



Appendix E

Noise

This appendix provides back-up data for the noise analysis results summarized in Final Environmental Impact Statement (FEIS) Section 3.7.1 Noise. Following are the topics addressed in this appendix:

- CREATE Noise and Vibration Assessment Methodology
- Screening and Noise Monitoring
 - Background Sound Level Monitoring and Calculations
 - Screening Distances
- Prediction of Existing, No-Build, and Build Sound Levels
- Evaluation of Noise Abatement Measures
- Construction Noise Analysis for Temporary Track Locations
- L_{max} Analysis and Results
- Viewpoints of Benefited Receptors

The following detailed tables and figures are included at the end of this appendix:

- Table E-1 – Screening Distance Evaluation
- Table E-2 – General Noise Assessment – Exterior Sound Levels
- Table E-3 – General Noise Assessment – Interior Sound Levels
- Table E-4 – Detailed Noise Assessment – Exterior Sound Levels
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- Table E-6 – Abatement Evaluation – Exterior Impacts
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- Table E-9 – Construction Noise – General Assessment – Exterior Sound Levels
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- Table E-11 – Construction Noise – Detailed Assessment – Exterior Sound Levels
- Table E-12 – Construction Abatement Evaluation – Exterior Impacts
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- Figures 1 to 12 – NEA Receptor and Cluster Maps
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- Letters and Viewpoint Forms Sent to Owners and Occupants



1.1 CREATE Noise and Vibration Assessment Methodology

The CREATE Program has established the methodology for the analysis of noise and vibration for the proposed projects within CREATE program since there are no existing federal guidance documents or methods specifically applicable to the evaluation of freight train traffic noise. The *CREATE Noise and Vibration Assessment Methodology*, June 2014 (CREATE methodology), is based upon the FTA's *Transit Noise and Vibration Impact Assessment*, May 2006, with certain modifications to allow for the evaluation of freight traffic.

The first step was to identify if any noise-sensitive receptors were within the noise screening distance. If receptors were identified then the evaluation continued with a General Noise Assessment to determine if any of the receptors would be impacted by the project. If receptors were impacted, a detailed analysis was performed on those receptors, adding additional factors such as the effect of ground attenuation and elevation differences between receptor and noise source. For any remaining impacts, noise mitigation was analyzed, such as noise barriers.

Additionally, to further describe the noise characteristics of the project, the CREATE methodology required that the L_{max} be calculated for each receptor impacted under the general assessment, and the highest L_{max} to be reported.

1.2 Screening

Screening distances were developed to identify the potential limits of noise impact from freight and passenger activity. The screening distance was based upon background sound levels, population density, and projected freight traffic in the Build condition. This information varied within the project area, so the project area was subdivided into 19 noise evaluation areas (NEAs) assumed to have similar train activity and background noise conditions.

1.2.1 Background Sound Level Monitoring and Calculations

To determine existing background existing sound levels, representative receptors were chosen for noise monitoring within each NEA. Noise monitoring was performed October 18 through October 22, 2010, between 8:00 a.m. and 5:00 p.m. A Bruel & Kjaer 2236, Type I noise monitor was used for data collection. The device was equipped with a windscreen to eliminate noise associated with wind blowing across the microphone. The monitor was calibrated with an acoustical calibrator before and after each measurement. Weather conditions were also considered to ensure accurate readings.

Noise monitoring was performed according to the recommended approach in the *CREATE Noise and Vibration Assessment Methodology* for use when train traffic information is to be provided by the Chicago Transportation Coordination Office (CTCO) for the existing scenario. Noise levels were monitored at each location in one-minute increments for approximately one hour. The time interval for each CREATE program train pass-by was recorded, and the time of monitoring was extended by this amount. The train pass-by events were removed from the data set, so at the end of the monitoring period 60 one-minute intervals were recorded that did not have train pass-bys. These 60 one-minute intervals were then used to calculate the hourly L_{eq} , which was then used as the background sound level for Land Use Category 3 sites (institutional land uses). For Land Use Category 2 sites (residential land uses), the FTA conversion method was used to convert L_{eq} to L_{dn} , which for measurements taken between 7:00 a.m. and 7:00 p.m., was to subtract 2 dBA from the L_{eq} . The resulting

background sound levels are included in Table E-1 at the end of this appendix, and were used to determine the screening distances, as described below.

1.2.2 Screening Distances

Tables 4-1 to 4-4 from the *CREATE Methodology* were used to identify the unobstructed and obstructed screening distances for each NEA. The obstructed distance applies if building rows are present between the railroad and the edge of the screening distance, such as an industrial area or dense residential area. The unobstructed distance applies if no building rows are present such as would occur with the first row of residences, or residences behind a large park or cemetery.

Table 4-3 from the *CREATE Methodology* (refer to Exhibit E-1) was used to determine the type of train activity category (low, medium, or high) associated with NEA. This was based upon the Build freight train activity obtained from CTCO for each NEA. Areas exposed to whistle blowing noise at grade crossings were assigned the high freight activity screening distance regardless of train activity characteristics.

Table 4-4 from the *CREATE Methodology* (refer to Exhibit E-2) was used to determine the ambient noise category (normal suburban residential, urban residential, or noisy urban residential). As the ambient noise category is based upon two factors, population density and background sound levels, each NEA was assigned an ambient noise category based upon each criterion. Lower noise ambient categories would lead to larger screening distances and a more conservative noise analysis in terms of spatial coverage; therefore, the lower ambient category was identified for each NEA.

Exhibit E-1: Low, Medium and High Freight Train Activity Categories and Characteristics

Train Activity	Trains per Day	Speed (mph)	Length of Cars (feet)	Locomotives /train
Low	5 to 40	10 to 20	1,000 to 4,000	1 to 2.08
Medium	41 to 75	20 to 30	4,000 to 6,000	2.08 to 2.5
High	More than 75	More than 30	More than 6,000	More than 2.5

*Source for Tables 4-1, 4-2, and 4-3: *Screening Distances for Potential Noise Impact by Ambient Location and Train Activity for CREATE Projects*, Appendix A.

Source: *CREATE Noise and Vibration Assessment Methodology*, June, 2013, Table 4-3.



Exhibit E-2: Ambient Noise Level Categories

TABLE 4-4*
Ambient Noise Level Categories

Ambient Category	Range of L _{dn} (dB(A))	Average L _{dn} (dB(A))	Average Census Tract Population Density per Square Mile
Normal Suburban Residential	53 to 57	55	2,000
Urban Residential	58 to 62	60	6,300
Noisy Urban Residential	63 to 67	65	20,000

*Source for Tables 4-1, 4-2 and 4-3: *Screening Distances for Potential Noise Impact by Ambient Location and Train Activity for CREATE Projects*, Appendix A.

Source: *CREATE Noise and Vibration Assessment Methodology*, June, 2013, Table 4-4.

Tables 4-1 and 4-2 from the *CREATE Methodology* (refer to Exhibits E-3 and E-4) then used the Train Activity Category combined with the Ambient Noise Category to determine the Unobstructed and Obstructed Screening Distances that was used for each NEA. Table E-1 at the end of this appendix details the results of this analysis.

Exhibit E-3: Screening Distances for Unobstructed Sight Lines

TABLE 4-1⁴
Screening Distances for Unobstructed Sight Lines for Low, Medium and High Train Activity vs. Noise Receptor Location

Ambient Category	Screening Distance (ft from centerline of track)			
	Train Volume			
	Low (Freight Only)	Low Mix (Freight and Passenger ³)	Medium (Freight ¹)	High (Freight ^{1,2})
Normal Suburban Residential	400	450	1,000	1,500
Urban Residential	300	350	750	1,200
Noisy Urban Residential	150	200	450	750

¹ Addition of commuter/passenger train traffic does not change screening distances.
² Use this category for grade crossings where horns are sounded.
³ Appropriate category when commuter/passenger/commuter present with low freight activity.
⁴ Table 4-1 derived from Table 4-2.

Source: *CREATE Noise and Vibration Assessment Methodology*, June, 2013, Table 4-1.

Exhibit E-4: Screening Distances for Obstructed Sight Lines

TABLE 4-2*
Screening Distances with Intervening Obstructions for Low, Medium and High Train Activity vs. Noise Receptor Location**

Screening Distance (ft from centerline of track)				
Ambient Category	Train Volume			
	Low (Freight Only)	Low Mix (Freight and Passenger ³)	Medium (Freight ¹)	High (Freight ^{1,2})
Normal Suburban Residential	200	225	500	1,000
Urban Residential	150	175	375	750
Noisy Urban Residential	75	100	225	500

¹ Addition of commuter/passenger train traffic does not change screening distances.
² Use this category for grade crossings where horns are sounded.
³ Appropriate category when commuter/passenger/commuter present with low freight activity.
*Source for Tables 4-1, 4-2, and 4-3: *Screening Distances for Potential Noise Impact by Ambient Location and Train Activity for CREATE Projects* (see Appendix A).
**Obstructions can include intervening buildings, terrain, embankments, and structures such as overpasses and retaining walls that block the line of sight between the noise source (i.e. trains) and sensitive receptors.

Source: *CREATE Noise and Vibration Assessment Methodology*, June, 2013, Table 4-2.

Project mapping, aerial photography, and field reviews were used to identify noise sensitive land uses along the project corridor within the identified screening distances. As there were numerous noise sensitive land uses within the screening distances, a General Noise Assessment was required.

1.3 Prediction of Existing, No-Build, and Build Sound Levels

1.3.1 General Exterior Noise Assessment

The 19 NEAs were further divided into clusters to account for differences in noise exposure resulting from incremental distances from the corridor centerline within the screening area. A single receptor within each cluster was then used for analysis purposes. Each receptor represents the “worst case” condition allowing for a conservative estimate for the entire cluster. For residences, the frequent exterior use was typically six feet from the edge of the building facing the noise sources, unless there was an identifiable frequent exterior use, such as a patio, near the back property line. For parks, the frequent exterior uses typically included identified paths, picnic tables, shelters, and ball fields. For schools, playgrounds or fields were the frequent exterior use, if there was one. Figures 1 through 12 at the end of this Appendix show the locations of each receptor analyzed and the cluster and NEA that it represents.

Project details including number of trains during the day and night periods, number of cars and locomotives per train, and train speed were estimated by the CTCO for each track in the project study area and for each condition – Existing, No-Build, and Build. This information was then averaged for each track and input into the CREATE spreadsheet model to estimate train-related noise at each receptor cluster. The train sound levels were then added to the background levels. The resultant sound levels for Existing, No-Build, and Build are



detailed in Table E-2 at the end of this Appendix. To identify impacts, the difference between the Existing condition and the Build Alternative condition was identified and compared to the FTA impact table. Of the 442 receptors analyzed for exterior impacts, 118 were impacted in the Build Alternative under the General Assessment. For comparison purposes, the difference between the Existing condition and the No-Build Alternative was identified and compared to the FTA impact table. Under the No-Build Alternative 55 receptors were above the FTA impact threshold.

1.3.2 General Interior Noise Assessment

Where there are no exterior activities to be affected by the project noise at institutional land uses, such as at churches, libraries, and some schools (e.g., a school with no outdoor common areas), or where the exterior activities are far from or physically shielded from the project in a manner that prevents an impact on exterior activities, FHWA's interior criterion was used as the basis of determining noise impacts. To compute interior sound levels, the exterior project sound levels were estimated as described above. A building noise reduction factor was then applied which subtracts from the project-related sound level to account for the shielding of the building. The factor ranges from 10 dBA for a typical structure that has windows that open, to 35 dBA for a masonry structure with double glazed windows (refer to Exhibit E-5). Unless it was confirmed that the windows were kept closed almost every day of the year, the windows were considered open, so the 10 dBA factor was used. The FHWA criteria states that an impact occurs if the interior project-related sound level is either 51 dBA or greater or would be 14 dBA greater than existing project-related sound levels.

Within the study area, twenty-six churches, a library and four schools have been identified as having no exterior activities. Eight of these receptors are equal to or above the 51 dBA threshold in the existing conditions and the No-Build Alternative: five religious facilities (God's Way Apostolic Faith Church, Freedom Temple Church of God, Beacon Light Baptist Church, Trinity United Church of Christ, and St. Thaddeus Catholic Church) and three schools (the Ashburn Community Elementary School, the Parker Elementary Community Academy, and the Banner School). These same eight receptors are above the impact threshold in the Build Alternative under the General Assessment (refer to Table E-3 at the end of this Appendix).

Exhibit E-5: Building Noise Reduction Factors due to Building Exteriors

Building Type	Window Condition	Structure Reduction
All	Open	10 dB
Light Frame	Ordinary Sash (closed)	20 dB
	Storm Windows	25 dB
Masonry	Single Glazed	25 dB
	Double Glazed	35 dB

Note: The window shall be considered open unless there is firm knowledge that the windows are in fact kept closed almost every day of the year.
Source: USDOT FHWA, *Highway Traffic Noise: Analysis and Abatement Guidance*, June 2010, January 2011, as revised.

Source: *CREATE Noise and Vibration Assessment Methodology*, June, 2013, Table 5-1.

1.3.3 Detailed Noise Assessment

The General Assessment resulted in the identification of 118 receptors that were above the exterior impact threshold in the Build Alternative, and 55 receptors were above the threshold in the No-Build Alternative. An additional eight receptors were above the 51 dBA interior threshold in both the Build and No-Build Alternatives. A detailed noise assessment was then performed on these receptors to refine the analysis, including incorporating the effects of ground attenuation and elevation differences between the receptor and the noise source.

The results of the detailed analysis for exterior noise show that the Build Alternative would impact 91 receptors (refer to Table E-4 at the end of this Appendix). An additional 7 receptors would experience interior impacts (refer to Table E-5 at the end of this Appendix). The total number of impacted residences would be 1359, and the impacted institutional land uses would be 10 (4 churches, 3 schools, and 3 parks). As a comparison, under the No-Build Alternative, 39 receptors would be above the FTA impact threshold for exterior noise and 6 receptors would be above the FHWA threshold for interior noise, totaling 1072 residences and 8 institutional land uses.

1.4 Evaluation of Abatement Measures

According to the *CREATE Methodology*, noise abatement is required to be considered for areas that experience a moderate or severe impact. To be feasible, the mitigation would need to provide a reduction in Build Scenario CREATE Program Train Noise Level (Design Year) of at least 5 dBA (both interior and exterior) at the impacted receptor. Mitigation for exterior noise impacts must also be cost effective, not exceeding a cost of \$5,000 per benefited receptor for each decibel meeting or exceeding the moderate impact threshold, up to a total limit of \$30,000 per benefited impacted receptor. For severely impacted receptors, the cost per benefited receptor should not exceed \$30,000. This can include receptors located above ground-floor elevation in multi-story buildings (e.g. second floor apartments). For interior impacts, noise mitigation measures must not exceed a cost of \$5,000 per benefited receptor for each decibel exceeding the Existing Scenario CREATE Program Train Noise Level, up to a total limit of \$30,000 per benefited receptor.

Noise barriers are generally the most practical noise mitigation option given their overall effectiveness and their ability to be constructed on the railroad right-of-way in most instances. Other options include acquisition of property to serve as a buffer zone and noise insulation for non-residential locations. Given that the majority of the 75th Street CIP study area is built-out, buffer zones are generally not an option for mitigation. Additionally, FHWA has determined that noise insulation is not a reasonable mitigation measure for this project.

The cost associated with noise barriers was calculated based on a \$25.00 per square foot cost for barriers up to and including 15 feet tall; \$37.50 for walls up to and including 30 feet tall; and \$50.00 for walls up to and including 45 feet tall. Where minor modifications (i.e., additional civil and/or structural work) would allow for a shorter noise wall, the barrier options were compared and the lower cost barrier was included in the analysis. The additional costs such as land acquisition and additional civil and structural work were included in the total barrier cost.

Each impacted area was studied to determine if a sufficiently long noise barrier could be constructed to protect the impact area, and if so, whether it would be cost effective. The effectiveness of a noise barrier in mitigating rail noise is largely dependent on sufficient height and physical continuity along its length to screen out a



moving train along most of its visible path. Noise barriers should generally extend four times as far in each direction as the distance from the receiver to the barrier. As requested by the railroads, the following clearance distances were used to identify where potential barriers could be located; although the railroads have been flexible, noting the potential for clear distance variances at certain locations.

- ◆ Amtrak – 25 feet from centerline of outermost track
- ◆ BRC – property line and 25 feet from centerline of outermost track
- ◆ CN – property line
- ◆ CSX – property line and 25 feet from centerline of outermost track
- ◆ NS – property line and 26 feet from centerline of outermost track
- ◆ UP – property line and 25 feet from centerline of outermost track
- ◆ Metra – no minimum; however sight distances and clearance for emergency equipment must be maintained

Tables E-6, E-7, E-8 at the end of this appendix summarize the feasibility and cost effectiveness of constructing a barrier for each impacted area. Figures 13 through 21 at the end of this Appendix show the locations of the barriers that were studied. A total of 21 noise barriers were determined to be feasible. These barriers were analyzed to determine their effectiveness at mitigating impacts, as well as their cost-effectiveness. Four of these barriers were deemed to be reasonable and are likely to be recommended for construction.

The noise analysis for this project may need to be reassessed if: a) the project is revised in a manner in which impacts of the project may change due to the project revisions (e.g., a new track alignment is moved closer to a receptor), or b) the CREATE Program's train model is updated due to projects being removed or added to the CREATE Program. The final decision on implementing noise mitigation measures will be made upon the completion of the project design and public involvement process.

1.5 Construction Noise Analysis for Areas with Temporary Tracks

At Forest Hill Junction, a pair of temporary tracks is proposed during construction to allow the existing CSX mainline tracks to be removed and the CSX flyover structure to be constructed in their place. These temporary tracks would be located east of the current CSX alignment between 79th Street and Marquette Road, approximately 60 to 80 feet closer to sensitive residential receptors. The noise levels would be increased at these areas during the flyover construction period due to the operation of trains on these closer tracks. The temporary tracks are expected to be in use for about a year. No other areas within the study area would require similar temporary tracks to accommodate construction.

Potential noise increases during construction were assessed the same way as described above for the build year analysis, using the *CREATE Methodology*, starting with a general assessment, and then where necessary, a detailed assessment. This analysis took into account the reduced distance between each noise receptor within the screening distance of the temporary tracks. The results showed that moving the tracks closer to the residences would raise the sound levels at the residences in the vicinity of the 71st Street at-grade crossing due to the whistle noise and to the residences in the vicinity of the BRC/CSX crossover due to passby noise (refer to Tables E-9, and E-10, and E-11 at the end of this Appendix). Barriers were evaluated for these areas; however they would not be cost-effective (refer to Table E-12). Figures 22 and 23 at the end of this Appendix show the locations of the barriers that were studied.

1.6 L_{max} Analysis and Results

L_{max} is the descriptor used to summarize the A-weighted sound level for an individual train passby. Although L_{max} is not used to determine impact, it is a useful descriptor to represent the highest sound level that receivers would hear during the time that the train passes by. The L_{max} sound levels do not account for reductions that could occur with relative changes in ground factors or shielding.

The L_{max} was computed for each receptor that required a detailed analysis, as per the *CREATE Methodology* (refer to Table E-13 after this Appendix). The L_{max} would change at each receptor by -2 to +5 dBA between the Existing and Build condition. This increase was caused by increased speeds and moving the track closer to the receptors in some locations. In both the Existing and Build conditions, the highest L_{max} value would be 109 dBA and was associated with the horn noise. This 109 dBA L_{max} value would occur at receptors 1M7, 1M14, and 1N9. The largest increase of L_{max} between the Existing and Build conditions occurred at receptor 10E, with an increase of railcar noise by 5 dBA from 91 dBA to 96 dBA.

1.7 Viewpoints of Benefited Receptors

Per the CREATE N&V Methodology, once noise barriers are found to be feasible and cost-effective, the desires of the benefited receptors need to be determined via the viewpoints solicitation process. The goal of the solicitation process is to obtain responses from at least one-third of the benefited receptors. If the first attempt does not obtain this number of responses, a second attempt should be made, either by certified mail or some other form of certified delivery. If after the second attempt there are still less than one-third of the responses received, the tally can be conducted based on the responses received. In order for a noise barrier to be implemented, greater than 50 percent of the benefited receptors responding must be in favor of the barrier. A response from first row benefited receptors will be counted and weighted as two responses. In the case of rental properties, the tenant would count as one response and the owner would count as one response, but first row rental properties would not be weighted.

For the first attempt, opinion letters were sent by regular mail to each property owner and renter/leaser that would be benefited by the cost-effective barriers (opinion letters are located at the end of this appendix). Less than one-third of the responses were received; therefore a second attempt was made, sending opinion letters via certified mail.

Responses were received for all four barriers, and all of the responses received were in favor of the implementation of their respective noise barrier. Following are the total number of owners/occupants that were sent letters and the number of yes votes for each barrier:

- ◆ Barrier G – 76 owners/occupants, 8 responses, 100% in favor of the barrier
- ◆ Barrier H – 67 owners/occupants, 6 responses, 100% in favor of the barrier
- ◆ Barrier M – 78 owners/occupants, 9 responses, 100% in favor of the barrier
- ◆ Barrier N – 29 owners/occupants, 17 responses, 100% in favor of the barrier

Since there were no votes against implementing any of the barriers, calculations to weight first row receivers are not necessary.



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Table E-1 - Screening Distance Evaluation

NEA	Monitored Sound Level (Ldn) (1)	Ldn Category	Population Density per square mile	Population Density Category	Ambient Category (2)	Build Freight Trains/Day	Average Speed	Average Length	Average Locos	Freight Train Category (3)	Unobstructed Screening Distance (feet)	Obstructed Screening Distance (feet)
R1	62	Urban Residential	6,503	Urban Residential	Urban Residential	25	20	4,923	2.23	Medium	750	375
R1/GC	62	Urban Residential	6,503	Urban Residential	Urban Residential	25	20	4,923	2.23	High	1200	750
R2/GC	59	Urban Residential	14,966	Urban Residential	Urban Residential	101	22	6,796	2.54	High	1200	750
R3	53	Normal Suburban Residential	12,538	Urban Residential	Normal Suburban Residential	93	23	7,084	2.61	High	1500	1000
R4	50	Normal Suburban Residential	13,148	Urban Residential	Normal Suburban Residential	26	21	6,844	2.5	High	1500	1000
R5	51	Normal Suburban Residential	14,186	Urban Residential	Normal Suburban Residential	33	18	5,910	2.47	Medium	1000	500
R5/GC	51	Normal Suburban Residential	14,186	Urban Residential	Normal Suburban Residential	33	18	5,910	2.47	High	1500	1000
R6	59	Urban Residential	17,776	Noisy Urban Residential	Urban Residential	113	23	7,049	2.59	High	1200	750
R7	51	Normal Suburban Residential	14,430	Urban Residential	Normal Suburban Residential	10	24	5,649	2.4	Medium	1000	500
R8	57	Normal Suburban Residential	19,662	Noisy Urban Residential	Normal Suburban Residential	113	23	7,049	2.59	High	1500	1000
R9	55	Normal Suburban Residential	15,780	Noisy Urban Residential	Normal Suburban Residential	113	23	7,049	2.59	High	1500	1000
R10	66	Noisy Urban Residential	12,735	Urban Residential	Urban Residential	116	23	6,968	2.6	High	1200	750
R11	55	Normal Suburban Residential	12,611	Urban Residential	Normal Suburban Residential	4	23	4,140	2.47	Medium	1000	500
R12	55	Normal Suburban Residential	10,863	Urban Residential	Normal Suburban Residential	0	NA	NA	NA	Low Mix	450	225
R13	55	Normal Suburban Residential	8,319	Urban Residential	Normal Suburban Residential	119	23	6,878	2.59	High	1500	1000
R14	60	Urban Residential	12,089	Urban Residential	Urban Residential	122	23	6,740	2.6	High	1200	750
R15	59	Urban Residential	6,021	Urban Residential	Urban Residential	122	25	6,740	2.6	High	1200	750
R16	62	Urban Residential	9,192	Urban Residential	Urban Residential	122	25	6,740	2.6	High	1200	750
R17	55	Normal Suburban Residential	4,370	Normal Suburban Residential	Normal Suburban Residential	122	25	6,740	2.6	High	1500	1000
R18	57	Normal Suburban Residential	9,294	Urban Residential	Normal Suburban Residential	81	25	6,876	2.66	High	1500	1000
R19	75	Noisy Urban Residential	11,023	Urban Residential	Urban Residential	40	34	6,467	2.48	High	1200	750
R19/GC	75	Noisy Urban Residential	11,023	Urban Residential	Urban Residential	40	34	6,467	2.48	High	1200	750

Notes: (1) Monitored sound level includes ambient levels and train passbys; (2) The lowest ambient category, Ldn category vs. population density category, was identified as the ambient category to be conservative (3) Medium increase to High for areas with grade crossings.

Source: U.S. Census, year 2000, Chicago Transportation Coordination Office, Train Model Output, 27 May 2011, Raw data.

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
1A2	2 / Ldn	6	Residential	50	64	64	64	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1A3	2 / Ldn	5	Residential	50	61	61	61	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1A4	3 / Leq	-	School	52	72	73	73	1	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
1B1	2 / Ldn	13	Residential	50	67	68	68	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1B2	2 / Ldn	10	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1B3	2 / Ldn	13	Residential	50	60	60	60	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1B4	2 / Ldn	3	Residential	50	70	70	70	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1B5	2 / Ldn	2	Residential	50	66	67	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1B6	2 / Ldn	5	Residential	50	64	64	64	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1B7	2 / Ldn	6	Residential	50	62	62	63	1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1C1	2 / Ldn	15	Residential	50	82	83	82	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1C2	2 / Ldn	30	Residential	50	70	70	70	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1C3	2 / Ldn	30	Residential	50	65	65	65	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1C4	2 / Ldn	59	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1C5	2 / Ldn	29	Residential	50	85	85	85	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1C6	2 / Ldn	22	Residential	50	71	71	71	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1C7	2 / Ldn	18	Residential	50	67	67	67	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1C8	2 / Ldn	28	Residential	50	64	64	64	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1C9	2 / Ldn	27	Residential	50	61	61	61	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1D1	2 / Ldn	16	Residential	50	82	82	82	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1D2	2 / Ldn	14	Residential	50	68	68	68	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1D3	2 / Ldn	17	Residential	50	65	65	65	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1D4	2 / Ldn	27	Residential	50	62	62	62	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1D5	2 / Ldn	16	Residential	50	82	82	82	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1D6	2 / Ldn	16	Residential	50	69	69	70	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
1D7	2 / Ldn	12	Residential	50	66	66	66	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1D8	2 / Ldn	11	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1D9	2 / Ldn	21	Residential	50	60	60	60	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1E1	2 / Ldn	4	Residential	50	81	81	81	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1E2	2 / Ldn	3	Residential	50	65	65	65	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1E3	2 / Ldn	10	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1E4	2 / Ldn	4	Residential	50	82	82	83	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1E5	2 / Ldn	4	Residential	50	71	71	71	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1E6	2 / Ldn	4	Residential	50	67	67	67	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1E7	2 / Ldn	3	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1E8	2 / Ldn	5	Residential	50	60	60	61	1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1F1	2 / Ldn	15	Residential	50	81	81	81	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1F2	2 / Ldn	4	Residential	50	80	80	80	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1F3	2 / Ldn	8	Residential	50	62	62	62	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1F4	2 / Ldn	12	Residential	50	82	82	83	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1F5	3 / Leq	-	Open Space	52	82	83	83	1	Moderate: 2-5 dBA Severe: >5 dBA	No Impact
1F6	2 / Ldn	11	Residential	50	74	74	74	0	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
1F7	2 / Ldn	5	Residential	50	68	68	68	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1F8	2 / Ldn	19	Residential	50	65	65	65	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1F9	2 / Ldn	9	Residential	50	61	61	62	1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1G1	2 / Ldn	4	Residential	50	71	71	71	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1G2	2 / Ldn	21	Residential	50	68	68	68	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1G3	2 / Ldn	19	Residential	50	66	66	66	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1G4	2 / Ldn	26	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1G5	2 / Ldn	1	Residential	50	79	79	79	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
1G6	2 / Ldn	10	Residential	50	77	77	77	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1G7	2 / Ldn	4	Residential	50	68	68	69	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1G8	2 / Ldn	3	Residential	50	65	65	65	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1G9	3 / Leq	-	Cemetery	52	69	70	71	2	Moderate: 4-6 dBA Severe: >6 dBA	No Impact
1H1	2 / Ldn	6	Residential	50	72	72	72	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1H2	2 / Ldn	12	Residential	50	66	66	66	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1H3	2 / Ldn	10	Residential	50	64	64	64	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1H4	2 / Ldn	8	Residential	50	61	61	61	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1H5	2 / Ldn	4	Residential	50	78	78	78	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1H6	2 / Ldn	14	Residential	50	75	75	75	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1H7	2 / Ldn	13	Residential	50	68	68	68	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1H8	2 / Ldn	12	Residential	50	65	65	65	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1H9	2 / Ldn	19	Residential	50	62	62	62	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1I1	2 / Ldn	1	Residential	50	66	67	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1I2	2 / Ldn	4	Residential	50	64	64	64	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1I3	2 / Ldn	3	Residential	50	62	62	62	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1I4	2 / Ldn	2	Residential	50	79	79	79	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1I5	2 / Ldn	2	Residential	50	76	76	77	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1I6	2 / Ldn	4	Residential	50	69	69	69	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1I7	2 / Ldn	2	Residential	50	65	65	65	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1I8	2 / Ldn	6	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1J1	2 / Ldn	8	Residential	50	84	84	84	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1J2	2 / Ldn	10	Residential	50	69	69	69	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1J3	2 / Ldn	13	Residential	50	67	67	67	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1J4	2 / Ldn	12	Residential	50	64	64	64	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
1J5	2 / Ldn	9	Residential	50	61	61	61	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1J6	2 / Ldn	3	Residential	50	79	79	79	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1J7	2 / Ldn	6	Residential	50	76	76	76	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1J8	2 / Ldn	9	Residential	50	69	69	69	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1J9	2 / Ldn	9	Residential	50	65	66	66	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1J10	2 / Ldn	17	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1K1	2 / Ldn	15	Residential	50	87	87	87	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1K2	2 / Ldn	3	Residential	50	71	71	71	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1K3	2 / Ldn	4	Residential	50	68	68	68	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1K4	2 / Ldn	5	Residential	50	65	65	65	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1K5	2 / Ldn	3	Residential	50	62	62	62	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1K6	2 / Ldn	3	Residential	50	85	85	85	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1K7	2 / Ldn	5	Residential	50	80	80	80	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1K8	2 / Ldn	4	Residential	50	70	71	71	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1K9	2 / Ldn	3	Residential	50	66	66	66	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1K10	2 / Ldn	5	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1L1	2 / Ldn	3	Residential	50	87	87	87	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1L2	2 / Ldn	9	Residential	50	71	71	71	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1L3	2 / Ldn	9	Residential	50	69	69	69	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1L4	2 / Ldn	7	Residential	50	66	66	66	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1L5	2 / Ldn	5	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1L6	2 / Ldn	3	Residential	50	86	86	86	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1L7	2 / Ldn	11	Residential	50	80	80	80	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1L8	2 / Ldn	8	Residential	50	71	71	71	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1L9	2 / Ldn	3	Residential	50	67	67	67	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
1L10	2 / Ldn	13	Residential	50	64	64	65	1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1L11	2 / Ldn	3	Residential	50	63	64	64	1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1M1	2 / Ldn	11	Residential	50	74	74	74	0	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
1M3	2 / Ldn	16	Residential	50	70	70	70	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1M4	2 / Ldn	18	Residential	50	67	67	67	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1M5	2 / Ldn	14	Residential	50	64	65	65	1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1M6	2 / Ldn	1	Residential	50	86	86	86	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1M7	2 / Ldn	4	Residential	50	87	87	88	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1M8	2 / Ldn	6	Residential	50	80	79	82	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1M9	2 / Ldn	9	Residential	50	82	81	82	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1M10	2 / Ldn	12	Residential	50	82	82	82	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1M11	2 / Ldn	5	Residential	50	78	76	80	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1M12	2 / Ldn	7	Residential	50	74	73	75	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
1M13	2 / Ldn	6	Residential	50	73	73	73	0	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
1M14	2 / Ldn	3	Residential	50	76	74	79	3	Moderate: 1-2 dBA Severe: >2 dBA	Severe Impact
1M15	2 / Ldn	7	Residential	50	76	73	78	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1M16	2 / Ldn	7	Residential	50	71	70	72	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1M17	2 / Ldn	3	Residential	50	68	68	68	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1M18	2 / Ldn	7	Residential	50	73	71	76	3	Moderate: 2-2 dBA Severe: >2 dBA	Severe Impact
1M19	2 / Ldn	7	Residential	50	68	67	70	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1M20	2 / Ldn	10	Residential	50	74	71	77	3	Moderate: 2-2 dBA Severe: >2 dBA	Severe Impact
1M21	2 / Ldn	4	Residential	50	69	67	71	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1N1	2 / Ldn	10	Residential	50	75	74	77	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1N2	2 / Ldn	2	Residential	50	71	71	71	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1N3	2 / Ldn	4	Residential	50	69	69	69	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
1N4	2 / Ldn	5	Residential	50	73	71	74	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
1N5	2 / Ldn	7	Residential	50	66	66	66	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1N6	2 / Ldn	1	Residential	50	69	67	71	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1N7	2 / Ldn	2	Residential	50	66	65	68	2	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
1N8	2 / Ldn	8	Residential	50	63	63	63	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1N9	2 / Ldn	4	Residential	50	85	83	87	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1N10	2 / Ldn	14	Residential	50	76	74	78	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1N12	2 / Ldn	22	Residential	50	73	71	75	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact
1N13	2 / Ldn	7	Residential	50	69	67	71	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1N14	2 / Ldn	6	Residential	50	64	64	64	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1O1	2 / Ldn	1	Residential	50	79	75	81	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1O2	2 / Ldn	2	Residential	50	76	73	78	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1O3	2 / Ldn	5	Residential	50	70	68	72	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1O4	2 / Ldn	5	Residential	50	67	66	69	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1O5	2 / Ldn	6	Residential	50	79	79	82	3	Moderate: 1-2 dBA Severe: >2 dBA	Severe Impact
1O6	2 / Ldn	1	Residential	50	70	70	73	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1P1	2 / Ldn	12	Residential	50	75	73	78	3	Moderate: 1-2 dBA Severe: >2 dBA	Severe Impact
1P2	2 / Ldn	6	Residential	50	73	71	75	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact
1P3	2 / Ldn	4	Residential	50	71	70	74	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1P4	2 / Ldn	7	Residential	50	74	71	76	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact
1P5	2 / Ldn	3	Residential	50	81	81	84	3	Moderate: 1-2 dBA Severe: >2 dBA	Severe Impact
1P6	2 / Ldn	7	Residential	50	77	77	80	3	Moderate: 1-2 dBA Severe: >2 dBA	Severe Impact
1P7	2 / Ldn	10	Residential	50	72	72	72	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1P8	2 / Ldn	7	Residential	50	68	68	67	-1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1P9	2 / Ldn	16	Residential	50	66	66	64	-2	Moderate: 2-4 dBA Severe: >4 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
1Q1	2 / Ldn	7	Residential	50	68	68	68	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1Q2	2 / Ldn	9	Residential	50	62	62	65	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
1Q3	2 / Ldn	8	Residential	50	61	61	64	3	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
1Q4	2 / Ldn	1	Residential	50	69	68	70	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1Q5	2 / Ldn	3	Residential	50	59	59	61	2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1Q6	2 / Ldn	12	Residential	50	70	67	73	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1Q7	2 / Ldn	1	Residential	50	69	69	72	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1Q8	2 / Ldn	7	Residential	50	68	68	71	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1Q9	2 / Ldn	4	Residential	50	74	74	77	3	Moderate: 2-2 dBA Severe: >2 dBA	Severe Impact
1Q10	2 / Ldn	12	Residential	50	64	64	66	2	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1Q11	2 / Ldn	6	Residential	50	69	70	71	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1Q12	2 / Ldn	7	Residential	50	61	61	64	3	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
1Q13	2 / Ldn	3	Residential	50	66	66	66	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1Q14	2 / Ldn	1	Residential	50	65	65	64	-1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1Q15	2 / Ldn	11	Residential	50	59	59	61	2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1R1	2 / Ldn	34	Residential	50	53	53	54	1	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
1R2	2 / Ldn	12	Residential	50	59	59	64	5	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
1R3	2 / Ldn	64	Residential	50	56	56	59	3	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
1R4	2 / Ldn	80	Residential	50	52	52	54	2	Moderate: 5-9 dBA Severe: >9 dBA	No Impact
1S1	2 / Ldn	40	Residential	50	54	54	54	0	Moderate: 4-8 dBA Severe: >8 dBA	No Impact
1S2	2 / Ldn	33	Residential	50	52	51	51	-1	Moderate: 5-9 dBA Severe: >9 dBA	No Impact
1T1	2 / Ldn	23	Residential	50	59	59	58	-1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1T2	2 / Ldn	22	Residential	50	55	55	54	-1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
1T3	2 / Ldn	32	Residential	50	54	53	53	-1	Moderate: 4-8 dBA Severe: >8 dBA	No Impact
1U2	2 / Ldn	7	Residential	50	72	72	74	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
1U3	2 / Ldn	12	Residential	50	71	72	74	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
2A	2 / Ldn	5	Residential	50	79	79	81	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2B	2 / Ldn	8	Residential	50	73	73	75	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact
2C	2 / Ldn	9	Residential	50	69	69	71	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
2D	2 / Ldn	7	Residential	50	87	87	89	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2E	2 / Ldn	62	Residential	50	79	79	81	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2F	2 / Ldn	77	Residential	50	75	75	77	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2G	2 / Ldn	38	Residential	50	70	70	72	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
2H	2 / Ldn	8	Residential	50	83	83	85	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2I	2 / Ldn	16	Residential	50	77	77	78	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2J	2 / Ldn	26	Residential	50	71	72	73	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
2K	2 / Ldn	19	Residential	50	66	67	68	2	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
2L	2 / Ldn	93	Residential	50	66	67	69	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
2M	2 / Ldn	5	Residential	50	65	66	68	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
2N	2 / Ldn	8	Residential	50	63	64	66	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
2O	2 / Ldn	38	Residential	50	53	53	55	2	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
2P	2 / Ldn	2	Residential	50	77	77	78	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2Q	2 / Ldn	5	Residential	50	73	74	74	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
2R	2 / Ldn	3	Residential	50	70	71	72	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
3A	2 / Ldn	5	Residential	51	80	80	82	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
3B	2 / Ldn	11	Residential	51	73	73	75	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact
3C	2 / Ldn	10	Residential	51	70	70	72	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
3D	2 / Ldn	9	Residential	51	66	66	68	2	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
3E	2 / Ldn	1	Residential	51	63	63	65	2	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
3F	2 / Ldn	3	Residential	51	66	67	69	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
3G	2 / Ldn	4	Residential	51	60	61	64	4	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
3H	2 / Ldn	6	Residential	51	58	59	61	3	Moderate: 3-6 dBA Severe: >6 dBA	Moderate Impact
3I	2 / Ldn	8	Residential	51	55	55	58	3	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
3J	2 / Ldn	10	Residential	51	54	54	56	2	Moderate: 4-8 dBA Severe: >8 dBA	No Impact
3K	2 / Ldn	16	Residential	51	53	53	55	2	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
3L	2 / Ldn	40	Residential	51	52	53	54	2	Moderate: 5-9 dBA Severe: >9 dBA	No Impact
3M	2 / Ldn	33	Residential	51	61	62	65	4	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
3N	2 / Ldn	37	Residential	51	57	57	60	3	Moderate: 4-6 dBA Severe: >6 dBA	No Impact
3O	2 / Ldn	46	Residential	51	55	55	58	3	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
3P	2 / Ldn	59	Residential	51	53	54	56	3	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
3Q	2 / Ldn	78	Residential	51	52	53	54	2	Moderate: 5-9 dBA Severe: >9 dBA	No Impact
4A	3 / Leq	-	School	52	68	68	63	-5	Moderate: 4-6 dBA Severe: >6 dBA	No Impact
4B	2 / Ldn	36	Residential	50	62	64	61	-1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
5A	2 / Ldn	31	Residential	48	77	79	67	-10	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
5AA	2 / Ldn	42	Residential	48	65	67	56	-9	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
5AB	2 / Ldn	79	Residential	48	61	63	54	-7	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
5AC	2 / Ldn	44	Residential	48	68	70	56	-12	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
5AD	2 / Ldn	118	Residential	48	65	67	54	-11	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
5AE	2 / Ldn	51	Residential	48	64	67	56	-8	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
5AF	2 / Ldn	65	Residential	48	61	64	54	-7	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
5AG	2 / Ldn	24	Residential	48	64	66	56	-8	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
5AH	2 / Ldn	36	Residential	48	60	61	53	-7	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
5AI	2 / Ldn	25	Residential	48	67	68	56	-11	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
5AJ	2 / Ldn	40	Residential	48	63	65	53	-10	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
5B	2 / Ldn	42	Residential	48	69	71	60	-9	Moderate: 2-3 dBA Severe: >3 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
5C	2 / Ldn	12	Residential	48	73	76	71	-2	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
5D	2 / Ldn	47	Residential	48	73	75	64	-9	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
5E	2 / Ldn	41	Residential	48	68	70	59	-9	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
5F	2 / Ldn	11	Residential	48	78	80	69	-9	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
5G	2 / Ldn	15	Residential	48	70	72	62	-8	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
5H	2 / Ldn	13	Residential	48	67	69	59	-8	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
5I	2 / Ldn	33	Residential	48	72	74	63	-9	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
5J	2 / Ldn	29	Residential	48	66	68	57	-9	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
5L	2 / Ldn	46	Residential	48	79	81	67	-12	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
5M	2 / Ldn	40	Residential	48	72	74	60	-12	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
5N	2 / Ldn	13	Residential	48	80	82	70	-10	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
5O	2 / Ldn	14	Residential	48	74	75	63	-11	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
5P	2 / Ldn	17	Residential	48	70	72	59	-11	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
5Q	2 / Ldn	16	Residential	48	75	77	63	-12	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
5R	2 / Ldn	19	Residential	48	69	71	58	-11	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
5S	2 / Ldn	27	Residential	48	73	78	74	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
5T	2 / Ldn	30	Residential	48	60	64	61	1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
5U	2 / Ldn	27	Residential	48	56	60	57	1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
5V	2 / Ldn	34	Residential	48	61	65	62	1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
5W	2 / Ldn	39	Residential	48	55	59	57	2	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
5X	2 / Ldn	78	Residential	48	53	56	54	1	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
5Y	2 / Ldn	64	Residential	48	63	65	55	-8	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
5Z	2 / Ldn	41	Residential	48	66	68	55	-11	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
6A	2 / Ldn	29	Residential	48	75	77	74	-1	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
6B	2 / Ldn	22	Residential	48	66	68	65	-1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
6C	2 / Ldn	13	Residential	48	63	64	61	-2	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
6D	2 / Ldn	55	Residential	48	76	78	76	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
6E	2 / Ldn	77	Residential	48	66	67	65	-1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
6F	2 / Ldn	76	Residential	48	62	63	61	-1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
6K	2 / Ldn	129	Residential	48	59	60	58	-1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
6N	2 / Ldn	64	Residential	48	60	62	60	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
6O	2 / Ldn	17	Residential	48	60	61	60	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
7A	2 / Ldn	45	Residential	51	66	69	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
7B	2 / Ldn	26	Residential	51	57	60	59	2	Moderate: 4-6 dBA Severe: >6 dBA	No Impact
7C	2 / Ldn	44	Residential	51	55	57	56	1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
7D	2 / Ldn	15	Residential	51	67	70	65	-2	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
7E	2 / Ldn	21	Residential	51	60	63	58	-2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
7F	2 / Ldn	18	Residential	51	56	60	55	-1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
7G	2 / Ldn	26	Residential	51	54	57	53	-1	Moderate: 4-8 dBA Severe: >8 dBA	No Impact
7H	3 / Leq	-	Open Space	53	64	65	64	0	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
7I	2 / Ldn	45	Residential	51	67	71	66	-1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
7J	2 / Ldn	17	Residential	51	58	62	57	-1	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
7K	2 / Ldn	18	Residential	51	55	58	54	-1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
7L	2 / Ldn	6	Residential	51	70	74	67	-3	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
7M	2 / Ldn	9	Residential	51	60	64	58	-2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
7N	2 / Ldn	4	Residential	51	56	59	54	-2	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
7R	2 / Ldn	18	Residential	51	60	64	58	-2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
7S	3 / Leq	-	Open Space	53	66	67	65	-1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
8B	2 / Ldn	31	Residential	50	75	75	74	-1	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
8C	2 / Ldn	65	Residential	50	68	69	67	-1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
8D	2 / Ldn	59	Residential	50	64	65	63	-1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
8E	2 / Ldn	69	Residential	50	61	61	60	-1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
8G	2 / Ldn	109	Residential	50	58	58	57	-1	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
8H	2 / Ldn	129	Residential	50	55	55	54	-1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
8I	2 / Ldn	75	Residential	50	68	68	67	-1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
9A	3 / Leq	-	School	52	70	71	67	-3	Moderate: 4-6 dBA Severe: >6 dBA	No Impact
9B	2 / Ldn	18	Residential	50	73	74	74	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
9C	2 / Ldn	24	Residential	50	65	66	65	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
9D	2 / Ldn	15	Residential	50	61	62	61	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
9E	2 / Ldn	18	Residential	50	76	77	77	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
9F	2 / Ldn	19	Residential	50	65	66	66	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
9G	2 / Ldn	11	Residential	50	61	62	61	0	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
9J	2 / Ldn	20	Residential	50	74	75	75	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
9K	2 / Ldn	30	Residential	50	66	67	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
9L	2 / Ldn	27	Residential	50	62	63	62	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
9M	2 / Ldn	24	Residential	50	58	59	58	0	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
9N	2 / Ldn	74	Residential	50	55	56	55	0	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
9O	2 / Ldn	91	Residential	50	58	59	58	0	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
9P	2 / Ldn	147	Residential	50	56	56	55	-1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
10A	3 / Leq	-	Open Space	52	65	66	71	6	Moderate: 4-7 dBA Severe: >7 dBA	Moderate Impact
10B	2 / Ldn	3	Residential	50	67	68	72	5	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact
10C	2 / Ldn	4	Residential	50	64	65	68	4	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
10D	2 / Ldn	11	Residential	50	63	64	67	4	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
10E	2 / Ldn	31	Residential	50	72	73	77	5	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact
10F	2 / Ldn	17	Residential	50	63	64	67	4	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
10G	2 / Ldn	13	Residential	50	59	60	63	4	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
10H	2 / Ldn	15	Residential	50	56	57	60	4	Moderate: 4-7 dBA Severe: >7 dBA	Moderate Impact
10J	2 / Ldn	23	Residential	50	54	54	57	3	Moderate: 4-8 dBA Severe: >8 dBA	No Impact
11A	2 / Ldn	6	Residential	48	61	62	63	2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
11B	2 / Ldn	35	Residential	48	67	68	72	5	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact
11C	2 / Ldn	16	Residential	48	58	59	63	5	Moderate: 3-6 dBA Severe: >6 dBA	Moderate Impact
11D	2 / Ldn	39	Residential	48	58	59	60	2	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
11E	2 / Ldn	40	Residential	48	55	56	58	3	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
11F	3 / Leq	-	Open Space	50	60	67	64	4	Moderate: 6-9 dBA Severe: >9 dBA	No Impact
11G	2 / Ldn	64	Residential	48	58	61	53	-5	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
11H	2 / Ldn	54	Residential	48	52	54	50	-2	Moderate: 5-9 dBA Severe: >9 dBA	No Impact
11I	2 / Ldn	43	Residential	48	62	64	53	-9	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
11J	2 / Ldn	17	Residential	48	53	56	49	-4	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
11K	3 / Leq	-	Open Space	50	60	64	60	0	Moderate: 6-9 dBA Severe: >9 dBA	No Impact
11L	2 / Ldn	3	Residential	48	66	69	64	-2	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
11M	2 / Ldn	9	Residential	48	64	66	67	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
11N	2 / Ldn	8	Residential	48	57	59	62	5	Moderate: 4-6 dBA Severe: >6 dBA	Moderate Impact
11O	2 / Ldn	5	Residential	48	58	59	66	8	Moderate: 3-6 dBA Severe: >6 dBA	Severe Impact
11R	2 / Ldn	12	Residential	48	55	57	49	-6	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
11S	3 / Leq	-	Open Space	50	60	67	63	3	Moderate: 6-9 dBA Severe: >9 dBA	No Impact
11T	2 / Ldn	6	Residential	48	62	65	55	-7	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
11U	2 / Ldn	4	Residential	48	65	67	55	-10	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
11V	3 / Leq	-	School	50	52	52	52	0	Moderate: 9-14 dBA Severe: >14 dBA	No Impact
12AE	2 / Ldn	28	Residential	50	66	66	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
12AH	2 / Ldn	7	Residential	50	63	63	65	2	Moderate: 3-4 dBA Severe: >4 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
12C	2 / Ldn	90	Residential	50	65	65	67	2	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
12D	2 / Ldn	3	Residential	50	62	62	63	1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
12J	2 / Ldn	96	Residential	50	66	66	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
12M	2 / Ldn	71	Residential	50	66	66	66	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
12P	2 / Ldn	46	Residential	50	69	69	68	-1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
12S	3 / Leq	-	Open Space	52	65	65	68	3	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
12T	3 / Leq	-	Open Space	52	63	63	65	2	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
12U	2 / Ldn	12	Residential	50	58	58	66	8	Moderate: 3-6 dBA Severe: >6 dBA	Severe Impact
13A	2 / Ldn	17	Residential	53	74	76	74	0	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
13B	2 / Ldn	23	Residential	53	68	69	67	-1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
13C	2 / Ldn	11	Residential	53	68	70	72	4	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact
13D	2 / Ldn	17	Residential	53	62	63	69	7	Moderate: 3-4 dBA Severe: >4 dBA	Severe Impact
13E	2 / Ldn	21	Residential	53	65	65	68	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
14A	3 / Leq	-	Open Space	52	73	71	71	-2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
14B	2 / Ldn	81	Residential	50	77	78	76	-1	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
14C	2 / Ldn	59	Residential	50	66	67	65	-1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
14D	2 / Ldn	68	Residential	50	62	63	61	-1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
14E	2 / Ldn	131	Residential	50	58	60	58	0	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
14F	2 / Ldn	7	Residential	50	69	69	70	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
14G	2 / Ldn	34	Residential	50	62	62	63	1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
14H	2 / Ldn	22	Residential	50	58	58	59	1	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
14I	2 / Ldn	39	Residential	50	66	66	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
14J	2 / Ldn	31	Residential	50	59	59	60	1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
14K	3 / Leq	-	Open Space	52	66	66	67	1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
14L	2 / Ldn	38	Residential	50	67	69	73	6	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
14M	2 / Ldn	20	Residential	50	60	61	65	5	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
14N	2 / Ldn	11	Residential	50	57	58	61	4	Moderate: 4-6 dBA Severe: >6 dBA	Moderate Impact
14O	3 / Leq	-	School	52	53	55	56	3	Moderate: 8-13 dBA Severe: >13 dBA	No Impact
14S	2 / Ldn	37	Residential	50	64	66	64	0	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
14T	2 / Ldn	10	Residential	50	61	61	63	2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
14U	2 / Ldn	21	Residential	50	56	55	56	0	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
14V	2 / Ldn	75	Residential	50	56	56	57	1	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
14W	2 / Ldn	20	Residential	50	54	55	58	4	Moderate: 4-8 dBA Severe: >8 dBA	Moderate Impact
15A	2 / Ldn	13	Residential	56	69	70	71	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
15B	2 / Ldn	9	Residential	56	64	65	66	2	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
15C	2 / Ldn	9	Residential	56	62	62	63	1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
15E	3 / Leq	-	Open Space	58	58	58	60	2	Moderate: 6-10 dBA Severe: >10 dBA	No Impact
16A	3 / Leq	-	Open Space	46	67	63	67	0	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
16B	3 / Leq	-	School	46	62	59	63	1	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
16C	2 / Ldn	48	Residential	44	70	70	69	-1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
16D	2 / Ldn	9	Residential	44	75	74	72	-3	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
16E	2 / Ldn	54	Residential	44	65	65	64	-1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
16F	2 / Ldn	24	Residential	44	75	74	71	-4	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
16G	2 / Ldn	32	Residential	44	63	62	62	-1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
16H	2 / Ldn	15	Residential	44	69	68	67	-2	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
16I	2 / Ldn	17	Residential	44	62	60	60	-2	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
16J	2 / Ldn	26	Residential	44	58	58	59	1	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
16K	2 / Ldn	41	Residential	44	58	58	58	0	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
16L	2 / Ldn	35	Residential	44	57	57	56	-1	Moderate: 4-6 dBA Severe: >6 dBA	No Impact
17A	2 / Ldn	3	Residential	51	67	68	66	-1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
17B	2 / Ldn	36	Residential	51	61	62	64	3	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
17C	2 / Ldn	20	Residential	51	67	69	74	7	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact
17E	2 / Ldn	5	Residential	51	66	66	66	0	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
18A	2 / Ldn	65	Residential	57	69	71	74	5	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact
18C	2 / Ldn	33	Residential	57	59	60	61	2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
18D	2 / Ldn	60	Residential	57	58	59	60	2	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
18E	2 / Ldn	35	Residential	57	66	68	70	4	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
18F	2 / Ldn	27	Residential	57	60	61	63	3	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
18G	2 / Ldn	21	Residential	57	59	60	62	3	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
18H	2 / Ldn	3	Residential	57	66	68	70	4	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
18I	2 / Ldn	3	Residential	57	62	63	65	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
18J	2 / Ldn	92	Residential	57	57	58	58	1	Moderate: 4-6 dBA Severe: >6 dBA	No Impact
18K	2 / Ldn	41	Residential	57	58	58	59	1	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
18L	2 / Ldn	52	Residential	57	57	58	58	1	Moderate: 4-6 dBA Severe: >6 dBA	No Impact
19A	2 / Ldn	50	Residential	55	74	73	75	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
19AA	2 / Ldn	8	Residential	55	78	77	79	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AB	2 / Ldn	8	Residential	55	71	70	72	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AC	2 / Ldn	8	Residential	55	75	74	76	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AD	2 / Ldn	6	Residential	55	69	68	70	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AE	2 / Ldn	17	Residential	55	66	65	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
19AF	2 / Ldn	8	Residential	55	80	79	81	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AG	2 / Ldn	15	Residential	55	67	66	68	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AH	2 / Ldn	4	Residential	55	76	75	77	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AI	2 / Ldn	4	Residential	55	70	69	71	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AJ	2 / Ldn	62	Residential	55	67	66	68	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
19AK	2 / Ldn	6	Residential	55	75	74	76	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AL	2 / Ldn	71	Residential	55	68	67	69	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AM	2 / Ldn	5	Residential	55	83	82	84	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AN	2 / Ldn	2	Residential	55	73	72	74	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
19AO	2 / Ldn	6	Residential	55	69	68	70	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AP	2 / Ldn	18	Residential	55	82	81	83	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AQ	2 / Ldn	10	Residential	55	73	72	74	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
19AR	2 / Ldn	31	Residential	55	69	68	70	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AS	2 / Ldn	16	Residential	55	83	82	84	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AT	2 / Ldn	12	Residential	55	74	73	75	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
19AU	2 / Ldn	26	Residential	55	69	68	70	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AV	2 / Ldn	3	Residential	55	73	72	74	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
19AW	2 / Ldn	57	Residential	55	70	69	71	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AX	2 / Ldn	10	Residential	55	78	77	79	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AY	2 / Ldn	16	Residential	55	71	70	72	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AZ	2 / Ldn	78	Residential	55	67	66	68	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19B	2 / Ldn	30	Residential	55	64	63	65	1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
19BA	2 / Ldn	45	Residential	55	79	78	80	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19BB	2 / Ldn	44	Residential	55	70	69	71	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19BC	2 / Ldn	64	Residential	55	67	66	68	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19BD	2 / Ldn	45	Residential	55	72	71	73	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19C	2 / Ldn	146	Residential	55	61	60	62	1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
19D	3 / Leq	-	Open Space	57	77	77	79	2	Moderate: 2-5 dBA Severe: >5 dBA	Moderate Impact
19E	2 / Ldn	149	Residential	55	65	64	66	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
19F	2 / Ldn	12	Residential	55	81	80	82	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact

Table E-2 General Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
19G	2 / Ldn	20	Residential	55	71	70	72	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19H	2 / Ldn	9	Residential	55	85	84	86	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19I	2 / Ldn	7	Residential	55	75	74	76	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19J	2 / Ldn	8	Residential	55	70	69	71	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19K	2 / Ldn	6	Residential	55	80	79	81	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19L	2 / Ldn	3	Residential	55	71	70	72	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19M	3 / Leq	-	Open Space	57	84	84	86	2	Moderate: 2-5 dBA Severe: >5 dBA	Moderate Impact
19N	2 / Ldn	24	Residential	55	81	80	82	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19O	2 / Ldn	17	Residential	55	73	72	74	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
19P	2 / Ldn	29	Residential	55	70	69	71	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19Q	3 / Leq	-	Open Space	57	78	78	80	2	Moderate: 2-5 dBA Severe: >5 dBA	Moderate Impact
19R	2 / Ldn	21	Residential	55	78	77	80	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19S	2 / Ldn	22	Residential	55	70	69	71	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19T	2 / Ldn	46	Residential	55	66	65	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
19U	3 / Leq	-	Open Space	57	82	82	84	2	Moderate: 2-5 dBA Severe: >5 dBA	Moderate Impact
19V	2 / Ldn	15	Residential	55	74	73	75	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
19W	2 / Ldn	40	Residential	55	68	66	69	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact

Table E-3 - General Noise Assessment - Interior Sound Levels

Receptor ID	Receptor Name, Location	FHWA Interior Noise Criterion Leq (dBA)	Window Condition and Building Type (i.e., operable or non-operable windows, air-conditioning, masonry or wood frame)	Noise Reduction Factor ¹ (dBA)	Exterior Existing Predicted Train Noise ² Leq (dBA)	Interior Existing Predicted Train Noise ³ Leq (dBA)	Exterior No Build Predicted Train Noise ² Leq (dBA)	Interior No Build Predicted Train Noise ³ Leq (dBA)	Exterior Build Predicted Train Noise ² Leq (dBA)	Interior Build Predicted Train Noise ³ Leq (dBA)	Interior Predicted Build Approach or Exceed 52 dBA?	Level of Interior Noise Impact ⁴
1M2	Ashburn Baptist Church, 3647 W. 83rd St., 773-735-6205	52	non-operable windows, window air-conditioning, brick building	25	73	48	74	49	75	50	No	None
1N11	Ashburn Community Elementary School, 8300 S. St. Louis Avenue, (773) 535-7860	52	operable windows, no visible air-conditioning, brick building	10	68	58	69	59	70	60	Yes	Impact
1U1	Monument of Faith, 2750 West Columbus Ave., (773) 918-0180	52	non-operable windows, air-conditioning on roof, stucco building, basketball courts outside	25	74	49	75	50	75	50	No	None
5K	New St Paul C.O.G.I.C, 2113 West Columbus Ave.	52	operable windows, no visible air-conditioning, brick building	10	52	42	54	44	54	44	No	None
6G	Grace Fellowship Bible Church, 1720 W. 75th Pl.,(773) 483-1312	52	non-operable windows, air-conditioning on roof, brick bldg	25	71	46	74	49	72	47	No	None
6H	New Israelite Missionary Baptist Church, 1625 W. 75th Pl., (773) 487-4591	52	non-operable windows, air-conditioning, stucco building	25	64	39	67	42	66	41	No	None
6I	God's Way Apostolic Faith Church, 7435 S. Ashland Ave., (773) 783-5050	52	operable windows, air-conditioning on roof, brick bldg	10	68	58	70	60	68	58	Yes	Impact
6J	Freedom Temple Church of God in Christ., 1459 W. 74th St., (773) 483-1140	52	operable windows, air-conditioning, concrete building, daycare play area outside	10	67	57	68	58	67	57	Yes	Impact
6L	Holy Covenant MB Church, 1722 W 75th Pl., (773) 483-6676	52	non-operable windows, air-conditioning on roof, brick bldg	25	71	46	74	49	72	47	No	None
6M	Church of Christ., 1514 W. 74th St., (773) 224-9279	52	non-operable windows, air-conditioning, brick building	25	55	30	57	32	55	30	No	None
7O	First Church of Love and Faith, 2140 W 79th St., (773) 224-6800	52	non-operable windows, air-conditioning on roof, brick bldg	25	59	34	61	36	60	35	No	None
7P	Liberty Temple Full Gospel Church, 2233 W. 79th St., (773) 737-7843	52	non-operable window, air-conditioning on roof, brick building	25	58	33	61	36	60	35	No	None
7Q	Kingdom Hall of Jehovah's Witness, 8137 S Western Ave., (773) 476-7789	52	non-operable windows, air-conditioning, brick building	25	54	29	55	30	54	29	No	None
8A	Thurgood Marshall Library, 7506 South Racine Ave., (312) 747-5927	52	non-operable windows, air-conditioning, brick building, outside reading garden/seating area	25	70	45	72	47	71	46	No	None
8F	1st Corinthian Baptist Church, 7500 S. Halsted St.	52	non-operable windows, air-conditioning, brick building	25	69	44	71	46	70	45	No	None
8J	Celestial Praise Ministries, 7526 S. Halsted St., (773) 779-1100	52	operable windows, no visible air-conditioning, brick building	10	56	46	58	48	57	47	No	None

Table E-3 - General Noise Assessment - Interior Sound Levels

Receptor ID	Receptor Name, Location	FHWA Interior Noise Criterion Leq (dBA)	Window Condition and Building Type (i.e., operable or non-operable windows, air-conditioning, masonry or wood frame)	Noise Reduction Factor ¹ (dBA)	Exterior Existing Predicted Train Noise ² Leq (dBA)	Interior Existing Predicted Train Noise ³ Leq (dBA)	Exterior No Build Predicted Train Noise ² Leq (dBA)	Interior No Build Predicted Train Noise ³ Leq (dBA)	Exterior Build Predicted Train Noise ² Leq (dBA)	Interior Build Predicted Train Noise ³ Leq (dBA)	Interior Predicted Build Approach or Exceed 52 dBA?	Level of Interior Noise Impact ⁴
9I	New Light Evangelical Baptist Church, 7426 S. Halsted St., (773) 846-6466	52	non-operable windows, air-conditioning on roof, brick bldg	25	59	34	61	36	61	36	No	None
10I	Mt. Ararat Community Church, 7541 S Halsted St., (773) 874-4670	52	non-operable windows, air-conditioning on roof, brick bldg	25	50	25	52	27	56	31	No	None
10K	Shiloh M.B. Church, 7537 S. Halsted St.	52	operable windows, no visible air conditioning, brick building	10	50	40	52	42	57	47	No	None
11P	Good Hope Missionary Baptist Church, 7101 S Union Ave.	52	non-operable windows, air-conditioning, brick building	25	45	20	53	28	49	24	No	None
11Q	Word of God Life Changing Ministries C.O. G.I.C., 514 W 71st St. (773) 264-2033	52	no windows, air-conditioning, brick building	25	47	22	54	29	50	25	No	None
12I	Parker Elementary Community Academy, 6800 South Stewart Ave. (773) 535-3375 & Amandla Elementary Charter School (773) 396-8022	52	operable windows, no visible air-conditioning, brick building	10	62	52	62	52	64	54	Yes	Impact
12Z	Mount Nebo Baptist Church, 354 W. 71st St., (773) 783-5772	52	non-operable windows, air-conditioning, brick building	25	69	44	69	44	70	45	No	None
14P	First Greater Bethlehem Missionary Baptist Church, 7814 S Lowe Ave.	52	non-operable windows, window unit air-conditioning, brick building	25	58	33	57	32	57	32	No	None
14Q	Mt. Hermon Missionary Baptist Church, 7848 S Normal Ave., (773) 874-3510	52	2 buildings. The sanctuary has non-operable windows, air-conditioning, and a wood frame. The building closer to the tracks, has operable windows, air-conditioning, and is brick.	10	52	42	52	42	53	43	No	None
14R	Pleasant Hill Missionary Baptist Church, 7950 S Normal Ave., (773) 994-4227	52	non-operable windows, air-conditioning, wood frame building	20	51	31	50	30	53	33	No	None
15D	Simeon Career Academy, 8235 S. Vincennes Avenue, (773) 535-3200	52	operable windows, air-conditioning, brick building	10	52	42	53	43	55	45	No	None
17D	Beacon Light Baptist Church, 8803 S. Harvard Ave., (773) 488-6266	52	operable windows, no visible air-conditioning, brick building	10	63	53	66	56	62	52	Yes	Impact
19X	Trinity United Church of Christ., 421 West 95th St., (773) 962-5656	52	operable windows, air-conditioning, brick building	10	79	69	79	69	81	71	Yes	Impact
19Y	The Banner School, 9538 S. Harvard Ave., (773) 568-8115	52	operable windows, air-conditioning, concrete building	10	76	66	76	66	79	69	Yes	Impact
19Z	St. Thaddeus Catholic Church, 9540 S. Harvard Ave., (773) 568-7077	52	non-operable windows, air-conditioning, brick building	25	77	52	77	52	80	55	Yes	Impact

Notes: ¹ Noise reduction factors for each receptor were determined from site visits and FHWA factors in Table 5-1 of the CREATE Methodology.

² Exterior rail noise predicted with the CREATE version of the FTA spreadsheet model.

³ Interior noise levels estimated by subtracting the noise reduction factor from the predicted exterior noise.

⁴ A potential impact would occur if the Interior Predicted Build Train Noise would be 51 dBA or greater, or the increase between Existing and Build would be 14 dBA or greater.

Table E-4 Detailed Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	FTA Impact Level
1E4	2 / Ldn	4	Residential	50	80	80	80	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1F4	2 / Ldn	12	Residential	50	81	81	81	0	Moderate: 1-2 dBA Severe: >2 dBA	No Impact
1I5	2 / Ldn	2	Residential	50	72	72	72	0	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1M7	2 / Ldn	4	Residential	50	86	86	87	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1M8	2 / Ldn	6	Residential	50	80	79	82	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1M11	2 / Ldn	5	Residential	50	78	76	80	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1M14	2 / Ldn	3	Residential	50	74	73	78	4	Moderate: 2-2 dBA Severe: >2 dBA	Severe Impact
1M15	2 / Ldn	7	Residential	50	76	73	78	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1M18	2 / Ldn	7	Residential	50	71	70	74	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1M19	2 / Ldn	7	Residential	50	66	66	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1M20	2 / Ldn	10	Residential	50	74	71	77	3	Moderate: 2-2 dBA Severe: >2 dBA	Severe Impact
1M21	2 / Ldn	4	Residential	50	67	66	68	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1N1	2 / Ldn	10	Residential	50	70	68	72	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1N6	2 / Ldn	1	Residential	50	63	61	65	2	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1N7	2 / Ldn	2	Residential	50	60	58	61	1	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
1N9	2 / Ldn	4	Residential	50	85	83	87	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1N10	2 / Ldn	14	Residential	50	72	70	74	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1N12	2 / Ldn	22	Residential	50	71	69	73	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1N13	2 / Ldn	7	Residential	50	67	66	68	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
1O1	2 / Ldn	1	Residential	50	79	75	81	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
1O2	2 / Ldn	2	Residential	50	74	71	76	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact

Table E-4 Detailed Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	FTA Impact Level
1O3	2 / Ldn	5	Residential	50	65	63	68	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
1O4	2 / Ldn	5	Residential	50	65	64	66	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
1O5	2 / Ldn	6	Residential	50	75	75	79	4	Moderate: 1-2 dBA Severe: >2 dBA	Severe Impact
1O6	2 / Ldn	1	Residential	50	65	65	68	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
1P1	2 / Ldn	12	Residential	50	75	73	78	3	Moderate: 1-2 dBA Severe: >2 dBA	Severe Impact
1P2	2 / Ldn	6	Residential	50	73	71	75	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact
1P3	2 / Ldn	4	Residential	50	71	70	74	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1P4	2 / Ldn	7	Residential	50	73	70	75	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact
1P5	2 / Ldn	3	Residential	50	79	79	82	3	Moderate: 1-2 dBA Severe: >2 dBA	Severe Impact
1P6	2 / Ldn	7	Residential	50	73	73	76	3	Moderate: 2-2 dBA Severe: >2 dBA	Severe Impact
1Q2	2 / Ldn	9	Residential	50	62	62	65	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
1Q3	2 / Ldn	8	Residential	50	61	61	64	3	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
1Q6	2 / Ldn	12	Residential	50	70	67	73	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1Q7	2 / Ldn	1	Residential	50	64	64	67	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
1Q8	2 / Ldn	7	Residential	50	62	62	64	2	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1Q9	2 / Ldn	4	Residential	50	69	69	72	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1Q11	2 / Ldn	6	Residential	50	64	64	65	1	Moderate: 3-4 dBA Severe: >4 dBA	No Impact
1Q12	2 / Ldn	7	Residential	50	55	55	57	2	Moderate: 4-7 dBA Severe: >7 dBA	No Impact
1R2	2 / Ldn	12	Residential	50	57	57	62	5	Moderate: 4-6 dBA Severe: >6 dBA	Moderate Impact
1U2	2 / Ldn	7	Residential	50	72	72	74	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
1U3	2 / Ldn	12	Residential	50	71	72	74	3	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact

Table E-4 Detailed Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	FTA Impact Level
2A	2 / Ldn	5	Residential	50	79	79	81	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2B	2 / Ldn	8	Residential	50	73	73	75	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact
2C	2 / Ldn	9	Residential	50	69	69	71	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
2D	2 / Ldn	7	Residential	50	87	87	89	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2E	2 / Ldn	62	Residential	50	79	79	81	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2F	2 / Ldn	77	Residential	50	75	75	77	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2G	2 / Ldn	38	Residential	50	70	70	72	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
2H	2 / Ldn	8	Residential	50	83	83	85	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2I	2 / Ldn	16	Residential	50	77	77	78	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
2J	2 / Ldn	26	Residential	50	71	72	73	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
2K	2 / Ldn	19	Residential	50	66	67	68	2	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
2L	2 / Ldn	93	Residential	50	66	67	69	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
2M	2 / Ldn	5	Residential	50	65	66	68	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
2N	2 / Ldn	8	Residential	50	63	64	66	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
2P	2 / Ldn	2	Residential	50	72	73	73	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
2R	2 / Ldn	3	Residential	50	70	71	72	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
3A	2 / Ldn	5	Residential	51	80	80	82	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
3B	2 / Ldn	11	Residential	51	73	73	75	2	Moderate: 2-2 dBA Severe: >2 dBA	Moderate Impact
3C	2 / Ldn	10	Residential	51	70	70	72	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
3D	2 / Ldn	9	Residential	51	66	66	68	2	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
3F	2 / Ldn	3	Residential	51	66	67	69	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact

Table E-4 Detailed Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	FTA Impact Level
3G	2 / Ldn	4	Residential	51	60	61	64	4	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
3H	2 / Ldn	6	Residential	51	58	59	61	3	Moderate: 3-6 dBA Severe: >6 dBA	Moderate Impact
3M	2 / Ldn	33	Residential	51	61	62	65	4	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
9E	2 / Ldn	18	Residential	50	74	75	75	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
10A	3 / Leq	-	Open Space	52	62	63	68	6	Moderate: 5-8 dBA Severe: >8 dBA	Moderate Impact
10B	2 / Ldn	3	Residential	50	63	64	68	5	Moderate: 3-4 dBA Severe: >4 dBA	Severe Impact
10C	2 / Ldn	4	Residential	50	59	60	64	5	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
10D	2 / Ldn	11	Residential	50	57	58	62	5	Moderate: 4-6 dBA Severe: >6 dBA	Moderate Impact
10E	2 / Ldn	31	Residential	50	70	71	75	5	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact
10F	2 / Ldn	17	Residential	50	63	64	67	4	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
10G	2 / Ldn	13	Residential	50	59	60	63	4	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
10H	2 / Ldn	15	Residential	50	56	57	60	4	Moderate: 4-7 dBA Severe: >7 dBA	Moderate Impact
11B	2 / Ldn	35	Residential	48	63	64	68	5	Moderate: 3-4 dBA Severe: >4 dBA	Severe Impact
11C	2 / Ldn	16	Residential	48	58	59	63	5	Moderate: 3-6 dBA Severe: >6 dBA	Moderate Impact
11M	2 / Ldn	9	Residential	48	61	64	65	4	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
11N	2 / Ldn	8	Residential	48	52	54	57	5	Moderate: 5-9 dBA Severe: >9 dBA	Moderate Impact
11O	2 / Ldn	5	Residential	48	53	54	63	10	Moderate: 5-8 dBA Severe: >8 dBA	Severe Impact
12C	2 / Ldn	90	Residential	50	65	65	67	2	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
12U	2 / Ldn	12	Residential	50	54	54	63	9	Moderate: 4-8 dBA Severe: >8 dBA	Severe Impact
13C	2 / Ldn	11	Residential	53	65	66	69	4	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
13D	2 / Ldn	17	Residential	53	58	59	66	8	Moderate: 3-6 dBA Severe: >6 dBA	Severe Impact

Table E-4 Detailed Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	FTA Impact Level
13E	2 / Ldn	21	Residential	53	62	62	65	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
14L	2 / Ldn	38	Residential	50	63	65	69	6	Moderate: 3-4 dBA Severe: >4 dBA	Severe Impact
14M	2 / Ldn	20	Residential	50	56	57	60	4	Moderate: 4-7 dBA Severe: >7 dBA	Moderate Impact
14N	2 / Ldn	11	Residential	50	53	54	56	3	Moderate: 5-8 dBA Severe: >8 dBA	No Impact
14W	2 / Ldn	20	Residential	50	51	52	53	2	Moderate: 6-10 dBA Severe: >10 dBA	No Impact
15A	2 / Ldn	13	Residential	56	66	67	67	1	Moderate: 2-4 dBA Severe: >4 dBA	No Impact
17B	2 / Ldn	36	Residential	51	57	57	59	2	Moderate: 4-6 dBA Severe: >6 dBA	No Impact
17C	2 / Ldn	20	Residential	51	64	66	71	7	Moderate: 3-4 dBA Severe: >4 dBA	Severe Impact
18A	2 / Ldn	65	Residential	57	69	71	74	5	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact
18E	2 / Ldn	35	Residential	57	63	65	67	4	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
18F	2 / Ldn	27	Residential	57	58	59	60	2	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
18G	2 / Ldn	21	Residential	57	58	58	59	1	Moderate: 3-6 dBA Severe: >6 dBA	No Impact
18H	2 / Ldn	3	Residential	57	63	64	66	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
18I	2 / Ldn	3	Residential	57	59	60	62	3	Moderate: 3-5 dBA Severe: >5 dBA	Moderate Impact
19AA	2 / Ldn	8	Residential	55	73	72	74	1	Moderate: 2-2 dBA Severe: >2 dBA	No Impact
19AC	2 / Ldn	8	Residential	55	70	69	71	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AF	2 / Ldn	8	Residential	55	77	76	79	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AH	2 / Ldn	4	Residential	55	71	70	72	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AK	2 / Ldn	6	Residential	55	69	68	70	1	Moderate: 2-3 dBA Severe: >3 dBA	No Impact
19AM	2 / Ldn	5	Residential	55	80	79	81	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AP	2 / Ldn	18	Residential	55	82	81	83	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact

Table E-4 Detailed Noise Assessment - Exterior Sound Levels

Receptor	FTA Land Use / Noise Metric	Number of Bldgs. Within Cluster	Existing Land Use	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA			Build Scenario Impacts		
					Existing Train Noise Exposure	No Build Train Noise Exposure	Build Train Noise Exposure	Increase in Overall Noise Exposure - Build over Existing (dBA)	FTA Allowable Increase (dBA)	FTA Impact Level
19AS	2 / Ldn	16	Residential	55	83	82	84	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19AX	2 / Ldn	10	Residential	55	78	77	79	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19BA	2 / Ldn	45	Residential	55	75	74	77	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19D	3 / Leq	-	Open Space	57	74	74	76	2	Moderate: 3-5 dBA Severe: >5 dBA	No Impact
19F	2 / Ldn	12	Residential	55	77	76	78	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19H	2 / Ldn	9	Residential	55	82	81	84	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19I	2 / Ldn	7	Residential	55	75	74	76	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19K	2 / Ldn	6	Residential	55	75	74	77	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19M	3 / Leq	-	Open Space	57	82	82	84	2	Moderate: 2-5 dBA Severe: >5 dBA	Moderate Impact
19N	2 / Ldn	24	Residential	55	77	76	78	1	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19Q	3 / Leq	-	Open Space	57	75	75	77	2	Moderate: 2-5 dBA Severe: >5 dBA	Moderate Impact
19R	2 / Ldn	21	Residential	55	76	75	78	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
19U	3 / Leq	-	Open Space	57	80	80	82	2	Moderate: 2-5 dBA Severe: >5 dBA	Moderate Impact

Table E-5 - Detailed Noise Assessment - Interior Sound Levels

Receptor ID	Receptor Name, Location	FHWA Interior Noise Criterion Leq (dBA)	Window Condition and Building Type (i.e., operable or non-operable windows, air-conditioning, masonry or wood frame)	Noise Reduction Factor ¹ (dBA)	Exterior Existing Predicted Train Noise ² Leq (dBA)	Interior Existing Predicted Train Noise ³ Leq (dBA)	Exterior No Build Predicted Train Noise ² Leq (dBA)	Interior No Build Predicted Train Noise ³ Leq (dBA)	Exterior Build Predicted Train Noise ² Leq (dBA)	Interior Build Predicted Train Noise ³ Leq (dBA)	Interior Predicted Build Approach or Exceed 52 dBA?	Level of Interior Noise Impact ⁴
1N11	Ashburn Community Elementary School, 8300 S. St. Louis Avenue First Floor	52	operable windows, no visible air-conditioning, brick building	10	68	58	69	59	70	60	Yes	Impact
1N11	Ashburn Community Elementary School, Second Floor	52	operable windows, no visible air-conditioning, brick building	10	68	58	69	59	70	60	Yes	Impact
1N11	Ashburn Community Elementary School, Third Floor	52	operable windows, no visible air-conditioning, brick building	10	68	58	69	59	70	60	Yes	Impact
6I	God's Way Apostolic Faith Church, 7435 S. Ashland Ave.	52	operable windows, air-conditioning on roof, brick bldg	10	64	54	65	55	64	54	Yes	Impact
6J	Freedom Temple Church of God in Christ., 1459 W. 74th St.	52	operable windows, air-conditioning, concrete building, daycare play area outside	10	62	52	64	54	62	52	Yes	Impact
12I	Parker Elementary Community Academy, 6800 South Stewart Ave. & Amandla Elementary Charter School First Floor	52	operable windows, no visible air-conditioning, brick building	10	59	49	59	49	61	51	Yes	Impact
12I	Parker Elementary Community Academy & Amandla Elementary Charter School Second Floor	52	operable windows, no visible air-conditioning, brick building	10	60	50	60	50	61	51	Yes	Impact
12I	Parker Elementary Community Academy & Amandla Elementary Charter School Third Floor	52	operable windows, no visible air-conditioning, brick building	10	60	50	60	50	62	52	Yes	Impact
12I	Parker Elementary Community Academy & Amandla Elementary Charter School Fourth Floor	52	operable windows, no visible air-conditioning, brick building	10	61	51	61	51	62	52	Yes	Impact
17D	Beacon Light Baptist Church, 8803 S. Harvard Ave.	52	operable windows, no visible air-conditioning, brick building	10	60	50	62	52	59	49	No	None
19X	Trinity United Church of Christ., 421 West 95th St. First Floor	52	operable windows, air-conditioning, brick building	10	79	69	79	69	81	71	Yes	Impact
19X	Trinity United Church of Christ., 421 West 95th St. Second Floor	52	operable windows, air-conditioning, brick building	10	79	69	79	69	81	71	Yes	Impact
19Y	The Banner School, 9538 S. Harvard Ave.	52	operable windows, air-conditioning, concrete building	10	76	66	76	66	79	69	Yes	Impact
19Z	St. Thaddeus Catholic Church, 9540 S. Harvard Ave.	52	non-operable windows, air-conditioning, brick building	25	73	48	73	48	76	51	Yes	Impact

Notes: ¹ Noise reduction factors for each receptor were determined from site visits and FHWA factors in Table 5-1 of the CREATE Methodology.

² Exterior rail noise predicted with the CREATE version of the FTA spreadsheet model.

³ Interior noise levels estimated by subtracting the noise reduction factor from the predicted exterior noise.

⁴ A potential impact would occur if the Interior Predicted Build Train Noise would be 51 dBA or greater, or the increase between Existing and Build would be 14 dBA or greater.

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier A)

Receptor	1P5	1P6	1Q7	1Q9	1R2
Potential Barrier Location	Along right of way, bottom of barrier at ground level				
Noise Metric	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	82 dBA	76 dBA	67 dBA	72 dBA	62 dBA
Noise Wall Height	17 ft (above ground level)				
Approximate Noise Wall Length	3,750 ft				
Unit Noise Wall Cost ⁽¹⁾	\$37.50/sq-ft				
Total Noise Wall Cost	\$2,390,625				
Future CREATE Program Train Noise Reduction ⁽²⁾	15 dBA	10 dBA	11 dBA	8 dBA	10 dBA
Number of Benefited Receptors ⁽³⁾	3	7	1	4	12
Cost per Benefited Receptor	\$88,542				
FTA Impact Level	Severe	Severe	Moderate	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 2-2 dBA Severe: >2 dBA	Moderate: 3-4 dBA Severe: >4 dBA	Moderate: 2-3 dBA Severe: >3 dBA	Moderate: 4-6 dBA Severe: >6 dBA
Predicted Increase in Noise Exposure (Build over Existing)	3 dBA	3 dBA	3 dBA	3 dBA	5 dBA
Predicted Noise Increase over Moderate Impact Threshold	3 dBA	2 dBA	1 dBA	2 dBA	2 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$30,000	\$30,000	\$5,000	\$10,000	\$10,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No				
Is Noise Wall Likely to be Implemented?	No				
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>					

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier C)

Receptor	1U2	1U3
Potential Barrier Location	Along right of way, bottom of barrier at ground level	
Noise Metric	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	74 dBA	74 dBA
Noise Wall Height	14 ft (above ground level)	
Approximate Noise Wall Length	1,040 ft	
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft	
Total Noise Wall Cost	\$364,000	
Future CREATE Program Train Noise Reduction ⁽²⁾	12 dBA	6 dBA
Number of Benefited Receptors ⁽³⁾	7	12
Cost per Benefited Receptor	\$19,158	
FTA Impact Level	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 2-3 dBA Severe: >3 dBA	Moderate: 2-3 dBA Severe: >3 dBA
Predicted Increase in Noise Exposure (Build over Existing)	2 dBA	3 dBA
Predicted Noise Increase over Moderate Impact Threshold	1 dBA	2 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$5,000	\$10,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No	
Is Noise Wall Likely to be Implemented?	No	

(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.

(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.

(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.

(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.

(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier D)

Receptor	2A	2B	2C	2R
Potential Barrier Location	Outside of right of way, bottom of barrier on retaining wall/fill			
Noise Metric	L _{dn}	L _{dn}	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	81 dBA	75 dBA	71 dBA	72 dBA
Noise Wall Height	19 ft (above retaining wall/fill)			
Approximate Noise Wall Length	1,125 ft			
Unit Noise Wall Cost ⁽¹⁾	\$37.50/sq-ft			
Total Noise Wall Cost	\$801,563			
Future CREATE Program Train Noise Reduction ⁽²⁾	13 dBA	10 dBA	8 dBA	7 dBA
Number of Benefited Receptors ⁽³⁾	5	4	4	3
Cost per Benefited Receptor	\$50,098			
FTA Impact Level	Moderate	Moderate	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 2-2 dBA Severe: >2 dBA	Moderate: 2-3 dBA Severe: >3 dBA	Moderate: 2-3 dBA Severe: >3 dBA
Predicted Increase in Noise Exposure (Build over Existing)	2 dBA	2 dBA	2 dBA	2 dBA
Predicted Noise Increase over Moderate Impact Threshold	2 dBA	1 dBA	1 dBA	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$10,000	\$5,000	\$5,000	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No			
Is Noise Wall Likely to be Implemented?	No			

(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.

(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.

(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.

(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.

(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier E)

Receptor	2H	2I	2J	2K	2N	3A	3B	3C	3D	3F	3G	3H
Potential Barrier Location	Outside of right of way, bottom of barrier at ground level											
Noise Metric	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	85 dBA	78 dBA	73 dBA	68 dBA	66 dBA	82 dBA	75 dBA	72 dBA	68 dBA	69 dBA	64 dBA	61 dBA
Noise Wall Height	18 ft (above ground level)											
Approximate Noise Wall Length	1,866 ft											
Unit Noise Wall Cost ⁽¹⁾	\$37.50/sq-ft											
Total Noise Wall Cost	\$1,259,550											
Future CREATE Program Train Noise Reduction ⁽²⁾	15 dBA	12 dBA	9 dBA	6 dBA	6 dBA	15 dBA	12 dBA	9 dBA	7 dBA	13 dBA	11 dBA	9 dBA
Number of Benefited Receptors ⁽³⁾	8	14	21	9	2	5	11	10	9	3	4	6
Cost per Benefited Receptor	\$12,348.53											
FTA Impact Level	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 2-3 dBA Severe: >3 dBA	Moderate: 2-4 dBA Severe: >4 dBA	Moderate: 3-4 dBA Severe: >4 dBA	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 2-2 dBA Severe: >2 dBA	Moderate: 2-3 dBA Severe: >3 dBA	Moderate: 2-4 dBA Severe: >4 dBA	Moderate: 2-4 dBA Severe: >4 dBA	Moderate: 3-5 dBA Severe: >5 dBA	Moderate: 3-6 dBA Severe: >6 dBA
Predicted Increase in Noise Exposure (Build over Existing)	2 dBA	1 dBA	2 dBA	2 dBA	3 dBA	2 dBA	2 dBA	2 dBA	2 dBA	3 dBA	4 dBA	3 dBA
Predicted Noise Increase over Moderate Impact Threshold	2 dBA	1 dBA	1 dBA	1 dBA	1 dBA	2 dBA	1 dBA	1 dBA	1 dBA	2 dBA	2 dBA	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$10,000	\$5,000	\$5,000	\$5,000	\$5,000	\$10,000	\$5,000	\$5,000	\$5,000	\$10,000	\$10,000	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No											
Is Noise Wall Likely to be Implemented?	No											
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>												

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier F)

Receptor	3M
Potential Barrier Location	Along right of way, bottom of barrier at ground level
Noise Metric	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	65 dBA
Noise Wall Height	20 ft (above ground level)
Approximate Noise Wall Length	2,010 ft
Unit Noise Wall Cost ⁽¹⁾	\$37.50/sq-ft
Total Noise Wall Cost	\$1,507,500
Future CREATE Program Train Noise Reduction ⁽²⁾	12 dBA
Number of Benefited Receptors ⁽³⁾	30
Cost per Benefited Receptor	\$50,250
FTA Impact Level	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 3-5 dBA Severe: >5 dBA
Predicted Increase in Noise Exposure (Build over Existing)	4 dBA
Predicted Noise Increase over Moderate Impact Threshold	2 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$10,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No
Is Noise Wall Likely to be Implemented?	No
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>	

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier G)

Receptor	10A (park)	10B	10C	10D	10E	10F	10G	10H
Potential Barrier Location	Along right of way, bottom of barrier on retaining wall/fill							
Noise Metric	L _{eq}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	68 dBA	68 dBA	64 dBA	62 dBA	75 dBA	67 dBA	63 dBA	60 dBA
Noise Wall Height	13 ft (above retaining wall/fill)							
Approximate Noise Wall Length	1,841 ft							
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft plus \$575,856 for civil work							
Total Noise Wall Cost	\$1,174,181							
Future CREATE Program Train Noise Reduction ⁽²⁾	7 dBA	6 dBA	4 dBA	4 dBA	14 dBA	9 dBA	8 dBA	6 dBA
Number of Benefited Receptors ⁽³⁾	1 unit	3	1	0	27	17	13	1
Cost per Benefited Receptor	\$18,938							
FTA Impact Level	Moderate	Severe	Moderate	Moderate	Severe	Moderate	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 5-8 dBA Severe: >8 dBA	Moderate: 3-4 dBA Severe: >4 dBA	Moderate: 3-5 dBA Severe: >5 dBA	Moderate: 4-6 dBA Severe: >6 dBA	Moderate: 2-3 dBA Severe: >3 dBA	Moderate: 3-4 dBA Severe: >4 dBA	Moderate: 3-5 dBA Severe: >5 dBA	Moderate: 4-7 dBA Severe: >7 dBA
Predicted Increase in Noise Exposure (Build over Existing)	6 dBA	5 dBA	5 dBA	5 dBA	5 dBA	4 dBA	4 dBA	4 dBA
Predicted Noise Increase over Moderate Impact Threshold	2 dBA	3 dBA	3 dBA	2 dBA	4 dBA	2 dBA	2 dBA	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$10,000	\$30,000	\$15,000	\$10,000	\$30,000	\$10,000	\$10,000	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	Yes							
Is Noise Wall Likely to be Implemented?	Yes							

(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.

(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.

(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.

(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.

(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier H)

Receptor	11B	11C
Potential Barrier Location	Along right of way, bottom of barrier on retaining wall/fill)	
Noise Metric	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	68 dBA	63 dBA
Noise Wall Height	15 ft (above retaining wall/fill)	
Approximate Noise Wall Length	1,378 ft	
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft plus \$134,100 for civil work	
Total Noise Wall Cost	\$650,850	
Future CREATE Program Train Noise Reduction ⁽²⁾	9 dBA	8 dBA
Number of Benefited Receptors ⁽³⁾	35	16
Cost per Benefited Receptor	\$12,762	
FTA Impact Level	Severe	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 3-4 dBA Severe: >4 dBA	Moderate: 3-6 dBA Severe: >6 dBA
Predicted Increase in Noise Exposure (Build over Existing)	5 dBA	5 dBA
Predicted Noise Increase over Moderate Impact Threshold	3 dBA	3 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$30,000	\$15,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	Yes	
Is Noise Wall Likely to be Implemented?	Yes	
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>		

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier J)

Receptor	13C	13D	13E
Potential Barrier Location	Along flyover, adjacent to rail		
Noise Metric	L _{dn}	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	69 dBA	66 dBA	65 dBA
Noise Wall Height	10 ft (above flyover structure)		
Approximate Noise Wall Length	1,400 ft		
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft plus \$2,240,000 of civil work		
Total Noise Wall Cost	\$2,590,000		
Future CREATE Program Train Noise Reduction ⁽²⁾	1 dBA	5 dBA	2 dBA
Number of Benefited Receptors ⁽³⁾	0	17	0
Cost per Benefited Receptor	\$152,353		
FTA Impact Level	Moderate	Severe	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 2-4 dBA Severe: >4 dBA	Moderate: 3-6 dBA Severe: >6 dBA	Moderate: 3-4 dBA Severe: >4 dBA
Predicted Increase in Noise Exposure (Build over Existing)	4 dBA	8 dBA	3 dBA
Predicted Noise Increase over Moderate Impact Threshold	3 dBA	6 dBA	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$15,000	\$30,000	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	No	Yes	No
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No		
Is Noise Wall Likely to be Implemented?	No		
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>			

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier L)

Receptor	12C
Potential Barrier Location	Along right of way, bottom of barrier on retaining wall
Noise Metric	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	67 dBA
Noise Wall Height	12 ft (above retaining wall)
Approximate Noise Wall Length	1,000 ft
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft
Total Noise Wall Cost	\$300,000
Future CREATE Program Train Noise Reduction ⁽²⁾	13 dBA
Number of Benefited Receptors ⁽³⁾	13
Cost per Benefited Receptor	\$23,077
FTA Impact Level	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 2-4 dBA Severe: >4 dBA
Predicted Increase in Noise Exposure (Build over Existing)	2 dBA
Predicted Noise Increase over Moderate Impact Threshold	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No
Is Noise Wall Likely to be Implemented?	No
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>	

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier M)

Receptor	14L	14M
Potential Barrier Location	Along right of way, bottom of barrier varies between embankment and ground level	
Noise Metric	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	69 dBA	60 dBA
Noise Wall Height	15 ft (above embankment/ground level)	
Approximate Noise Wall Length	1,970 ft	
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft plus \$352,299 for bridge widening	
Total Noise Wall Cost	\$1,091,049	
Future CREATE Program Train Noise Reduction ⁽²⁾	11 dBA	5 dBA
Number of Benefited Receptors ⁽³⁾	38	18
Cost per Benefited Receptor	\$19,483	
FTA Impact Level	Severe	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 3-4 dBA Severe: >4 dBA	Moderate: 4-7 dBA Severe: >7 dBA
Predicted Increase in Noise Exposure (Build over Existing)	6 dBA	4 dBA
Predicted Noise Increase over Moderate Impact Threshold	4 dBA	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$30,000	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	Yes	
Is Noise Wall Likely to be Implemented?	Yes	
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>		

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier N)

Receptor	17C
Potential Barrier Location	Along right of way, bottom of barrier at edge of access road embankment
Noise Metric	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	71 dBA
Noise Wall Height	15 ft (above embankment)
Approximate Noise Wall Length	1,438 ft
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft
Total Noise Wall Cost	\$539,250
Future CREATE Program Train Noise Reduction ⁽²⁾	12 dBA
Number of Benefited Receptors ⁽³⁾	20
Cost per Benefited Receptor	\$26,963
FTA Impact Level	Severe
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 3-4 dBA Severe: >4 dBA
Predicted Increase in Noise Exposure (Build over Existing)	7 dBA
Predicted Noise Increase over Moderate Impact Threshold	5 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$30,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	Yes
Is Noise Wall Likely to be Implemented?	Yes

(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.

(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.

(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.

(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.

(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier O)

Receptor	18A
Potential Barrier Location	At edge of ROW
Noise Metric	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	74 dBA
Noise Wall Height	22 ft
Approximate Noise Wall Length	1,853 ft
Unit Noise Wall Cost ⁽¹⁾	\$37.50/sq-ft plus \$496,725 for bridge widening
Total Noise Wall Cost	\$2,025,450
Future CREATE Program Train Noise Reduction ⁽²⁾	13 dBA
Number of Benefited Receptors ⁽³⁾	57
Cost per Benefited Receptor	\$35,534
FTA Impact Level	Severe
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 2-3 dBA Severe: >3 dBA
Predicted Increase in Noise Exposure (Build over Existing)	5 dBA
Predicted Noise Increase over Moderate Impact Threshold	4 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$30,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No
Is Noise Wall Likely to be Implemented?	No

(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.

(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.

(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.

(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.

(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier P)

Receptor	18E	18H	18I
Potential Barrier Location	At edge of embankment		
Noise Metric	L _{dn}	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	67 dBA	66 dBA	62 dBA
Noise Wall Height	25 ft		
Approximate Noise Wall Length	1,254 ft		
Unit Noise Wall Cost ⁽¹⁾	\$37.50/sq-ft		
Total Noise Wall Cost	\$1,175,625		
Future CREATE Program Train Noise Reduction ⁽²⁾	8 dBA	n/a	n/a
Number of Benefited Receptors ⁽³⁾	32	0	0
Cost per Benefited Receptor	\$36,738		
FTA Impact Level	Moderate	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 3-4 dBA Severe: >4 dBA	Moderate: 3-4 dBA Severe: >4 dBA	Moderate: 3-5 dBA Severe: >5 dBA
Predicted Increase in Noise Exposure (Build over Existing)	4 dBA	3 dBA	3 dBA
Predicted Noise Increase over Moderate Impact Threshold	2 dBA	1 dBA	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$10,000	\$5,000	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No		
Is Noise Wall Likely to be Implemented?	No		
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>			

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier R)

Receptor	19AS	19AX	19BA
Potential Barrier Location	Along right of way, bottom of barrier at ground level		
Noise Metric	L _{dn}	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	84 dBA	79 dBA	77 dBA
Noise Wall Height	15 ft (above ground level)		
Approximate Noise Wall Length	2,251 ft		
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft		
Total Noise Wall Cost	\$844,125		
Future CREATE Program Train Noise Reduction ⁽²⁾	11 dBA	10 dBA	11 dBA
Number of Benefited Receptors ⁽³⁾	12	10	45
Cost per Benefited Receptor	\$12,599		
FTA Impact Level	Moderate	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 1-2 dBA Severe: >2 dBA
Predicted Increase in Noise Exposure (Build over Existing)	1 dBA	1 dBA	2 dBA
Predicted Noise Increase over Moderate Impact Threshold	1 dBA	1 dBA	2 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$5,000	\$5,000	\$10,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No		
Is Noise Wall Likely to be Implemented?	No		
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>			

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier S)

Receptor	19M (Park)	19N	19AP
Potential Barrier Location	Along right of way, bottom of barrier at ground level		
Noise Metric	L_{eq}	L_{dn}	L_{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	84 dBA	78 dBA	83 dBA
Noise Wall Height	15 ft (above ground level)		
Approximate Noise Wall Length	2,055 ft		
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft		
Total Noise Wall Cost	\$770,625		
Future CREATE Program Train Noise Reduction ⁽²⁾	14 dBA	8 dBA	10 dBA
Number of Benefited Receptors ⁽³⁾	1	24	15
Cost per Benefited Receptor	\$19,266		
FTA Impact Level	Moderate	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 2-5 dBA Severe: >5 dBA	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 1-2 dBA Severe: >2 dBA
Predicted Increase in Noise Exposure (Build over Existing)	2 dBA	1 dBA	1 dBA
Predicted Noise Increase over Moderate Impact Threshold	1 dBA	1 dBA	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$5,000	\$5,000	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No		
Is Noise Wall Likely to be Implemented?	No		
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?</p>			

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier U)

Receptor	19U (Park)
Potential Barrier Location	Outside of right of way, bottom of barrier at ground level
Noise Metric	L_{eq}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	82 dBA
Noise Wall Height	15 ft (above ground level)
Approximate Noise Wall Length	1,181 ft
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft
Total Noise Wall Cost	\$442,875
Future CREATE Program Train Noise Reduction ⁽²⁾	14 dBA
Number of Benefited Receptors ⁽³⁾	1
Cost per Benefited Receptor	\$442,875
FTA Impact Level	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 2-5 dBA Severe: >5 dBA
Predicted Increase in Noise Exposure (Build over Existing)	2 dBA
Predicted Noise Increase over Moderate Impact Threshold	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No
Is Noise Wall Likely to be Implemented?	No

(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.

(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.

(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.

(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.

(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?

Table E-6 - Abatement Evaluation - Exterior Noise Levels (Barrier V)

Receptor	19Q (Park)	19R
Potential Barrier Location	Along right-of-way, bottom of barrier at ground level	
Noise Metric	L_{eq}	L_{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	77 dBA	78 dBA
Noise Wall Height	15 ft (above ground level)	
Approximate Noise Wall Length	1,170 ft	
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft	
Total Noise Wall Cost	\$438,750	
Future CREATE Program Train Noise Reduction ⁽²⁾	11 dBA	14 dBA
Number of Benefited Receptors ⁽³⁾	1	21
Cost per Benefited Receptor	\$19,943	
FTA Impact Level	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 2-5 dBA Severe: >5 dBA	Moderate: 1-2 dBA Severe: >2 dBA
Predicted Increase in Noise Exposure (Build over Existing)	2 dBA	2 dBA
Predicted Noise Increase over Moderate Impact Threshold	1 dBA	2 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$5,000	\$10,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No	
Is Noise Wall Likely to be Implemented?	No	

(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.

(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.

(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.

(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.

(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?

Table E-7 - Abatement Evaluation - Interior Noise Levels (Barrier K)

Receptor	121 Parker School First Floor	121 Parker School Second Floor	121 Parker School Third Floor	121 Parker School Fourth Floor
Potential Barrier Location	Along right of way, bottom of barrier at ground level			
Noise Metric	L_{eq}	L_{eq}	L_{eq}	L_{eq}
Noise Wall Height	15 ft (above ground level)	20 ft (above ground level)	26 ft (above ground level)	32 ft (above ground level)
Approximate Noise Wall Length	800 ft			
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft	\$37.50/sq-ft	\$37.50/sq-ft	\$50.00/sq-ft
Total Noise Wall Cost	\$300,000	\$600,000	\$780,000	\$1,280,000
CREATE Program Train Noise Reduction with Noise Wall ⁽²⁾	6 dBA At first floor	6 dBA At second floor	5 dBA At third floor	6 dBA At fourth floor
Predicted Interior Build Scenario CREATE Program Train Noise (Without Barrier)	51 dBA	51 dBA	52 dBA	52 dBA
Predicted Interior Existing Scenario CREATE Program Train Noise	49 dBA	50 dBA	50 dBA	51 dBA
Number of Decibels Interior Build Scenario Exceeds Existing Scenario, at Floor of Receptor	2 dBA	1 dBA	2 dBA	1 dBA
Reasonable Mitigation Cost per Benefited Unit at Floor of Receptor ⁽³⁾	\$10,000	\$5,000	\$10,000	\$5,000
Number of Benefited Receptors ⁽⁴⁾	1st floor = 7 units	1st floor = 7 units <u>2nd floor = 4 units</u> Total = 11 units	1st floor = 7 units 2nd floor = 4 units <u>3rd floor = 9 units</u> Total = 20 units	1st floor = 7 units 2nd floor = 4 units 3rd floor = 9 units <u>4th floor = 7 units</u> Total = 27 units
Reasonable Mitigation Cost per Floor	1st: 7*10,000 = \$70,000	1st: 7*10,000 = \$70,000 2nd: 4*5,000 = \$20,000	1st: 7*10,000 = \$70,000 2nd: 4*5,000 = \$20,000 3rd: 9*10,000 = \$90,000	1st: 7*10,000 = \$70,000 2nd: 4*5,000 = \$20,000 3rd: 9*10,000 = \$90,000 4th: 7*5,000 = \$35,000
Total Reasonable Mitigation Cost	\$70,000	\$90,000	\$180,000	\$215,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No	No	No	No
Is Noise Wall Likely to be Implemented?	No	No	No	No
(1) Noise-wall costs based on \$25 00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50 00 per square foot up to 45 feet tall. (2) Noise reduction goal of a feasible reduction of 5 dBA or more in interior CREATE Program train noise. (3) For interior impacts, noise walls must not exceed a cost of \$5,000 per benefited receptor for each decibel exceeding the Existing Scenario CREATE Program Train Noise, up to a total limit of \$30,000 per benefited receptor. (4) Benefited Units are units facing the tracks that would receive a noise reduction of at least 5 dBA in CREATE Program train noise. (5) Does "Total Reasonable Mitigation Cost" exceed the "Total Noise Wall Cost"?				

Table E-7 - Abatement Evaluation - Interior Noise Levels (Barrier Q)

Receptor	19X (Church)
Potential Barrier Location	Along right of way, bottom of barrier at ground level
Noise Metric	L_{eq}
Noise Wall Height	15 ft (above ground level)
Approximate Noise Wall Length	689 ft
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft
Total Noise Wall Cost	\$258,375
CREATE Program Train Noise Reduction with Noise Wall ⁽²⁾	12 dBA
Predicted Interior Build Scenario CREATE Program Train Noise (Without Barrier)	71 dBA
Predicted Interior Existing Scenario CREATE Program Train Noise	69 dBA
Number of Decibels Interior Build Scenario Exceeds Existing Scenario, at Floor of Receptor	2 dBA
Reasonable Mitigation Cost per Benefited Unit at Floor of Receptor ⁽³⁾	\$10,000
Number of Benefited Receptors ⁽⁴⁾	1 church
Reasonable Mitigation Cost per Floor	\$10,000
Total Reasonable Mitigation Cost	\$10,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No
Is Noise Wall Likely to be Implemented?	No
<p>(1) Noise-wall costs based on \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. (2) Noise reduction goal of a feasible reduction of 5 dBA or more in interior CREATE Program train noise. (3) For interior impacts, noise walls must not exceed a cost of \$5,000 per benefited receptor for each decibel exceeding the Existing Scenario CREATE Program Train Noise, up to a total limit of \$30,000 per benefited receptor. (4) Benefited Units are units facing the tracks that would receive a noise reduction of at least 5 dBA in CREATE Program train noise. (5) Does "Total Reasonable Mitigation Cost" exceed the "Total Noise Wall Cost"?</p>	

Table E-7 - Abatement Evaluation - Interior Noise Levels (Barrier W)

Receptor	6I	6J
Potential Barrier Location	Along right of way, at edge of embankment	
Noise Metric	L_{eq}	L_{eq}
Noise Wall Height	15 ft (above embankment)	
Approximate Noise Wall Length	1,264 ft	
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft plus \$335,585 for civil work	
Total Noise Wall Cost	\$809,585	
CREATE Program Train Noise Reduction with Noise Wall ⁽²⁾	11 dBA	10 dBA
Predicted Interior Build Scenario CREATE Program Train Noise (Without Barrier)	54 dBA	52 dBA
Predicted Interior Existing Scenario CREATE Program Train Noise	54 dBA	52 dBA
Number of Decibels Interior Build Scenario Exceeds Existing Scenario, at Floor of Receptor	0 dBA	0 dBA
Reasonable Mitigation Cost per Benefited Unit at Floor of Receptor ⁽³⁾	\$0	\$0
Number of Benefited Receptors ⁽⁴⁾	1 church	1 church
Reasonable Mitigation Cost per Floor	\$0	\$0
Total Reasonable Mitigation Cost	\$0	
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No	
Is Noise Wall Likely to be Implemented?	No	
<p>(1) Noise-wall costs based on \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. (2) Noise reduction goal of a feasible reduction of 5 dBA or more in interior CREATE Program train noise. (3) For interior impacts, noise walls must not exceed a cost of \$5,000 per benefited receptor for each decibel exceeding the Existing Scenario CREATE Program Train Noise, up to a total limit of \$30,000 per benefited receptor. (4) Benefited Units are units facing the tracks that would receive a noise reduction of at least 5 dBA in CREATE Program train noise. (5) Does "Total Reasonable Mitigation Cost" exceed the "Total Noise Wall Cost"?</p>		

Table E-8 - Abatement Evaluation - Exterior and Interior Impact Combination (Barrier T)

Receptor	19F	19H	19I	19K	19Y (Banner School)	19Z (St. Thaddeus Catholic Church)	19AM	19AF
Receptor Type	Exterior	Exterior	Exterior	Exterior	Interior	Interior	Exterior	Exterior
Potential Barrier Location	Along right of way, bottom of barrier at ground level							
Noise Metric	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{eq}	L _{eq}	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	78 dBA	84 dBA	76 dBA	77 dBA	N/A	N/A	81 dBA	79 dBA
Interior CREATE Build Train Noise Level	N/A	N/A	N/A	N/A	69 dBA	51 dBA	N/A	N/A
Noise Wall Height	15 ft (above ground level)							
Approximate Noise Wall Length	2,125 ft							
Unit Noise Wall Cost ⁽¹⁾	\$25.00/sq-ft							
Total Noise Wall Cost	\$796,875							
Future CREATE Program Train Noise Reduction ⁽²⁾	9 dBA	13 dBA	9 dBA	9 dBA	10 dBA	10 dBA	12 dBA	13 dBA
Number of Benefited Receptors ⁽³⁾	12	4	1	6	10 classrooms	1 church	5	5
Cost per Benefited Receptor	\$18,111							
FTA Impact Level	Moderate	Moderate	Moderate	Moderate	Interior Impact	Interior Impact	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 1-2 dBA Severe: >2 dBA	N/A	N/A	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 1-2 dBA Severe: >2 dBA
Predicted Increase in Noise Exposure (Build over Existing)	1 dBA	2 dBA	1 dBA	2 dBA	3 dBA	3 dBA	1 dBA	2 dBA
Predicted Noise Increase over Moderate Impact Threshold	1 dBA	2 dBA	1 dBA	2 dBA	N/A	N/A	1 dBA	2 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$5,000	\$10,000	\$5,000	\$10,000	\$15,000	\$15,000	\$5,000	\$10,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No							
Is Noise Wall Likely to be Implemented?	No							

(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.

(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.

(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.

(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.

(5) Does the average "Reasonable Cost per Benefited Residence" exceed the "Cost per Benefited Receptor"?

Table E-9 - Construction Noise - General Assessment - Exterior Sound Levels

Receptor ID	FTA Land Use / Noise Metric	No. of Dwelling Units within Cluster	Existing Land Use	Average of Distance Offset from Existing Alignment to Temporary Tracks, feet	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA		Construction Scenario Impacts		
						Existing Train Noise Exposure	Construction Train Noise Exposure	Increase in Overall Noise Exposure - Construction over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
4A	3 / Leq	-	School	-86	52	68	70	2	Moderate 4-6 dBA Severe >6 dBA	No
4B	2 / Ldn	36	Residential	-93	50	62	62	0	Moderate 3-4 dBA Severe >4 dBA	No
5A	2 / Ldn	31	Residential	+99	48	77	74	-3	Moderate 1-2 dBA Severe >2 dBA	No
5AA	2 / Ldn	42	Residential	+99	48	65	64	-1	Moderate 2-4 dBA Severe >4 dBA	No
5AB	2 / Ldn	79	Residential	+99	48	61	61	0	Moderate 3-5 dBA Severe >5 dBA	No
5AC	2 / Ldn	44	Residential	+91	48	68	67	-1	Moderate 2-3 dBA Severe >3 dBA	No
5AD	2 / Ldn	118	Residential	+99	48	65	64	-1	Moderate 2-4 dBA Severe >4 dBA	No
5AE	2 / Ldn	51	Residential	+67	48	64	64	0	Moderate 3-4 dBA Severe >4 dBA	No
5AF	2 / Ldn	65	Residential	+67	48	61	61	0	Moderate 3-5 dBA Severe >5 dBA	No
5AG	2 / Ldn	24	Residential	-99	48	64	65	1	Moderate 3-4 dBA Severe >4 dBA	No
5AH	2 / Ldn	36	Residential	-99	48	60	61	1	Moderate 3-5 dBA Severe >5 dBA	No
5AI	2 / Ldn	25	Residential	-99	48	67	68	1	Moderate 2-3 dBA Severe >3 dBA	No
5AJ	2 / Ldn	40	Residential	-99	48	63	64	1	Moderate 3-4 dBA Severe >4 dBA	No
5B	2 / Ldn	42	Residential	+99	48	69	67	-2	Moderate 2-3 dBA Severe >3 dBA	No
5C	2 / Ldn	12	Residential	+67	48	73	70	-3	Moderate 2-2 dBA Severe >2 dBA	No
5D	2 / Ldn	47	Residential	+67	48	73	71	-2	Moderate 2-2 dBA Severe >2 dBA	No
5E	2 / Ldn	41	Residential	+67	48	68	67	-1	Moderate 2-3 dBA Severe >3 dBA	No
5F	2 / Ldn	11	Residential	-99	48	78	83	5	Moderate 1-2 dBA Severe >2 dBA	Severe Impact
5G	2 / Ldn	15	Residential	-99	48	70	73	3	Moderate 2-3 dBA Severe >3 dBA	Moderate Impact
5H	2 / Ldn	13	Residential	-99	48	67	69	2	Moderate 2-3 dBA Severe >3 dBA	Moderate Impact
5I	2 / Ldn	33	Residential	-67	48	72	73	1	Moderate 2-3 dBA Severe >3 dBA	No
5J	2 / Ldn	29	Residential	-67	48	66	67	1	Moderate 2-4 dBA Severe >4 dBA	No
5L	2 / Ldn	46	Residential	+99	48	79	77	-2	Moderate 1-2 dBA Severe >2 dBA	No
5M	2 / Ldn	40	Residential	+99	48	72	71	-1	Moderate 2-3 dBA Severe >3 dBA	No
5N	2 / Ldn	13	Residential	-99	48	80	84	4	Moderate 1-2 dBA Severe >2 dBA	Severe Impact
5O	2 / Ldn	14	Residential	-99	48	74	76	2	Moderate 2-2 dBA Severe >2 dBA	Moderate Impact
5P	2 / Ldn	17	Residential	-99	48	70	72	2	Moderate 2-3 dBA Severe >3 dBA	Moderate Impact
5Q	2 / Ldn	16	Residential	-91	48	75	77	2	Moderate 1-2 dBA Severe >2 dBA	Moderate Impact
5R	2 / Ldn	19	Residential	-91	48	69	70	1	Moderate 2-3 dBA Severe >3 dBA	No
5S	2 / Ldn	27	Residential	+55	48	73	69	-4	Moderate 2-2 dBA Severe >2 dBA	No
5T	2 / Ldn	30	Residential	+55	48	60	59	-1	Moderate 3-5 dBA Severe >5 dBA	No
5U	2 / Ldn	27	Residential	+55	48	56	55	-1	Moderate 4-7 dBA Severe >7 dBA	No
5V	2 / Ldn	34	Residential	-54	48	61	62	1	Moderate 3-5 dBA Severe >5 dBA	No
5W	2 / Ldn	39	Residential	-67	48	55	56	1	Moderate 4-7 dBA Severe >7 dBA	No
5X	2 / Ldn	78	Residential	-67	48	53	53	0	Moderate 5-8 dBA Severe >8 dBA	No
5Y	2 / Ldn	64	Residential	-67	48	63	63	0	Moderate 3-4 dBA Severe >4 dBA	No
5Z	2 / Ldn	41	Residential	-91	48	66	67	1	Moderate 2-4 dBA Severe >4 dBA	No
6A	2 / Ldn	17	Residential	-83	48	75	78	3	Moderate 1-2 dBA Severe >2 dBA	Severe Impact
6A-2 ¹	2 / Ldn	12	Residential	-83	48	72	76	4	Moderate 2-3 dBA Severe >3 dBA	Severe Impact
6B	2 / Ldn	22	Residential	-83	48	66	67	1	Moderate 2-4 dBA Severe >4 dBA	No
6C	2 / Ldn	13	Residential	-76	48	63	63	0	Moderate 3-4 dBA Severe >4 dBA	No
7A	2 / Ldn	45	Residential	-40	51	66	67	1	Moderate 2-4 dBA Severe >4 dBA	No
7B	2 / Ldn	26	Residential	-45	51	57	58	1	Moderate 4-6 dBA Severe >6 dBA	No
7C	2 / Ldn	44	Residential	-50	51	55	55	0	Moderate 4-7 dBA Severe >7 dBA	No

¹An additional receptor 6A-2 was added to better predict the effects of Temporary Barrier 2. This receptor is only included in the temporary barrier analysis.

Table E-10 - Construction Noise - General Assessment - Interior Sound Levels

Receptor ID	Receptor Name, Location	FHWA Interior Noise Criterion Leq (dBA)	Window Condition and Building Type (i.e., operable or non-operable windows, air-conditioning, masonry or wood frame)	Noise Reduction Factor ¹ (dBA)	Exterior Existing Predicted Train Noise ² Leq (dBA)	Interior Existing Predicted Train Noise ³ Leq (dBA)	Exterior Construction Predicted Train Noise ² Leq (dBA)	Interior Construction Predicted Train Noise ³ Leq (dBA)	Interior Predicted Build Approach or Exceed 52 dBA?	Level of Interior Noise Impact ⁴
5K	New St Paul C.O.G.I.C, 2113 West Columbus Ave.	52	operable windows, no visible air conditioning, brick building	10	52	42	57	47	No	None
7O	First Church of Love and Faith, 2140 W 79th St., (773) 224-6800	52	non-operable windows, air-conditioning on roof, brick bldg	25	59	34	62	37	No	None

Notes: ¹ Noise reduction factors for each receptor were determined from site visits and FHWA factors in Table 5-1 of the CREATE Methodolgy.

² Exterior rail noise predicted with the CREATE version of the FTA spreadsheet model.

³ Interior noise levels estimated by subtracting the noise reduction factor from the predicted exterior noise.

⁴ A potential impact would occur if the Interior Predicted Construction Train Noise would be 51 dBA or greater, or the increase between Existing and Build would be 14 dBA or greater.

Table E-11 - Construction Noise - Detailed Assessment - Exterior Sound Levels

Receptor ID	FTA Land Use / Noise Metric	No. of Dwelling Units within Cluster	Existing Land Use	Average of Distance Offset from Existing Alignment to Temporary Tracks, feet	Background Noise Level, dBA	Predicted Exterior Noise Levels, dBA		Construction Scenario Impacts		
						Existing Train Noise Exposure	Construction Train Noise Exposure	Increase in Overall Noise Exposure - Construction over Existing (dBA)	FTA Allowable Increase (dBA)	Impact Under FTA Criteria
5F	2 / Ldn	11	Residential	-99	48	73	80	7	Moderate: 2-2 dBA Severe: >2 dBA	Severe Impact
5G	2 / Ldn	15	Residential	-99	48	65	68	3	Moderate: 2-4 dBA Severe: >4 dBA	Moderate Impact
5H	2 / Ldn	13	Residential	-99	48	61	63	2	Moderate: 3-5 dBA Severe: >5 dBA	None
5N	2 / Ldn	13	Residential	-99	48	75	81	6	Moderate: 1-2 dBA Severe: >2 dBA	Severe Impact
5O	2 / Ldn	14	Residential	-99	48	68	72	4	Moderate: 2-3 dBA Severe: >3 dBA	Severe Impact
5P	2 / Ldn	17	Residential	-99	48	64	67	3	Moderate: 3-4 dBA Severe: >4 dBA	Moderate Impact
5Q	2 / Ldn	16	Residential	-91	48	75	77	2	Moderate: 1-2 dBA Severe: >2 dBA	Moderate Impact
6A	2 / Ldn	17	Residential	-83	48	72	74	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact
6A-2 ¹	2 / Ldn	12	Residential	-83	48	67	69	2	Moderate: 2-3 dBA Severe: >3 dBA	Moderate Impact

¹An additional receptor, 6A-2, was added to better predict the effects of Temporary Barrier 2. This receptor is only included in the temporary barrier analysis.

Table E-12 - Abatement Evaluation - Exterior Noise Levels (Temporary Barrier-1)

Receptor	5F	5G	5N	5O	5P
Potential Barrier Location	Within ROW				
Noise Metric	L _{dn}	L _{dn}	L _{dn}	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	80 dBA	68 dBA	81 dBA	72 dBA	67 dBA
Noise Wall Height	18 ft (above ground level)				
Approximate Noise Wall Length	1,490 ft				
Unit Noise Wall Cost ⁽¹⁾	\$37.50/sq-ft				
Total Noise Wall Cost	\$1,005,750				
Future CREATE Program Train Noise Reduction ⁽²⁾	12 dBA	7 dBA	12 dBA	7 dBA	5 dBA
Number of Benefited Receptors ⁽³⁾	11	14	6	8	5
Cost per Benefited Receptor	\$22,858				
FTA Impact Level	Severe	Moderate	Severe	Severe	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 2-2 dBA Severe: >2 dBA	Moderate: 2-4 dBA Severe: >4 dBA	Moderate: 1-2 dBA Severe: >2 dBA	Moderate: 2-3 dBA Severe: >3 dBA	Moderate: 3-4 dBA Severe: >4 dBA
Predicted Increase in Noise Exposure (Construction over Existing)	7 dBA	3 dBA	6 dBA	4 dBA	3 dBA
Predicted Noise Increase over Moderate Impact Threshold	6 dBA	2 dBA	6 dBA	3 dBA	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$30,000	\$10,000	\$30,000	\$30,000	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	Yes	Yes	Yes	Yes	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value? ⁽⁵⁾	No				
Is Noise Wall Likely to be Implemented?	No				

(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.

(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.

(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.

(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.

(5) Does "Reasonable Cost per Benefited Value" exceed the "Cost per Benefited Receptor"?

Table E-12 - Abatement Evaluation - Exterior Noise Levels (Temporary Barrier-2)

Receptor	6A	6A-2
Potential Barrier Location	Within ROW	
Noise Metric	L _{dn}	L _{dn}
Overall Build Scenario Noise Level Without Barrier (Future CREATE Program Noise + Background)	74 dBA	69 dBA
Noise Wall Height	18 ft (above fill)	
Approximate Noise Wall Length	855 ft	
Unit Noise Wall Cost ⁽¹⁾	\$37.50/sq-ft	
Total Noise Wall Cost	\$577,125	
Future CREATE Program Train Noise Reduction ⁽²⁾	3 dBA	10 dBA
Number of Benefited Receptors ⁽³⁾	2	12
Cost per Benefited Receptor	\$48,094	
FTA Impact Level	Moderate	Moderate
Allowable Noise Level Increase Under FTA Criteria (Moderate Impact Threshold)	Moderate: 2-3 dBA Severe: >3 dBA	Moderate: 2-3 dBA Severe: >3 dBA
Predicted Increase in Noise Exposure (Construction over Existing)	2 dBA	2 dBA
Predicted Noise Increase over Moderate Impact Threshold	1 dBA	1 dBA
Reasonable Cost Level per Benefited Residence for Decibels Exceeding Moderate Impact Threshold ⁽⁴⁾	\$5,000	\$5,000
Does Noise Wall Achieve Noise Reduction Goal? (minimum 5-dBA reduction)	No	Yes
Does Noise Wall Achieve the Policy Economic Reasonability Value ⁽⁵⁾	No	
Is Noise Wall Likely to be Implemented?	No	
<p>(1) Noise wall costs are based on a \$25.00 per square foot unit cost for walls up to 15 feet tall; \$37.50 per square foot up to 30 feet tall, and \$50.00 per square foot up to 45 feet tall. At R2, the noise wall would be on top of the proposed retaining wall, and the height of the retaining wall was deducted from the overall height of the noise wall to determine the total cost of the noise wall.</p> <p>(2) Noise reduction goal of a feasible reduction of 5 dBA or more in future CREATE Program train noise.</p> <p>(3) Benefited receptor assumed to receive a noise reduction of at least 5 dBA.</p> <p>(4) For "Moderate" Impacts, an upper limit of \$5,000 per dwelling for each decibel exceeding the impact threshold, up to a limit of \$30,000 per dwelling. Minimum of \$5,000 per dwelling for "Noise Level over Allowable" of less than 1 dBA.</p> <p>(5) Does "Reasonable Cost per Benefited Value" exceed the "Cost per Benefited Receptor"?</p>		

Table E-13 – L_{max} Sound Levels

Receptor	Existing				No Build				Build				Increase of L _{max} between Build and Existing
	L _{max} Locos	L _{max} Railcars	L _{max} Horn	L _{max} Train	L _{max} Locos	L _{max} Railcars	L _{max} Horn	L _{max} Train	L _{max} Locos	L _{max} Railcars	L _{max} Horn	L _{max} Train	
1E4	90	95	107	107	90	95	107	107	90	95	107	107	0
1F4	90	95	108	108	90	95	108	108	90	95	108	108	0
1I5	86	89	102	102	86	89	102	102	86	89	102	102	0
1M7	90	96	109	109	90	96	109	109	90	96	109	109	0
1M8	87	91	104	104	87	90	103	103	87	90	103	103	-1
1M11	90	94	107	107	89	94	107	107	89	94	107	107	0
1M14	91	96	109	109	90	95	108	108	90	96	109	109	0
1M15	90	94	107	107	89	93	106	106	89	94	107	107	0
1M18	90	95	108	108	90	95	107	107	90	95	108	108	0
1M19	86	89	102	102	85	88	101	101	86	89	102	102	0
1M20	90	94	107	107	89	94	107	107	89	94	107	107	0
1M21	87	90	103	103	86	90	103	103	87	90	103	103	0
1N1	87	90	103	103	86	90	103	103	87	90	103	103	0
1N6	85	88	101	101	85	88	101	101	85	88	101	101	0
1N7	84	87	100	100	84	87	100	100	84	87	100	100	0
1N9	91	96	109	109	90	95	109	109	90	96	109	109	0
1N10	89	93	106	106	88	92	105	105	89	93	106	106	0
1N11	79	79	100	100	79	79	100	100	79	79	98	98	-2
1N12	89	92	105	105	88	92	105	105	88	92	105	105	0
1N13	87	90	103	103	86	90	103	103	86	90	103	103	0
1O1	90	94	107	107	89	94	107	107	89	94	107	107	0
1O2	89	93	106	106	89	93	106	106	89	93	106	106	0
1O3	87	90	103	103	86	90	103	103	87	90	103	103	0
1O4	86	88	102	102	85	88	101	101	85	88	102	102	0
1O5	85	88	105	105	85	88	105	105	85	89	104	104	-1
1O6	81	81	102	102	81	82	102	102	81	82	102	102	0
1P1	89	93	106	106	89	93	106	106	89	93	106	106	0
1P2	89	93	106	106	88	92	105	105	88	92	105	105	-1
1P3	89	93	106	106	88	93	106	106	89	93	106	106	0
1P4	90	94	107	107	89	94	107	107	89	94	107	107	0
1P5	86	88	108	108	86	88	108	108	87	89	107	107	-1
1P6	83	83	104	104	83	84	104	104	83	84	104	104	0
1Q2	79	80	99	99	79	80	99	99	79	79	98	98	-1
1Q3	79	79	99	99	79	79	99	99	78	78	99	99	0
1Q6	89	92	106	106	88	92	105	105	88	92	105	105	-1
1Q7	85	86	100	100	85	85	100	100	85	86	100	100	0
1Q8	83	83	100	100	83	83	100	100	83	84	99	99	-1
1Q9	82	83	103	103	82	83	103	103	82	83	103	103	0
1Q11	81	81	102	102	81	81	102	102	81	81	101	101	-1
1Q12	79	79	99	99	79	80	99	99	79	79	98	98	-1
1R2	84	85	0	85	84	85	0	85	85	86	0	86	1
1U2	82	85	93	93	82	85	93	93	81	84	94	94	1
1U3	79	83	94	94	79	83	93	93	80	84	94	94	0
2A	85	89	100	100	85	88	100	100	85	89	100	100	0
2B	83	86	100	100	83	86	99	99	84	87	100	100	0
2C	82	85	98	98	82	85	98	98	82	85	98	98	0
2D	88	93	106	106	88	93	106	106	88	93	106	106	0
2E	86	90	103	103	86	90	103	103	86	90	103	103	0
2F	84	87	100	100	84	87	100	100	84	87	100	100	0
2G	81	85	97	97	81	85	97	97	81	85	97	97	0
2H	87	91	104	104	87	91	104	104	87	92	105	105	1
2I	86	90	103	103	86	90	103	103	86	90	103	103	0
2J	84	87	100	100	84	87	100	100	84	87	100	100	0
2K	81	84	97	97	81	85	97	97	81	85	97	97	0
2L	80	83	96	96	80	83	96	96	80	83	96	96	0

Table E-13 – L_{max} Sound Levels

Receptor	Existing				No Build				Build				Increase of L _{max} between Build and Existing
	L _{max} Locos	L _{max} Railcars	L _{max} Horn	L _{max} Train	L _{max} Locos	L _{max} Railcars	L _{max} Horn	L _{max} Train	L _{max} Locos	L _{max} Railcars	L _{max} Horn	L _{max} Train	
2M	79	83	95	95	79	83	95	95	79	82	95	95	0
2N	80	83	96	96	80	83	96	96	80	83	96	96	0
2P	85	88	98	98	84	88	98	98	85	88	98	98	0
2R	82	85	97	97	82	85	97	97	82	86	97	97	0
3A	88	92	102	102	88	92	102	102	88	92	102	102	0
3B	85	89	101	101	86	89	101	101	86	89	101	101	0
3C	84	87	99	99	84	87	99	99	84	87	99	99	0
3D	82	85	97	97	82	85	97	97	82	85	97	97	0
3F	85	89	0	89	85	88	0	88	85	88	0	88	-1
3G	84	87	0	87	84	88	0	88	84	87	0	87	0
3H	83	86	0	86	83	86	0	86	83	86	0	86	0
3M	82	85	0	85	82	85	0	85	82	85	0	85	0
6I	85	88	0	88	84	87	0	87	85	88	0	88	0
6J	84	87	0	87	83	87	0	87	84	87	0	87	0
9E	86	90	0	90	86	91	0	91	87	92	0	92	2
10A	85	89	0	89	85	89	0	89	86	90	0	90	1
10B	84	87	0	87	85	88	0	88	85	88	0	88	1
10C	82	85	0	85	82	86	0	86	82	86	0	86	1
10D	81	84	0	84	81	85	0	85	81	85	0	85	1
10E	87	91	0	91	88	92	0	92	90	96	0	96	5
10F	84	87	0	87	85	88	0	88	86	89	0	89	2
10G	82	86	0	86	83	86	0	86	84	87	0	87	1
10H	81	84	0	84	82	85	0	85	82	86	0	86	2
11B	84	87	0	87	84	87	0	87	84	87	0	87	0
11C	81	84	0	84	81	84	0	84	81	84	0	84	0
11M	85	90	0	90	86	91	0	91	87	90	0	90	0
11N	82	85	0	85	83	86	0	86	83	87	0	87	2
11O	82	85	0	85	83	86	0	86	86	87	0	87	2
12C	88	79	0	88	88	79	0	88	87	78	0	87	-1
12I	86	75	0	86	86	75	0	86	85	75	0	85	-1
12U	83	82	0	83	83	83	0	83	86	84	0	86	3
13C	85	90	0	90	86	91	0	91	86	90	0	90	0
13D	83	85	0	85	83	86	0	86	87	86	0	87	2
13E	87	84	0	87	87	84	0	87	87	85	0	87	0
14L	84	88	0	88	84	88	0	88	86	90	0	90	2
14M	81	84	0	84	81	84	0	84	83	87	0	87	3
14N	80	83	0	83	80	83	0	83	81	84	0	84	1
14W	79	82	0	82	79	82	0	82	80	82	0	82	0
15A	88	91	0	91	88	91	0	91	88	92	0	92	1
17B	83	87	0	87	83	87	0	87	83	86	0	86	-1
17C	86	90	0	90	86	89	0	89	88	91	0	91	1
17D	87	91	0	91	87	91	0	91	86	90	0	90	-1
18A	87	90	0	90	87	90	0	90	87	90	0	90	0
18E	86	90	0	90	86	89	0	89	86	89	0	89	-1
18F	84	87	0	87	84	87	0	87	84	87	0	87	0
18G	83	87	0	87	83	87	0	87	83	87	0	87	0
18H	86	89	0	89	86	89	0	89	86	89	0	89	0
18I	85	89	0	89	85	88	0	88	85	88	0	88	-1
19AA	87	90	103	103	87	90	104	104	87	90	103	103	0
19AC	86	89	102	102	86	89	102	102	86	89	102	102	0
19AF	89	93	106	106	89	93	106	106	89	93	106	106	0
19AH	86	89	102	102	86	89	102	102	86	89	102	102	0
19AK	85	89	101	101	85	88	101	101	85	88	101	101	0
19AM	89	93	106	106	89	93	106	106	89	93	106	106	0
19AP	87	91	104	104	87	91	104	104	87	91	104	104	0

Table E-13 – L_{max} Sound Levels


Receptor	Existing				No Build				Build				Increase of L _{max} between Build and Existing
	L _{max} Locos	L _{max} Railcars	L _{max} Horn	L _{max} Train	L _{max} Locos	L _{max} Railcars	L _{max} Horn	L _{max} Train	L _{max} Locos	L _{max} Railcars	L _{max} Horn	L _{max} Train	
19AS	89	93	106	106	89	93	106	106	89	93	106	106	0
19AX	87	91	104	104	87	91	104	104	87	91	104	104	0
19BA	88	92	105	105	88	92	105	105	88	92	105	105	0
19D	88	92	106	106	89	93	106	106	89	93	106	106	0
19F	88	91	104	104	88	91	104	104	88	91	104	104	0
19H	90	94	107	107	89	94	107	107	90	94	107	107	0
19I	86	90	103	103	86	90	103	103	86	89	103	103	0
19K	87	91	104	104	87	91	104	104	87	91	104	104	0
19M	89	95	108	108	90	95	108	108	90	95	108	108	0
19N	87	90	103	103	87	90	103	103	87	90	103	103	0
19Q	88	92	105	105	88	92	104	104	89	92	105	105	0
19R	90	94	107	107	90	94	107	107	90	94	107	107	0
19U	90	96	107	107	90	96	107	107	90	96	107	107	0
19X	88	92	105	105	89	93	106	106	89	93	106	106	1
19Y	87	90	103	103	86	90	103	103	87	90	103	103	0
19Z	88	91	104	104	87	91	104	104	88	91	104	104	0
Minimum	79	75	0	82	79	75	0	82	78	75	0	82	-2
Maximum	91	96	109	109	90	96	109	109	90	96	109	109	5



Figure 1 - NEA 1 Receptor and Cluster Map
75th Street CIP EIS - Appendix E



Legend

 **At-Grade Crossing**

 **Monitoring Location**

 **Railroads**

Noise Evaluation Areas (NEA)

 **Institutional**

 **Residential**

Noise Receptors*

 Institutional

 Residential

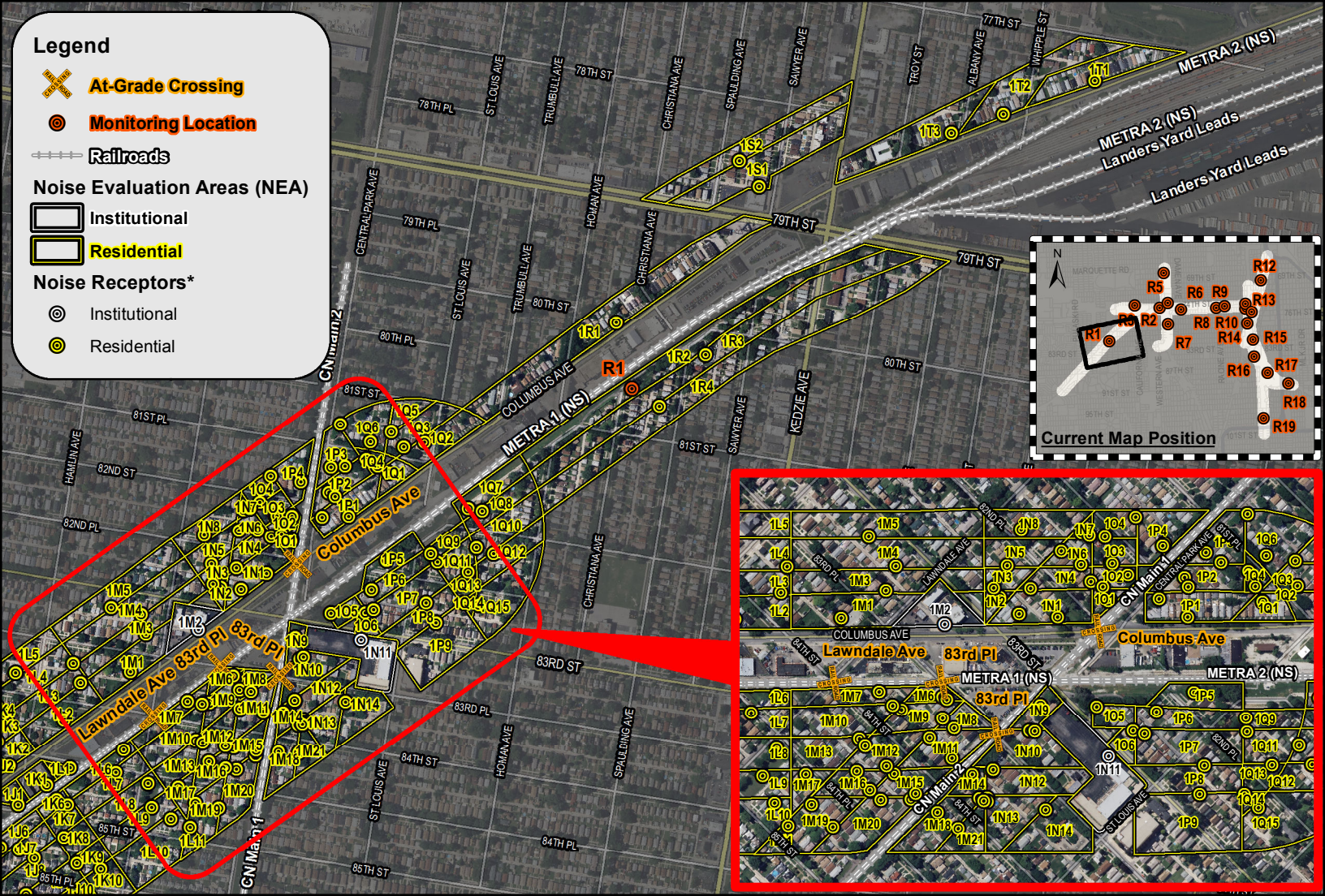
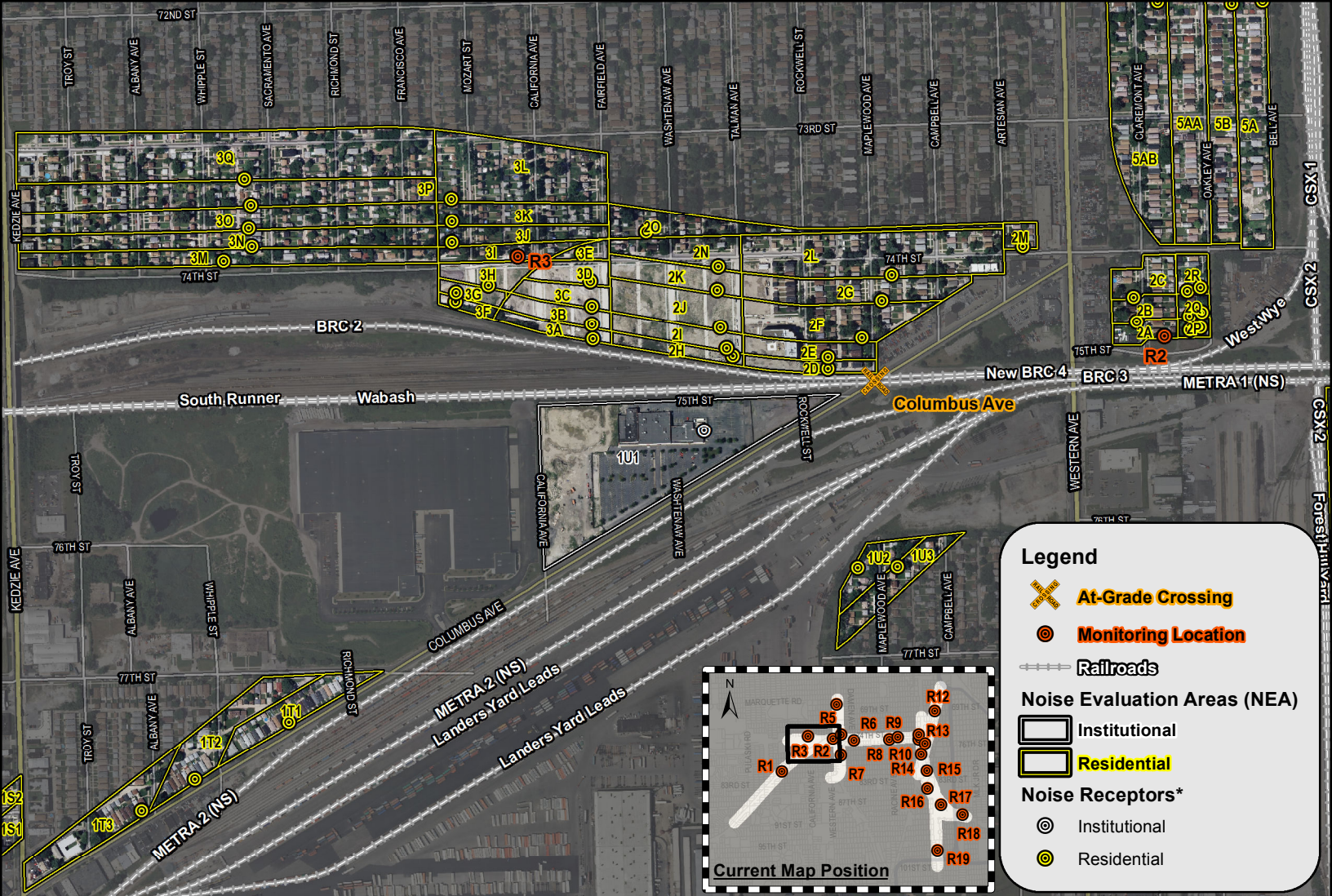


Figure 2 - NEA 1 (continued) Receptor and Cluster Map
75th Street CIP EIS - Appendix E



Scale 0 500 1000 Feet

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

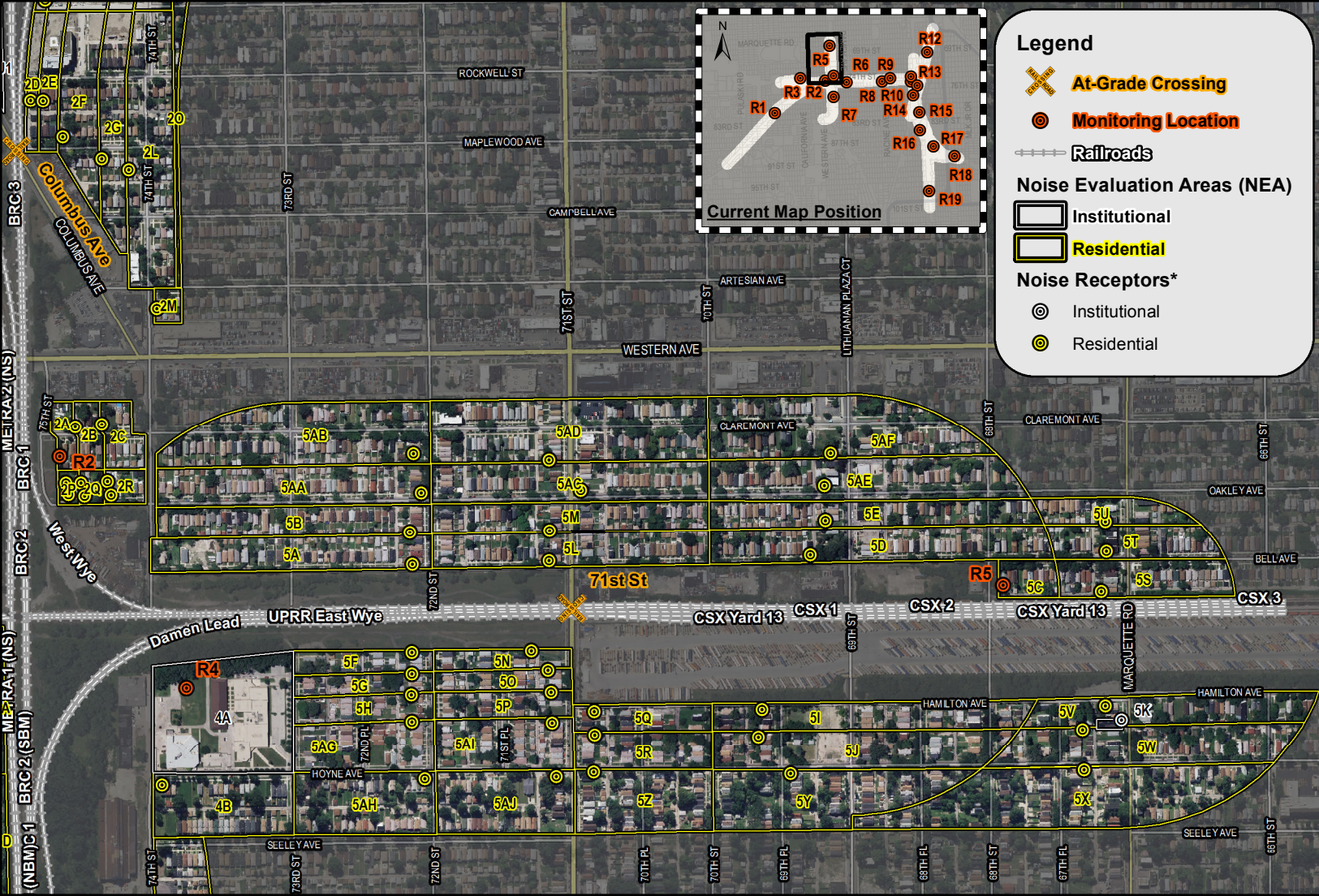


Scale 0 500 1000 Feet

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

Figure 3 - NEA 1, 2, and 3 Receptor and Cluster Map
75th Street CIP EIS - Appendix E





Legend

- At-Grade Crossing**
- Monitoring Location**
- Railroads**
- Noise Evaluation Areas (NEA)**
- Institutional
- Residential**
- Noise Receptors***
- Institutional
- Residential

Current Map Position

Scale 0 500 1000 Feet

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

Figure 4 - NEA 4 and 5 Receptor and Cluster Map
75th Street CIP EIS - Appendix E



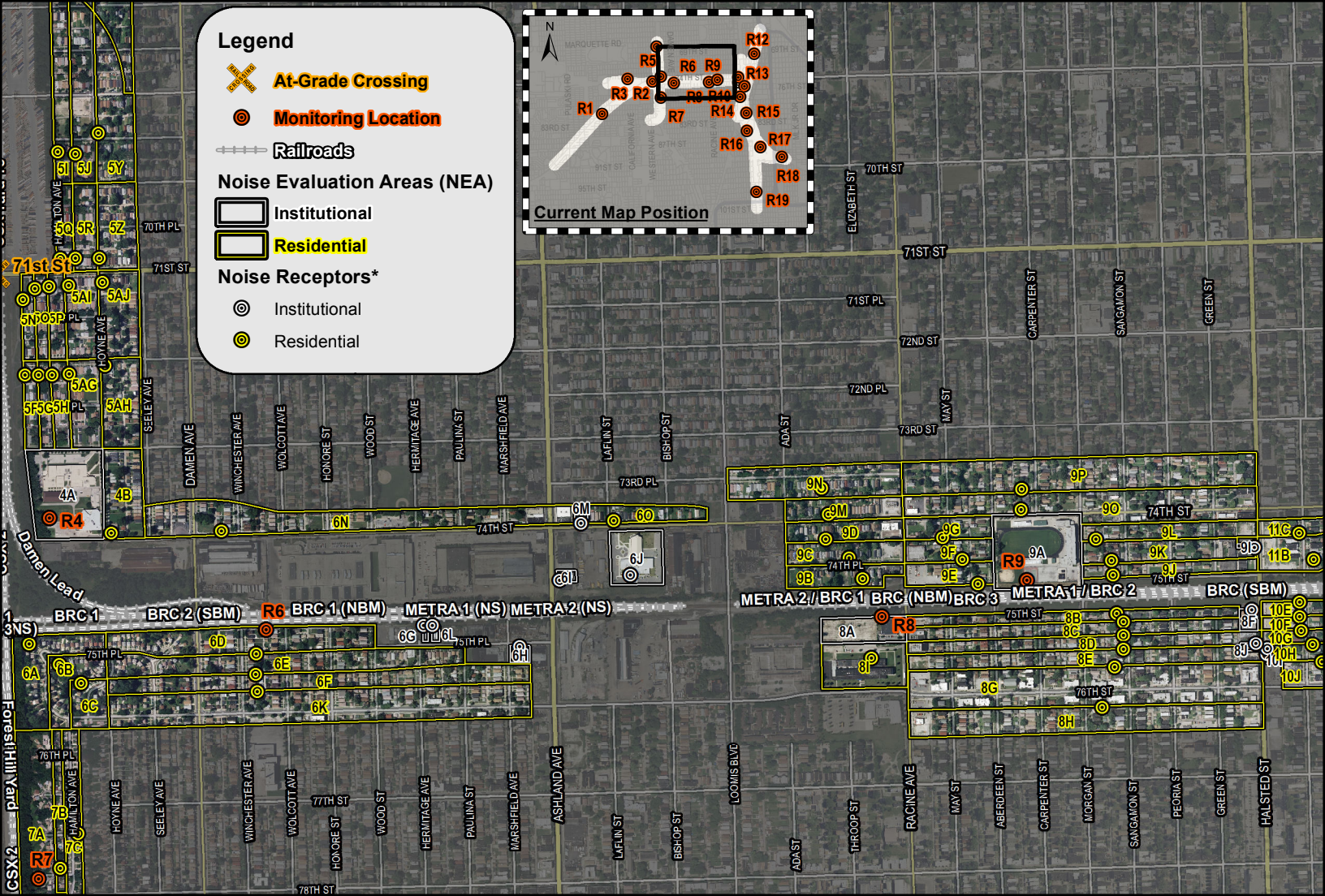
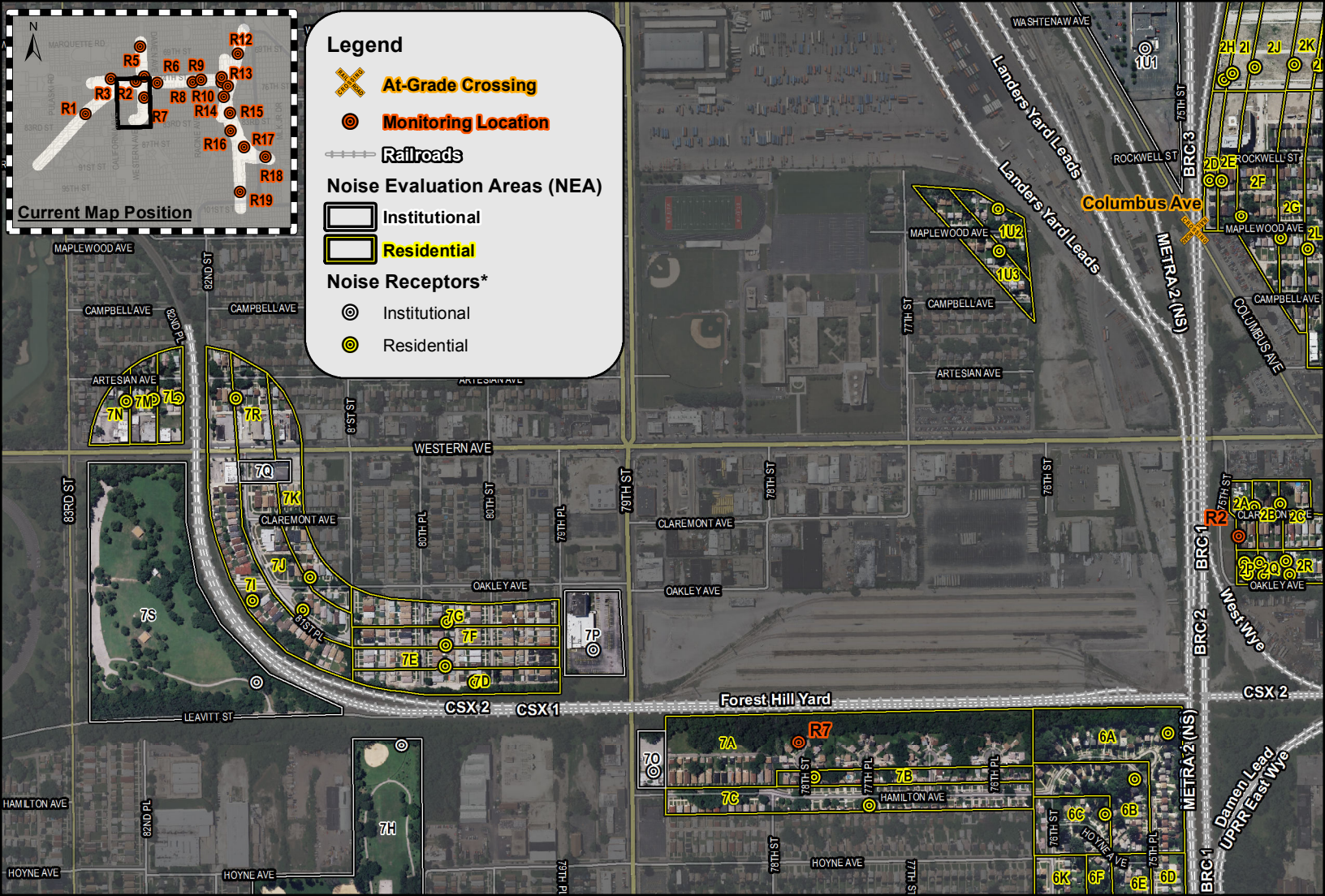


Figure 5 - NEA 6, 8, and 9 Receptor and Cluster Map
75th Street CIP EIS - Appendix E





Legend

- At-Grade Crossing**
- Monitoring Location**
- Railroads**
- Noise Evaluation Areas (NEA)**
 - Institutional
 - Residential
- Noise Receptors***
 - Institutional
 - Residential

Current Map Position

Scale 0 500 1000 Feet

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

Figure 6 - NEA 7 Receptor and Cluster Map
75th Street CIP EIS - Appendix E



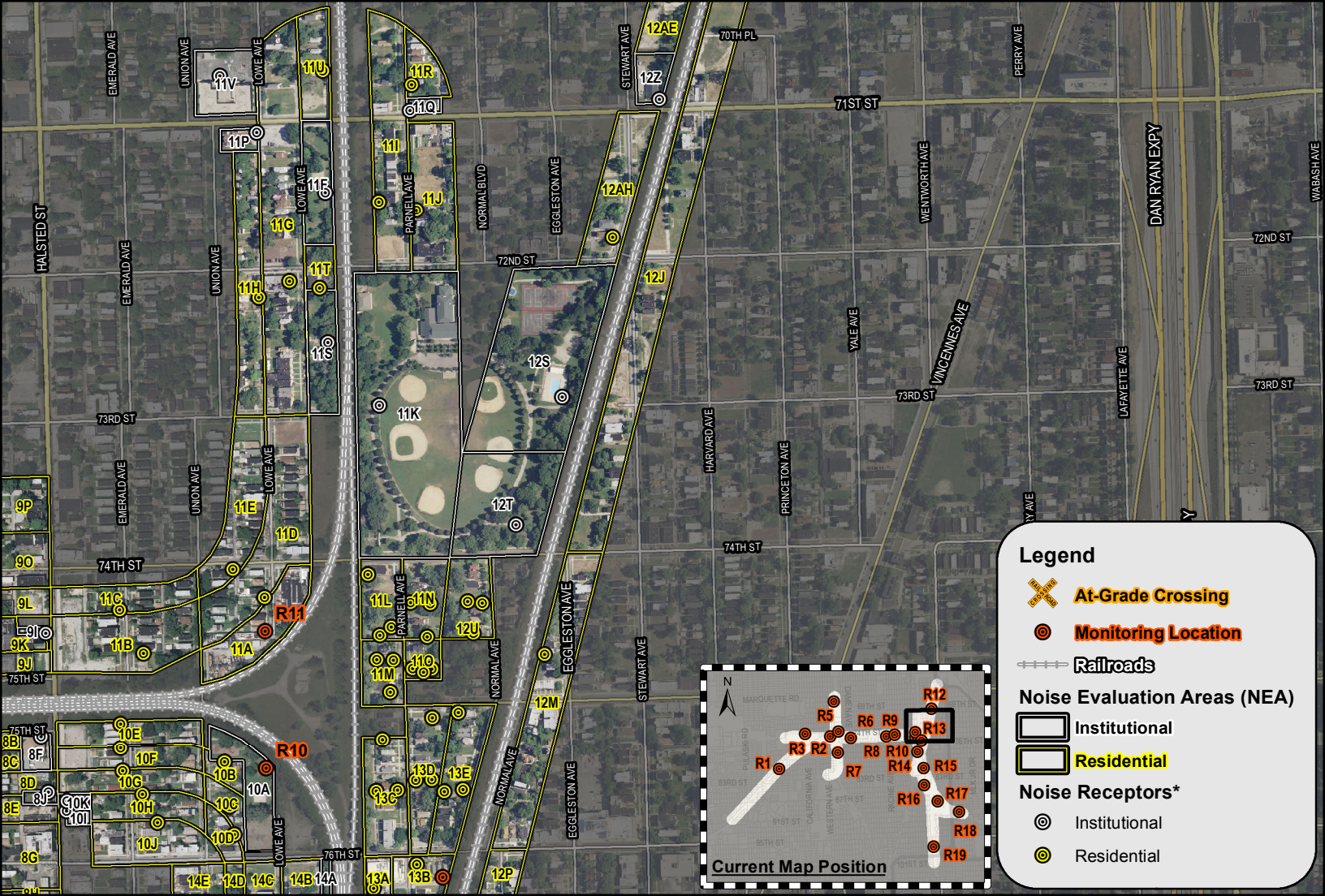


Figure 7 - NEA 10, 11, 12, and 13 Receptor and Cluster Map
75th Street CIP EIS - Appendix E

Legend

At-Grade Crossing

Monitoring Location

Railroads

Noise Evaluation Areas (NEA)

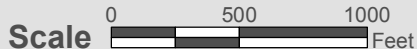
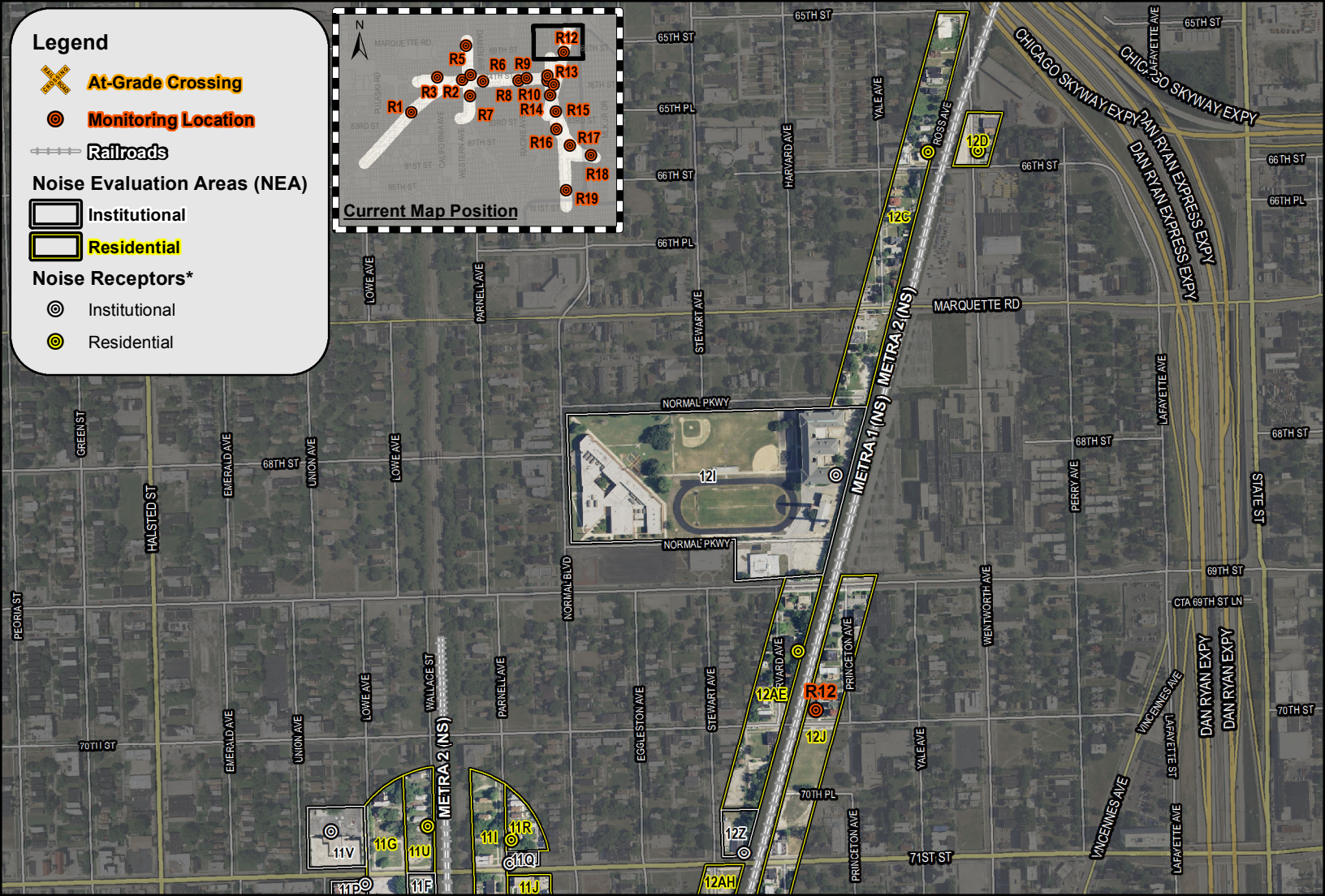
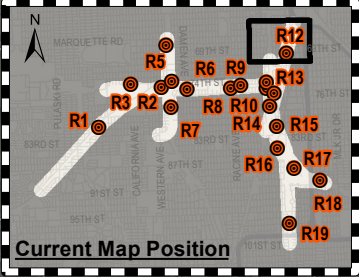
Institutional

Residential

Noise Receptors*

Institutional

Residential



*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

Figure 8 - NEA 12 Receptor and Cluster Map
75th Street CIP EIS - Appendix E



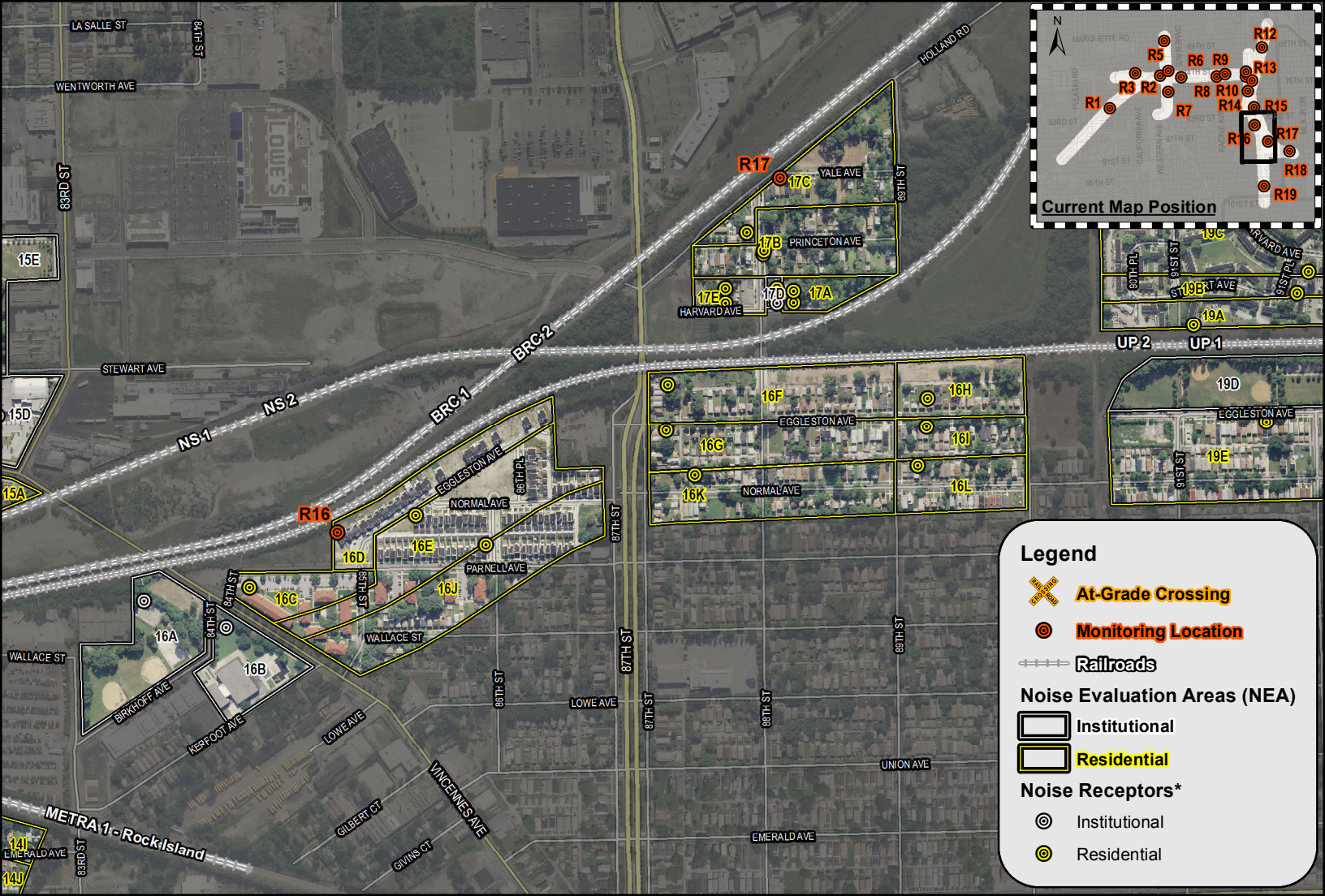


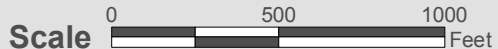
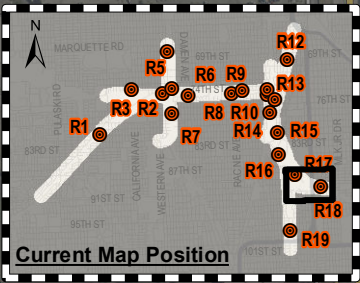
Figure 10 - NEA 16 and 17 Receptor and Cluster Map
75th Street CIP EIS - Appendix E

Scale 0 500 1000 Feet

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

Legend

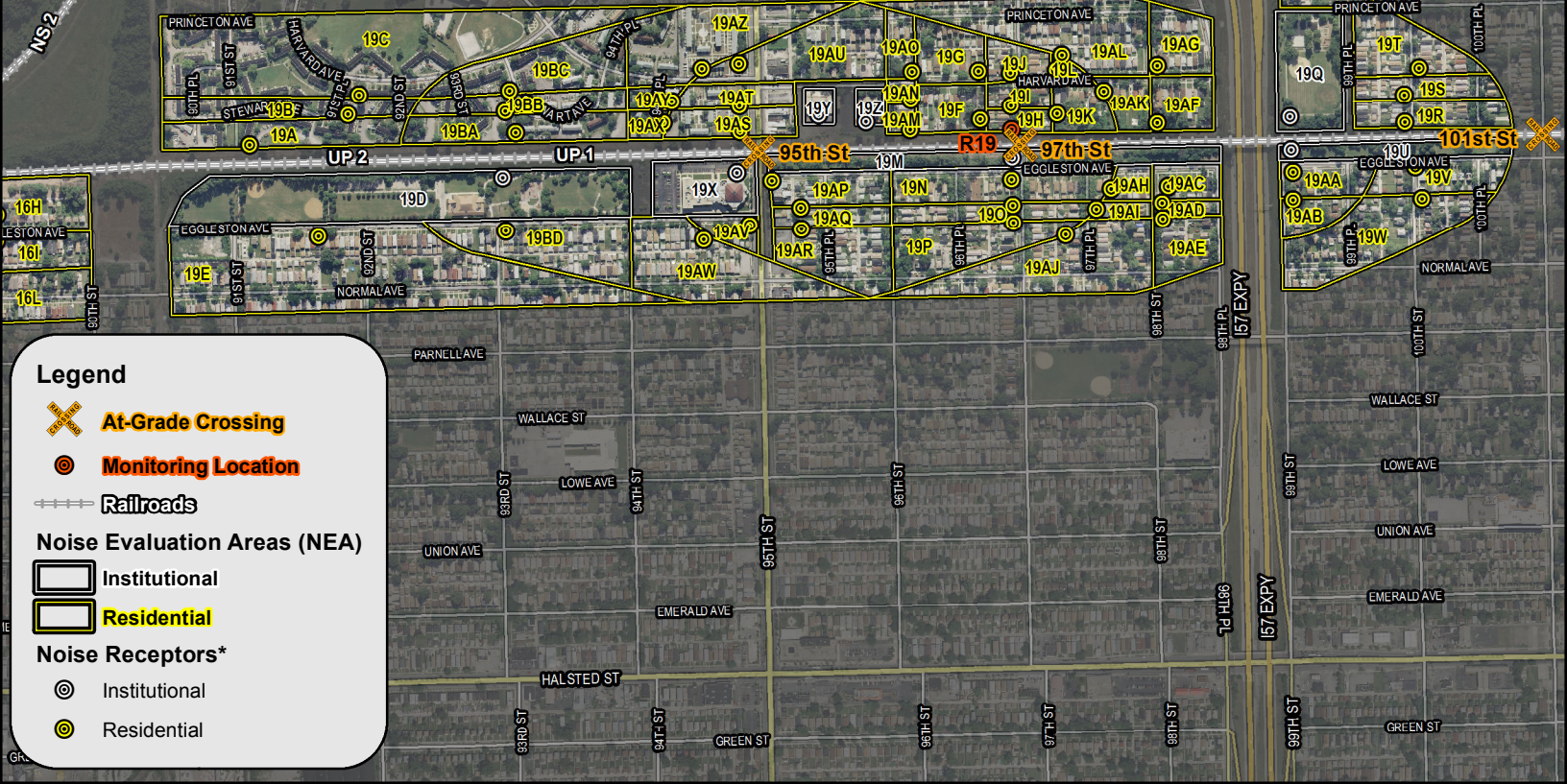
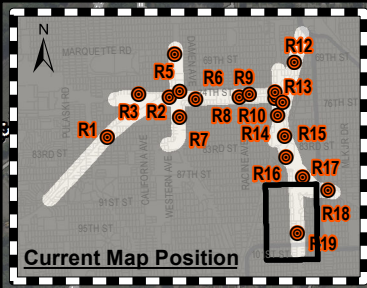
- At-Grade Crossing**
- Monitoring Location**
- Railroads**
- Noise Evaluation Areas (NEA)**
- Institutional**
- Residential**
- Noise Receptors***
- Institutional
- Residential



**Figure 11 - NEA 18 Receptor and Cluster Map
75th Street CIP EIS - Appendix E**



*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.



Legend

- At-Grade Crossing**
- Monitoring Location**
- Railroads**

Noise Evaluation Areas (NEA)

- Institutional**
- Residential**

Noise Receptors*

- Institutional
- Residential

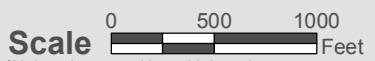
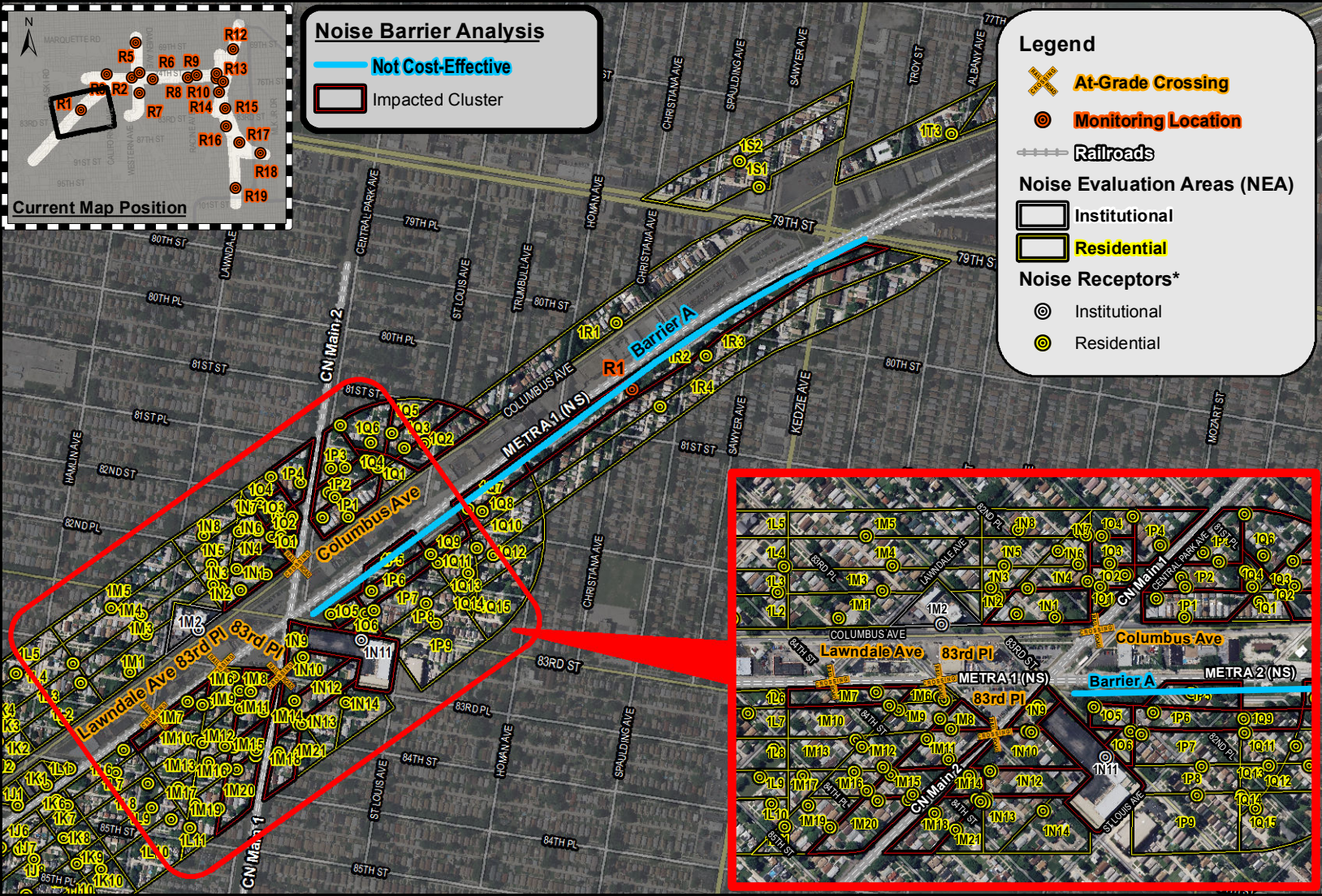


Figure 12 - NEA 19 Receptor and Cluster Map
75th Street CIP EIS - Appendix E



*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.



Noise Barrier Analysis

— Not Cost-Effective

 Impacted Cluster

Legend

- ✕ At-Grade Crossing
- ⊙ Monitoring Location
- +—+—+—+— Railroads
- Noise Evaluation Areas (NEA)**
- Institutional
- Residential
- Noise Receptors***
- ⊙ Institutional
- ⊙ Residential

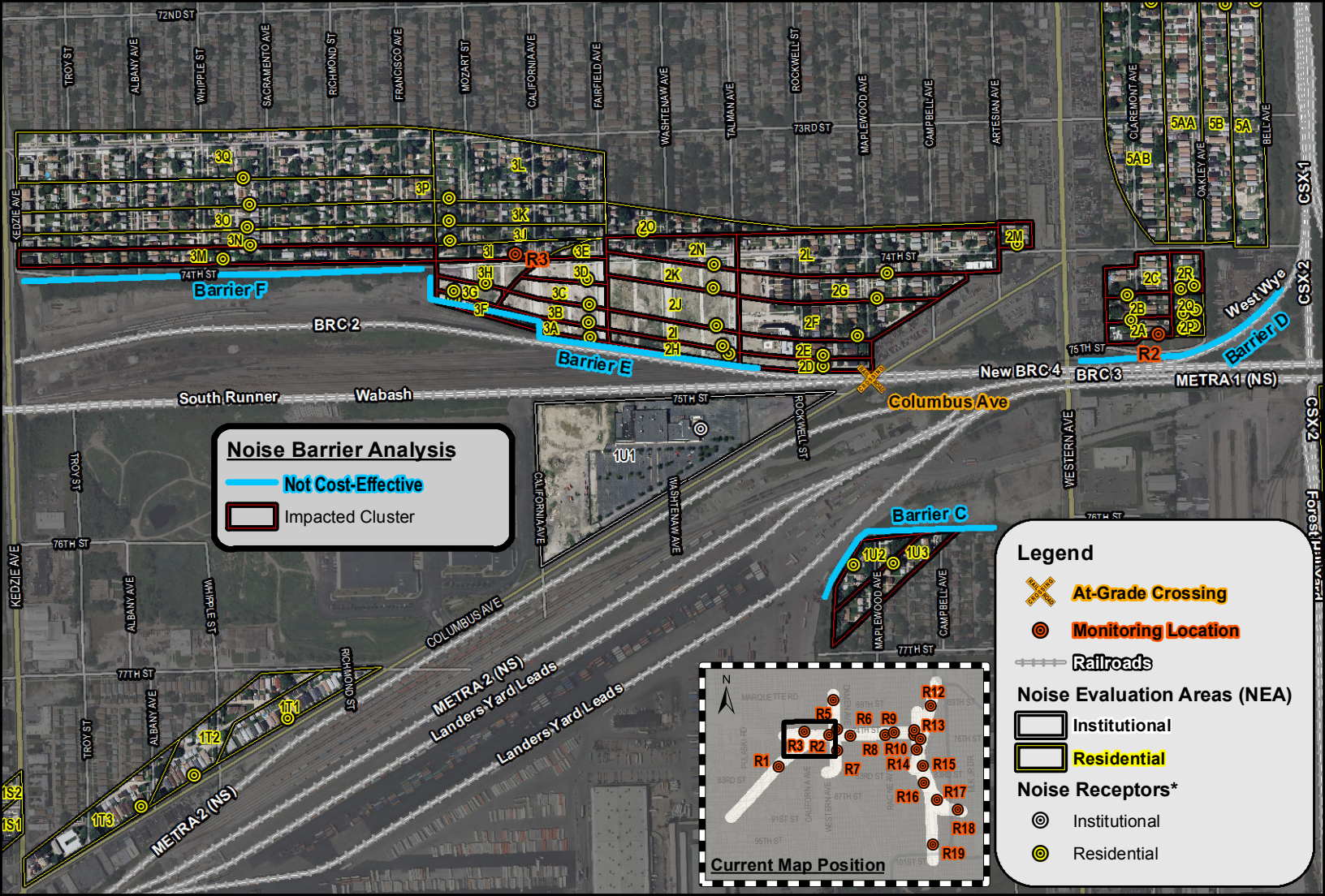
Current Map Position

Scale 0 500 1000 Feet

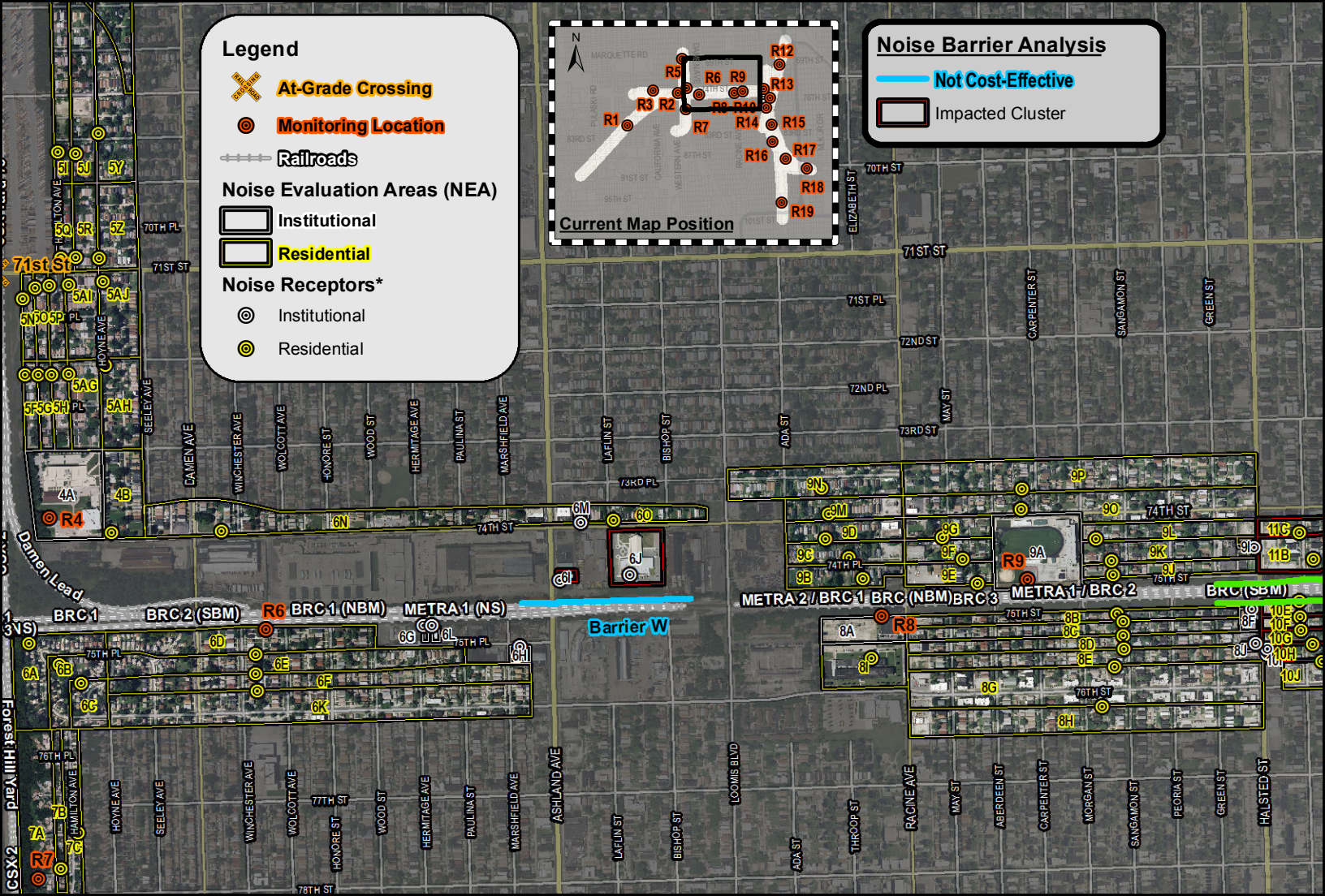
*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

Figure 13 - Abatement Evaluation - NEA 1
75th Street CIP EIS - Appendix E





**Figure 14 - Abatement Evaluation - NEA 2 and 3
75th Street CIP EIS - Appendix E**



Legend

At-Grade Crossing

Monitoring Location

Railroads

Noise Evaluation Areas (NEA)

Institutional

Residential

Noise Receptors*

Institutional

Residential

Noise Barrier Analysis

Not Cost-Effective

Impacted Cluster

Current Map Position

**Figure 15 - Abatement Evaluation - NEA 6
75th Street CIP EIS - Appendix E**

Scale 0 500 1000 Feet

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.



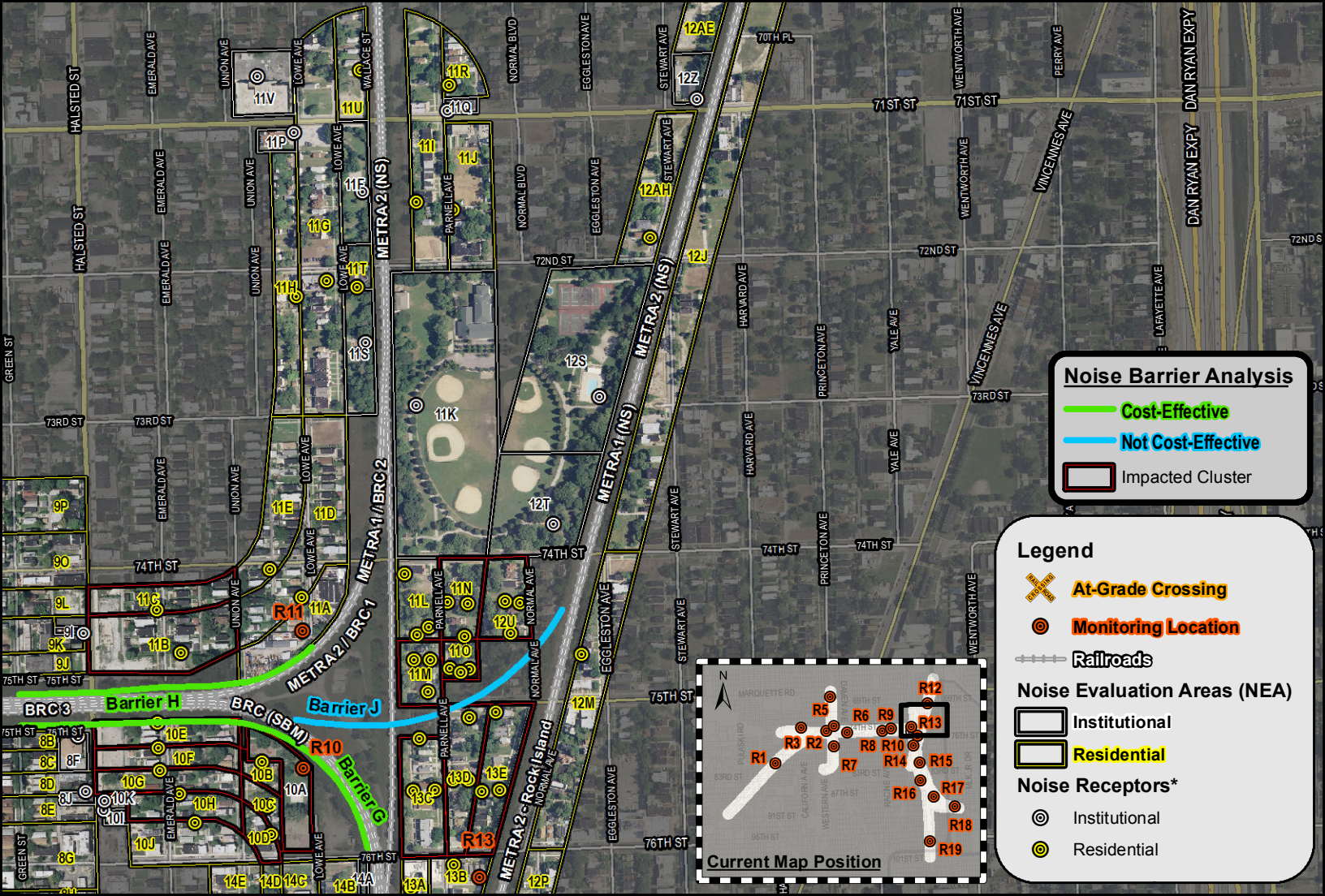


Figure 16 - Abatement Evaluation - NEA 10, 11, 12, 13
75th Street CIP EIS - Appendix E

Scale 0 500 1000 Feet

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

Legend

At-Grade Crossing

Monitoring Location

Railroads

Noise Evaluation Areas (NEA)

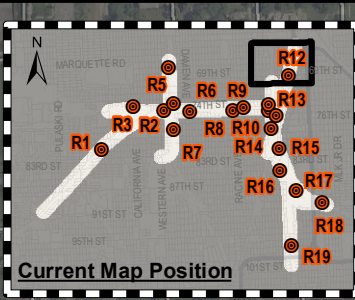
Institutional

Residential

Noise Receptors*

Institutional

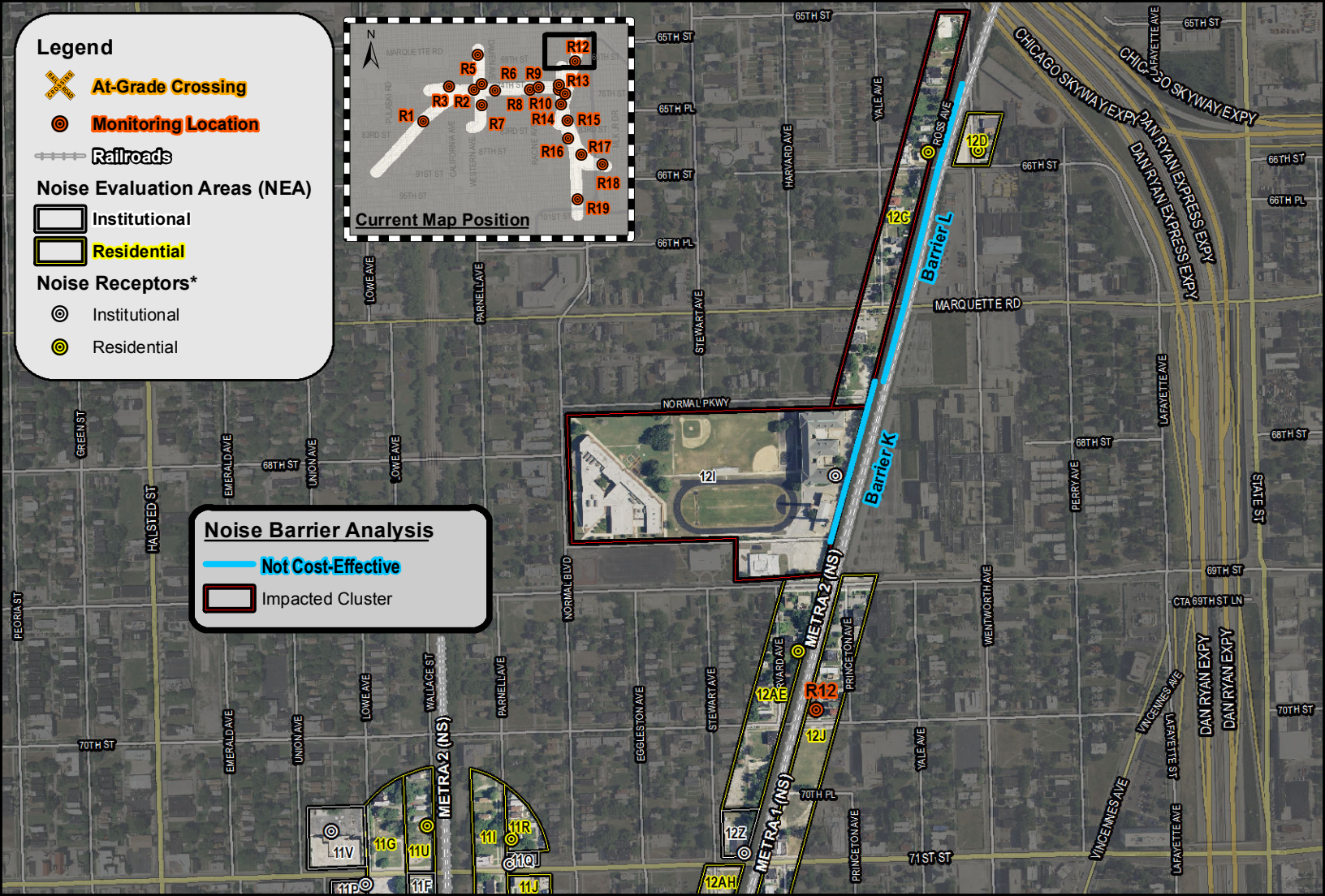
Residential



Noise Barrier Analysis

Not Cost-Effective

Impacted Cluster



*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

**Figure 17 - Abatement Evaluation - NEA 12
75th Street CIP EIS - Appendix E**



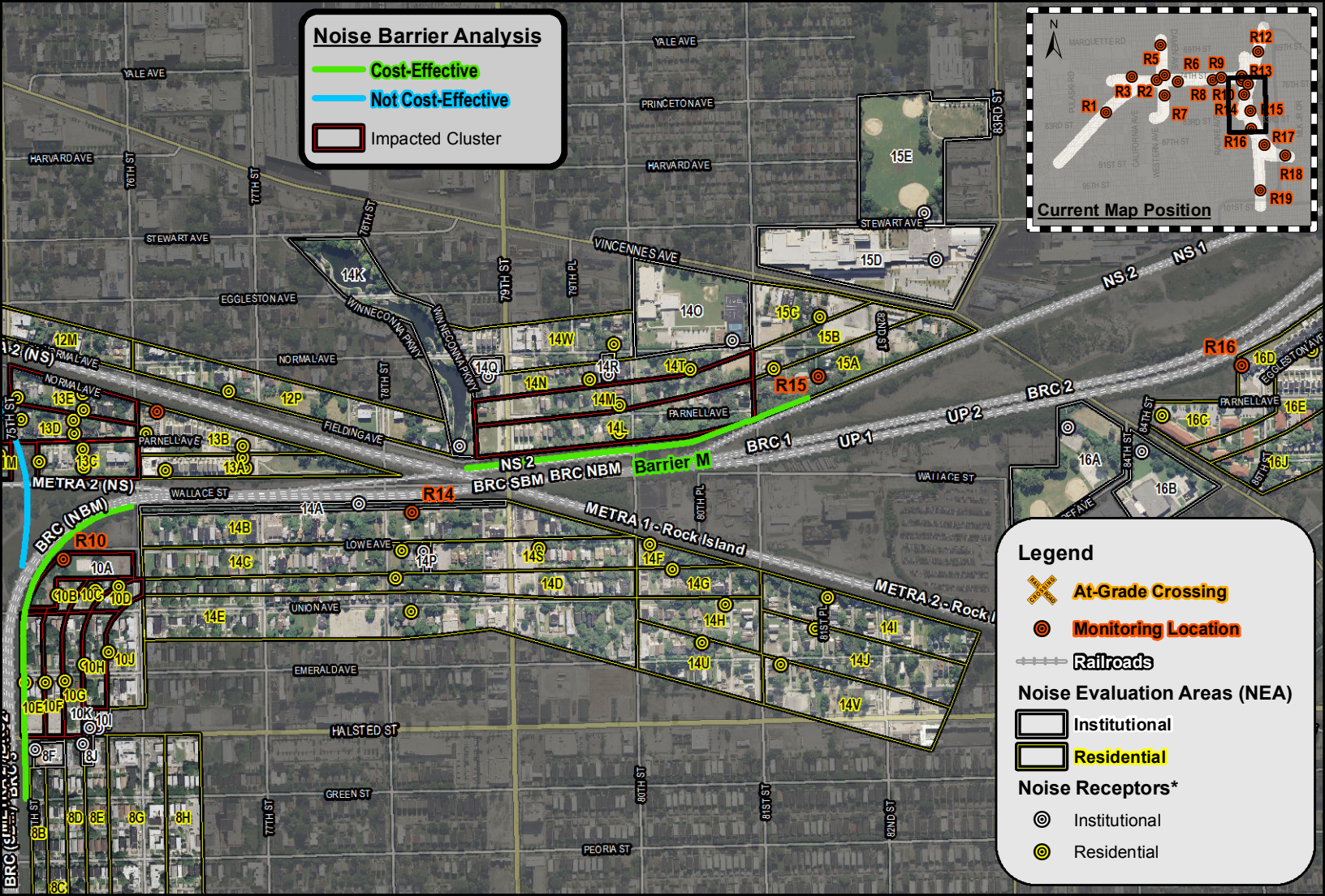
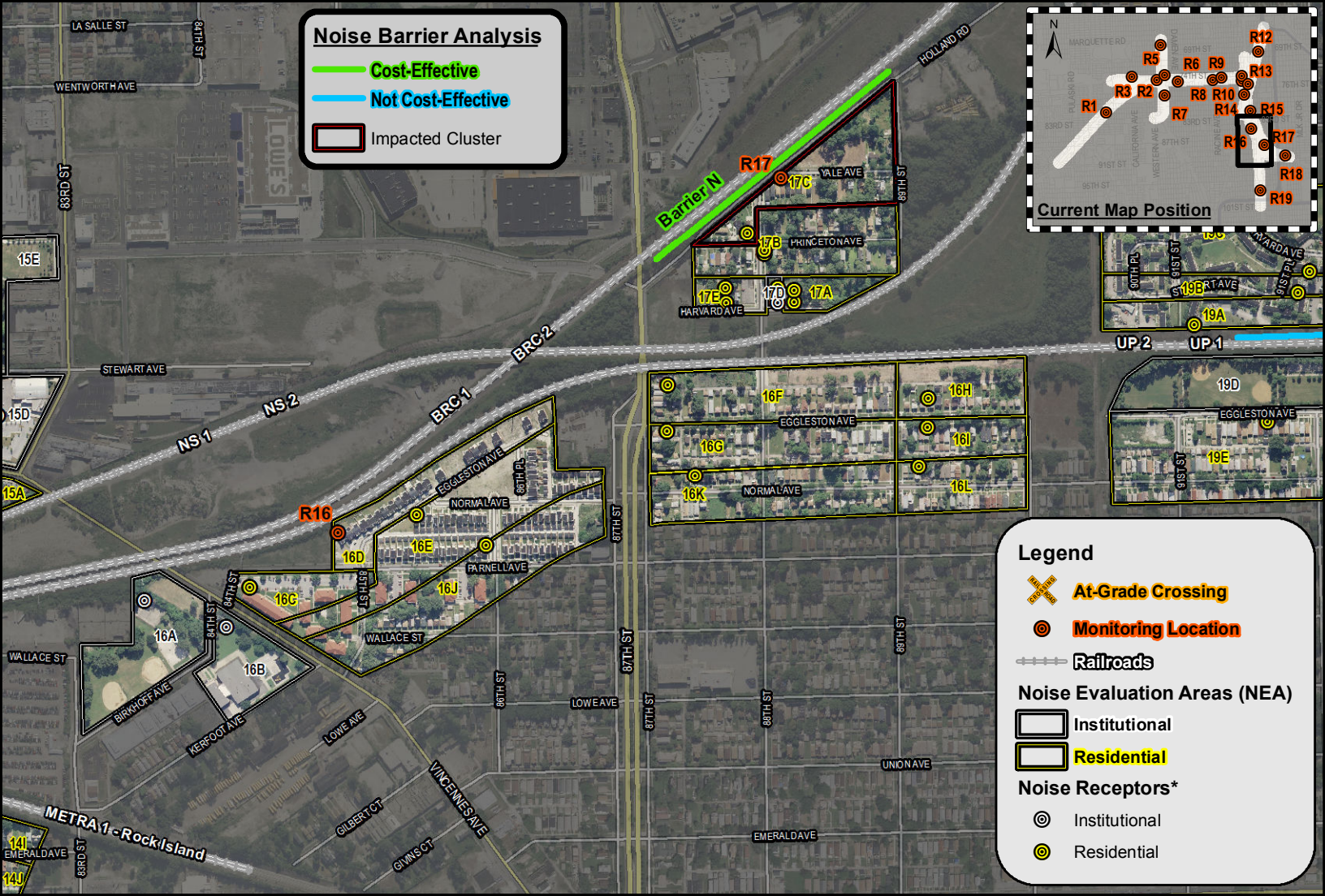


Figure 18 - Abatement Evaluation - NEA 14
75th Street CIP EIS - Appendix E





Noise Barrier Analysis

- Cost-Effective
- Not Cost-Effective
- Impacted Cluster

Current Map Position

Legend

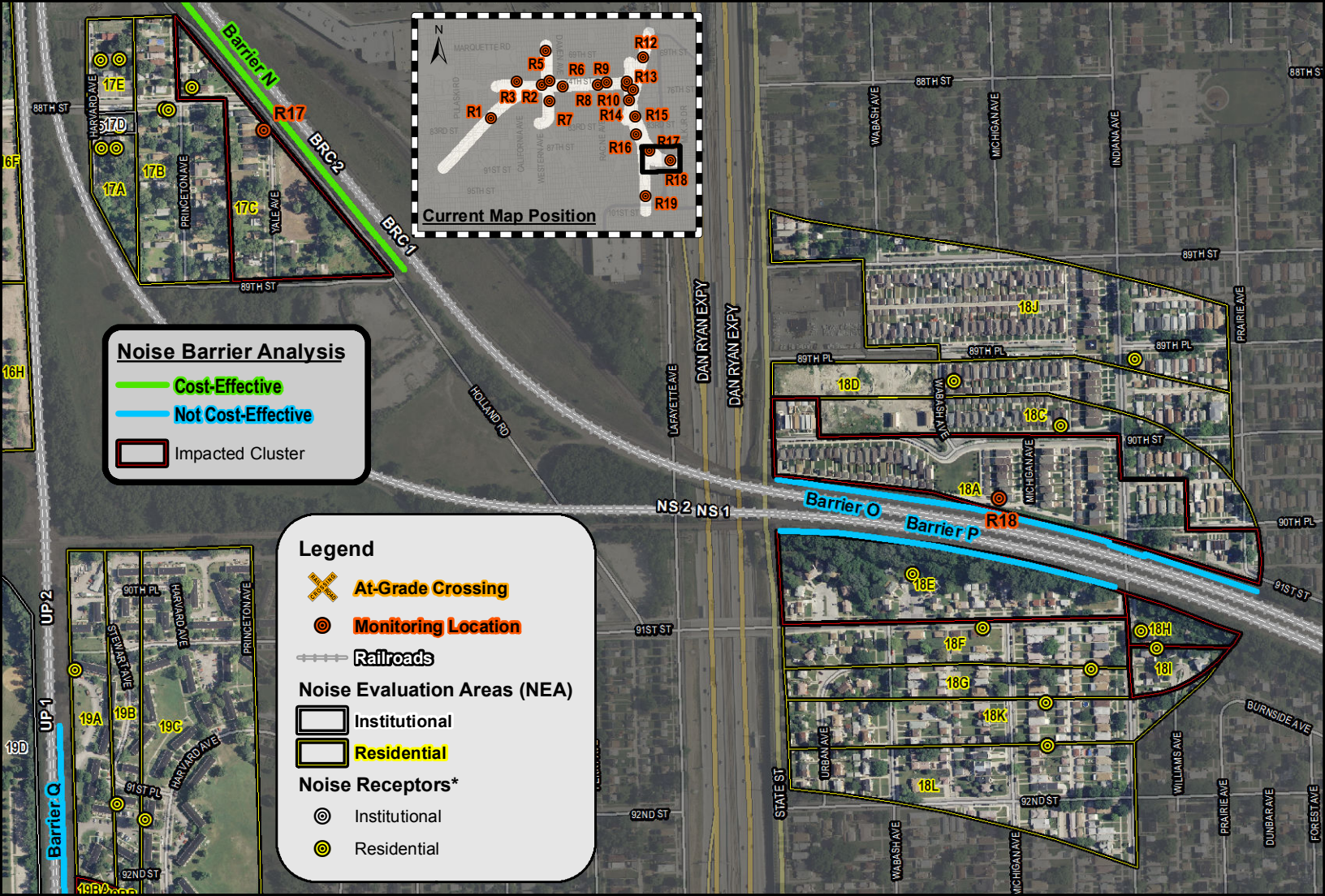
- At-Grade Crossing**
- Monitoring Location**
- Railroads**
- Noise Evaluation Areas (NEA)**
 - Institutional
 - Residential**
- Noise Receptors***
 - Institutional
 - Residential

Scale 0 500 1000 Feet

**Figure 19 - Abatement Evaluation - NEA 17
75th Street CIP EIS - Appendix E**

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.





Noise Barrier Analysis

- Cost-Effective
- Not Cost-Effective
- Impacted Cluster

Legend

- ✕ At-Grade Crossing
- ⊙ Monitoring Location
- Railroads
- Noise Evaluation Areas (NEA)**
- Institutional
- Residential
- Noise Receptors***
- ⊙ Institutional
- ⊙ Residential

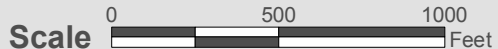
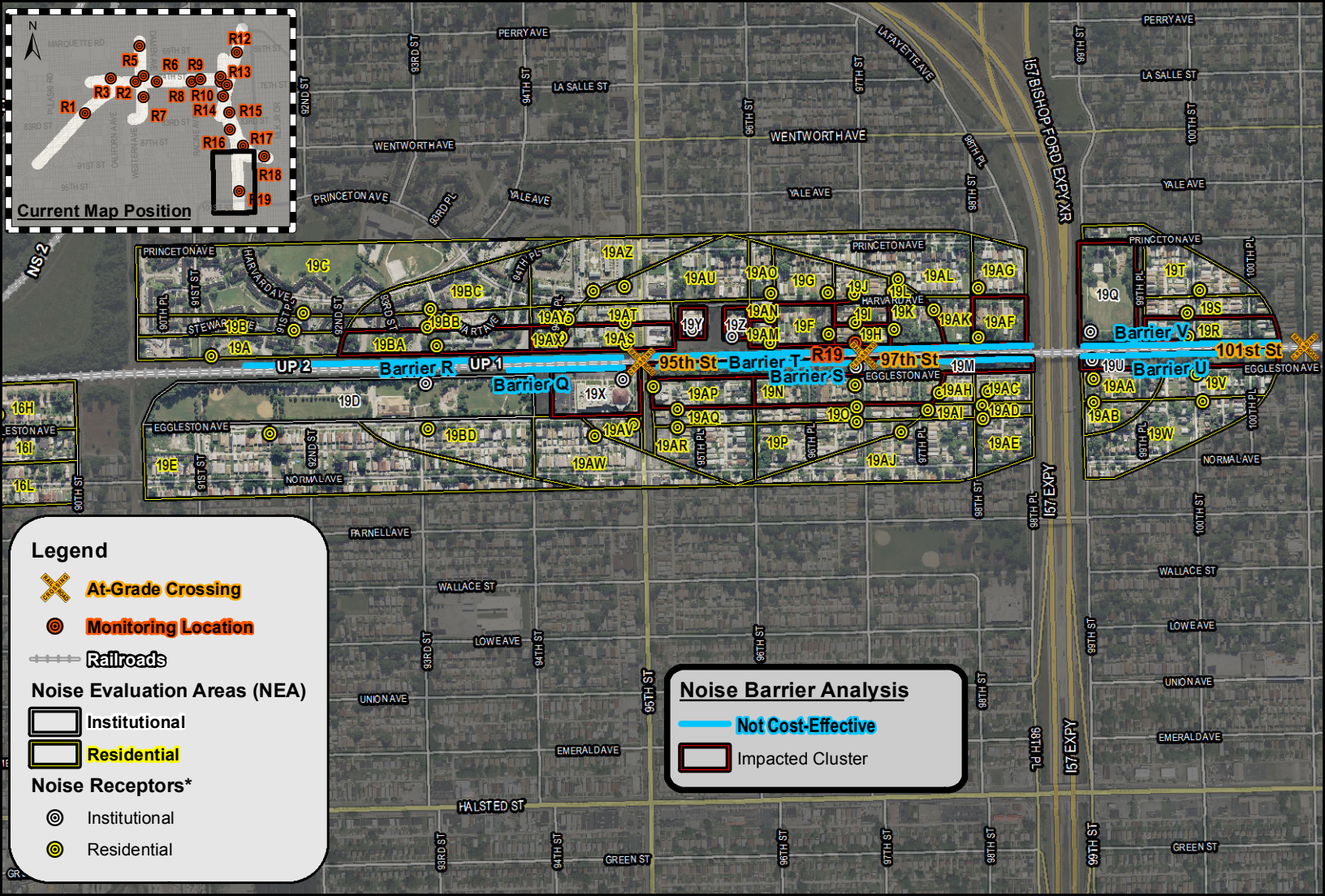


Figure 20 - Abatement Evaluation - NEA 18
75th Street CIP EIS - Appendix E



*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.



Current Map Position

Legend

- At-Grade Crossing
- Monitoring Location
- Railroads

Noise Evaluation Areas (NEA)

- Institutional
- Residential

Noise Receptors*

- Institutional
- Residential

Noise Barrier Analysis

- Not Cost-Effective
- Impacted Cluster

Scale 0 500 1000 Feet

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

Figure 21 - Abatement Evaluation - NEA 19
75th Street CIP EIS - Appendix E



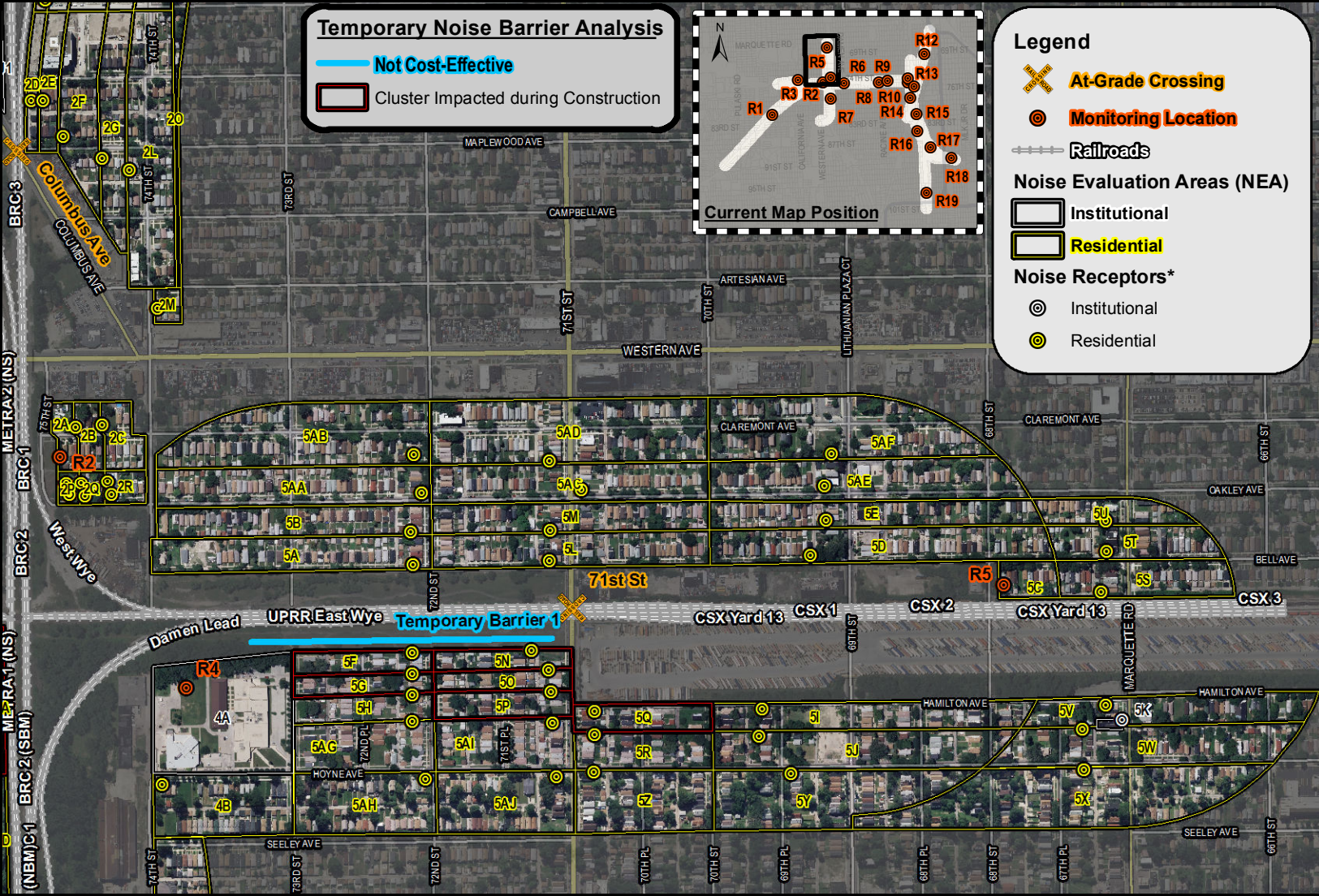
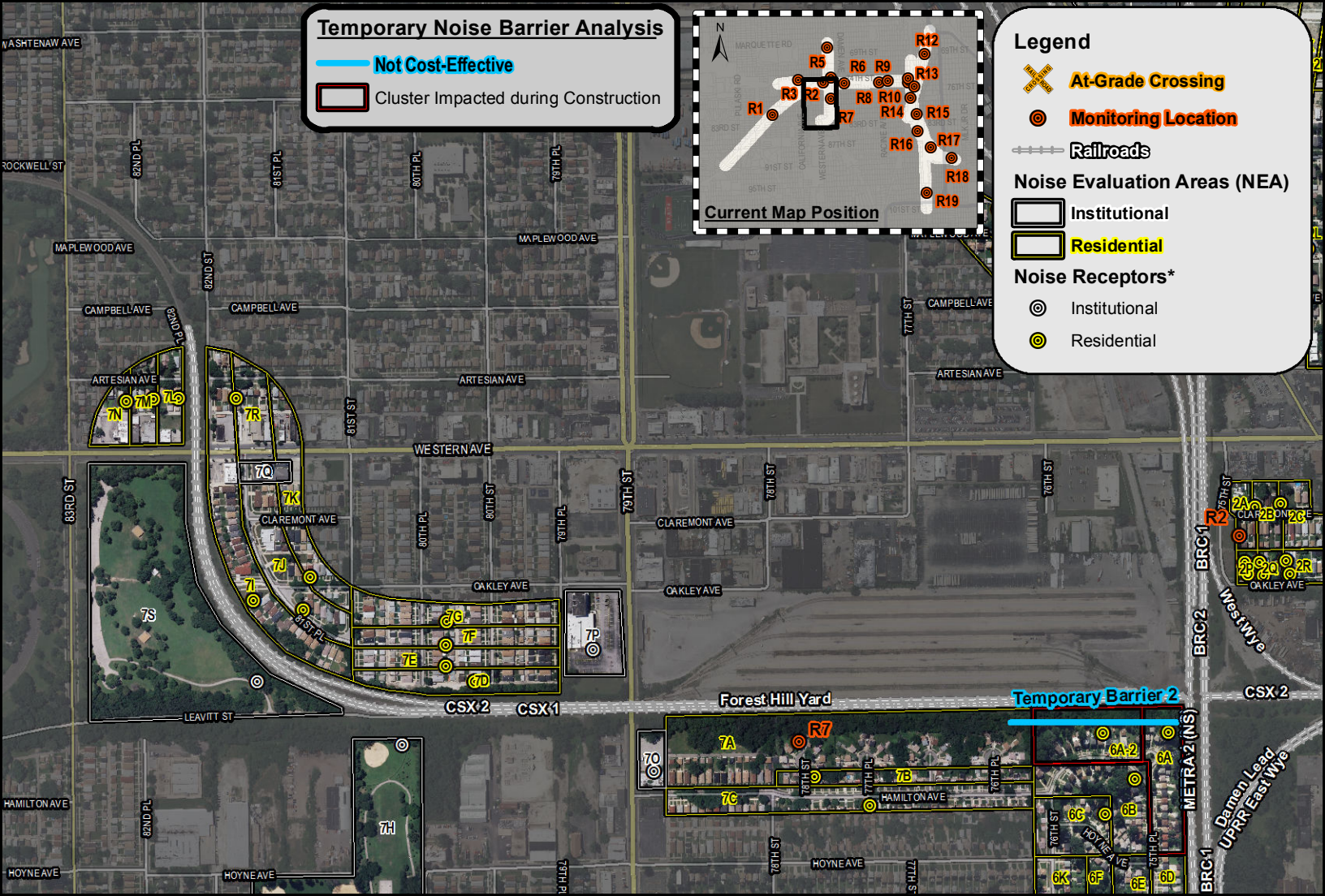


Figure 22 - Construction Abatement Evaluation - NEA 5
75th Street CIP EIS - Appendix E

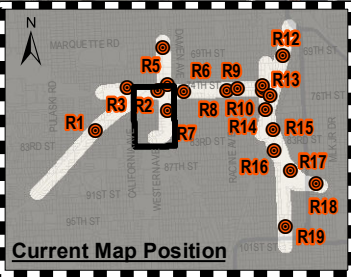


*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.



Temporary Noise Barrier Analysis

- Not Cost-Effective
- Cluster Impacted during Construction



Legend

- At-Grade Crossing
- Monitoring Location
- Railroads
- Noise Evaluation Areas (NEA)**
 - Institutional
 - Residential
- Noise Receptors***
 - Institutional
 - Residential

Scale 0 500 1000 Feet

*Noise clusters with multiple noise receptors aggregate rail noise sources from multiple directions.

**Figure 23 - Construction Abatement Evaluation - NEA 6
75th Street CIP EIS - Appendix E**





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75th St. CIP
525 W. Monroe St.
Suite 200
Chicago, Illinois 60661

www.75thcip.org ♦ info@75thcip.org

March 27, 2014

Re: Viewpoint Solicitation - Noise Barrier Implementation

Dear Owner/Occupant:

The Illinois Department of Transportation (IDOT) is currently conducting Phase I preliminary engineering and environmental studies for the 75th Street Corridor Improvement Project (75th St. CIP). CREATE, the Chicago Region Environmental and Transportation Efficiency Program, was developed to increase the efficiency of the region's rail infrastructure. The 75th St. CIP involves new rail bridge structures at four locations, replacement of existing rail bridges at three locations, rehabilitation or modification of existing rail bridges at 23 locations, and one highway-rail grade separation. The proposed action is located in the City of Chicago, Cook County, Illinois. The proposed action will eliminate major rail conflicts at three rail junctions and one at-grade roadway crossing. It will also provide substantial structural, drainage, roadway, and lighting improvements at 36 existing rail viaducts to improve local mobility. See the reverse for an overall project location map.

As part of the environmental study for this project, train traffic noise was evaluated for the proposed railroad improvements and compared to existing noise levels. The train noise analysis indicated that predicted noise levels in your area warrant the consideration of noise abatement. Based on the noise abatement analysis, a noise barrier approximately 10-12 feet above the top of the rail line is proposed in your area as part of this project. Depicted as a thin green line on the form, the proposed barrier would reduce the noise level in your area by five decibels or more. It is anticipated that the proposed noise barrier would be made of precast concrete panels.

IDOT requests your viewpoint regarding your desire for the noise barrier proposed near your property. This letter has been provided to all property owners and tenants in the area where sound levels could be reduced by the proposed noise barrier. Please indicate your preference on the enclosed form, include your full name and address, and return the form by mail in the stamped self-addressed envelope enclosed by May 22, 2014. You may also email your opinion to info@75thcip.org. You are also encouraged to attend an upcoming Public Hearing for the proposed project. The hearing information is located below.

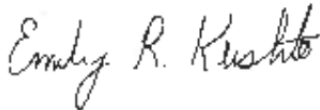
Date: April 22, 2014
Location: Freedom Temple Church of God in Christ, 1459 W. 74th Street, Chicago, Illinois
Time: 4 p.m. until 7:30 p.m. The formal session will begin at 6:00 p.m.

The project team will be available during the Public Hearing to discuss the project and answer questions.

IDOT will consider all viewpoints received from benefited property owners or tenants. Based on the consideration of the viewpoints, the noise barrier may or may not be included for implementation in the project. The final decision on implementing noise barriers will be made upon the completion of the project design and public involvement process. We appreciate your views and look forward to hearing from you.

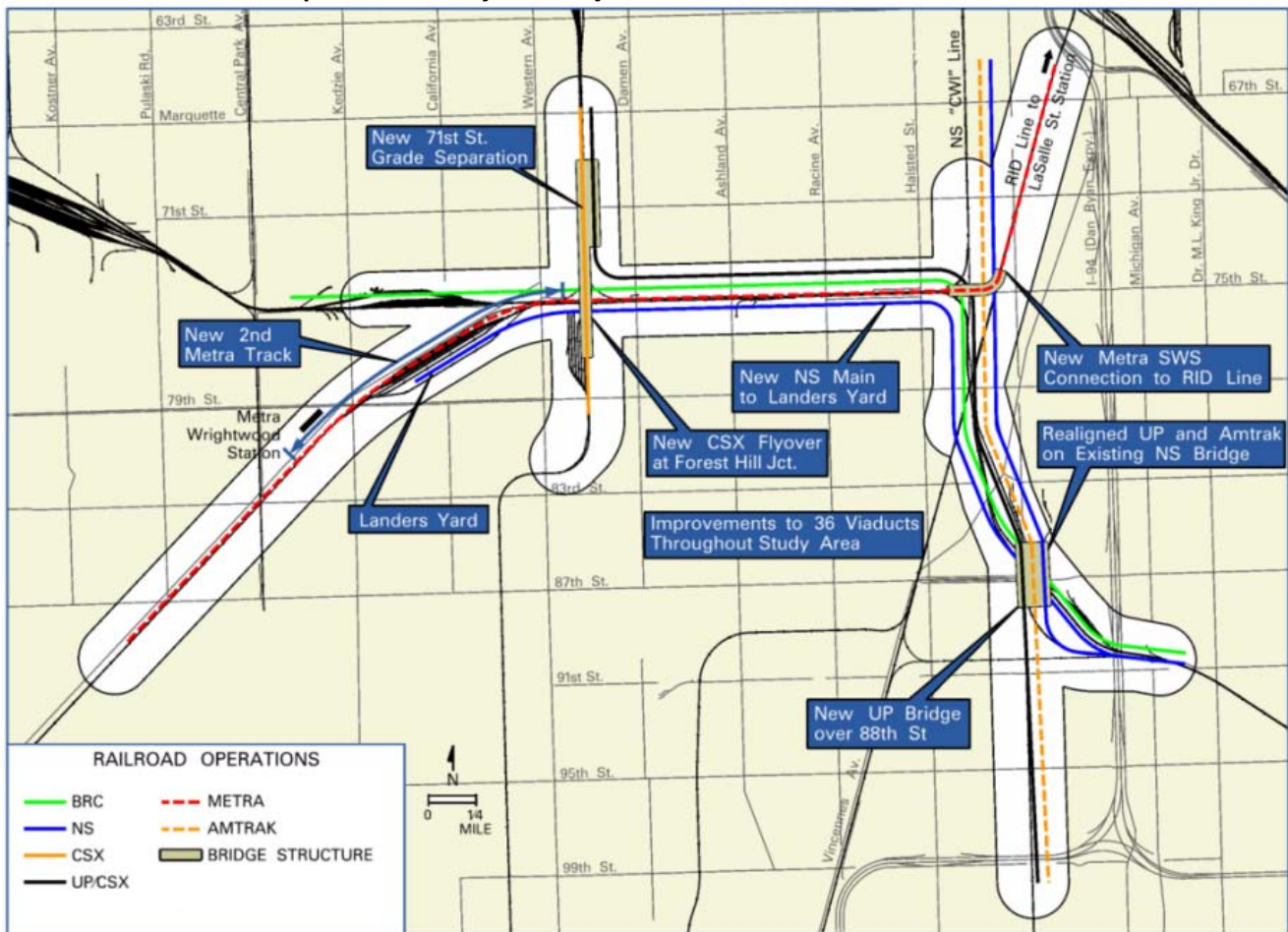
Should you have any questions regarding the Public Hearing or proposed noise barrier please contact Tom Underwood, Project Manager, at (303) 820-5207 or tom.underwood@jacobs.com. For more information about the 75th St. CIP, visit www.75thcip.org.

Very truly yours,



Emily R. Kushto, P.E., Ph.D.
Acting Section Chief CREATE
Illinois Department of Transportation

75th Street Corridor Improvement Project – Project Area and Elements of Preferred Alternative





CORRIDOR IMPROVEMENT PROJECT

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75th St. CIP
525 W. Monroe St.
Suite 200
Chicago, Illinois 60661

www.75thcip.org ♦ info@75thcip.org

NOISE BARRIER G VIEWPOINT FORM

Please print clearly

NAME: _____

STREET ADDRESS: _____

UNIT NUMBER: _____

I DESIRE THE NOISE BARRIER:

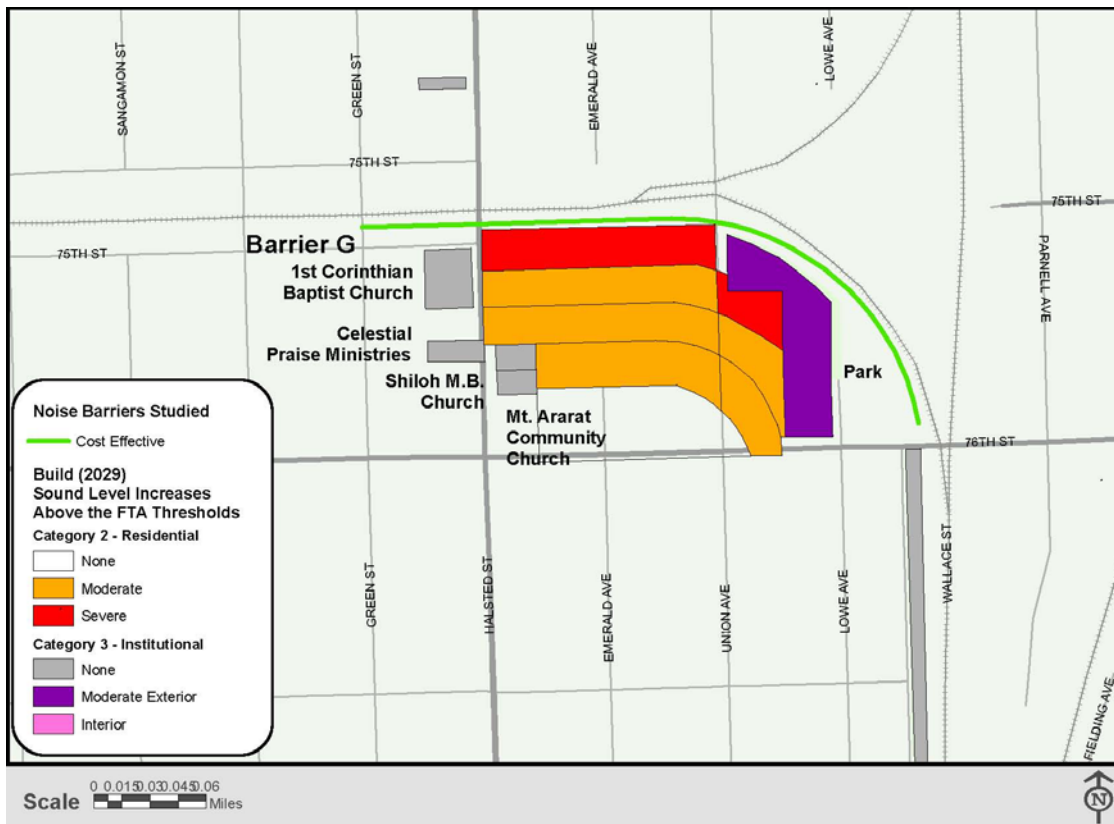
YES

NO

PLEASE CHECK ONE: OWNER or TENANT

SIGNATURE: _____ DATE: _____

Please return this completed form in the addressed stamped envelope that was included in this mailing to: 75th St. CIP, 525 W. Monroe, Suite 200, Chicago, IL 60661, Attn: Tom Underwood or email your viewpoint to info@75thcip.org. For more information about the 75th St. CIP, visit www.75thcip.org.





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525 W. Monroe St.
Suite 200
Chicago, Illinois 60661
www.75thcip.org ♦ info@75thcip.org

NOISE BARRIER H VIEWPOINT FORM

Please print clearly

NAME: _____

STREET ADDRESS: _____

UNIT NUMBER: _____

I DESIRE THE NOISE BARRIER:

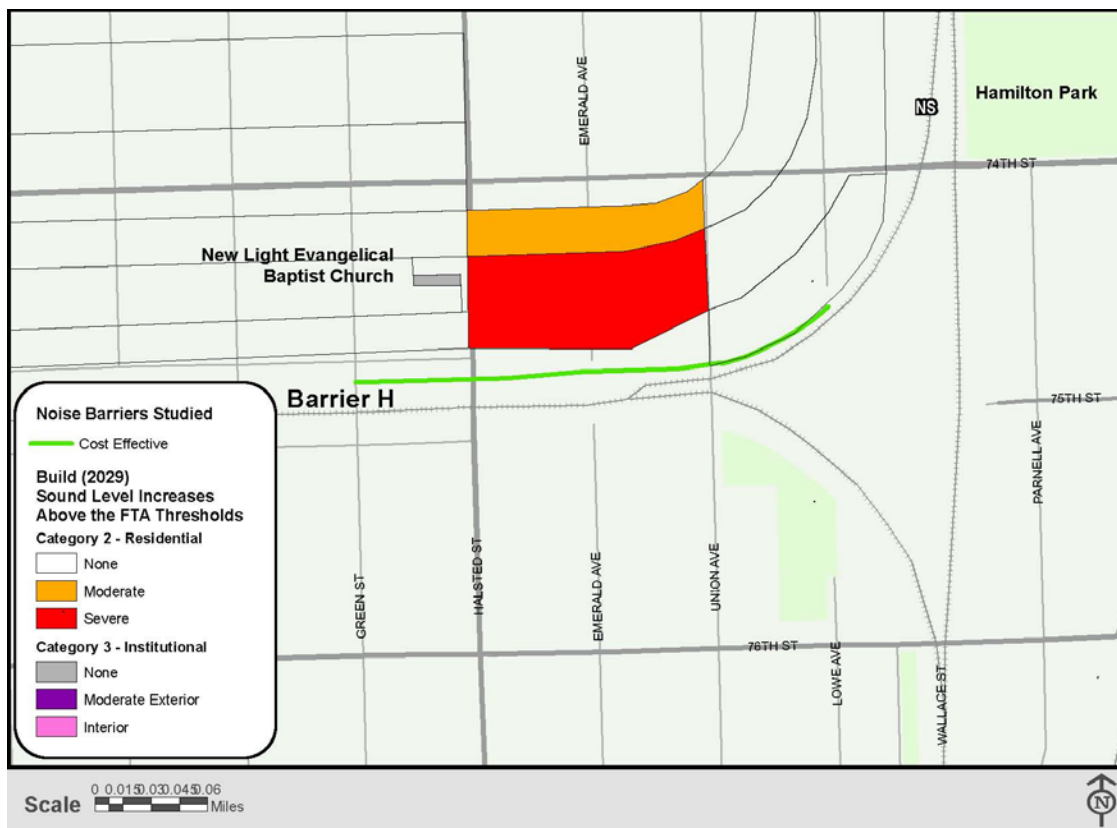
YES

NO

PLEASE CHECK ONE: OWNER or TENANT

SIGNATURE: _____ DATE: _____

Please return this completed form in the addressed stamped envelope that was included in this mailing to: 75th St. CIP, 525 W. Monroe, Suite 200, Chicago, IL 60661, Attn: Tom Underwood or email your viewpoint to info@75thcip.org. For more information about the 75th St. CIP, visit www.75thcip.org.





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Suite 200
Chicago, Illinois 60661

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NOISE BARRIER M VIEWPOINT FORM

Please print clearly

NAME: _____

STREET ADDRESS: _____

UNIT NUMBER: _____

I DESIRE THE NOISE BARRIER:

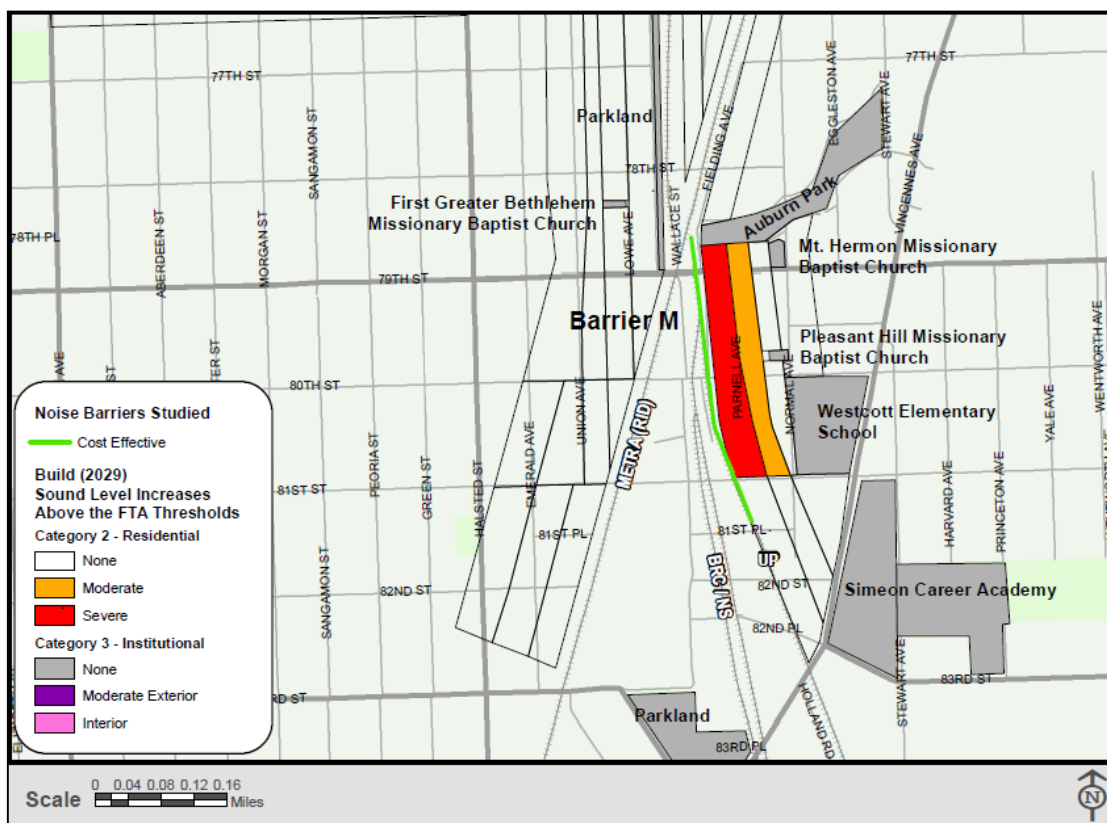
YES

NO

PLEASE CHECK ONE: OWNER or TENANT

SIGNATURE: _____ DATE: _____

Please return this completed form in the addressed stamped envelope that was included in this mailing to: 75th St. CIP, 525 W. Monroe, Suite 200, Chicago, IL 60661, Attn: Tom Underwood or email your viewpoint to info@75thcip.org. For more information about the 75th St. CIP, visit www.75thcip.org.





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Suite 200
Chicago, Illinois 60661
www.75thcip.org ♦ info@75thcip.org

NOISE BARRIER N VIEWPOINT FORM

Please print clearly

NAME: _____

STREET ADDRESS: _____

UNIT NUMBER: _____

I DESIRE THE NOISE BARRIER:

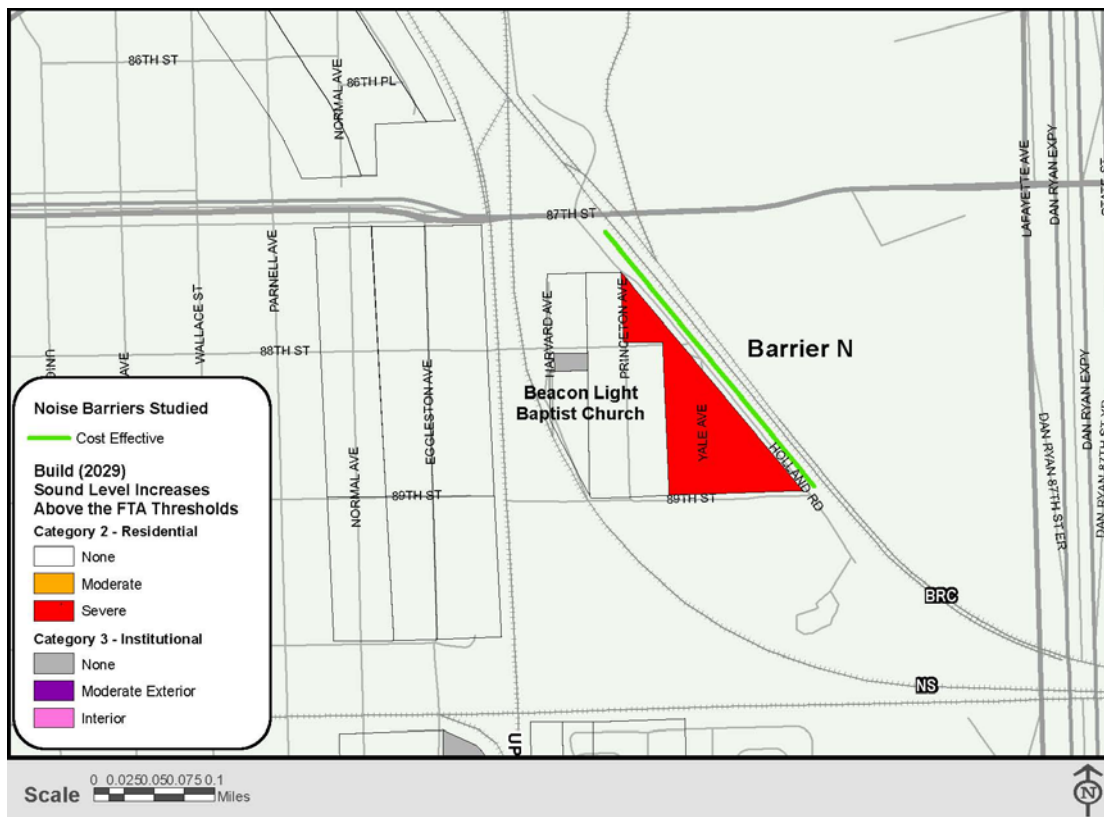
YES

NO

PLEASE CHECK ONE: OWNER or TENANT

SIGNATURE: _____ DATE: _____

Please return this completed form in the addressed stamped envelope that was included in this mailing to: 75th St. CIP, 525 W. Monroe, Suite 200, Chicago, IL 60661, Attn: Tom Underwood or email your viewpoint to info@75thcip.org. For more information about the 75th St. CIP, visit www.75thcip.org.





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75th St. CIP
525 W. Monroe St.
Suite 200
Chicago, Illinois 60661

www.75thcip.org ♦ info@75thcip.org

May 14, 2014

Re: Viewpoint Solicitation - Noise Barrier Implementation

Dear Owner/Occupant:

The Illinois Department of Transportation (IDOT) is currently conducting Phase I preliminary engineering and environmental studies for the 75th Street Corridor Improvement Project (75th St. CIP). CREATE, the Chicago Region Environmental and Transportation Efficiency Program, was developed to increase the efficiency of the region's rail infrastructure. The 75th St. CIP involves new rail bridge structures at four locations, replacement of existing rail bridges at three locations, rehabilitation or modification of existing rail bridges at 23 locations, and one highway-rail grade separation. The proposed action is located in the City of Chicago, Cook County, Illinois. The proposed action will eliminate major rail conflicts at three rail junctions and one at-grade roadway crossing. It will also provide substantial structural, drainage, roadway, and lighting improvements at 36 existing rail viaducts to improve local mobility. See the reverse for an overall project location map.

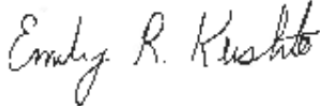
As part of the environmental study for this project, train traffic noise was evaluated for the proposed railroad improvements and compared to existing noise levels. The train noise analysis indicated that predicted noise levels in your area warrant the consideration of noise abatement. Based on the noise abatement analysis, a noise barrier approximately 10-12 feet above the top of the rail line is proposed in your area as part of this project. Depicted as a thin green line on the form, the proposed barrier would reduce the noise level in your area by five decibels or more. It is anticipated that the proposed noise barrier would be made of precast concrete panels.

IDOT requests your viewpoint regarding your desire for the noise barrier proposed near your property. This letter has been provided to all property owners and tenants in the area where sound levels could be reduced by the proposed noise barrier. Please indicate your preference on the enclosed form, include your full name and address, and return the form by mail in the stamped self-addressed envelope enclosed by May 31, 2014. You may also email your opinion to info@75thcip.org.

IDOT will consider all viewpoints received from benefited property owners or tenants. Based on the consideration of the viewpoints, the noise barrier may or may not be included for implementation in the project. The final decision on implementing noise barriers will be made upon the completion of the project design and public involvement process. We appreciate your views and look forward to hearing from you.

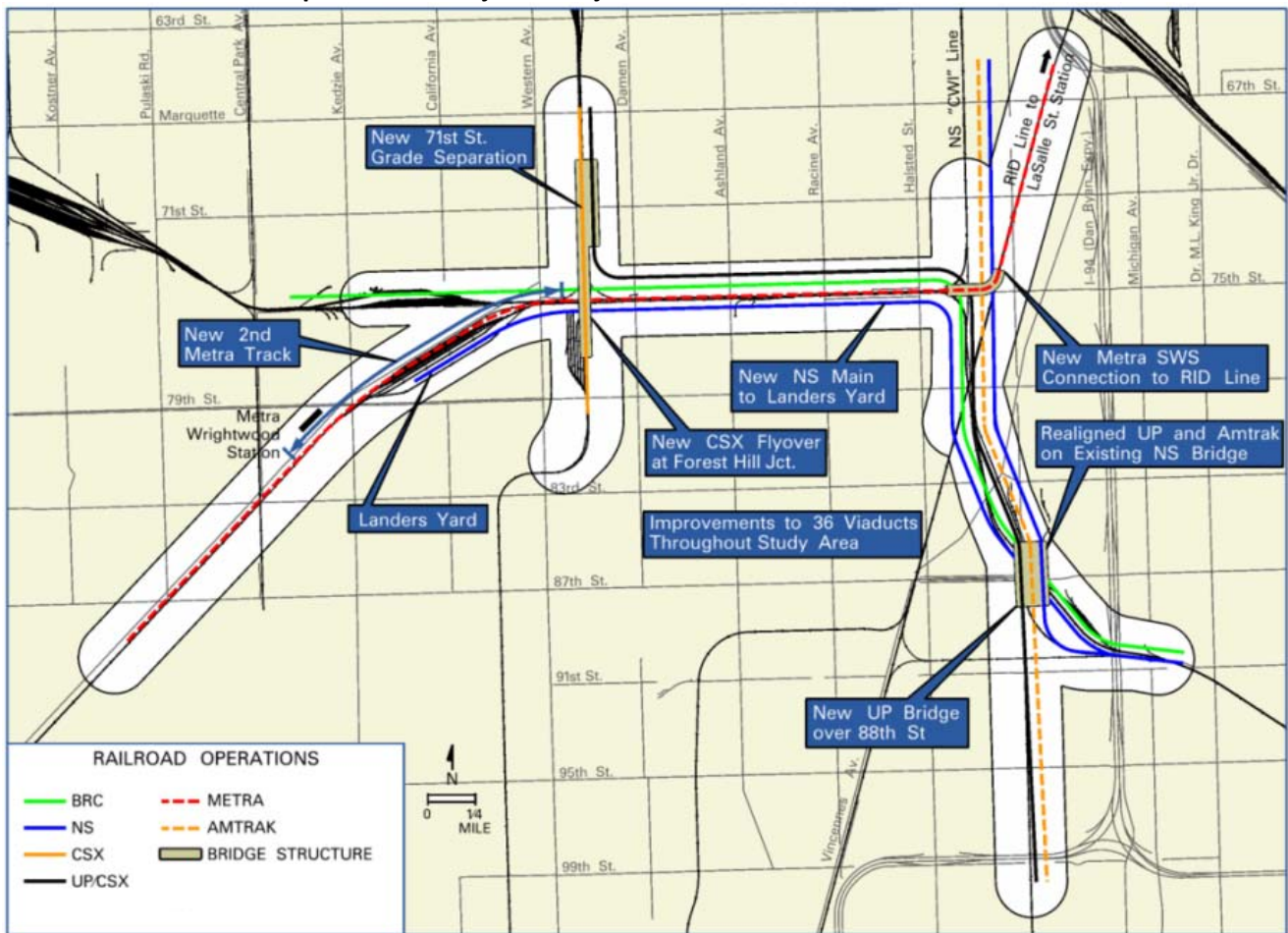
Should you have any questions regarding the Public Hearing or proposed noise barrier please contact Tom Underwood, Project Manager, at (303) 820-5207 or tom.underwood@jacobs.com. For more information about the 75th St. CIP, visit www.75thcip.org.

Very truly yours,



Emily R. Kushto, P.E., Ph.D.
Acting Section Chief CREATE
Illinois Department of Transportation

75th Street Corridor Improvement Project – Project Area and Elements of Preferred Alternative





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75th St. CIP
525 W. Monroe St.
Suite 200
Chicago, Illinois 60661

www.75thcip.org ♦ info@75thcip.org

May 20, 2014

Re: Viewpoint Solicitation - Noise Barrier Implementation – ***Second and Final Notice***

Dear Owner/Occupant:

The Illinois Department of Transportation (IDOT) is currently conducting Phase I preliminary engineering and environmental studies for the 75th Street Corridor Improvement Project (75th St. CIP). CREATE, the Chicago Region Environmental and Transportation Efficiency Program, was developed to increase the efficiency of the region's rail infrastructure. The 75th St. CIP involves new rail bridge structures at four locations, replacement of existing rail bridges at three locations, rehabilitation or modification of existing rail bridges at 23 locations, and one highway-rail grade separation. The proposed action is located in the City of Chicago, Cook County, Illinois. The proposed action will eliminate major rail conflicts at three rail junctions and one at-grade roadway crossing. It will also provide substantial structural, drainage, roadway, and lighting improvements at 36 existing rail viaducts to improve local mobility. See the reverse for an overall project location map.

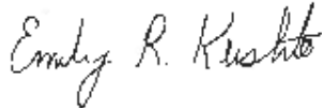
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IDOT requests your viewpoint regarding your desire for the noise barrier proposed near your property. This letter has been provided to all property owners and tenants in the area where sound levels could be reduced by the proposed noise barrier. Please indicate your preference on the enclosed form, include your full name and address, and return the form by mail in the stamped self-addressed envelope enclosed by June 6, 2014. You may also email your opinion to info@75thcip.org.

IDOT will consider all viewpoints received from benefited property owners or tenants. Based on the consideration of the viewpoints, the noise barrier may or may not be included for implementation in the project. The final decision on implementing noise barriers will be made upon the completion of the project design and public involvement process. We appreciate your views and look forward to hearing from you.

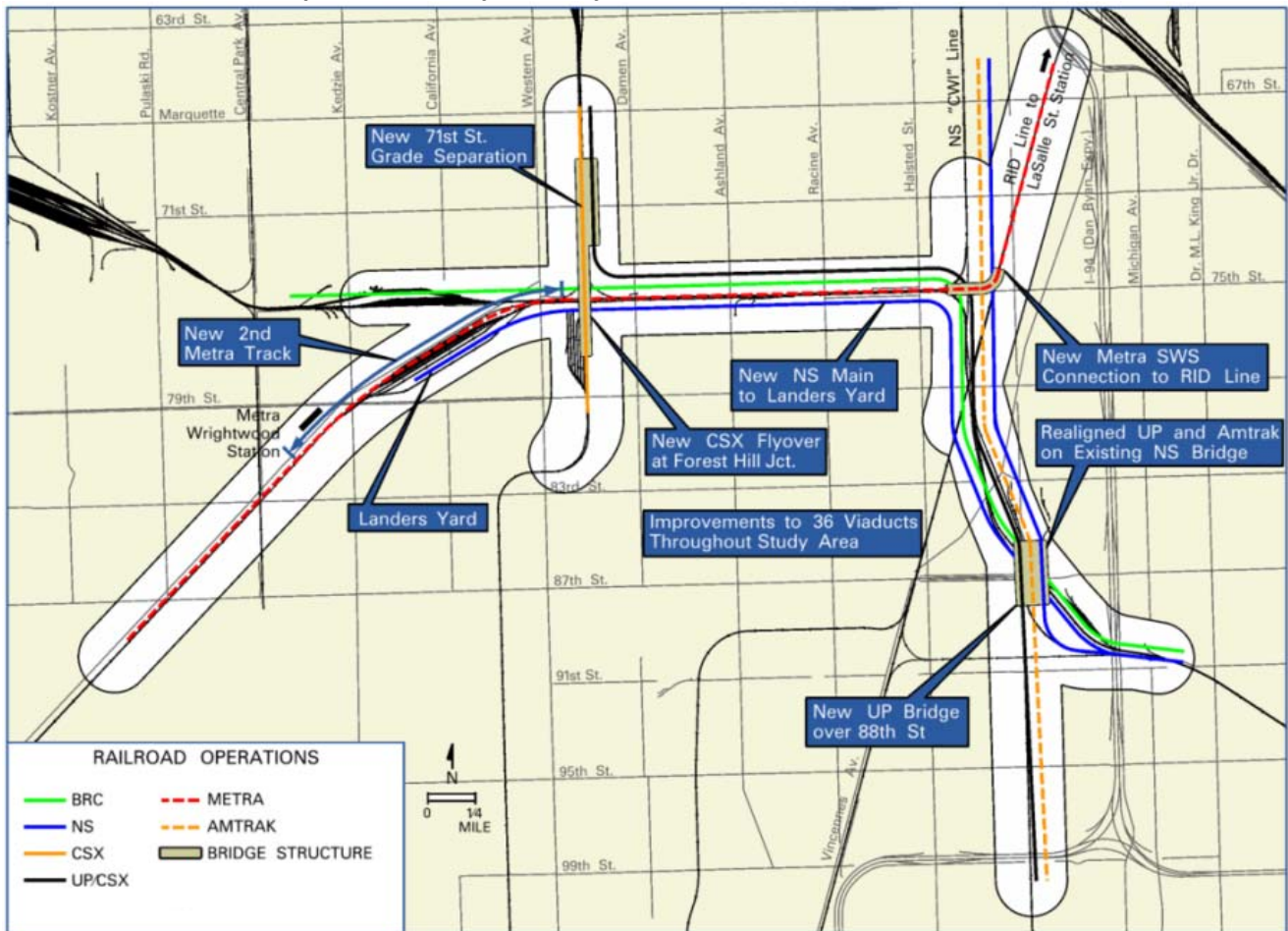
Should you have any questions regarding the Public Hearing or proposed noise barrier please contact Tom Underwood, Project Manager, at (303) 820-5207 or tom.underwood@jacobs.com. For more information about the 75th St. CIP, visit www.75thcip.org.

Very truly yours,



Emily R. Kushto, P.E., Ph.D.
Acting Section Chief CREATE
Illinois Department of Transportation

75th Street Corridor Improvement Project – Project Area and Elements of Preferred Alternative





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525 W. Monroe St.
Suite 200
Chicago, Illinois 60661

www.75thcip.org ♦ info@75thcip.org

June 12, 2014

Re: Viewpoint Solicitation - Noise Barrier Implementation – ***Second and Final Notice***

Dear Owner/Occupant:

The Illinois Department of Transportation (IDOT) is currently conducting Phase I preliminary engineering and environmental studies for the 75th Street Corridor Improvement Project (75th St. CIP). CREATE, the Chicago Region Environmental and Transportation Efficiency Program, was developed to increase the efficiency of the region's rail infrastructure. The 75th St. CIP involves new rail bridge structures at four locations, replacement of existing rail bridges at three locations, rehabilitation or modification of existing rail bridges at 23 locations, and one highway-rail grade separation. The proposed action is located in the City of Chicago, Cook County, Illinois. The proposed action will eliminate major rail conflicts at three rail junctions and one at-grade roadway crossing. It will also provide substantial structural, drainage, roadway, and lighting improvements at 36 existing rail viaducts to improve local mobility. See the reverse for an overall project location map.

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IDOT requests your viewpoint regarding your desire for the noise barrier proposed near your property. This letter has been provided to all property owners and tenants in the area where sound levels could be reduced by the proposed noise barrier. Please indicate your preference on the enclosed form, include your full name and address, and return the form by mail in the stamped self-addressed envelope enclosed by June 30, 2014. You may also email your opinion to info@75thcip.org.

IDOT will consider all viewpoints received from benefited property owners or tenants. Based on the consideration of the viewpoints, the noise barrier may or may not be included for implementation in the project. The final decision on implementing noise barriers will be made upon the completion of the project design and public involvement process. We appreciate your views and look forward to hearing from you.

Should you have any questions regarding the Public Hearing or proposed noise barrier please contact Tom Underwood, Project Manager, at (303) 820-5207 or tom.underwood@jacobs.com. For more information about the 75th St. CIP, visit www.75thcip.org.

Very truly yours,

Emily R. Kushto, P.E., Ph.D.
Acting Section Chief CREATE
Illinois Department of Transportation

75th Street Corridor Improvement Project – Project Area and Elements of Preferred Alternative

