



# Plank-Nicholson Bus Rapid Transit

## Technical Memorandum: General Noise Assessment

|   |                               |
|---|-------------------------------|
| <b>To:</b> Capital Area Transit System            | <b>Date:</b> January 17, 2019 |
| <b>From:</b> HNTB Corporation                     |                               |
| <b>Cc:</b> Federal Transit Administration         |                               |
| <b>Project:</b> Plank-Nicholson Bus Rapid Transit |                               |

### PROJECT DESCRIPTION

The City-Parish of East Baton Rouge (City), along with the Capital Area Transit System (CATS) and in partnership with the Federal Transit Administration (FTA), will be implementing Baton Rouge's first Bus Rapid Transit (BRT) route known as the Plank-Nicholson BRT (Project). The Project route is approximately nine miles in length (one way) between North Baton Rouge (Airline Highway) and the Louisiana State University (LSU) campus. The Project is intended to deliver a premium transit service to the City, conveniently and efficiently linking the north and south side of the city with downtown. Plank Road is one of CATS' highest volume corridors and serves a high percentage of transit-dependent passengers. The route passes through well-organized neighborhoods that are characterized by high concentrations of minority and low-income residents, and recent focus along the Plank and Nicholson corridors has spurred investment in infrastructure and economic development opportunities. The Project will expand local and regional mobility options, improve job access, support transit-oriented development (TOD) and enhance livability along the corridor.

Most station improvements will be within existing right-of-way. However, some station areas may require the acquisition of small portions of right-of-way from adjacent properties. The scope of work proposed for the Project includes the following:

- Construction of up to 44 station locations (22 station pairs), a transfer center, and a layover location at LSU. The proposed standard station design has a typical total footprint of 10 feet by 55 feet.
- High-amenity, modern stations will be constructed and will each include a shelter, level boarding platform, station marker, real-time arrival (RTA) displays, bicycle facilities, benches, trash receptacles, and ADA accommodations.
- A 2.55-acre parcel located along Airline Highway just east of Plank Road has been identified by CATS to serve as the transfer center. The property will provide transfer connections to several local routes serving North Baton Rouge and provide premium transit amenities, waiting areas, and park-and-ride facilities.

- Guideway improvements include transit signal priority (TSP) and narrowed travel lanes to reduce vehicles speeds, thus improving safety in the corridor. Queue jumps may be located at intersections, where appropriate, and will provide preferences to buses at intersections through the addition of travel lane at the intersection approach to signalized intersections.
- Roadway improvements include roadway resurfacing, new curb construction, restriping and utility adjustments in the vicinity of station locations necessary to accommodate station improvements and narrow the four-lane roadway section to four 11-foot lanes (two lanes in each direction).
- Construction of new sidewalks along sections of both sides of Plank Road from the Denham stations south to I-10.
- The Plank-Nicholson BRT will feature a fleet of specifically designed BRT vehicles that will be uniquely stylized and branded. The BRT fleet is planned to utilize all-electric propulsion technology to enhance air quality and passenger experience.

## NOISE SCREENING METHODOLOGY

The FTA *Transit Noise and Vibration Impact Assessment* Manual, September 2018, (hereinafter referred to as The Manual) was used to perform the screening procedure and subsequent general noise assessment.

The Project is located along existing street corridors, in an urban setting in Baton Rouge, Louisiana, and will not significantly increase the number of vehicles on the roadways. To determine the potential for noise impacts, the screening procedure was used to determine if noise-sensitive receptors are located within the screening distance at the proposed transit center, the bus layover area, the 44 proposed individual stations, and areas along the project corridor. Although the proposed individual bus stations are not considered “transit centers,” the screening distances designated for transit centers by FTA were used to determine locations of potential noise receptors as the most conservative assumption for this type of project. Single buses stopping, idling, and then moving on from any station would be expected to generate less noise than multiple buses moving within a transit center. Therefore, the screening distances determined for the Project noise assessment are 225 feet for unobstructed receptors and 150 feet for receptors that have intervening buildings between the station and the receptor (Table 4-7 of The Manual). These same distances were applied to the linear project area, between the station areas.

A 225-foot screening buffer was applied to the proposed transit center areas, the bus layover areas, and individual station areas, and along the linear project area to identify potential noise-sensitive receptors. The three noise-sensitive land use categories (1, 2, and 3) used by FTA were used to identify potential noise sensitive receptors, and are shown below in Table 1, which is excerpted from Table 4-3 of The Manual. The FTA Noise Impact Assessment Spreadsheet ([http://www.fta.dot.gov/12347\\_2233.html](http://www.fta.dot.gov/12347_2233.html)) utilizes these three categories and describes them as 1: *Outdoor – Quiet*, 2: *Residential*, and 3: *Institutional*. According to FTA guidelines, buildings used for commercial or industrial purposes, and which are located within busy commercial areas, were not considered to be noise-sensitive and the noise impact criteria does not apply. Under FTA environmental reviews, some historic structures may be evaluated as sensitive resources as defined in The Manual, but because The Manual and regulations under Section 106 of the National Historic Preservation Act have different criteria for determining effect, identifying a severe noise impact for a structure under the Manual does not necessarily mean there would be an adverse effect under Section 106. Therefore, only the historic structures that qualify as sensitive resources within the three land use categories were evaluated.

**Table 1 – FTA Land Use Categories**

| Land Use Category | Land Use Type    | Noise Metric, dBA       | Description of Land Use Category   |
|-------------------|------------------|-------------------------|--|
| 1                 | High Sensitivity | Outdoor $L_{eq(1hr)}$ * | Land where quiet is an essential element of its intended purpose. Example land uses include preserved land for serenity and quiet, outdoor amphitheaters and concert pavilions, and national historic landmarks with considerable outdoor use. Recording studios and concert halls are also included in this category.   |
| 2                 | Residential      | Outdoor $L_{dn}$        | This category is applicable all residential land use and buildings where people normally sleep, such as hotels and hospitals.  |
| 3                 | Institutional    | Outdoor $L_{eq(1hr)}$ * | This category is applicable to institutional land uses with primarily daytime and evening use. Example land uses include schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities are also included in this category. |

\*  $L_{eq(1hr)}$  for the loudest hour of project-related activity during hours of noise sensitivity.

Source: FTA Transit Noise and Vibration Manual, September 2018.

In addition to the receptors identified within the screening distance of the proposed transit centers and stations, , receptors were identified within these distances along the project street corridors and were carried forward into the general noise assessment. Each noise sensitive receptor within the screening buffers was given a unique identification number (R-1, R-2, etc.). The locations of the receptors, in relation to the proposed transit centers and stations, and along the project street corridors, are shown on **Exhibit 1, Pages 1 through 17**.

## GENERAL NOISE ASSESSMENT

The busy urban streets along the proposed BRT project are primary transportation corridors that have existing transportation noise, including noise from existing buses, and the Project would not introduce a new atypical noise source. It was anticipated that there would be very little change in the noise environment of the project area as a result of the increased bus service of the proposed BRT project. The proposed stations would provide 3 buses per hour during off-peak hours, 2 buses per hour in evening and early am, and the peak hours running 4 buses per hour; totaling 47 buses throughout the daytime during the week (see **Table 2**). This corresponds to an average of 3.1 buses per hour, through the 15-hour period during the weekday (between 7am and 10pm). The FTA considers "nighttime" to be between 10pm and 7am, in which there would be a total of 11 buses, although no BRT buses would run between the hours of 12:00am and 5:00am. This results in an average of 1.2 buses per hour through the 9-hour period during the night.

For the transfer center on Airline Highway, the local buses that will serve the facility were added, resulting in an average of 10.0 buses per hour through the daytime period, and an average of 2.3 buses per hour through the nighttime period. At the proposed downtown transfer center, at Florida St and 10<sup>th</sup> Street, there are no noise sensitive receptors in the screening buffer zone.

**Table 2 – BRT Service Plan**

| Time Period                 | Weekday       |               |               |               |               |               |                |                 |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-----------------|
|                             | Nighttime     |               | Daytime       |               |               |               |                | Nighttime       |
|                             | Early AM      | AM Peak       | AM Peak       | Midday        | PM Peak       | Evening       | Night          | Night           |
| Service Hours               | 5:00a - 5:30a | 5:30a - 7:00a | 7:00a - 9:00a | 9:00a - 3:00p | 3:00p - 6:30p | 6:30p - 7:30p | 7:30p - 10:00p | 10:00p - 12:00a |
| Service Frequency (Minutes) | 30            | 15            | 15            | 20            | 15            | 30            | 30             | 30              |
| Number of Buses             | 1             | 6             | 8             | 18            | 14            | 2             | 5              | 4               |

**Noise Assessment for Proposed Stations and Transit Centers**

FTA's *Noise Impact Assessment Spreadsheet* was used to calculate the increase and change in noise levels at the noise sensitive receptors within the buffer zones, as a result of implementing the proposed BRT project. The spreadsheet calculates the level of impact (no impact or "none", moderate, severe) by utilizing input data including project type, land use category, estimated existing noise levels (derived from Table 5-7 in The Manual), the average number of buses per hour for daytime and nighttime service, estimated noise levels from the noise source (buses), and the distance from the receptor to the noise source.

To determine whether the noise levels from the proposed BRT project may have an impact on a noise sensitive receptor (based on the FTA noise impact criteria) a comparison is made between the estimated existing outdoor noise levels in the vicinity of the proposed project and the estimated outdoor noise levels from the proposed project when it is implemented ("project noise").

**Noise Assessment for Proposed Stations and Transit Centers**

A total of 125 noise sensitive receptors were identified within the screening buffers of the stations and transit centers, including 2 receptors in Category 1, 106 receptors in Category 2, and 17 receptors in Category 3. Through the general noise assessment for each transit center or station, it was determined that there would be "no impact" on any receptors. The impact results of the spreadsheet analyses of the general noise assessment are summarized in **Table A** in **Appendix A**. The detailed results of the spreadsheet calculations for the receptors in each land use category that are the shortest distance from the transit centers and stations (representing a worst case) are presented in **Appendix B**.

One urban park at Convention Street and North Seventh (#R-46) and one recording studio at Saint Ferdinand Street and Spain Street (#R-39) are located within proposed station areas and were evaluated as Category 1. However, these properties are surrounded by busy urban streets with existing bus routes and/or bus stops. For both properties, "quiet is an essential element in their intended purpose", as described in Section 4.1 of The Manual. However, these properties are sufficiently distant from the stations to not be impacted (moderately or severely) by project noise.

### **Noise Assessment for the Project Street Corridors**

Several noise sensitive receptors were identified within the screening distance for the project street corridors (between the station areas). The FTA spreadsheet was used to determine impact levels from the noise source. Data entered into the spreadsheet included estimated existing noise levels, distance between the source and the receptor, the average number of buses per hour, bus speed (mph), land use category, and the type of bus (diesel, electric, or hybrid).

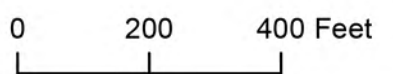
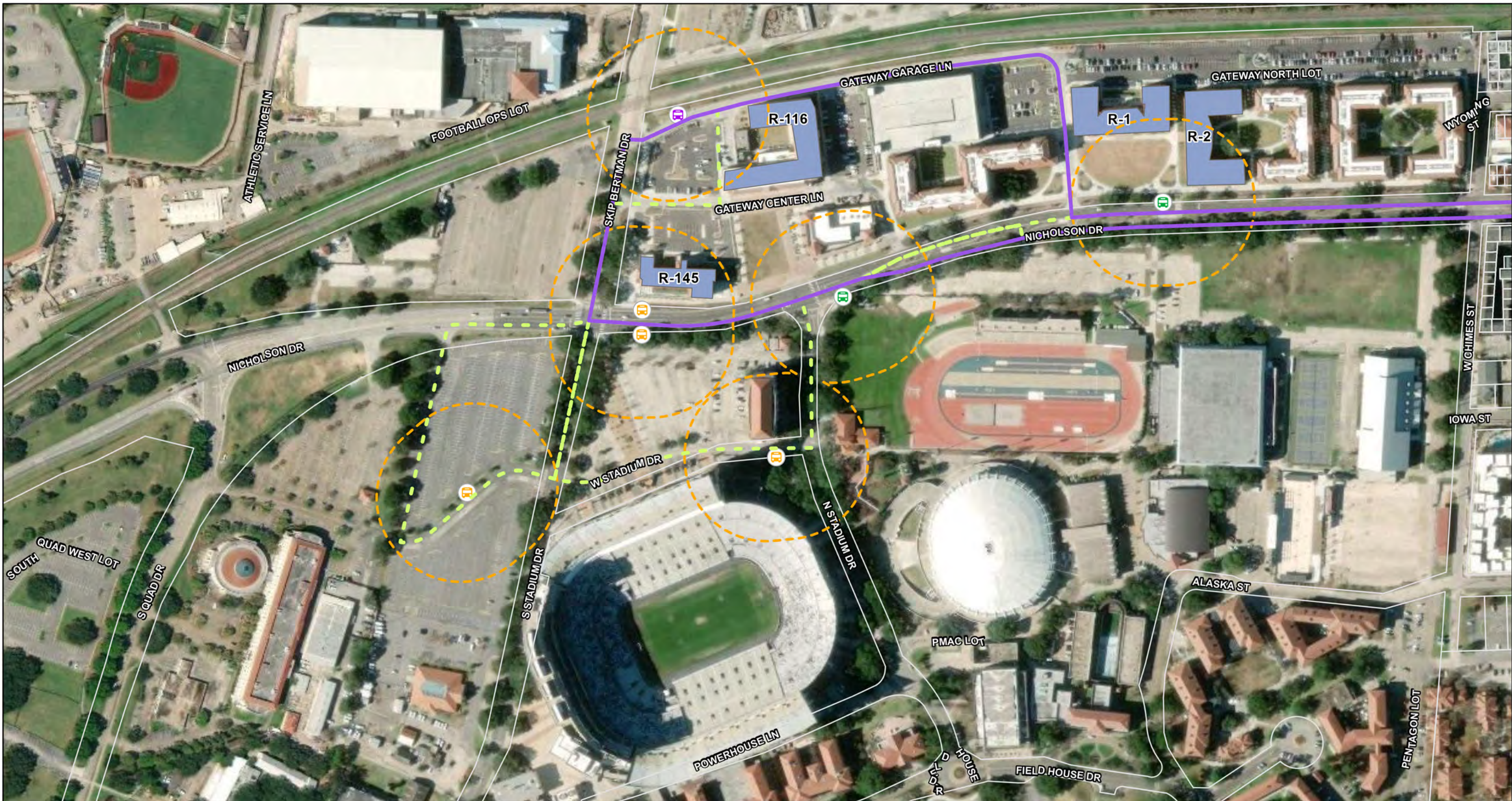
Based on the large number of identified receptors, the spreadsheet analysis was completed for the receptors with the shortest distance between the source and the receptor for each land use category. If a receptor was farther from the source than the distance for a moderate or severe impact, it was determined to have no impact. The spreadsheet analysis indicated that the moderate and severe impact distances for each land use category would be minimal and would not be outside of the street, as shown in Table 3. Therefore, the Project would have no impact on any receptors outside of the station buffer zones.

**Table 3 – Impact Distances for Project Street Corridors**

| <b>Land Use Category</b> | <b>Shortest Distance to Receptor</b> | <b>Distance Resulting in Moderate Impact</b> | <b>Distance Resulting in Severe Impact</b> |
|--------------------------|--------------------------------------|--|--|
| 1                        | 141 ft.                              | 6 ft.  | 3 ft.                                      |
| 2                        | 35 ft.                               | 4 ft.  | 2 ft.                                      |
| 3                        | 60 ft.                               | 2 ft.  | 1 ft.                                      |

### **CONCLUSION**

A General Noise Assessment was conducted for the noise sensitive receptors at the proposed bus layover area, the transfer center, the 44 individual station areas, and along the project street corridors, in accordance with FTA Guidance. The results of the assessment indicated that the proposed BRT project would have “no impact” on any of the receptors in the project area.



**BRT Route Alignment**

- Preferred Alignment
- Alignment Alternative

**Proposed Stations**

- Preferred
- Alternate
- Layover
- Transit Center
- Local Bus Stop Improvement

**Noise Land Use Classification**

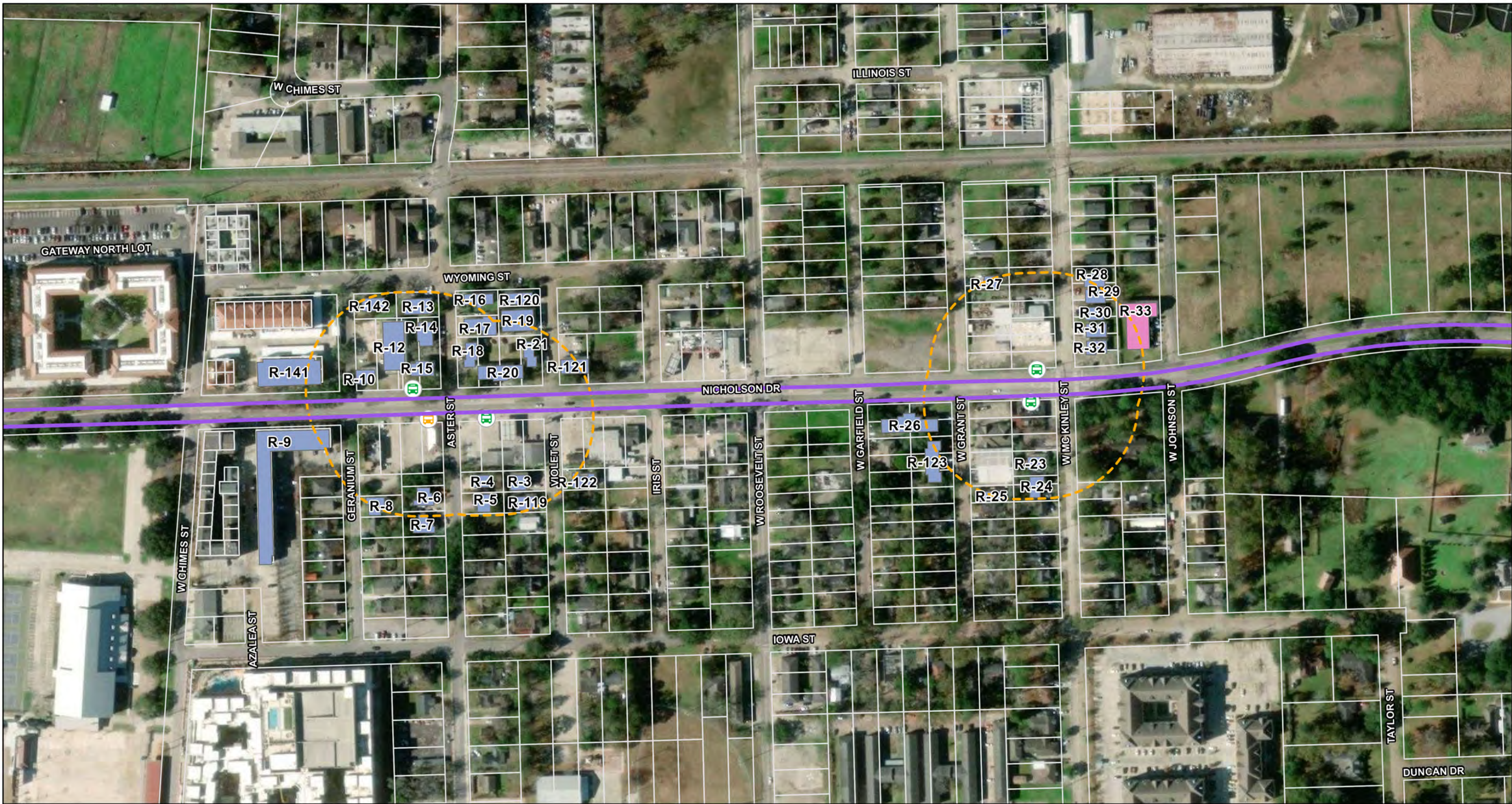
- High Sensitivity
- Residential
- Institutional

**Noise Screening Buffer**

- Noise Screening Buffer
- Parcels

**Plank-Nicholson BRT  
Noise Impact Assessment  
Map Book**

**Exhibit 1  
1/17/2020**



0 200 400 Feet

**BRT Route Alignment**

- Preferred Alignment
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**Proposed Stations**

- Preferred
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**Noise Land Use Classification**

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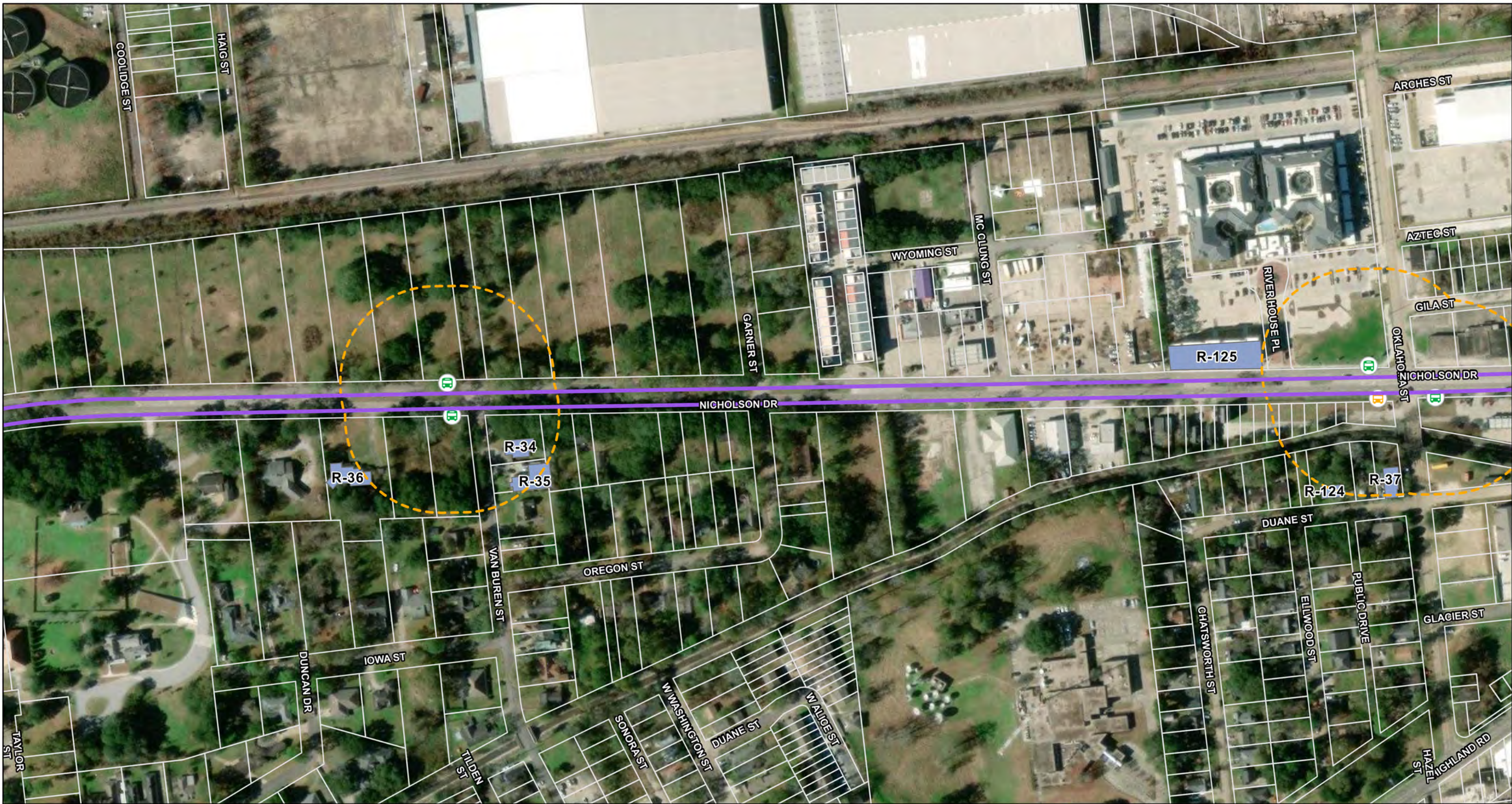
Noise Screening Buffer

Parcels

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Noise Impact Assessment  
Map Book**

**Exhibit 1  
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**BRT Route Alignment**

- Preferred Alignment
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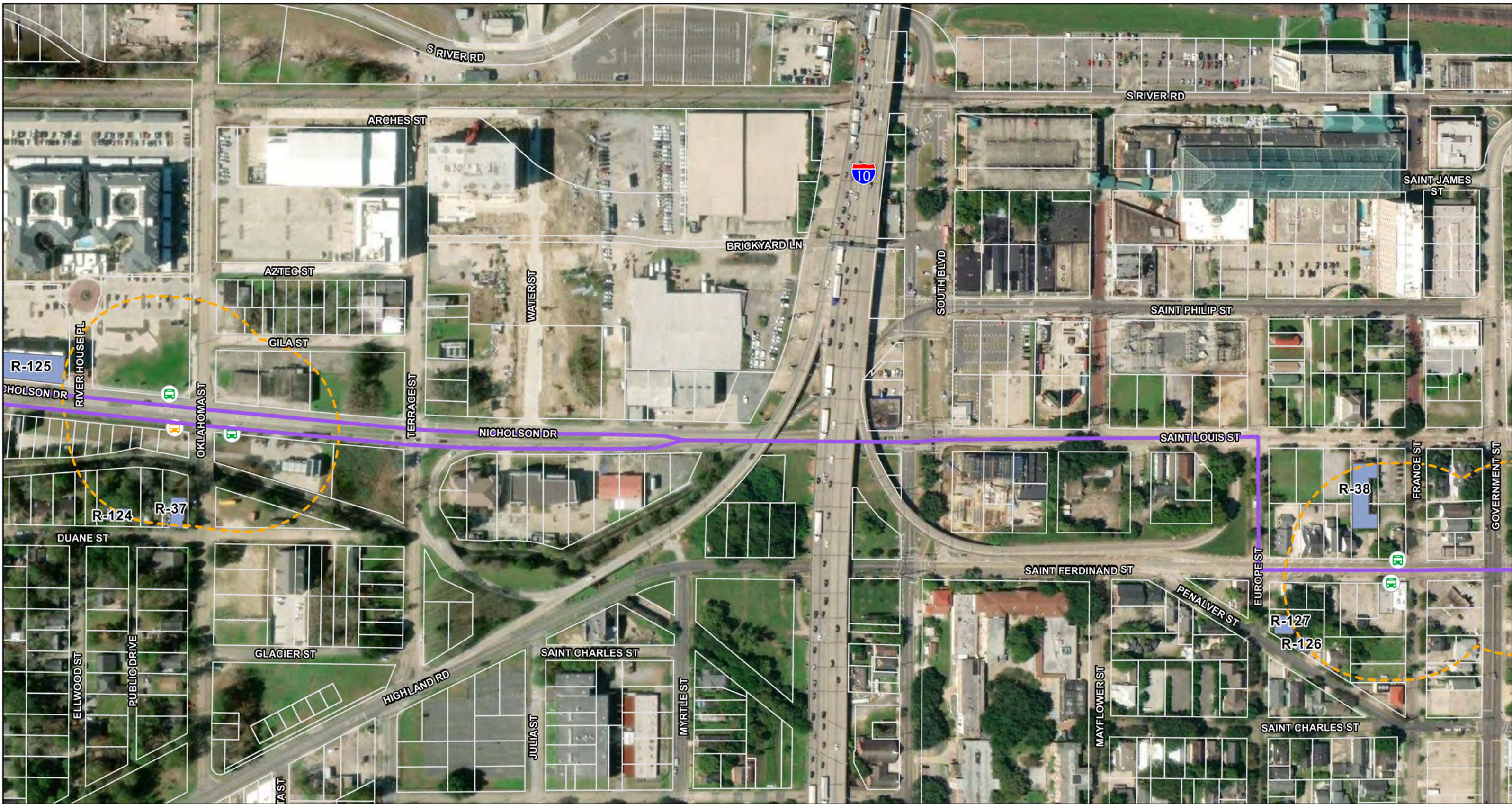
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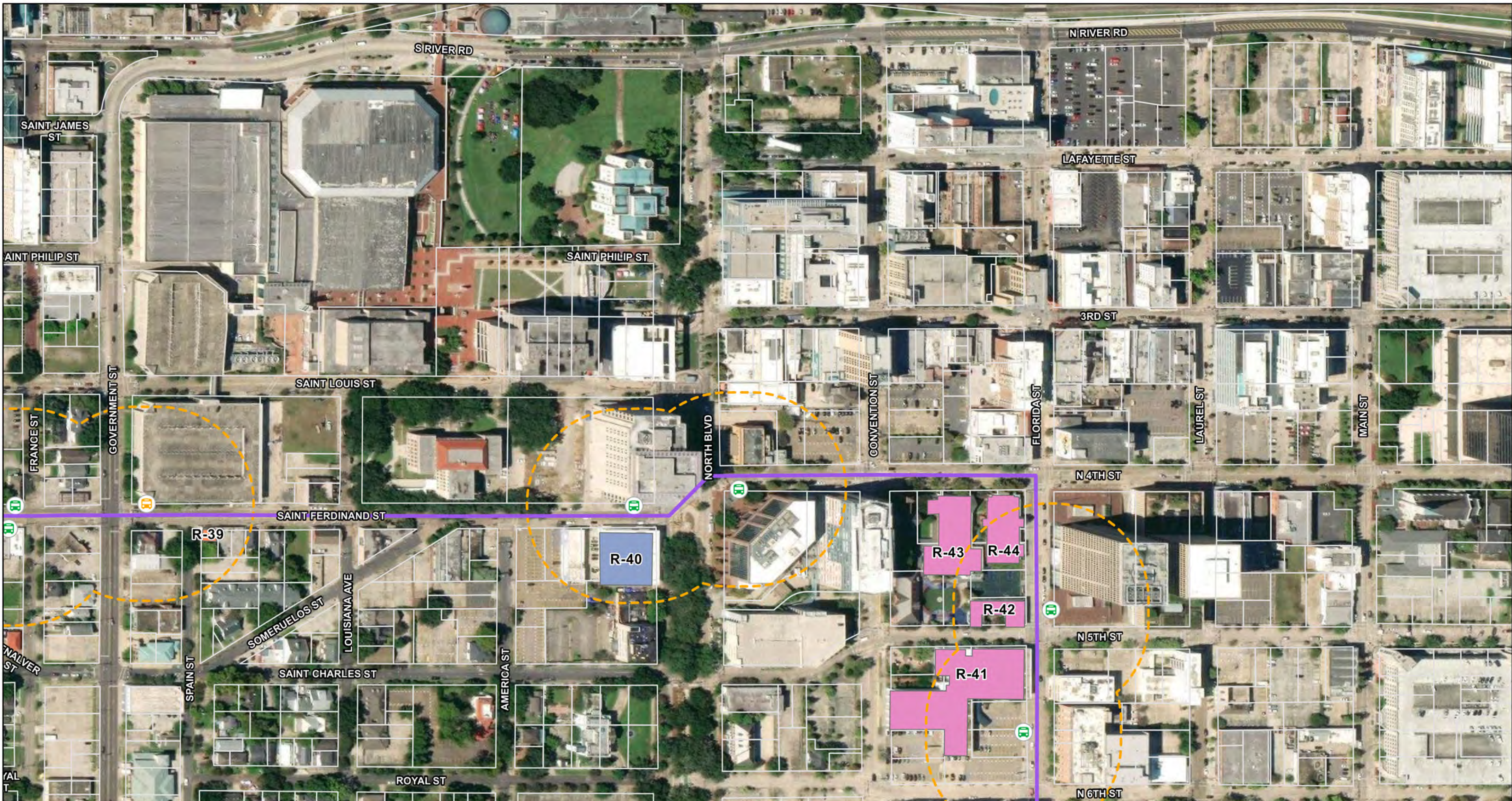
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0 200 400 Feet



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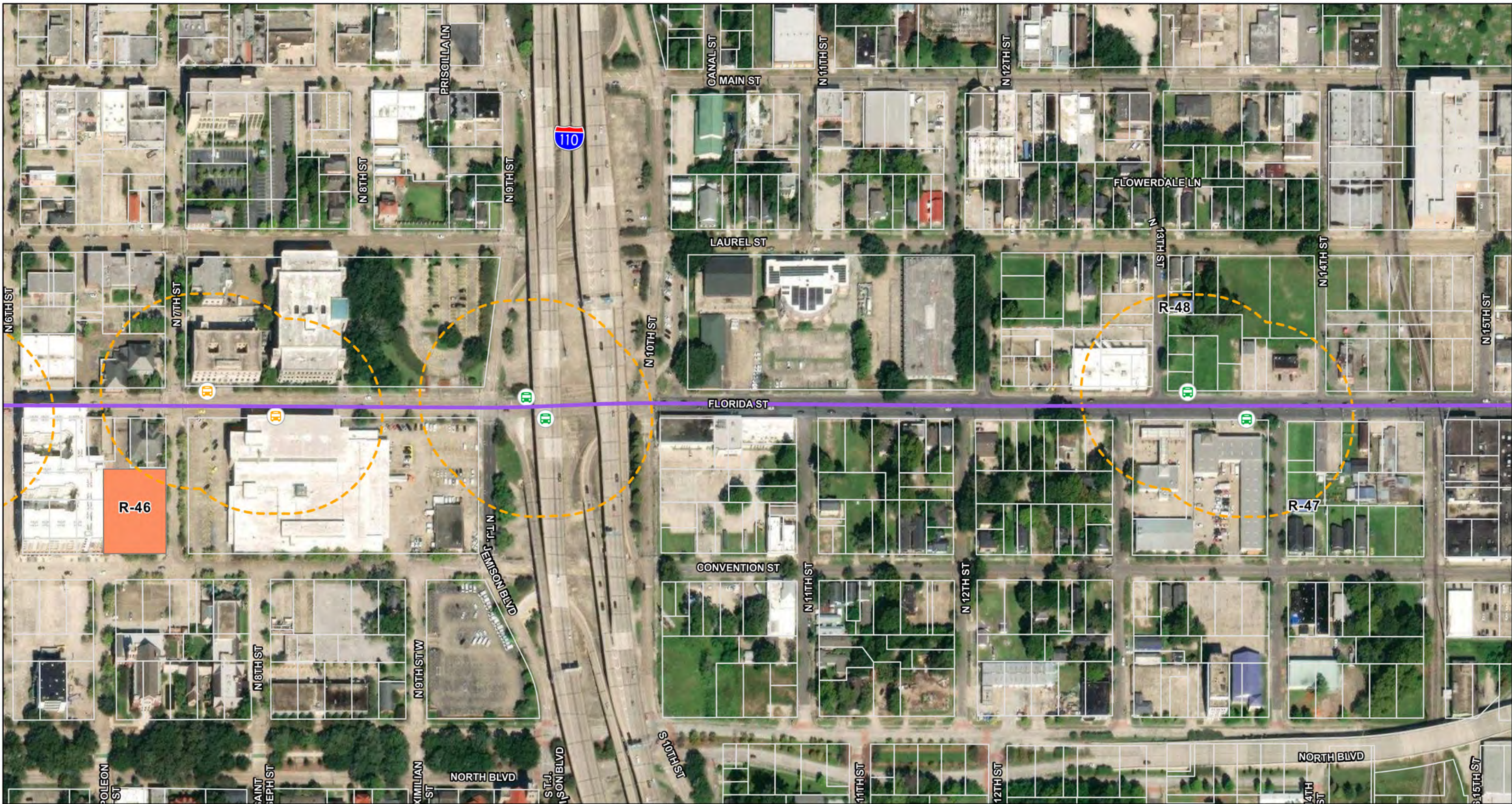
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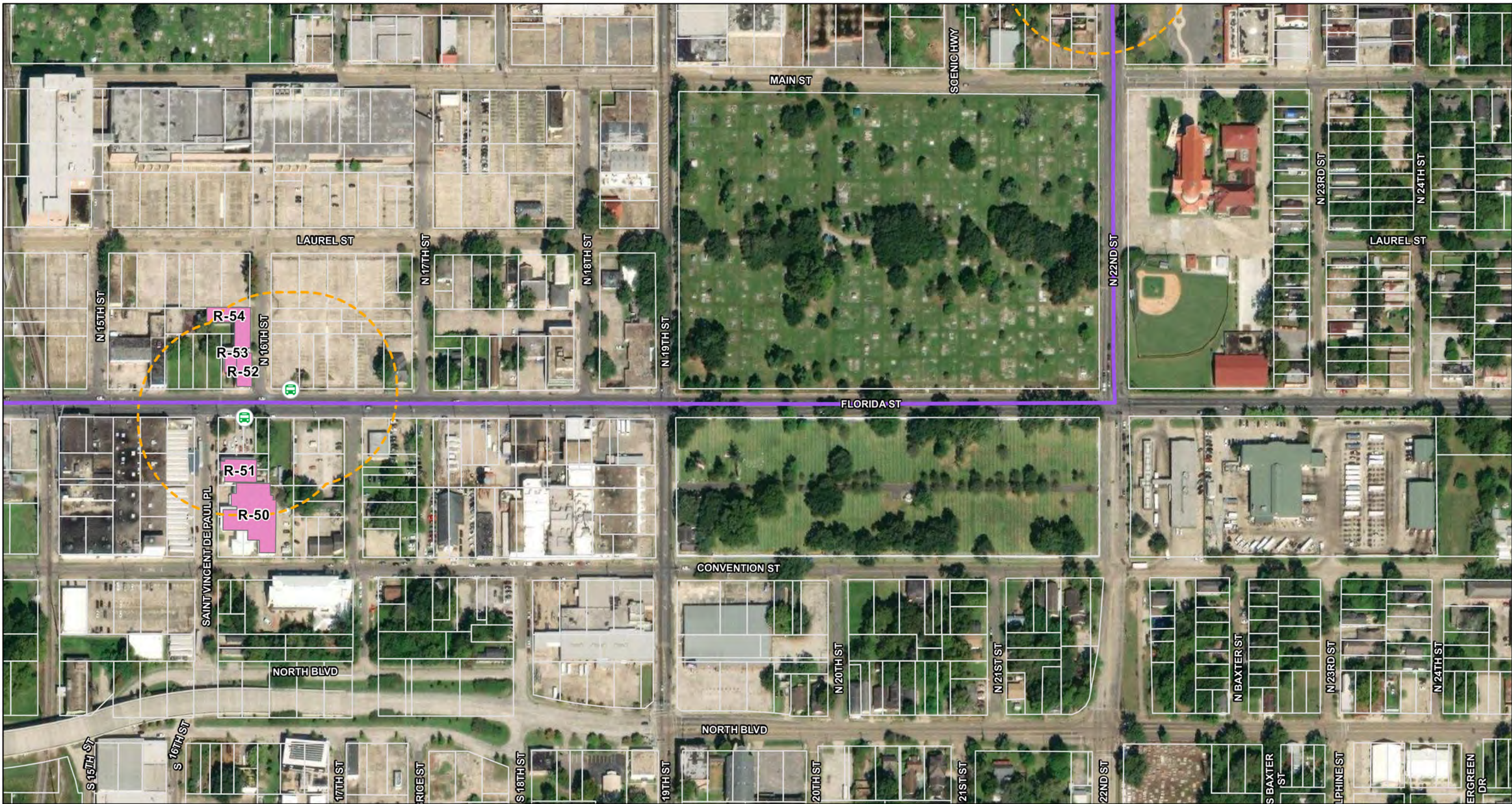


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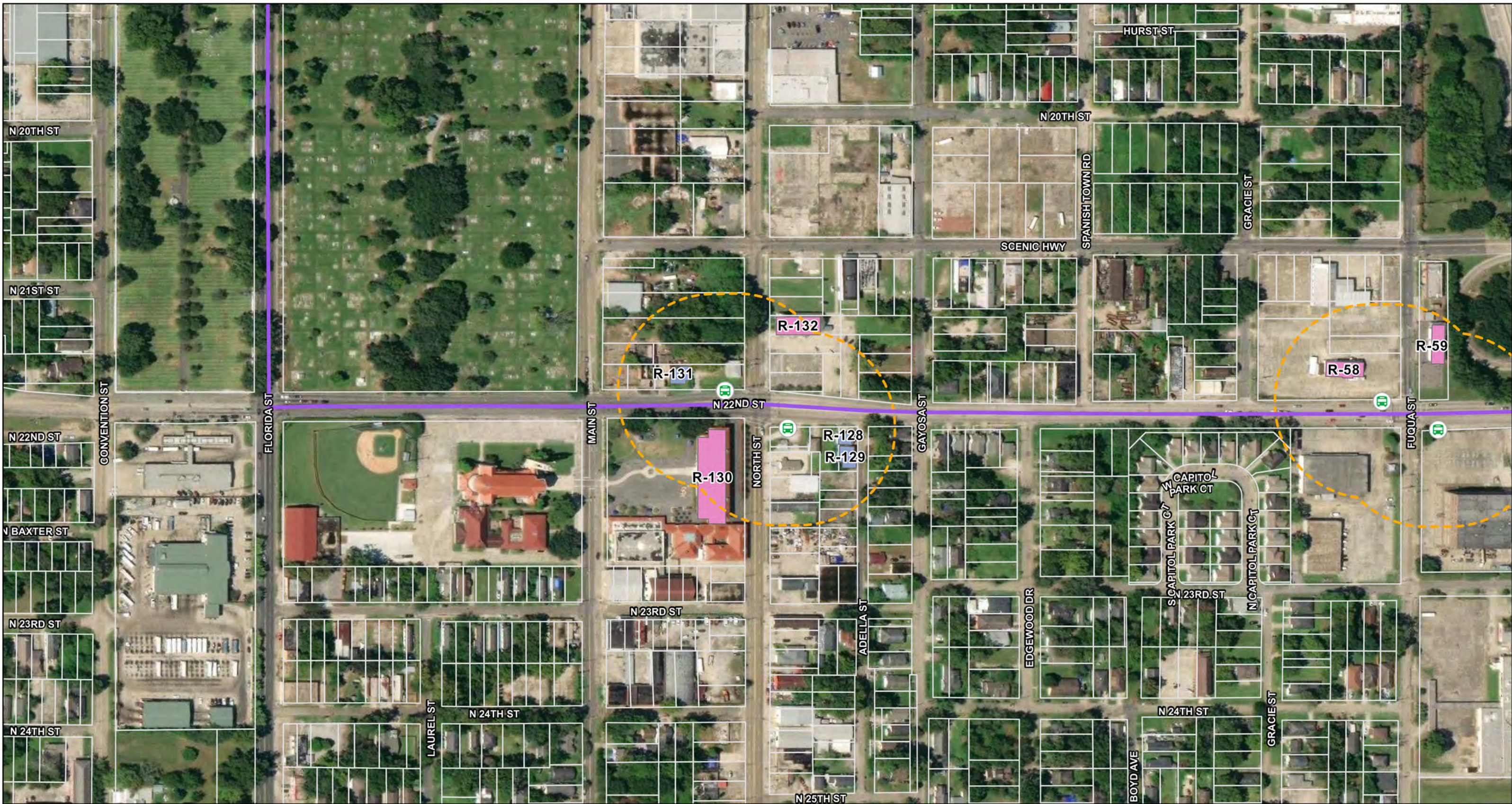
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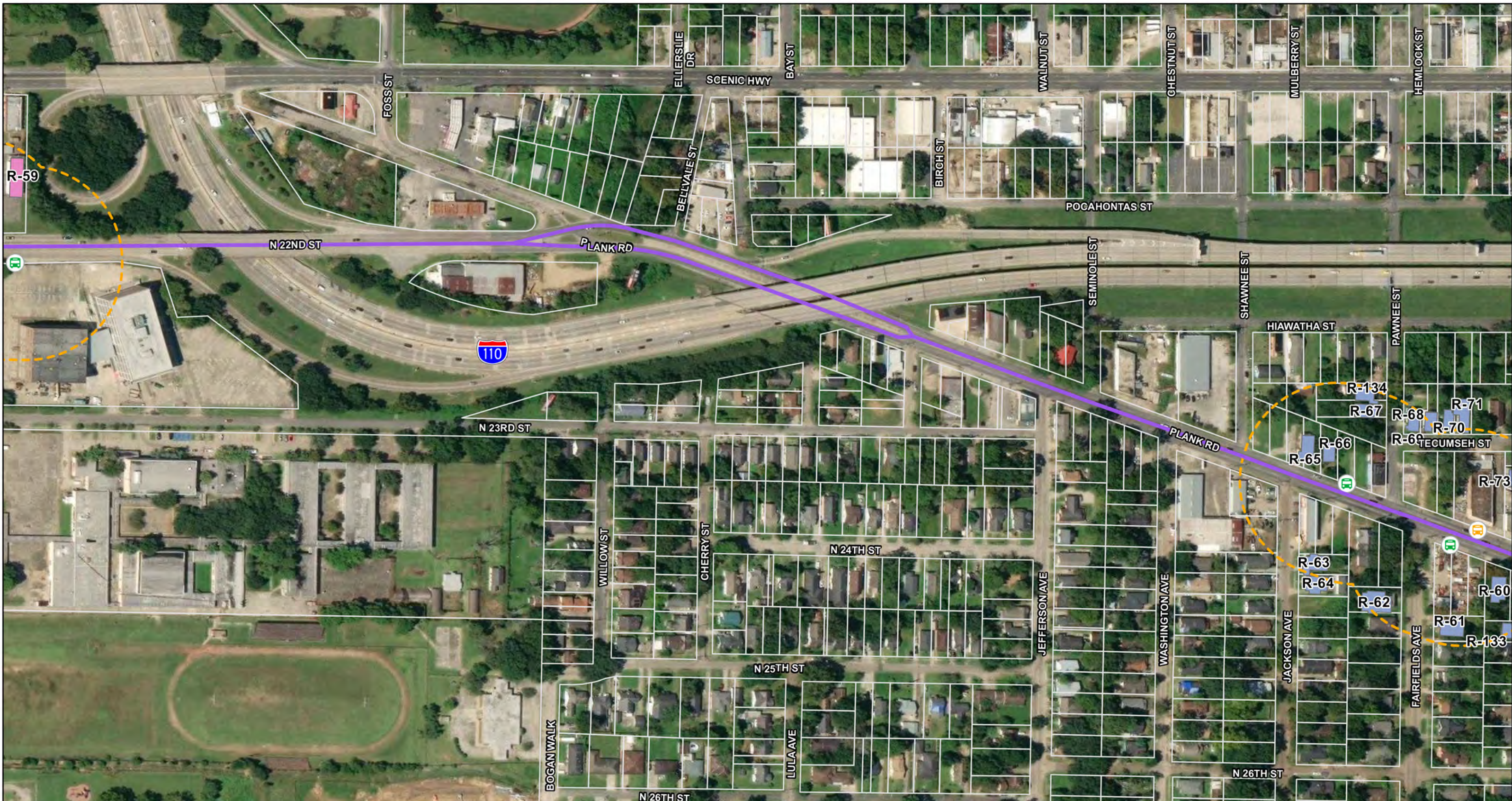
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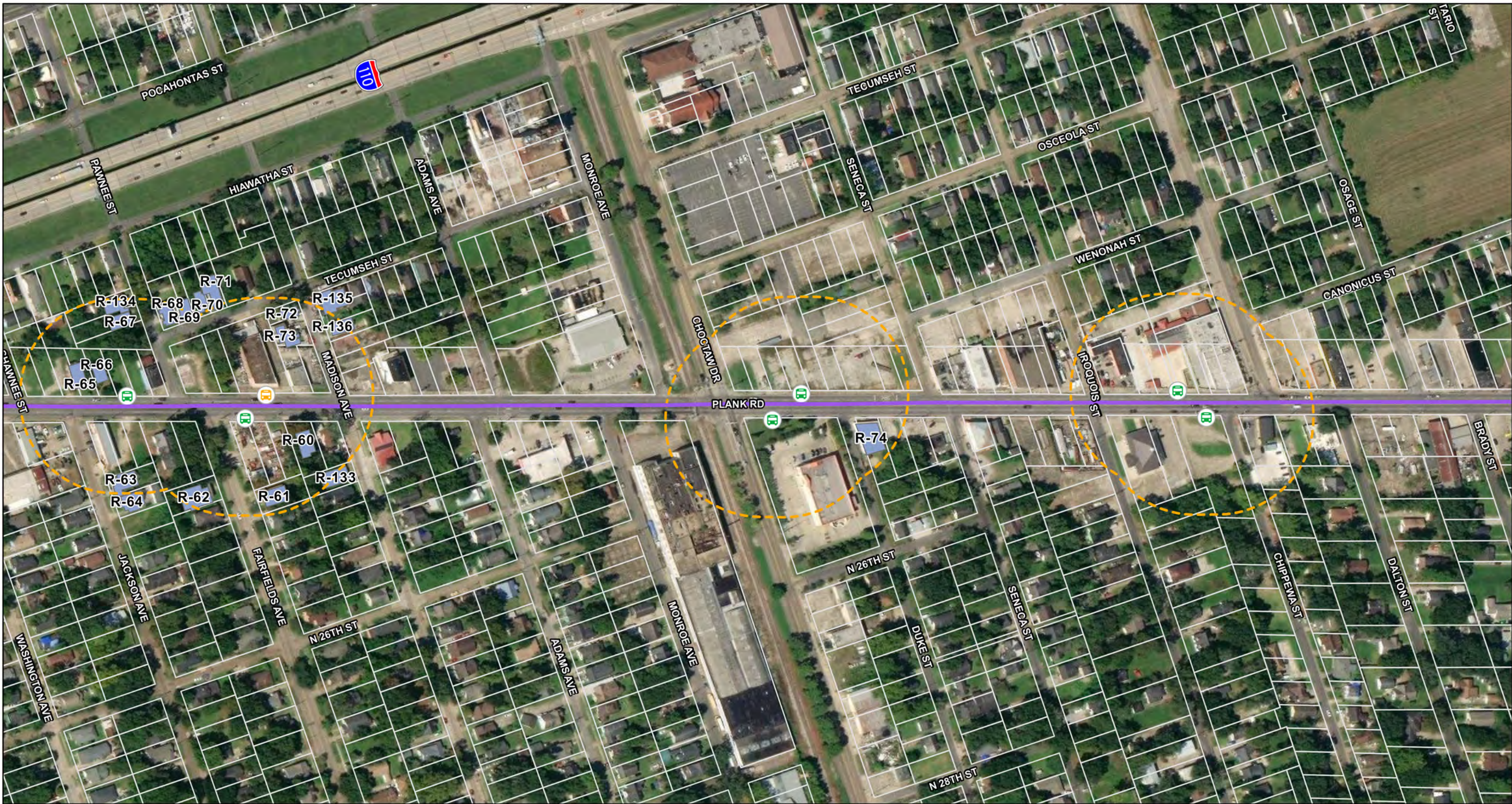
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0 200 400 Feet



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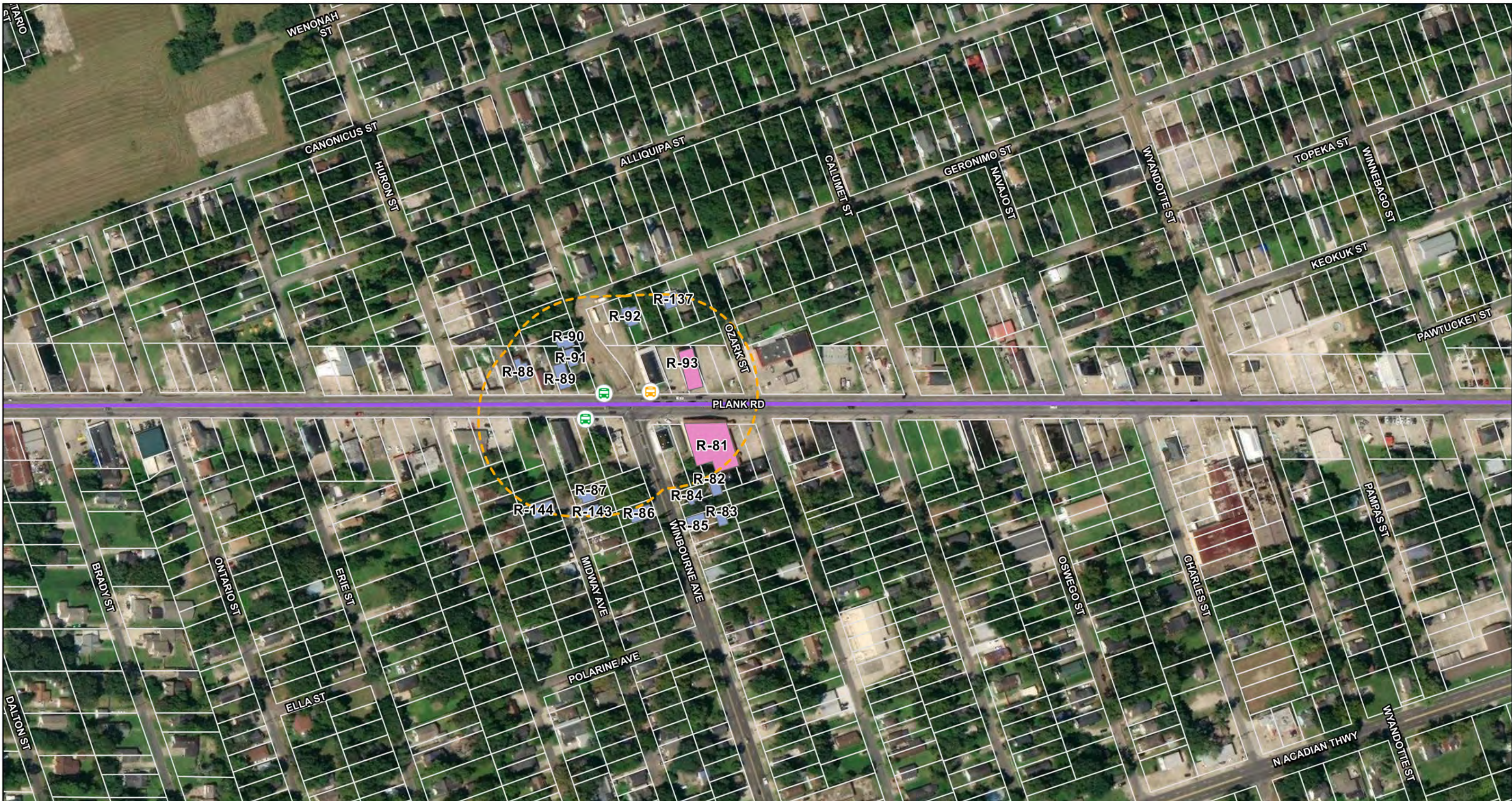
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**BRT Route Alignment**

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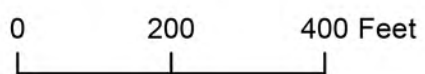
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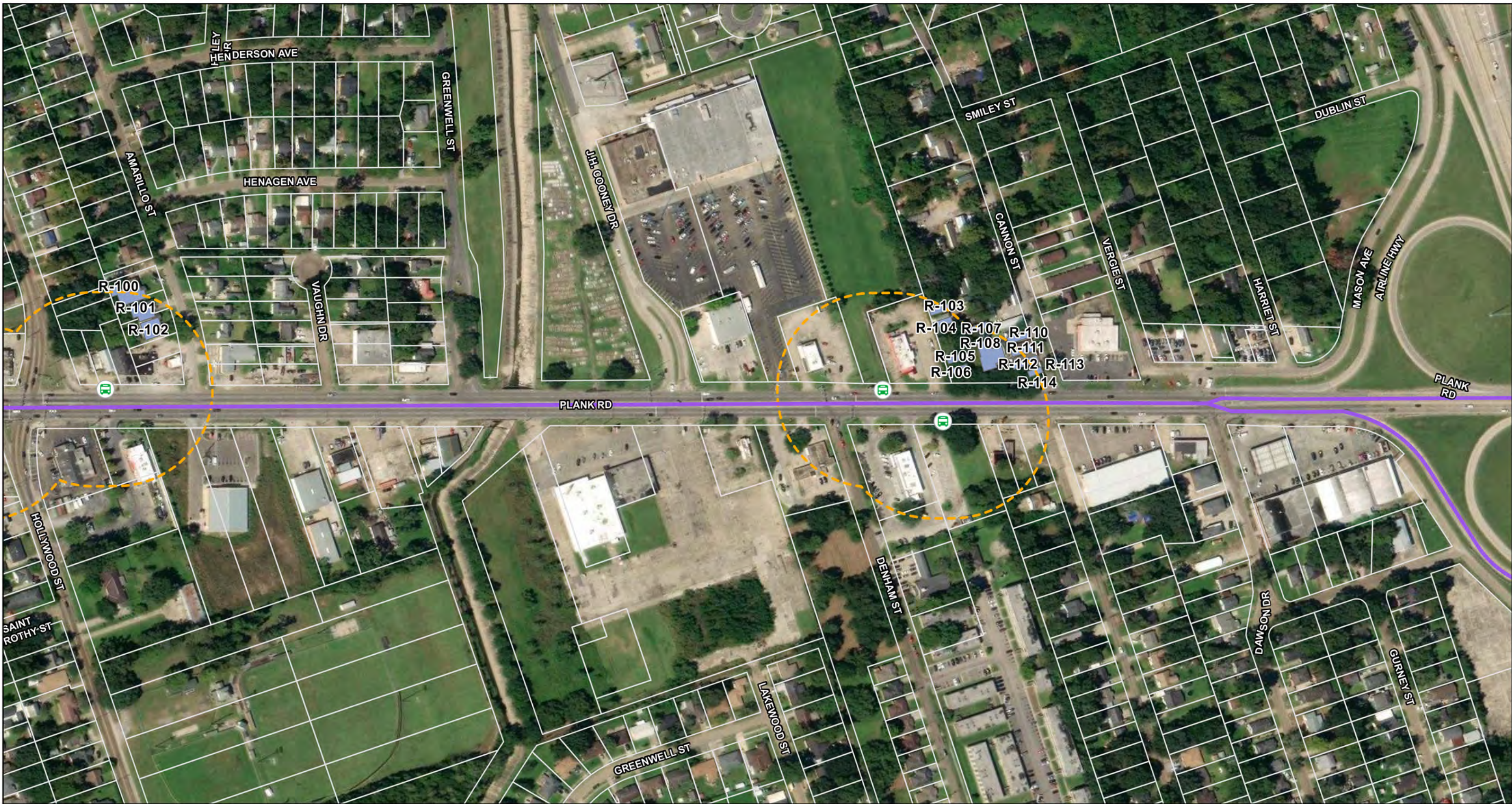
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0 200 400 Feet



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**Other Symbols**

- Noise Screening Buffer
- Parcels

0 200 400 Feet



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**BRT Route Alignment**

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# Appendix A

## Noise Assessment Summary

### APPENDIX A

**Table A - Noise Assessment Summary**

**Project:** Plank-Nicholson BRT  
**Receiver:** All

| Receiver | Land Use Category | Distance         | Project Noise* | Existing Noise* | Total Noise | Noise Criteria |               | Impact? |      |
|----------|-------------------|------------------|----------------|-----------------|-------------|----------------|---------------|---------|------|
|          |                   |                  |                |                 |             | Mod. Impact**  | Sev. Impact** |         |      |
| 1        | R-1               | 2. Residential   | 222 ft         | 44.3 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 2        | R-2               | 2. Residential   | 66 ft          | 57.5 dBA        | 65 dBA      | 66 dBA         | 61 dBA        | 66 dBA  | None |
| 3        | R-3               | 2. Residential   | 155 ft         | 43.7 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 4        | R-4               | 2. Residential   | 150 ft         | 44.1 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 5        | R-5               | 2. Residential   | 203 ft         | 39.3 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 6        | R-6               | 2. Residential   | 182 ft         | 46.5 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 7        | R-7               | 2. Residential   | 257 ft         | 38.2 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 8        | R-8               | 2. Residential   | 227 ft         | 44.1 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 9        | R-9               | 2. Residential   | 243 ft         | 43.3 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 10       | R-10              | 2. Residential   | 72 ft          | 56.5 dBA        | 60 dBA      | 62 dBA         | 58 dBA        | 63 dBA  | None |
| 11       | R-12              | 2. Residential   | 46 ft          | 61.4 dBA        | 70 dBA      | 71 dBA         | 64 dBA        | 69 dBA  | None |
| 12       | R-13              | 2. Residential   | 199 ft         | 41.0 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 13       | R-14              | 2. Residential   | 110 ft         | 47.4 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 14       | R-15              | 2. Residential   | 35 ft          | 64.4 dBA        | 70 dBA      | 71 dBA         | 64 dBA        | 69 dBA  | None |
| 15       | R-16              | 2. Residential   | 249 ft         | 38.5 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 16       | R-17              | 2. Residential   | 187 ft         | 41.7 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 17       | R-18              | 2. Residential   | 121 ft         | 50.9 dBA        | 65 dBA      | 65 dBA         | 61 dBA        | 66 dBA  | None |
| 18       | R-19              | 2. Residential   | 230 ft         | 39.4 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 19       | R-20              | 2. Residential   | 148 ft         | 48.7 dBA        | 70 dBA      | 70 dBA         | 64 dBA        | 69 dBA  | None |
| 20       | R-21              | 2. Residential   | 156 ft         | 43.6 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 21       | R-23              | 2. Residential   | 145 ft         | 44.4 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 22       | R-24              | 2. Residential   | 200 ft         | 37.9 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 23       | R-25              | 2. Residential   | 243 ft         | 35.8 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 24       | R-26              | 2. Residential   | 228 ft         | 44.0 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 25       | R-27              | 2. Residential   | 226 ft         | 39.6 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 26       | R-28              | 2. Residential   | 241 ft         | 38.9 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 27       | R-29              | 2. Residential   | 203 ft         | 45.3 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 28       | R-30              | 2. Residential   | 164 ft         | 47.6 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 29       | R-31              | 2. Residential   | 132 ft         | 49.9 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 30       | R-32              | 2. Residential   | 108 ft         | 52.1 dBA        | 60 dBA      | 61 dBA         | 58 dBA        | 63 dBA  | None |
| 31       | R-33              | 3. Institutional | 222 ft         | 37.7 dBA        | 55 dBA      | 55 dBA         | 60 dBA        | 66 dBA  | None |
| 32       | R-34              | 2. Residential   | 128 ft         | 50.3 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 33       | R-35              | 2. Residential   | 211 ft         | 44.8 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 34       | R-36              | 2. Residential   | 241 ft         | 43.4 dBA        | 55 dBA      | 55 dBA         | 55 dBA        | 61 dBA  | None |
| 35       | R-37              | 2. Residential   | 184 ft         | 46.3 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |
| 36       | R-38              | 2. Residential   | 85 ft          | 54.7 dBA        | 65 dBA      | 65 dBA         | 61 dBA        | 66 dBA  | None |
| 37       | R-39              | 1. Outdoor Quiet | 141 ft         | 47.2 dBA        | 60 dBA      | 60 dBA         | 58 dBA        | 63 dBA  | None |

|    |       |                     |        |          |        |        |        |        |      |
|----|-------|---------------------|--------|----------|--------|--------|--------|--------|------|
| 38 | R-40  | 2. Residential      | 70 ft  | 56.8 dBA | 65 dBA | 66 dBA | 61 dBA | 66 dBA | None |
| 39 | R-41  | 3. Institutional    | 58 ft  | 56.8 dBA | 65 dBA | 66 dBA | 66 dBA | 71 dBA | None |
| 40 | R-42  | 3. Institutional    | 60 ft  | 56.4 dBA | 65 dBA | 66 dBA | 66 dBA | 71 dBA | None |
| 41 | R-43  | 3. Institutional    | 200 ft | 43.4 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 42 | R-44  | 3. Institutional    | 125 ft | 48.5 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 43 | R-46  | 1. Outdoor<br>Quiet | 223 ft | 37.7 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 44 | R-47  | 2. Residential      | 232 ft | 39.3 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 45 | R-48  | 2. Residential      | 213 ft | 44.7 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 46 | R-50  | 3. Institutional    | 172 ft | 40.5 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 47 | R-51  | 3. Institutional    | 109 ft | 49.9 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 48 | R-52  | 3. Institutional    | 74 ft  | 54.2 dBA | 65 dBA | 65 dBA | 66 dBA | 71 dBA | None |
| 49 | R-53  | 3. Institutional    | 128 ft | 43.7 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 50 | R-54  | 3. Institutional    | 134 ft | 47.7 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 51 | R-58  | 3. Institutional    | 64 ft  | 55.7 dBA | 65 dBA | 65 dBA | 66 dBA | 71 dBA | None |
| 52 | R-59  | 3. Institutional    | 142 ft | 47.1 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 53 | R-60  | 2. Residential      | 112 ft | 51.7 dBA | 60 dBA | 61 dBA | 58 dBA | 63 dBA | None |
| 54 | R-61  | 2. Residential      | 204 ft | 45.2 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 55 | R-62  | 2. Residential      | 195 ft | 45.7 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 56 | R-63  | 2. Residential      | 205 ft | 45.2 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 57 | R-64  | 2. Residential      | 263 ft | 38.0 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 58 | R-65  | 2. Residential      | 80 ft  | 55.4 dBA | 65 dBA | 65 dBA | 61 dBA | 66 dBA | None |
| 59 | R-66  | 2. Residential      | 44 ft  | 61.9 dBA | 70 dBA | 71 dBA | 64 dBA | 69 dBA | None |
| 60 | R-67  | 2. Residential      | 188 ft | 46.1 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 61 | R-68  | 2. Residential      | 202 ft | 40.8 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 62 | R-69  | 2. Residential      | 272 ft | 37.6 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 63 | R-70  | 2. Residential      | 261 ft | 38.0 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 64 | R-71  | 2. Residential      | 249 ft | 38.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 65 | R-72  | 2. Residential      | 200 ft | 39.4 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 66 | R-73  | 2. Residential      | 126 ft | 45.9 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 67 | R-74  | 2. Residential      | 140 ft | 49.3 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 68 | R-81  | 3. Institutional    | 203 ft | 43.2 dBA | 55 dBA | 55 dBA | 60 dBA | 66 dBA | None |
| 69 | R-82  | 2. Residential      | 167 ft | 42.9 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 70 | R-83  | 2. Residential      | 259 ft | 36.6 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 71 | R-84  | 2. Residential      | 185 ft | 41.8 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 72 | R-85  | 2. Residential      | 254 ft | 36.8 dBA | 65 dBA | 65 dBA | 61 dBA | 66 dBA | None |
| 73 | R-86  | 2. Residential      | 229 ft | 39.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 74 | R-87  | 2. Residential      | 185 ft | 46.3 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 75 | R-88  | 2. Residential      | 172 ft | 41.1 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 76 | R-89  | 2. Residential      | 58 ft  | 58.9 dBA | 65 dBA | 66 dBA | 61 dBA | 66 dBA | None |
| 77 | R-90  | 2. Residential      | 136 ft | 45.1 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 78 | R-91  | 2. Residential      | 83 ft  | 55.0 dBA | 65 dBA | 65 dBA | 61 dBA | 66 dBA | None |
| 79 | R-92  | 2. Residential      | 175 ft | 42.4 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 80 | R-93  | 3. Institutional    | 200 ft | 43.4 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 81 | R-98  | 2. Residential      | 196 ft | 45.6 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 82 | R-99  | 2. Residential      | 201 ft | 45.4 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 83 | R-100 | 2. Residential      | 222 ft | 44.3 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 84 | R-101 | 2. Residential      | 188 ft | 46.1 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 85 | R-102 | 2. Residential      | 150 ft | 48.6 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 86 | R-103 | 2. Residential      | 284 ft | 37.1 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 87 | R-104 | 2. Residential      | 250 ft | 43.0 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |



|     |                              |                     |        |          |        |        |        |        |      |
|-----|------------------------------|---------------------|--------|----------|--------|--------|--------|--------|------|
| 88  | R-105                        | 2. Residential      | 151 ft | 44.0 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 89  | R-106                        | 2. Residential      | 122 ft | 50.8 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 90  | R-107                        | 2. Residential      | 237 ft | 37.6 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 91  | R-108                        | 2. Residential      | 155 ft | 48.2 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 92  | R-110                        | 2. Residential      | 256 ft | 38.2 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 93  | R-111                        | 2. Residential      | 236 ft | 39.1 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 94  | R-112                        | 2. Residential      | 215 ft | 44.6 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 95  | R-113                        | 2. Residential      | 239 ft | 43.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 96  | R-114                        | 2. Residential      | 236 ft | 43.6 dBA | 65 dBA | 65 dBA | 61 dBA | 66 dBA | None |
| 97  | R-115***                     | 2. Residential      | 82 ft  | 60.4 dBA | 65 dBA | 66 dBA | 61 dBA | 66 dBA | None |
| 98  | R-116                        | 2. Residential      | 65 ft  | 57.6 dBA | 65 dBA | 66 dBA | 61 dBA | 66 dBA | None |
| 99  | R-119                        | 2. Residential      | 217 ft | 38.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 100 | R-120                        | 2. Residential      | 225 ft | 38.1 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 101 | R-121                        | 2. Residential      | 208 ft | 45.0 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 102 | R-122                        | 2. Residential      | 250 ft | 38.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 103 | R-123                        | 2. Residential      | 239 ft | 43.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 104 | R-124                        | 2. Residential      | 240 ft | 43.4 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 105 | R-125                        | 2. Residential      | 263 ft | 42.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 106 | R-126                        | 2. Residential      | 240 ft | 38.9 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 107 | R-127                        | 2. Residential      | 251 ft | 38.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 108 | R-128                        | 2. Residential      | 108 ft | 52.1 dBA | 60 dBA | 61 dBA | 58 dBA | 63 dBA | None |
| 109 | R-129                        | 2. Residential      | 118 ft | 46.7 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 110 | R-130                        | 3. Institutional    | 111 ft | 49.8 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 111 | R-131                        | 2. Residential      | 70 ft  | 56.8 dBA | 65 dBA | 66 dBA | 61 dBA | 66 dBA | None |
| 112 | R-132                        | 3. Institutional    | 183 ft | 39.8 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 113 | R-133                        | 2. Residential      | 229 ft | 39.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 114 | R-134                        | 2. Residential      | 219 ft | 39.9 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 115 | R-135                        | 2. Residential      | 250 ft | 43.0 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 116 | R-136                        | 2. Residential      | 217 ft | 44.5 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 117 | R-137                        | 2. Residential      | 219 ft | 39.9 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 118 | R-138                        | 2. Residential      | 259 ft | 42.6 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 119 | R-139                        | 2. Residential      | 226 ft | 44.1 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 120 | R-140                        | 3. Institutional    | 146 ft | 46.8 dBA | 60 dBA | 60 dBA | 63 dBA | 68 dBA | None |
| 121 | R-141                        | 2. Residential      | 220 ft | 39.9 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 122 | R-142                        | 2. Residential      | 214 ft | 40.2 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 123 | R-143                        | 2. Residential      | 237 ft | 39.1 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 124 | R-144                        | 2. Residential      | 225 ft | 39.6 dBA | 55 dBA | 55 dBA | 55 dBA | 61 dBA | None |
| 125 | R-145                        | 2. Residential      | 73 ft  | 56.4 dBA | 65 dBA | 66 dBA | 61 dBA | 66 dBA | None |
| 126 | R-39 -<br>Corridor<br>R-15 - | 1. Outdoor<br>Quiet | 141 ft | 37.5 dBA | 60 dBA | 60 dBA | 58 dBA | 63 dBA | None |
| 127 | Corridor<br>R-42 -           | 2. Residential      | 35 ft  | 50.5 dBA | 70 dBA | 70 dBA | 64 dBA | 69 dBA | None |
| 128 | Corridor                     | 3. Institutional    | 60 ft  | 44.9 dBA | 65 dBA | 65 dBA | 66 dBA | 71 dBA | None |

\*Ldn for Category 2. Leqh for Categories 1 and 3.

\*\*Project Noise level that would result in a moderate or severe impact

\*\*\*Noise Impact for the North Transfer Center includes both BRT buses and the local buses.

**Appendix B**  
**Noise Impact Calculation Spreadsheets**

Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-1            |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 222                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dBA  |
| Impact?:              | None   |

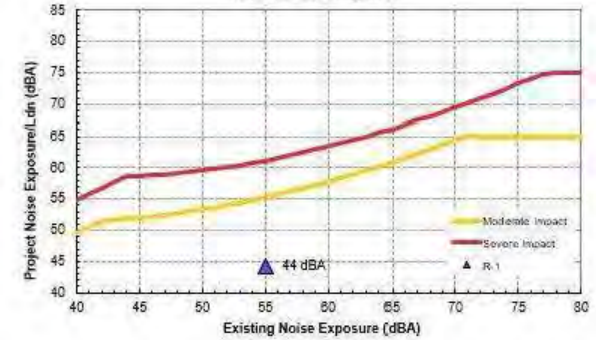
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

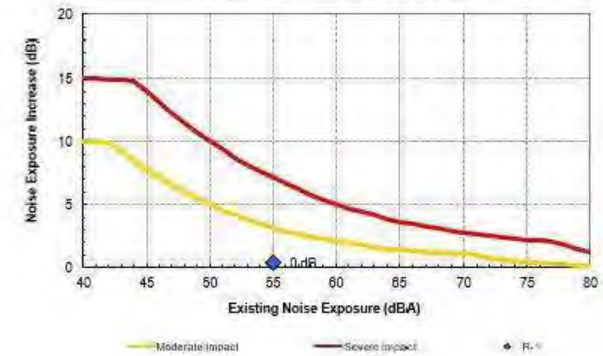
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 41.1 dBA |
| Leq(night): | 37.0 dBA |
| Ldn:        | 44.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

Receiver Parameters

Receiver: R-2  
Land Use Category: 2 Residential  
Existing Noise (Measured or Generic Value): 65 dBA

Noise Source Parameters

Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 66                 |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

Existing Ldn: 65 dBA  
Total Project Ldn: 57 dBA  
Total Noise Exposure: 66 dBA  
Increase: 1 dB  
Impact?: None

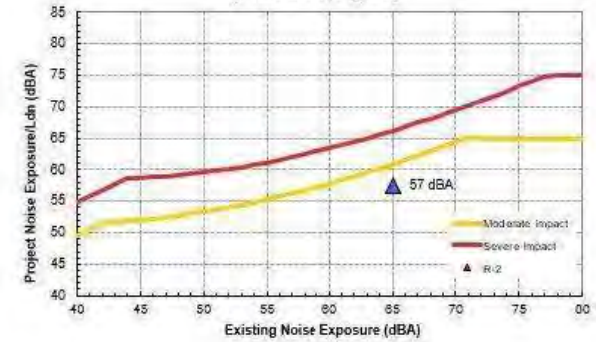
Distance to Impact Contours

Dist to Mod. Impact Contour (Source 1): 48 ft  
Dist to Sev. Impact Contour (Source 1): 30 ft

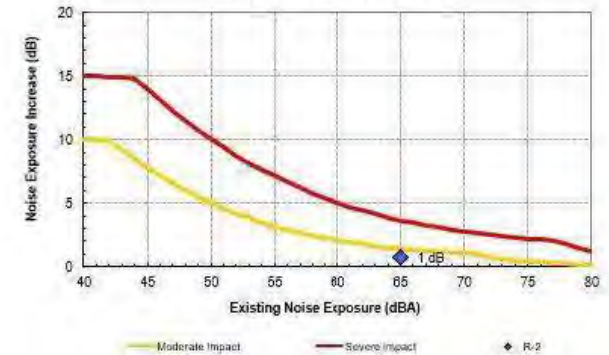
Source 1 Results

Leq(day): 54.3 dBA  
Leq(night): 50.2 dBA  
Ldn: 57.5 dBA

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-3           |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA        |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 155                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

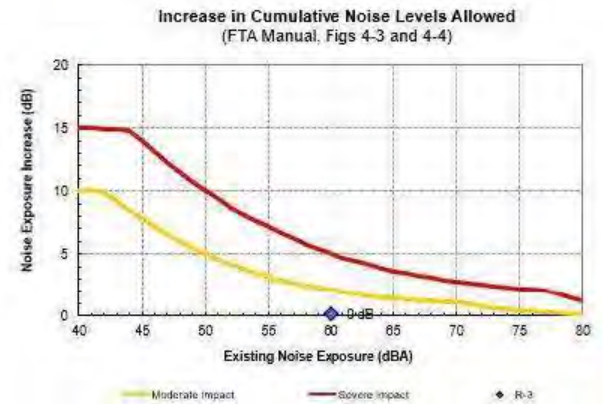
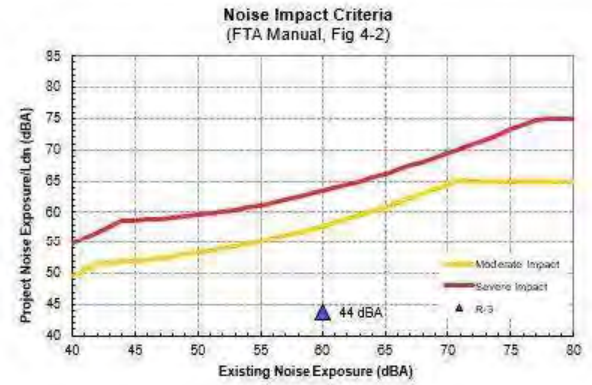
|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.5 dBA |
| Leq(night): | 36.4 dBA |
| Ldn:        | 43.7 dBA |



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-4            |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 150                |
|                         | Number of Interceding Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

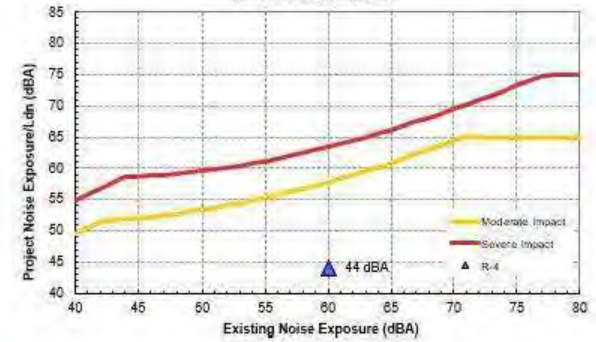
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 64 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 38 ft |

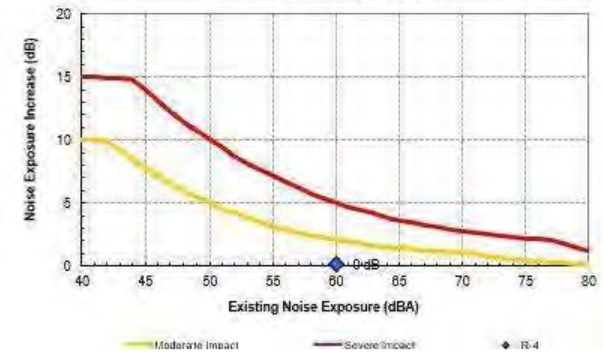
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.9 dBA |
| Leq(night): | 36.8 dBA |
| Ldn:        | 44.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-5            |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 203                |
|                         | Number of Intervening Rows of Buildings | 2                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 33 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

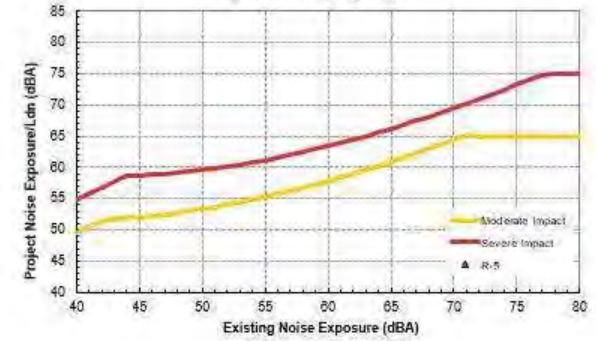
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

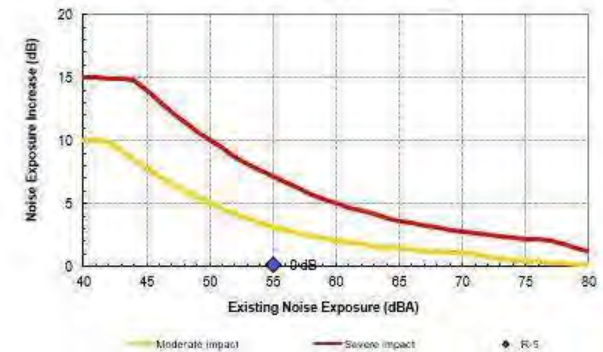
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 36.1 dBA |
| Leq(night): | 32.0 dBA |
| Ldn:        | 39.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-6            |
| Land Use Category:                          | 2: Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 182                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 46 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

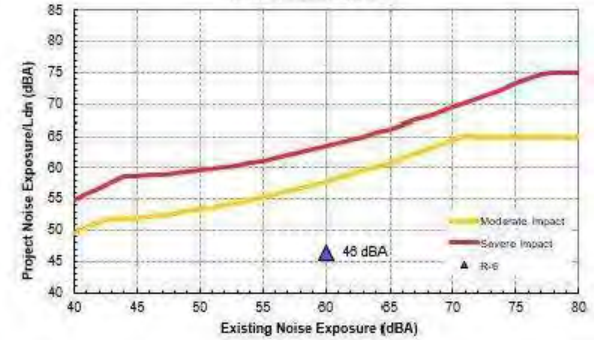
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

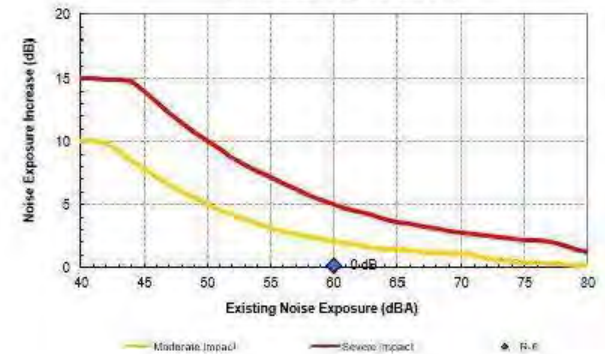
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 43.3 dBA |
| Leq(night): | 39.2 dBA |
| Ldn:        | 46.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-7            |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 257                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

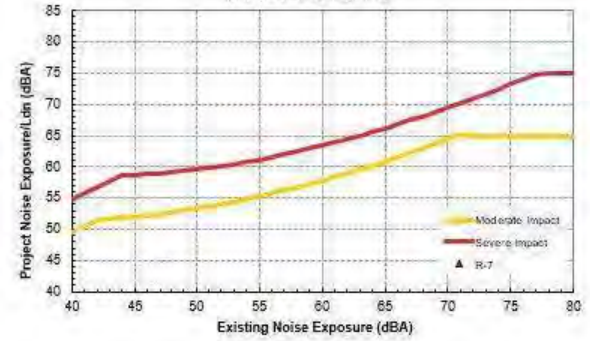
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

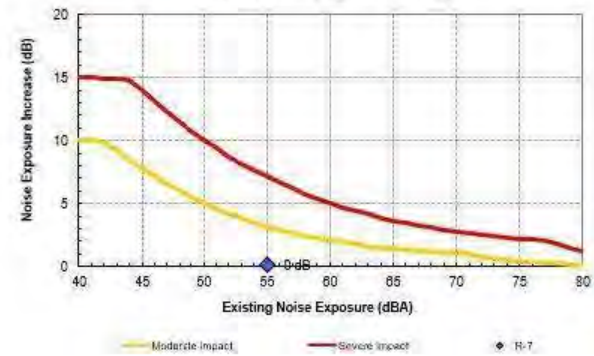
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 35.0 dBA |
| Leq(night): | 30.9 dBA |
| Ldn:        | 38.2 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-8            |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 227                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

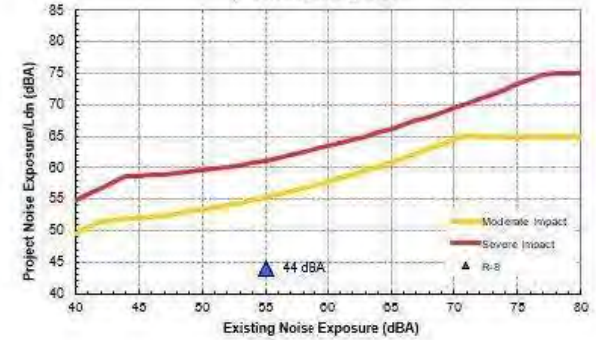
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

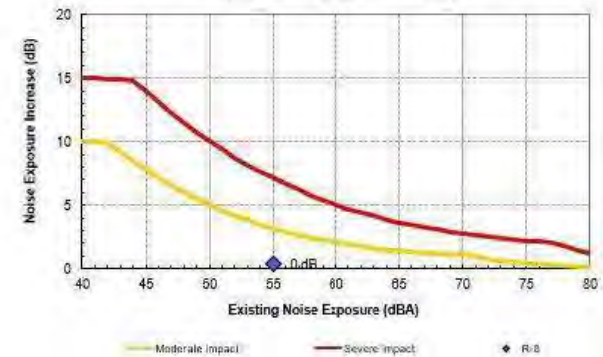
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.9 dBA |
| Leq(night): | 36.8 dBA |
| Ldn:        | 44.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-9            |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs:            | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs:          | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 243                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 43 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

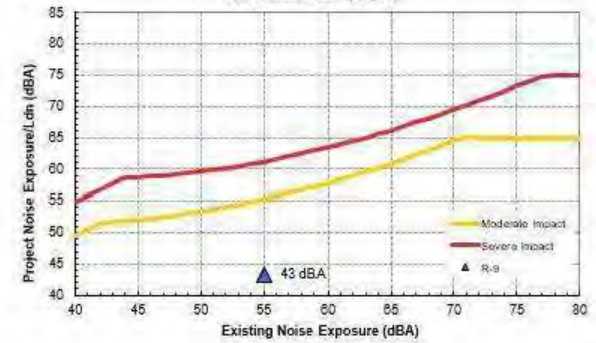
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

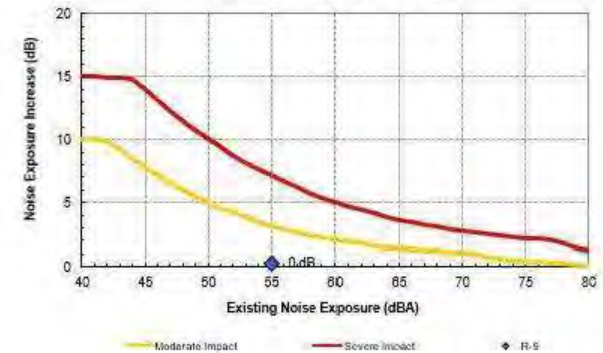
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.1 dBA |
| Leq(night): | 36.0 dBA |
| Ldn:        | 43.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-10          |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA        |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 12                 |
| Distance                | Distance from Source to Receiver (ft)    | 72                 |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 57 dBA |
| Total Noise Exposure: | 62 dBA |
| Increase:             | 2 dB   |
| Impact?:              | None   |

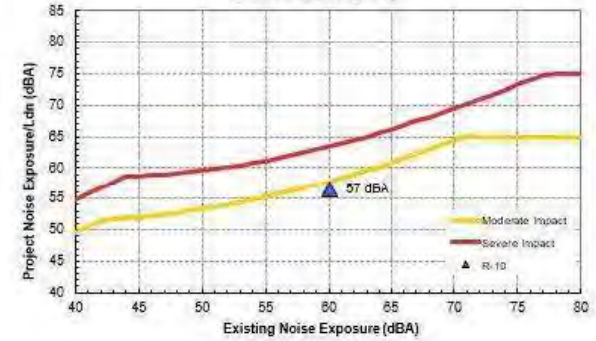
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact | 64 ft |
| Contour (Source 1): | 64 ft |
| Dist to Sev. Impact | 38 ft |
| Contour (Source 1): | 38 ft |

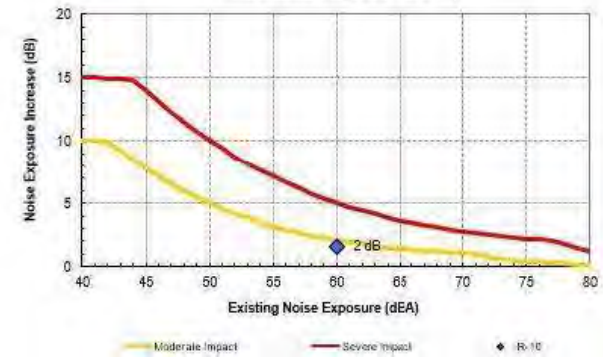
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 53.3 dBA |
| Leq(night): | 49.2 dBA |
| Ldn:        | 56.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-12          |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 70 dBA        |

Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 46                 |
|                         | Number of Interceding Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 70 dBA |
| Total Project Ldn:    | 61 dBA |
| Total Noise Exposure: | 71 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

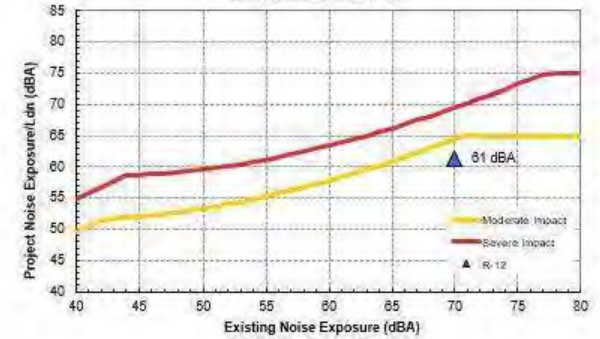
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 35 ft |
| Dist to Sev. Impact Contour (Source 1): | 22 ft |

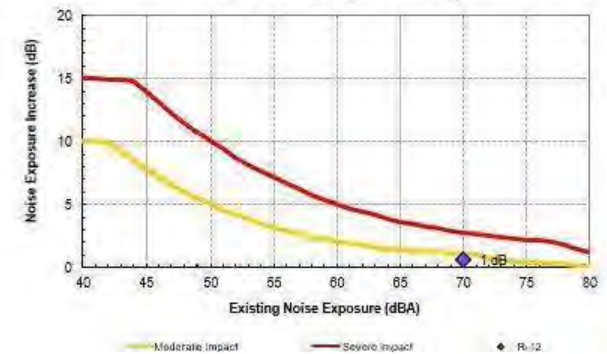
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 58.2 dBA |
| Leq(night): | 54.1 dBA |
| Ldn:        | 61.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2013

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-13           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                              | Stationary Source  |
|                         | Specific Source:                          | Bus Transit Center |
| Daytime hrs:            | Avg. Number of Buses/hr:                  | 3.1                |
| Nighttime hrs:          | Avg. Number of Buses/hr:                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft):    | 199                |
|                         | Number of Intersecting Rows of Buildings: | 1                  |
| Adjustments             | Noise Barrier?                            | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 41 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

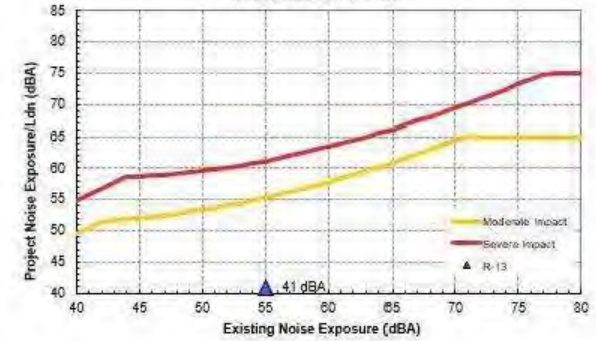
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

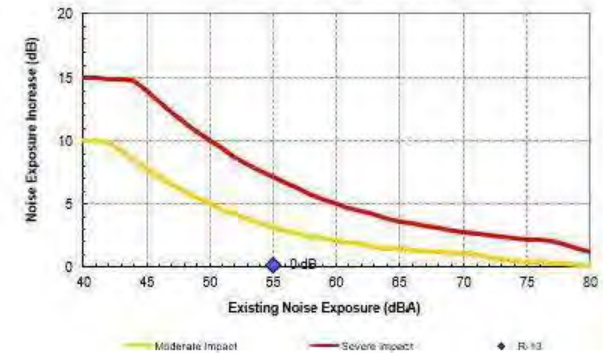
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 37.8 dBA |
| Leq(night): | 33.7 dBA |
| Ldn:        | 41.0 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-14           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Noise Source Parameters  
Number of Noise Sources: **1**

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 110                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 47 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

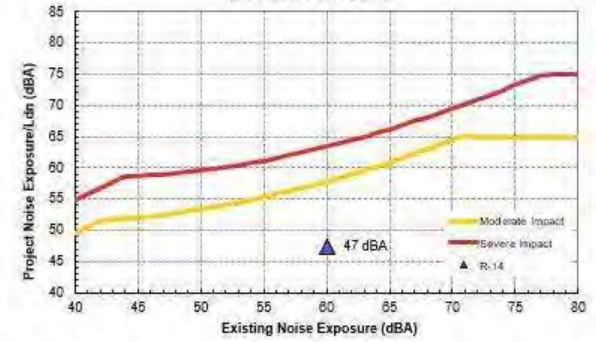
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

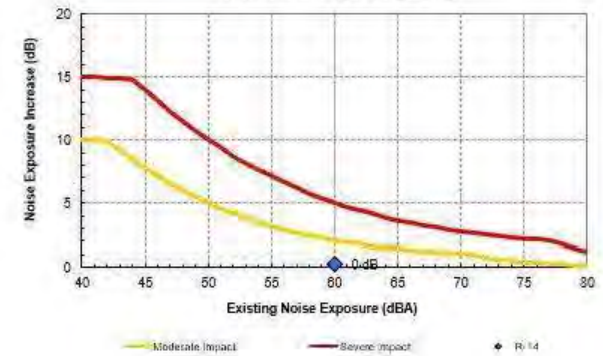
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 44.2 dBA |
| Leq(night): | 40.1 dBA |
| Ldn:        | 47.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

Receiver Parameters

Receiver: R-15  
Land Use Category: 2. Residential  
Existing Noise (Measured or Generic Value): 70 dBA

Noise Source Parameters

Number of Noise Sources: 1

Noise Source Parameters

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                              | Stationary Source  |
|                         | Specific Source:                          | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                   | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                   | 1.2                |
| Distance                | Distance from Source to Receiver (ft)     | 35                 |
|                         | Number of Intercreaking Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                            | No                 |
|                         | Joint Track/Crossover?                    | No                 |
|                         | Embedded Track?                           | No                 |
|                         | Aerial Structure?                         | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 70 dBA |
| Total Project Ldn:    | 64 dBA |
| Total Noise Exposure: | 71 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

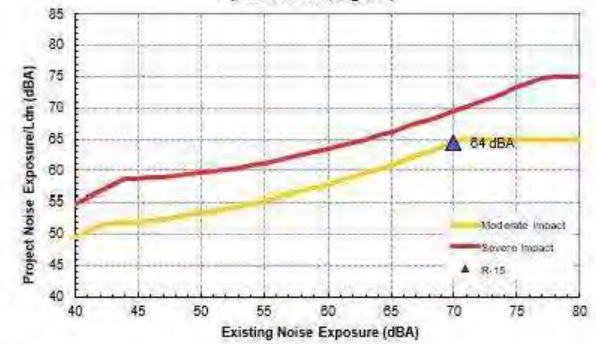
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 35 ft |
| Dist to Sev. Impact Contour (Source 1): | 22 ft |

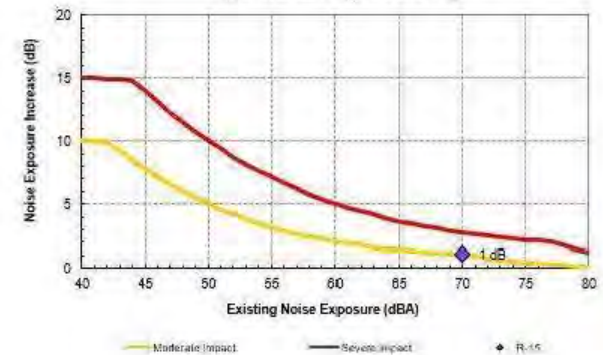
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 61.2 dBA |
| Leq(night): | 57.1 dBA |
| Ldn:        | 64.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-16           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 12                 |
| Distance                | Distance from Source to Receiver (ft)   | 249                |
|                         | Number of Intervening Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

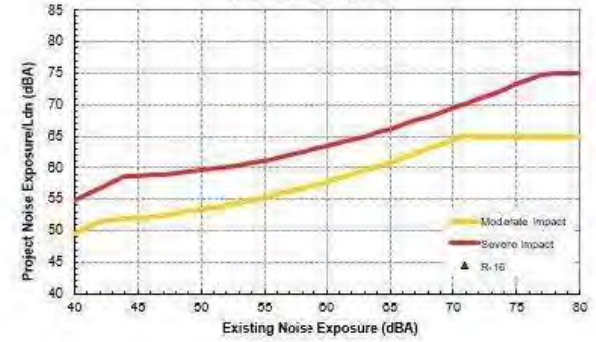
Distance to Impact Contours

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 81ft |
| Dist to Sev. Impact Contour (Source 1): | 47ft |

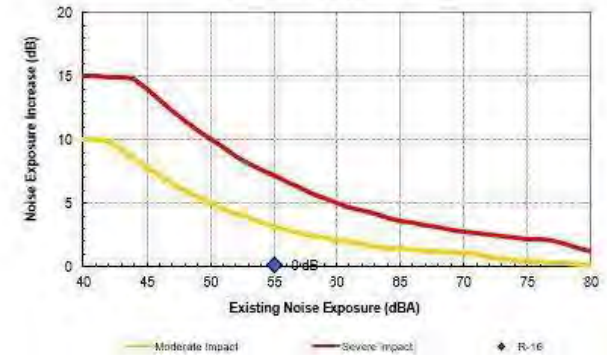
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 35.4 dBA |
| Leq(night): | 31.3 dBA |
| Ldn:        | 36.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-17           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 187                |
|                         | Number of Intervailing Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

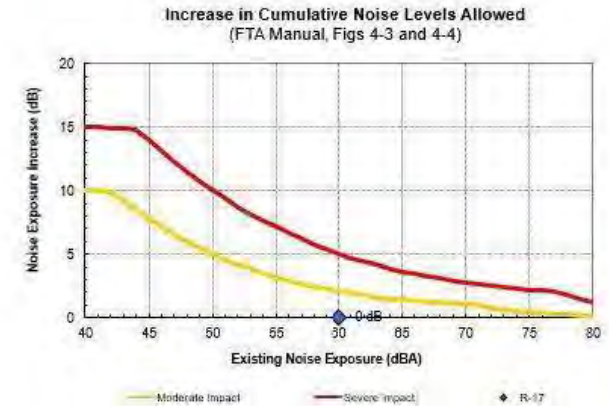
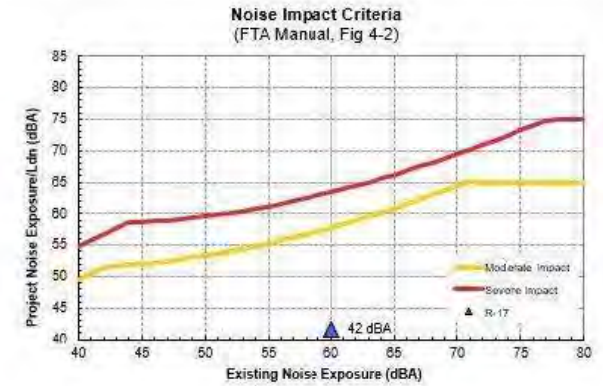
|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 42 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 38.5 dBA |
| Leq(night): | 34.4 dBA |
| Ldn:        | 41.7 dBA |



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-18           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 121                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 51 dBA |
| Total Noise Exposure: | 65 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

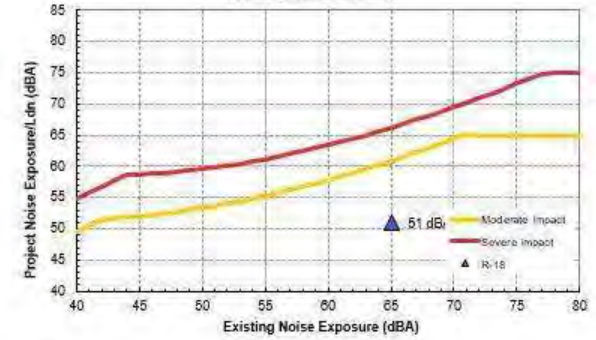
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 48 ft |
| Dist to Sev. Impact Contour (Source 1): | 30 ft |

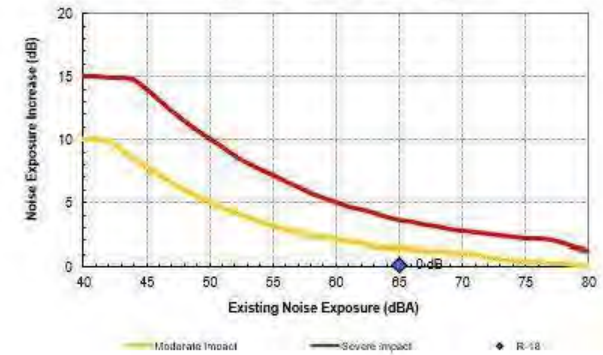
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 47.7 dBA |
| Leq(night): | 43.6 dBA |
| Ldn:        | 50.9 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-19           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 230                |
|                         | Number of Intercreaing Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

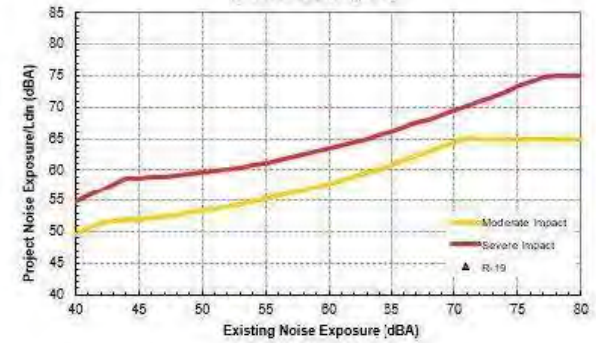
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 81 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 47 ft |

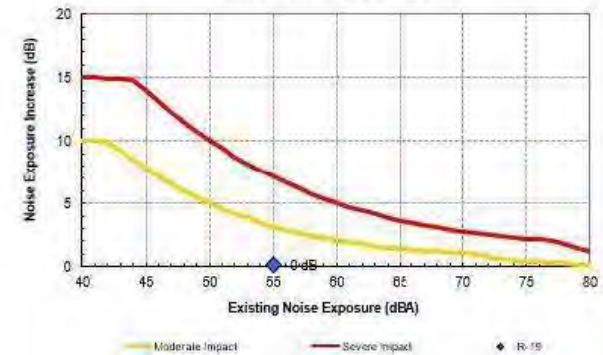
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 36.2 dBA |
| Leq(night): | 32.1 dBA |
| Ldn:        | 39.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2013

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-20          |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 70 dBA        |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 148                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 70 dBA |
| Total Project Ldn:    | 49 dBA |
| Total Noise Exposure: | 70 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

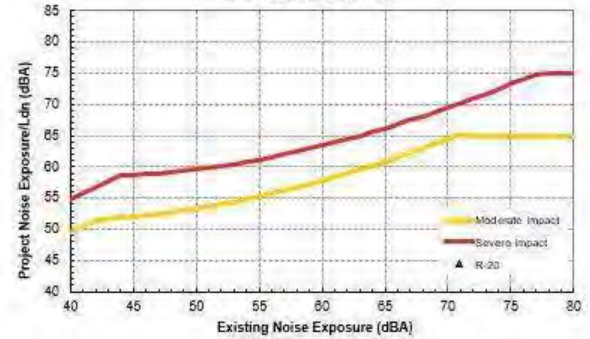
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 35 ft |
| Dist to Sev. Impact Contour (Source 1): | 22 ft |

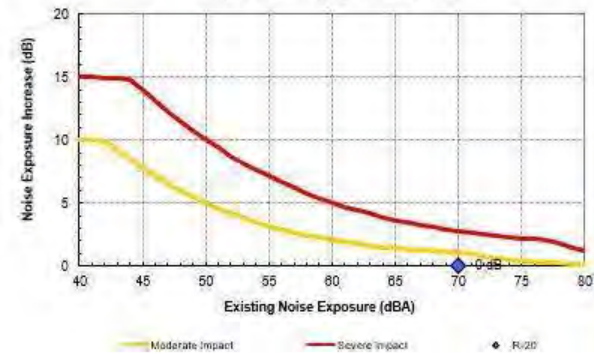
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 45.5 dBA |
| Leq(night): | 41.4 dBA |
| Ldn:        | 48.7 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-21          |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA        |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                              | Stationary Source  |
|                         | Specific Source:                          | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                   | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                   | 1.2                |
| Distance                | Distance from Source to Receiver (ft)     | 156                |
|                         | Number of Intersecting Rows of Buildings: | 1                  |
| Adjustments             | Noise Barrier?                            | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

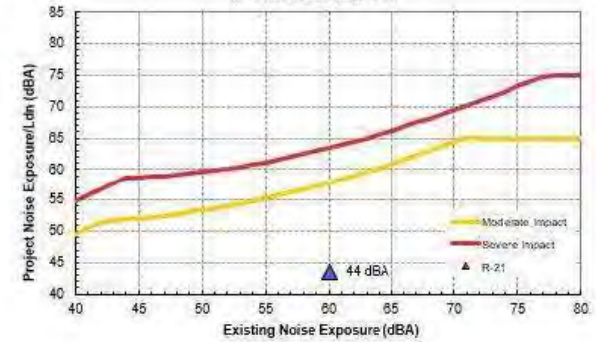
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

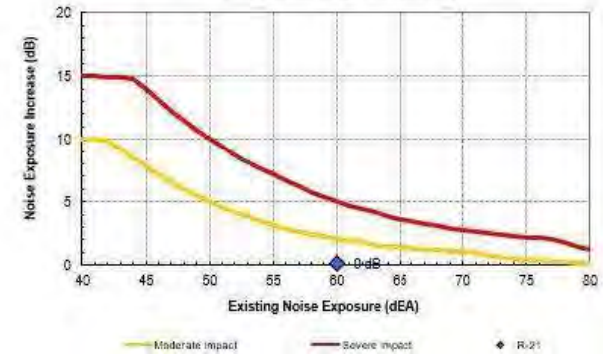
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.4 dBA |
| Leq(night): | 36.3 dBA |
| Ldn:        | 43.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-23           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 12                 |
| Distance                | Distance from Source to Receiver (ft)   | 145                |
|                         | Number of Intervening Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

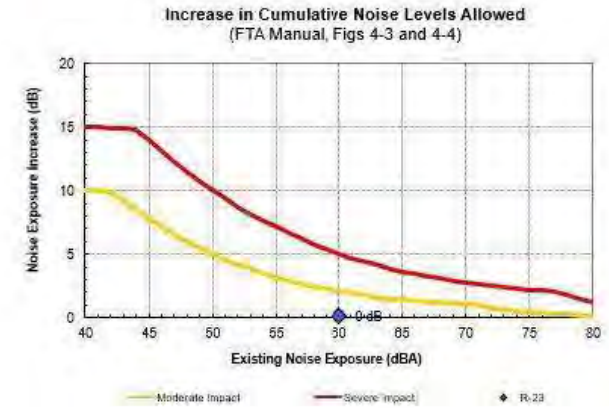
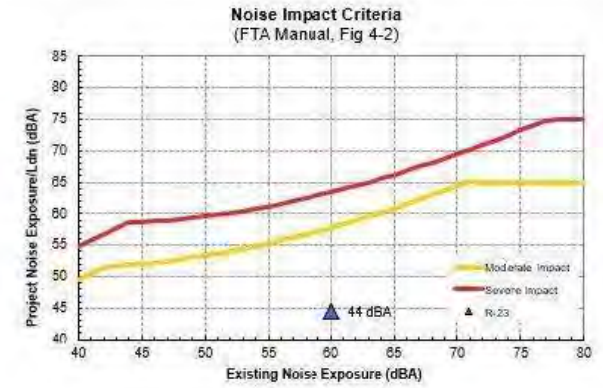
|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 41.2 dBA |
| Leq(night): | 37.1 dBA |
| Ldn:        | 44.4 dBA |



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-24          |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA        |

Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 200                |
|                         | Number of Intersecting Rows of Building: | 3                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

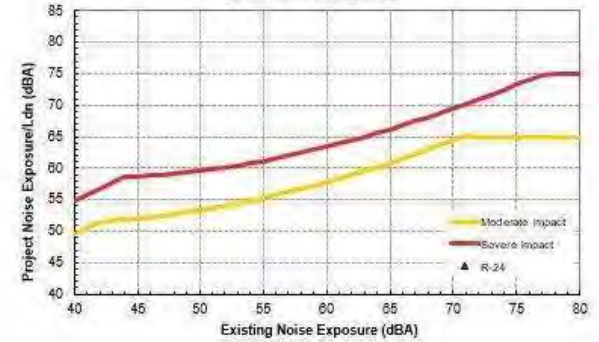
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

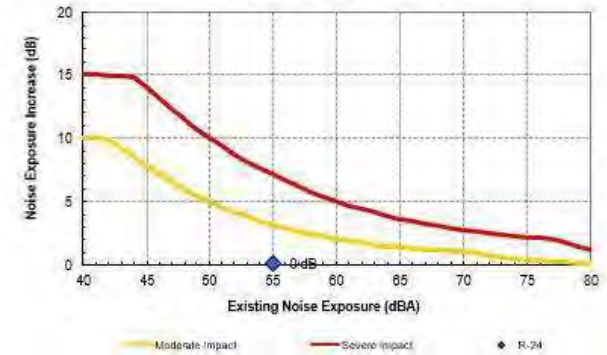
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 34.8 dBA |
| Leq(night): | 30.6 dBA |
| Ldn:        | 37.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2013

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-25          |
| Land Use Category:                          | 2-Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA        |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                              | Stationary Source  |
|                         | Specific Source:                          | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                   | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                   | 12                 |
| Distance                | Distance from Source to Receiver (ft)     | 243                |
|                         | Number of Interweaving Rows of Buildings: | 3                  |
| Adjustments             | Noise Barrier?                            | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 36 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

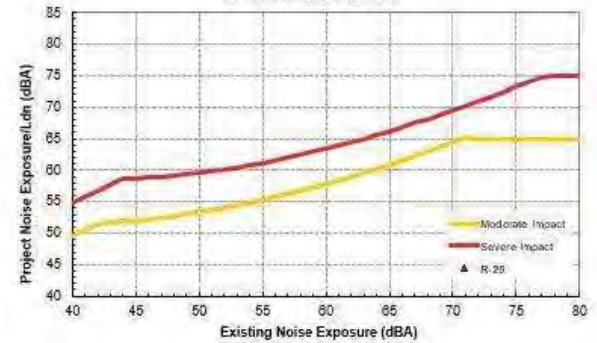
Distance to Impact Contours

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 81ft |
| Dist to Sev. Impact Contour (Source 1): | 47ft |

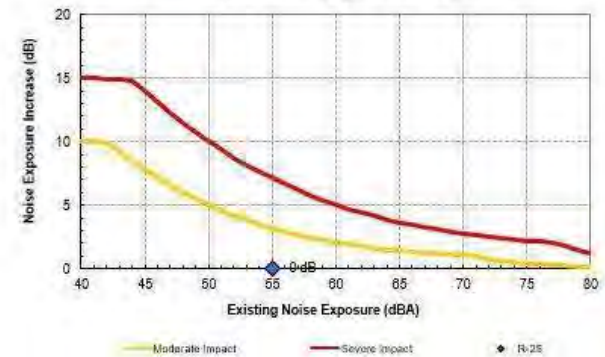
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 32.6 dBA |
| Leq(night): | 28.5 dBA |
| Ldn:        | 35.8 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2013

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-26          |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA        |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 228                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

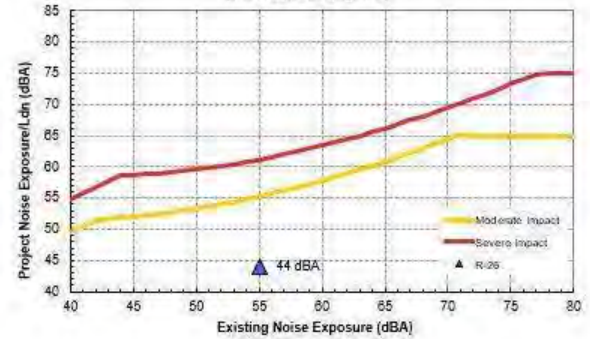
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact | 81 ft |
| Contour (Source 1): | 81 ft |
| Dist to Sev. Impact | 47 ft |
| Contour (Source 1): | 47 ft |

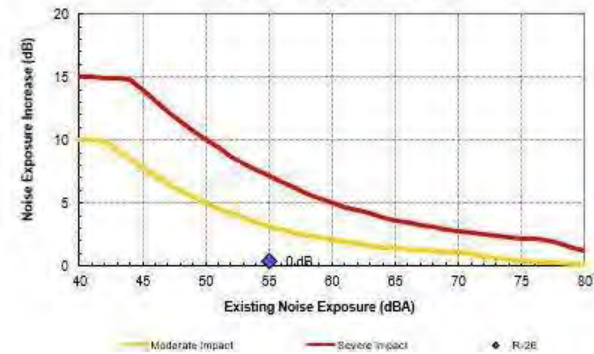
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.8 dBA |
| Leq(night): | 36.7 dBA |
| Ldn:        | 44.0 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2013

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-27           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 226                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 40 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

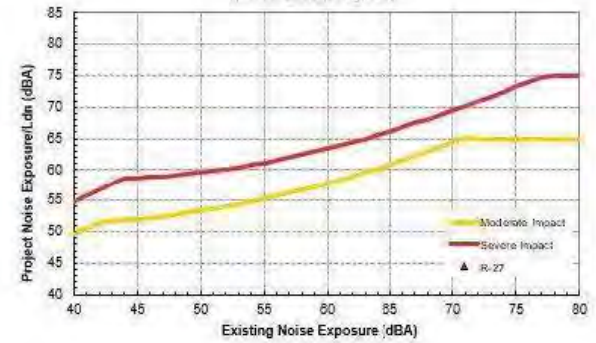
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

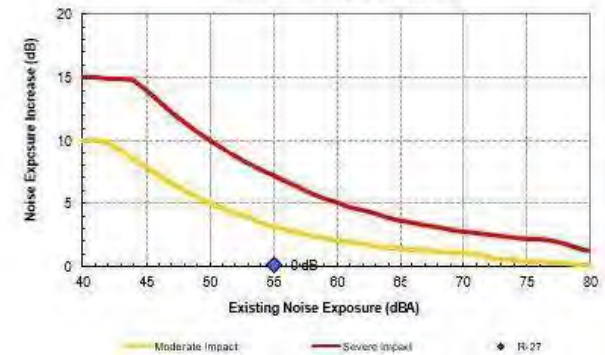
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 36.4 dBA |
| Leq(night): | 32.3 dBA |
| Ldn:        | 39.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2013

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-28           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                              | Stationary Source  |
|                         | Specific Source:                          | Bus Transit Center |
| Daytime hrs:            | Avg. Number of Buses/hr:                  | 3.1                |
| Nighttime hrs:          | Avg. Number of Buses/hr:                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft):    | 241                |
|                         | Number of Intersecting Rows of Buildings: | 1                  |
| Adjustments             | Noise Barrier?                            | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

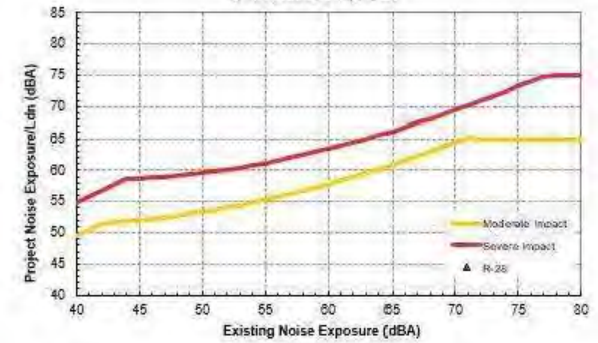
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 81 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 47 ft |

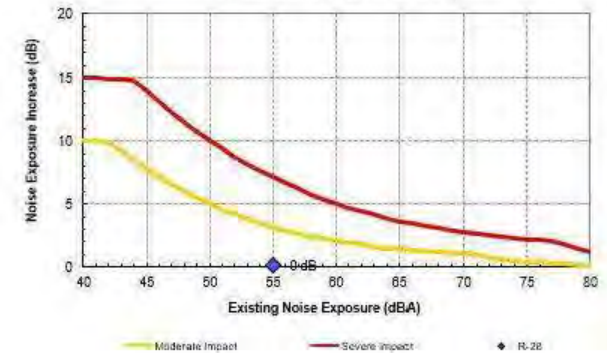
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 35.7 dBA |
| Leq(night): | 31.6 dBA |
| Ldn:        | 38.9 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-29           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 203                |
|                         | Number of Intervening Rows of Buildings: | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

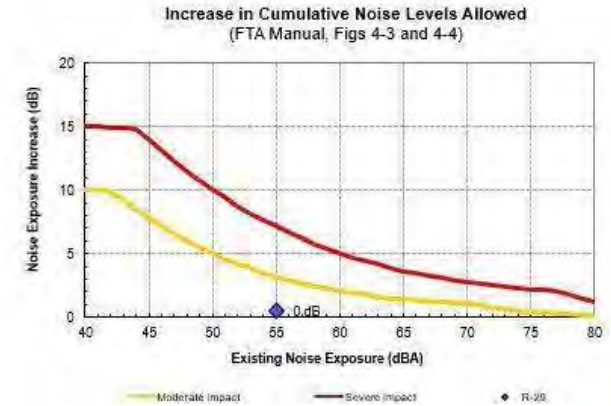
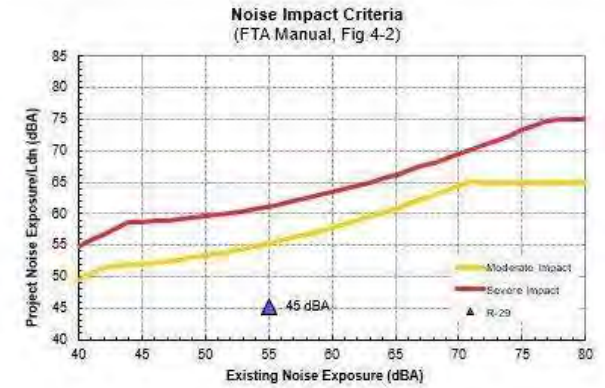
|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 42.1 dBA |
| Leq(night): | 38.0 dBA |
| Ldn:        | 45.3 dBA |



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-30           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                              | Stationary Source  |
|                         | Specific Source:                          | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                   | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                   | 1.2                |
| Distance                | Distance from Source to Receiver (ft)     | 164                |
|                         | Number of Intersecting Rows of Buildings: | 0                  |
| Adjustments             | Noise Barrier?                            | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 48 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

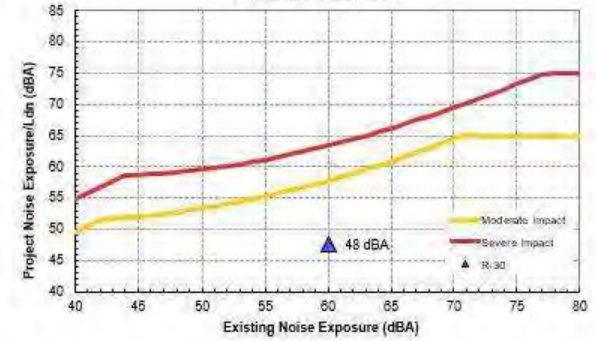
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

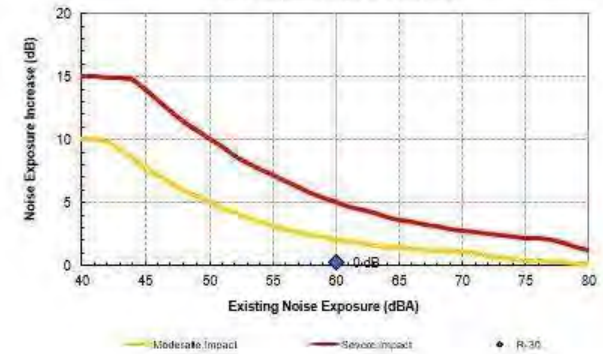
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 44.4 dBA |
| Leq(night): | 40.3 dBA |
| Ldn:        | 47.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-31           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 132                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 50 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

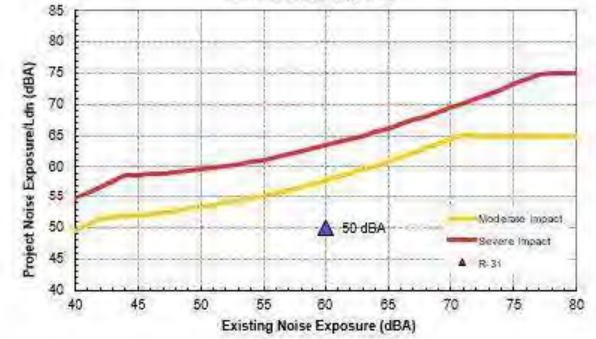
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 64 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 38 ft |

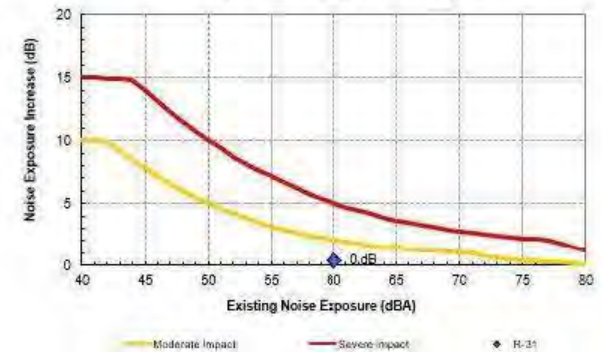
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 46.8 dBA |
| Leq(night): | 42.6 dBA |
| Ldn:        | 49.9 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-32          |
| Land Use Category:                          | 2-Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA        |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                              | Stationary Source  |
|                         | Specific Source:                          | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                   | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                   | 1.2                |
| Distance                | Distance from Source to Receiver (ft)     | 108                |
|                         | Number of Intersecting Rows of Buildings: | 0                  |
| Adjustments             | Noise Barrier?                            | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 52 dBA |
| Total Noise Exposure: | 61 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

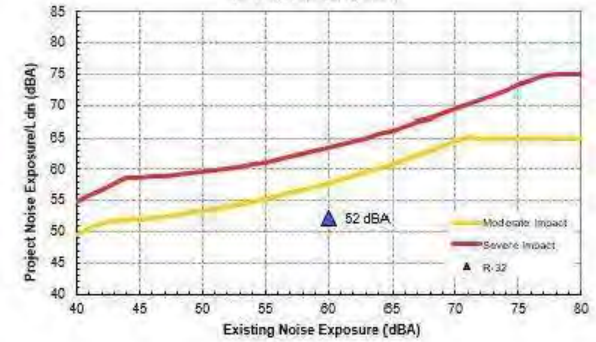
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

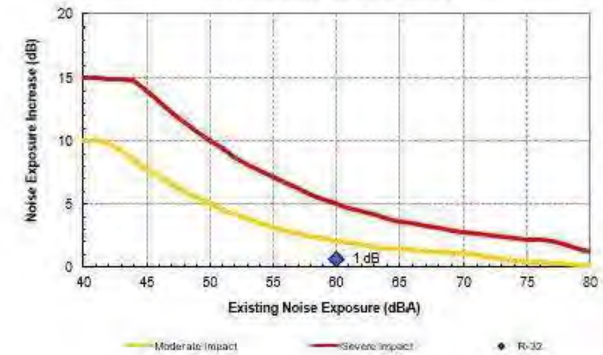
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 48.9 dBA |
| Leq(night): | 44.8 dBA |
| Ldn:        | 52.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-33             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 55 dBA           |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters                      |   | Source 1 |
|--|---|----------|
| Source Type:                                 | Stationary Source                       |          |
| Specific Source:                             | Bus Transit Center                      |          |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                      | 4        |
| Distance                                     | Distance from Source to Receiver (ft)   | 222      |
| Adjustments                                  | Number of Intervening Rows of Buildings | 1        |
|  | Noise Barrier?                          | No       |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

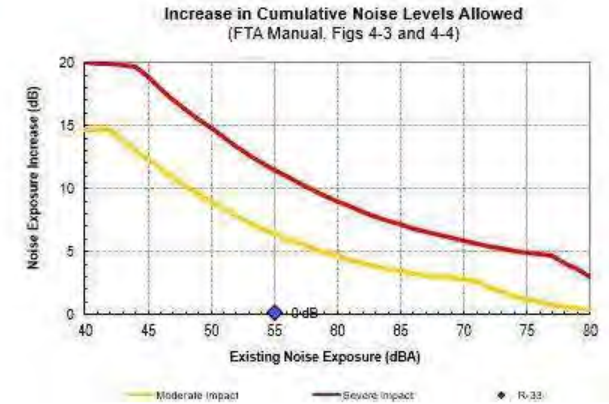
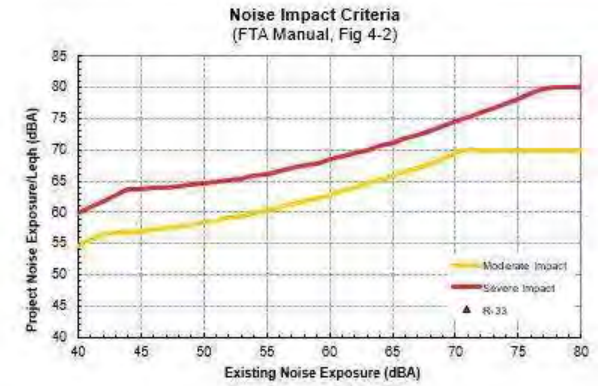
|                       |        |
|-----------------------|--------|
| Existing Leq:         | 55 dBA |
| Total Project Leq:    | 36 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 42 ft |
| Dist to Sev. Impact Contour (Source 1): | 24 ft |

Source 1 Results

|      |          |
|------|----------|
| Leq: | 37.7 dBA |
|------|----------|



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-34          |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA        |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 128                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 50 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

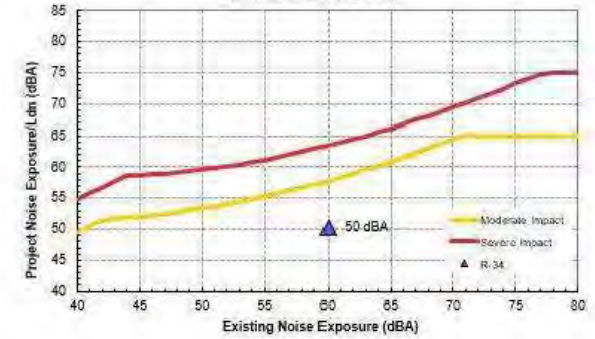
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

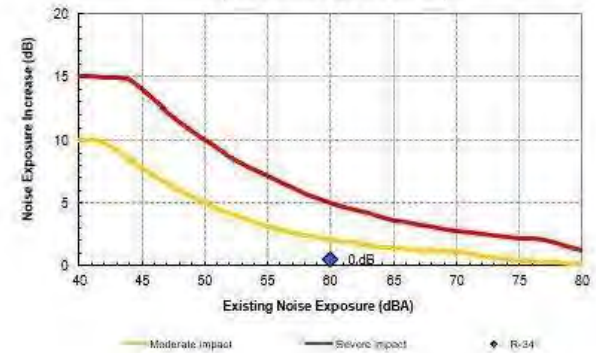
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 47.1 dBA |
| Leq(night): | 43.0 dBA |
| Ldn:        | 50.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-35          |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA        |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 211                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

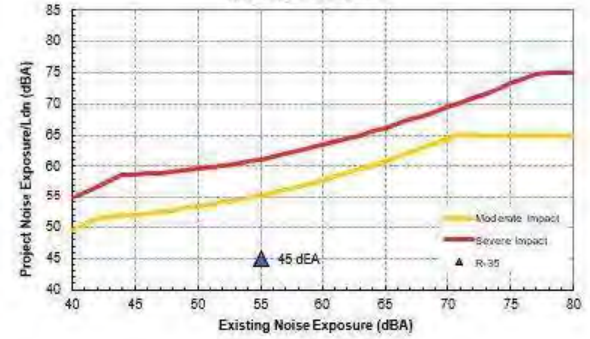
Distance to Impact Contours

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 81ft |
| Dist to Sev. Impact Contour (Source 1): | 47ft |

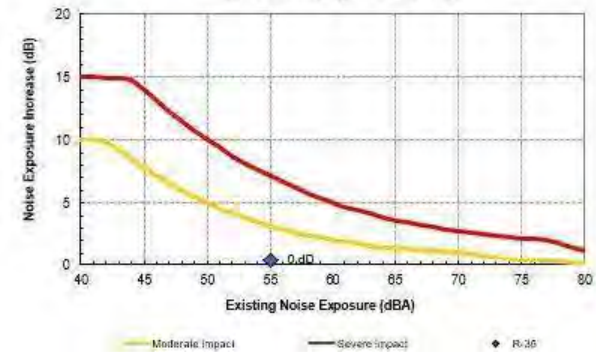
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 41.7 dBA |
| Leq(night): | 37.5 dBA |
| Ldn:        | 44.8 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-36           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 241                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 43 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

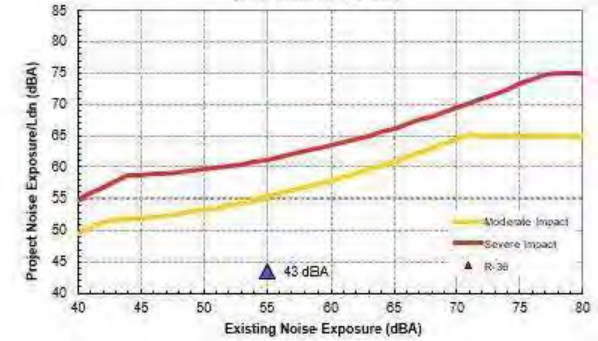
Distance to Impact Contours

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 81ft |
| Dist to Sev. Impact Contour (Source 1): | 47ft |

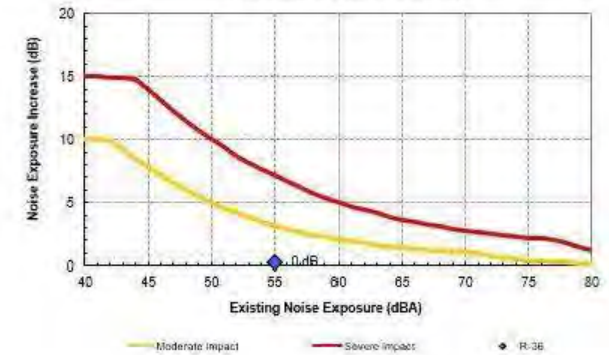
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.2 dBA |
| Leq(night): | 36.1 dBA |
| Ldn:        | 43.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-37           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 184                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 46 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

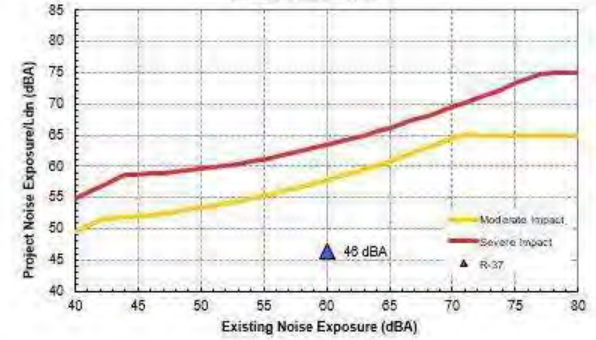
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 64 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 38 ft |

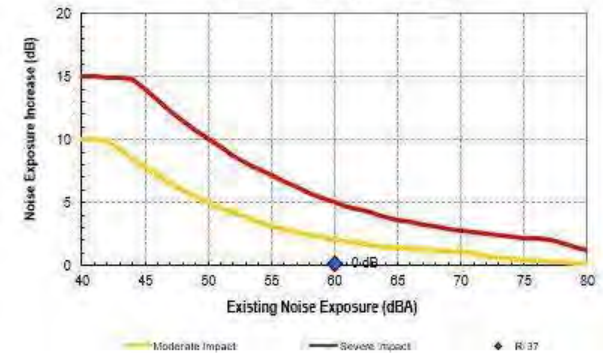
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 43.2 dBA |
| Leq(night): | 39.0 dBA |
| Ldn:        | 46.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-38           |
| Land Use Category:                          | 2: Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                              | Stationary Source  |
|                         | Specific Source:                          | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                   | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                   | 1.2                |
| Distance                | Distance from Source to Receiver (ft)     | 85                 |
|                         | Number of Intervailing Rows of Buildings: | 0                  |
| Adjustments             | Noise Barrier?                            | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 55 dBA |
| Total Noise Exposure: | 65 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

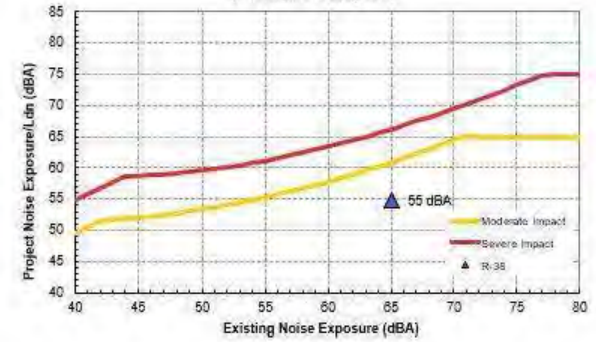
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 48 ft |
| Dist to Sev. Impact Contour (Source 1): | 30 ft |

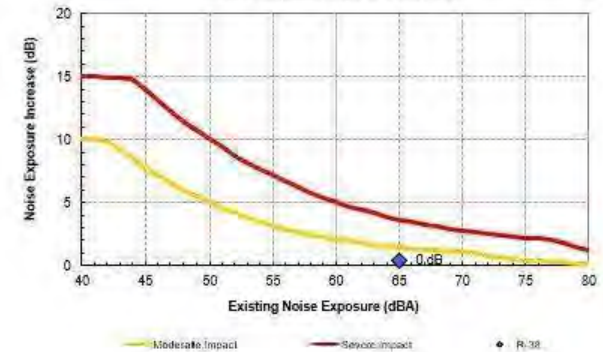
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 51.5 dBA |
| Leq(night): | 47.4 dBA |
| Ldn:        | 54.7 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2013

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                 |
|---|-----------------|
| Receiver:                                   | R-39            |
| Land Use Category:                          | 1 Outdoor Quiet |
| Existing Noise (Measured or Generic Value): | 60 dBA          |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters                      |  | Source 1           |
|--|--|--------------------|
|  | Source Type:                             | Stationary Source  |
|  | Specific Source:                         | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                       | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)    | 141                |
|  | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 47 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

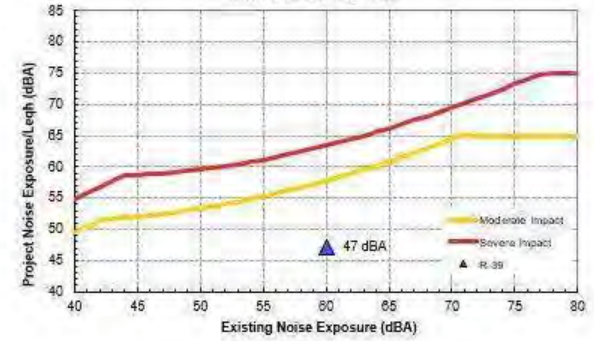
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 53 ft |
| Dist to Sev. Impact Contour (Source 1): | 32 ft |

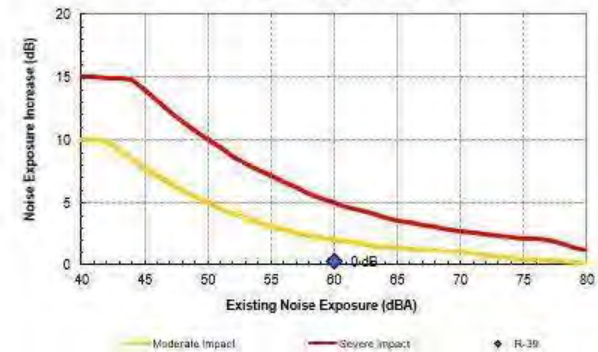
Source 1 Results

|      |          |
|------|----------|
| Leq: | 47.2 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-40           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 70                 |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 57 dBA |
| Total Noise Exposure: | 66 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

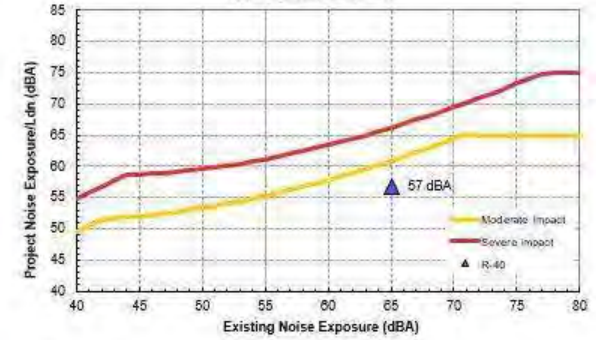
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 48 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 30 ft |

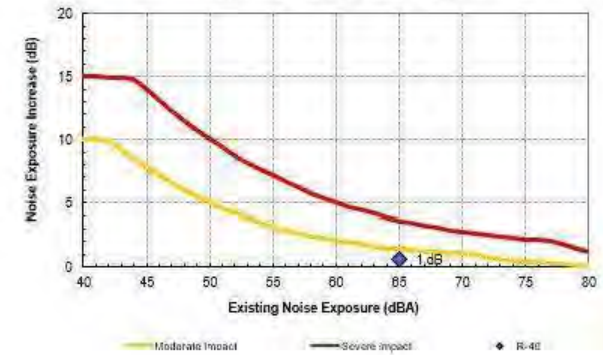
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 53.7 dBA |
| Leq(night): | 49.5 dBA |
| Ldn:        | 56.8 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-41             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 65 dBA           |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters                      |   | Source 1           |
|--|---|--------------------|
|  | Source Type:                            | Stationary Source  |
|  | Specific Source:                        | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                      | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)   | 58                 |
|  | Number of Intervening Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 65 dBA |
| Total Project Leq:    | 57 dBA |
| Total Noise Exposure: | 66 dBA |
| Increase:             | 1dB    |
| Impact?:              | None   |

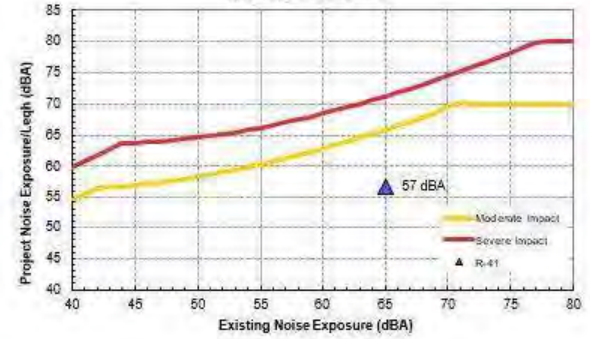
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 25 ft |
| Dist to Sev. Impact Contour (Source 1): | 15 ft |

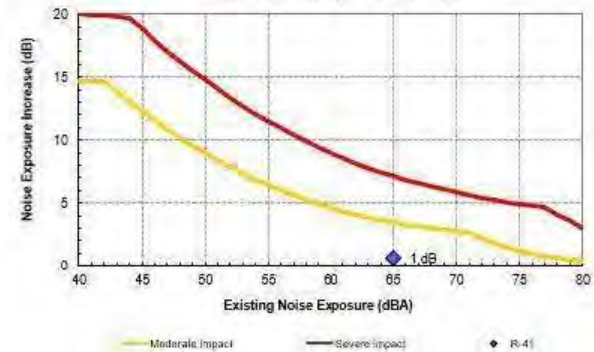
Source 1 Results

|      |          |
|------|----------|
| Leq: | 56.8 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-42             |
| Land Use Category:                          | 3- Institutional |
| Existing Noise (Measured or Generic Value): | 65 dBA           |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters                      |  | Source 1           |
|--|--|--------------------|
|  | Source Type:                             | Stationary Source  |
|  | Specific Source:                         | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                       | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)    | 60                 |
|  | Number of Intercreting Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 65 dBA |
| Total Project Leq:    | 56 dBA |
| Total Noise Exposure: | 66 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

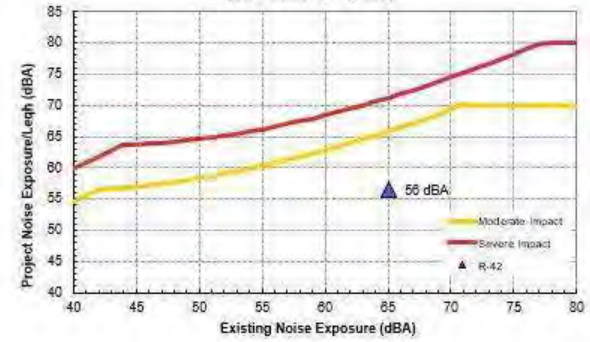
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 25 ft |
| Dist to Sev. Impact Contour (Source 1): | 15 ft |

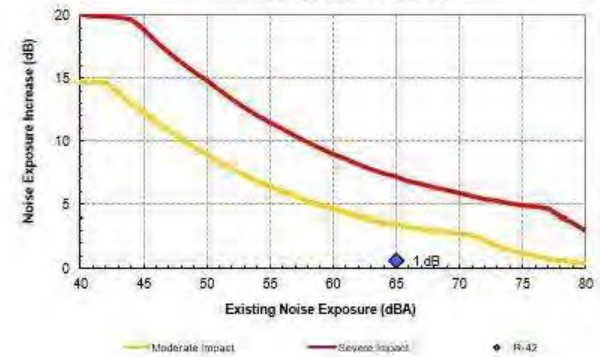
Source 1 Results

|      |          |
|------|----------|
| Leq: | 56.4 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-43             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters                      |  | Source 1           |
|--|--|--------------------|
|  | Source Type:                             | Stationary Source  |
|  | Specific Source:                         | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                       | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)    | 200                |
|  | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 43 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

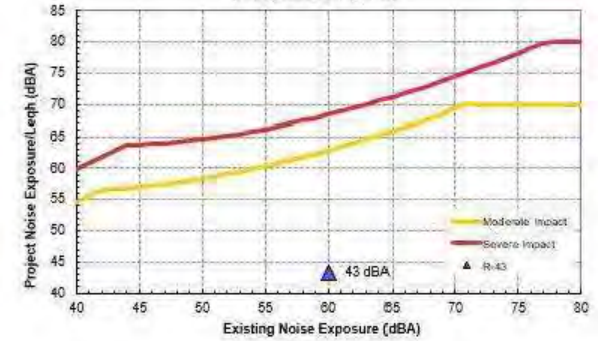
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 33 ft |
| Dist to Sev. Impact Contour (Source 1): | 20 ft |

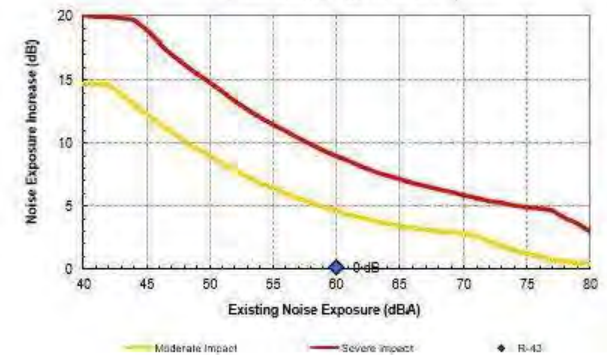
Source 1 Results

|      |          |
|------|----------|
| Leq: | 43.4 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-44             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters                      |   | Source 1           |
|--|---|--------------------|
|  | Source Type:                            | Stationary Source  |
|  | Specific Source:                        | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                      | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)   | 125                |
|  | Number of Intervening Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 48 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

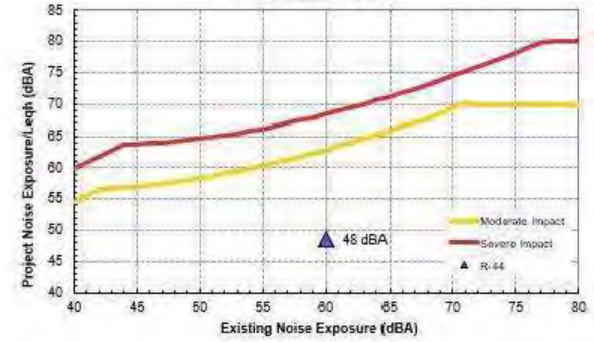
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 33 ft |
| Dist to Sev. Impact Contour (Source 1): | 20 ft |

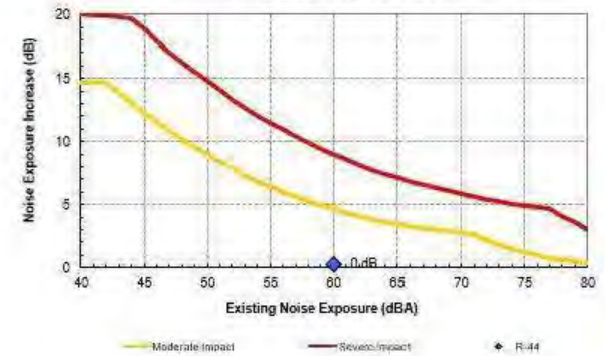
Source 1 Results

|      |          |
|------|----------|
| Leq: | 48.5 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-46             |
| Land Use Category:                          | 1. Outdoor Quiet |
| Existing Noise (Measured or Generic Value): | 55 dBA           |

Number of Noise Sources: 1

| Noise Source Parameters                      |   | Source 1 |
|--|---|----------|
| Source Type:                                 | Stationary Source                       |          |
| Specific Source:                             | Bus Transit Center                      |          |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                      | 4        |
| Distance                                     | Distance from Source to Receiver (ft)   | 223      |
| Adjustments                                  | Number of Interceding Rows of Buildings | 1        |
|  | Noise Barrier?                          | No       |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 55 dBA |
| Total Project Leq:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

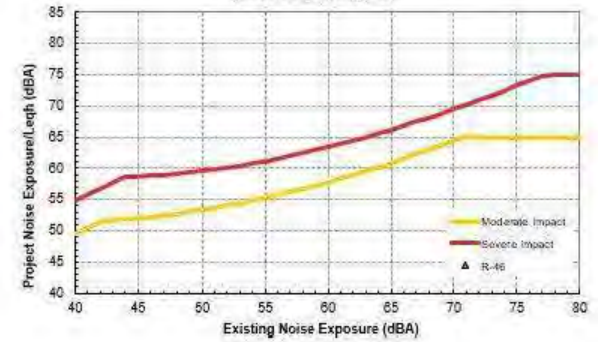
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 67 ft |
| Dist to Sev. Impact Contour (Source 1): | 39 ft |

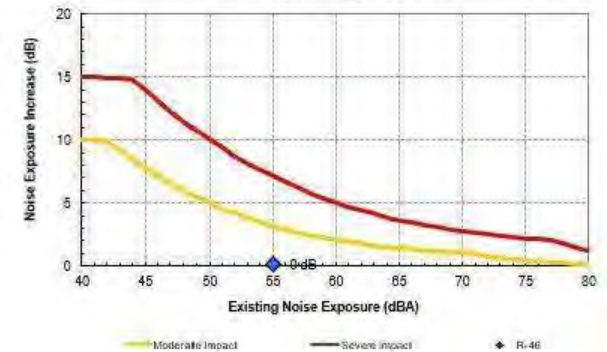
Source 1 Results

|      |          |
|------|----------|
| Leq: | 37.7 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-47           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 12                 |
| Distance                | Distance from Source to Receiver (ft)    | 232                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

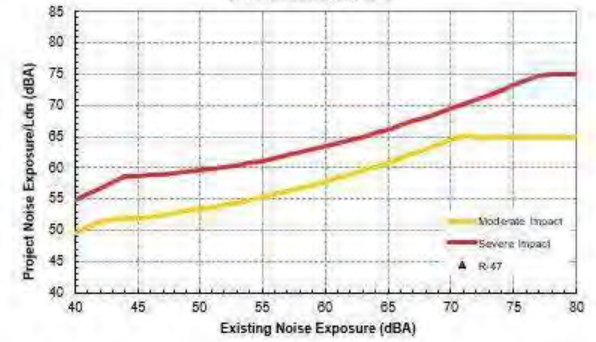
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

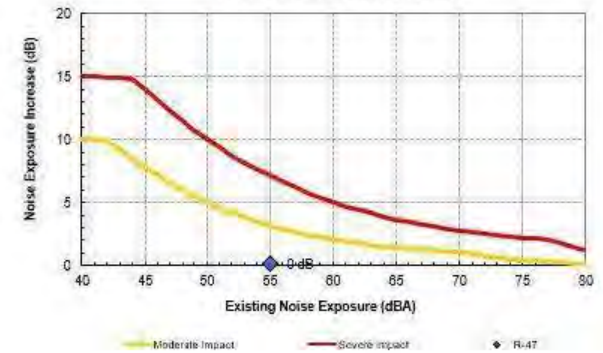
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 36.1 dBA |
| Leq(night): | 32.0 dBA |
| Ldn:        | 39.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-48           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 213                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

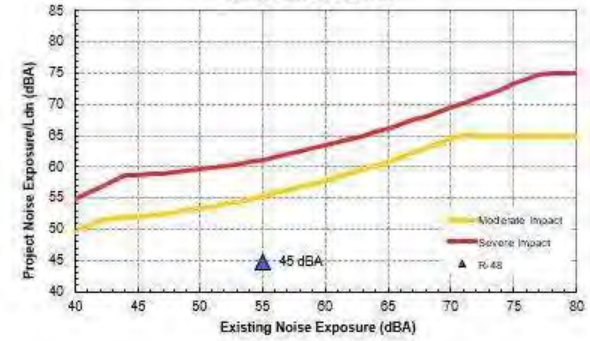
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

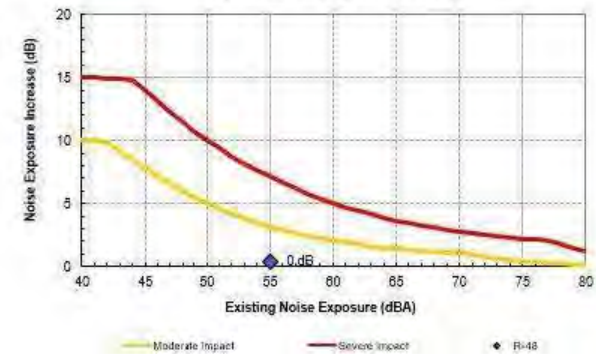
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 41.6 dBA |
| Leq(night): | 37.4 dBA |
| Ldn:        | 44.7 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

|   |                  |
|---|------------------|
| <b>Receiver Parameters:</b>                 |                  |
| Receiver:                                   | R-50             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

**Noise Source Parameters**  
Number of Noise Sources: 1

|  |   |                    |
|--|---|--------------------|
| <b>Noise Source Parameters</b>               |   | <b>Source 1</b>    |
|  | Source Type:                            | Stationary Source  |
|  | Specific Source:                        | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                      | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)   | 172                |
|  | Number of Intervening Rows of Buildings | 1                  |
| Adjustments                                  | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 40 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

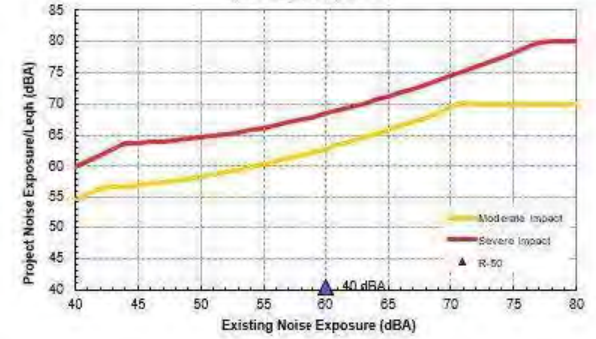
**Distance to Impact Contours**

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 33 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 20 ft |

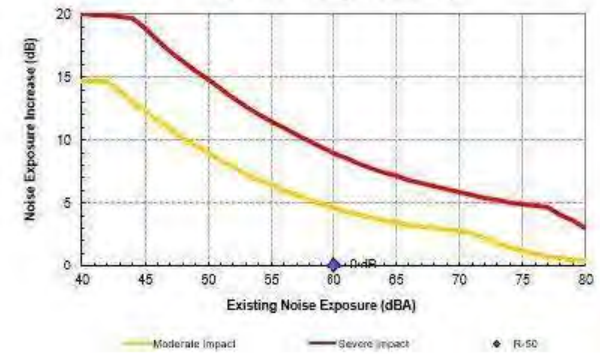
**Source 1 Results**

|      |          |
|------|----------|
| Leq: | 40.5 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)







Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                 |
|---|-----------------|
| Receiver:                                   | R-52            |
| Land Use Category:                          | 3 Institutional |
| Existing Noise (Measured or Generic Value): | 65 dBA          |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters                      |   | Source 1           |
|--|---|--------------------|
|  | Source Type:                            | Stationary Source  |
|  | Specific Source:                        | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                      | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)   | 74                 |
|  | Number of Intervening Rows of Buildings |                    |
| Adjustments                                  | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 65 dBA |
| Total Project Leq:    | 54 dBA |
| Total Noise Exposure: | 65 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

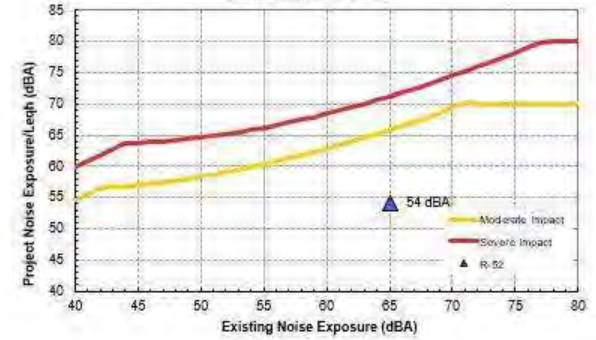
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 25 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 15 ft |

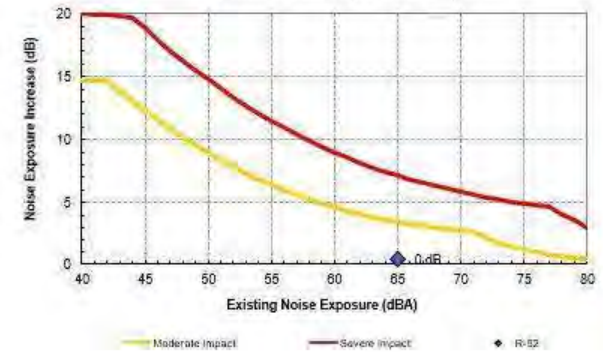
Source 1 Results

|      |          |
|------|----------|
| Leq: | 54.2 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-53             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters                      |  | Source 1           |
|--|--|--------------------|
|  | Source Type:                             | Stationary Source  |
|  | Specific Source:                         | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                       | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)    | 129                |
|  | Number of Intervening Rows of Buildings: | 1                  |
| Adjustments                                  | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 44 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

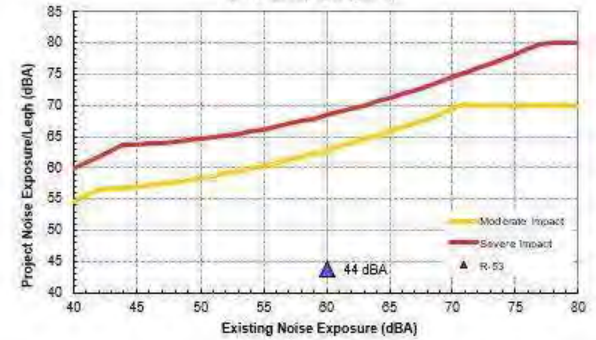
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 33 ft |
| Dist to Sev. Impact Contour (Source 1): | 20 ft |

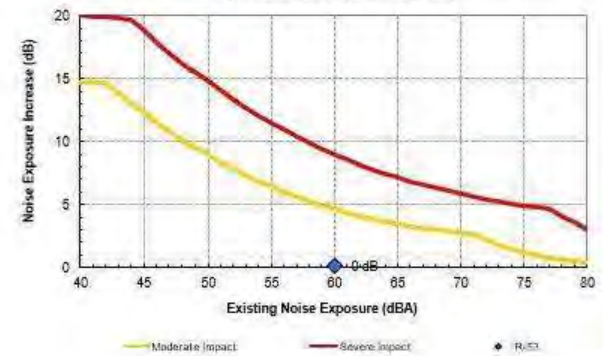
Source 1 Results

|      |          |
|------|----------|
| Leq: | 43.7 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-54             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters                      |  | Source 1           |
|--|--|--------------------|
|  | Source Type:                             | Stationary Source  |
|  | Specific Source:                         | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                       | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)    | 134                |
|  | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 48 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

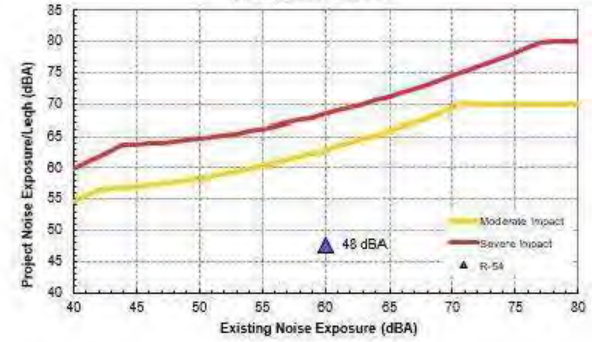
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 33 ft |
| Dist to Sev. Impact Contour (Source 1): | 20 ft |

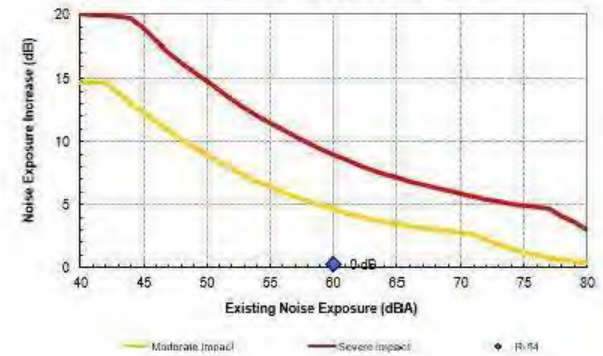
Source 1 Results

|      |          |
|------|----------|
| Leq: | 47.7 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-58             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 65 dBA           |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters                      |   | Source 1           |
|--|---|--------------------|
|  | Source Type:                            | Stationary Source  |
|  | Specific Source:                        | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                      | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)   | 64                 |
|  | Number of Interfering Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 65 dBA |
| Total Project Leq:    | 56 dBA |
| Total Noise Exposure: | 65 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

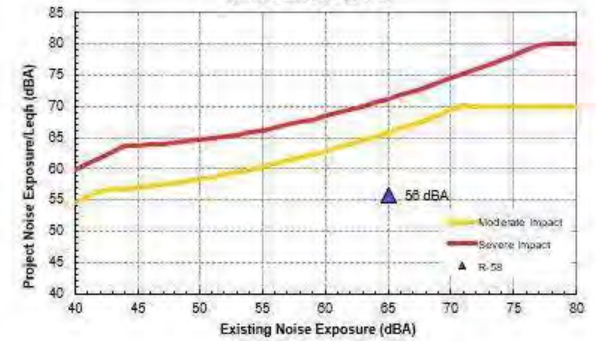
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 25 ft |
| Dist to Sev. Impact Contour (Source 1): | 15 ft |

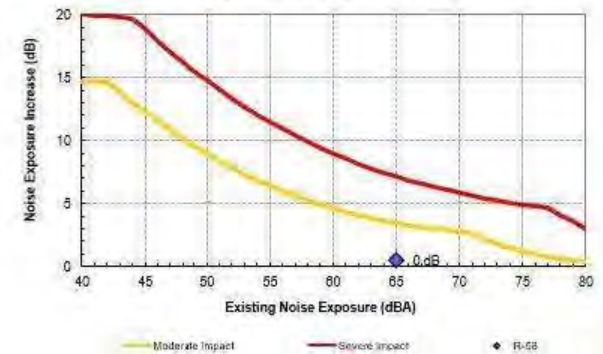
Source 1 Results

|      |          |
|------|----------|
| Leq: | 55.7 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-59             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

Noise Source Parameters  
Number of Noise Sources: **1**

| Noise Source Parameters                      |  | Source 1           |
|--|--|--------------------|
|  | Source Type:                             | Stationary Source  |
|  | Specific Source:                         | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                       | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)    | 142                |
|  | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 47 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

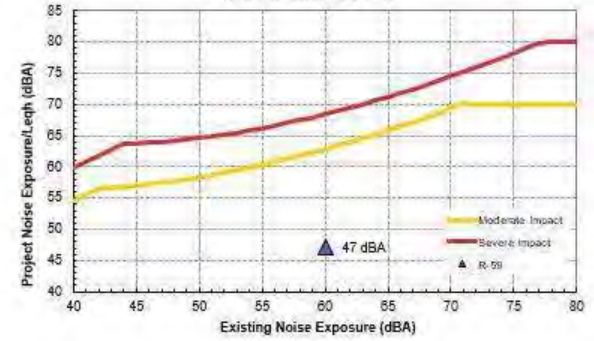
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 33 ft |
| Dist to Sev. Impact Contour (Source 1): | 20 ft |

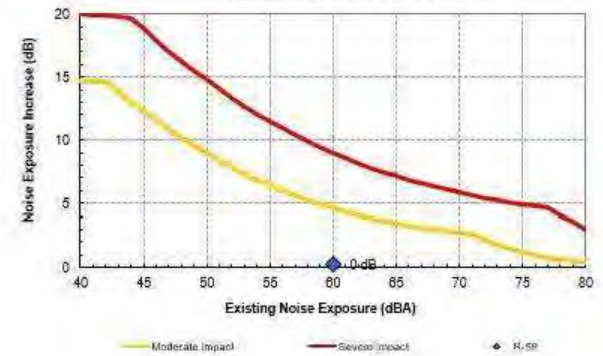
**Source 1 Results**

|      |          |
|------|----------|
| Leq: | 47.1 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-60           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 112                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 52 dBA |
| Total Noise Exposure: | 61 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

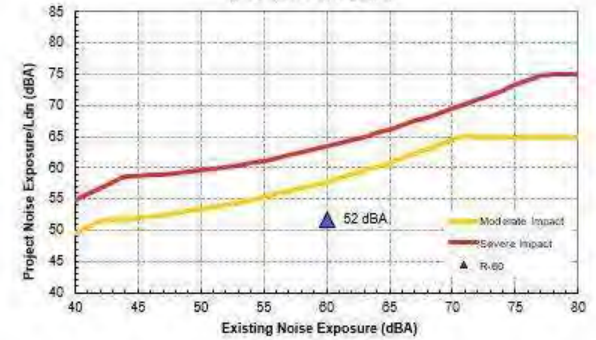
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

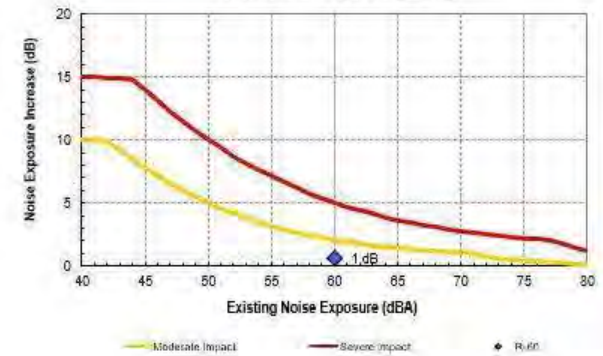
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 48.5 dBA |
| Leq(night): | 44.4 dBA |
| Ldn:        | 51.7 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-61           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 12                 |
| Distance                | Distance from Source to Receiver (ft)    | 204                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

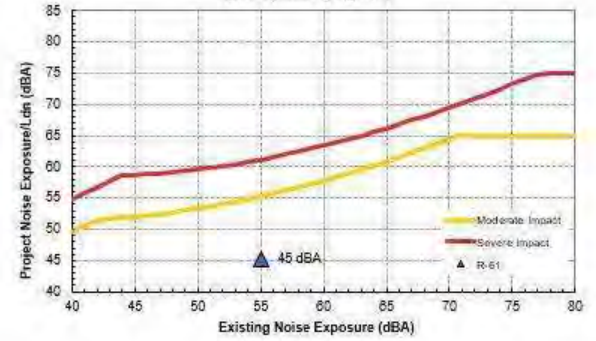
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

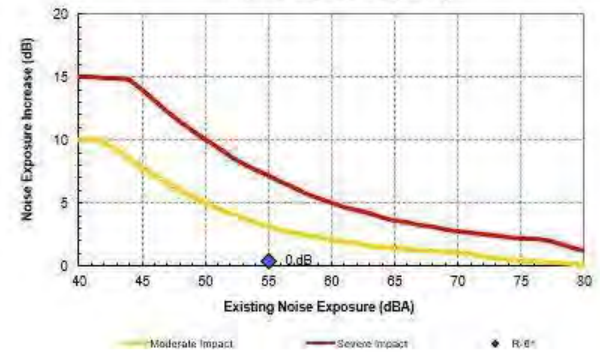
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 42.0 dBA |
| Leq(night): | 37.9 dBA |
| Ldn:        | 45.2 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-62           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                               | Stationary Source  |
|                         | Specific Source:                           | Bus Transit Center |
| Daytime hrs:            | Avg. Number of Buses/hr                    | 3.1                |
| Nighttime hrs:          | Avg. Number of Buses/hr                    | 1.2                |
| Distance:               | Distance from Source to Receiver (ft)      | 195                |
|                         | Number of Intercreasing Rows of Buildings: | 0                  |
| Adjustments:            | Noise Barrier?                             | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 46 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

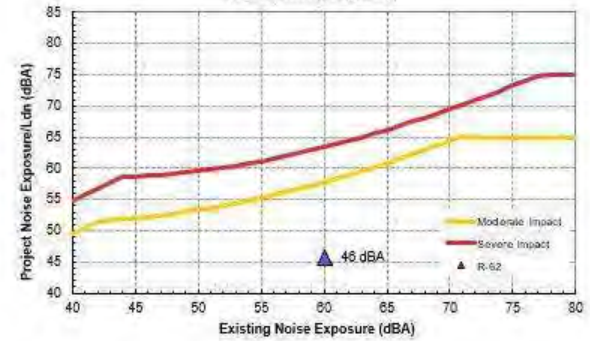
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

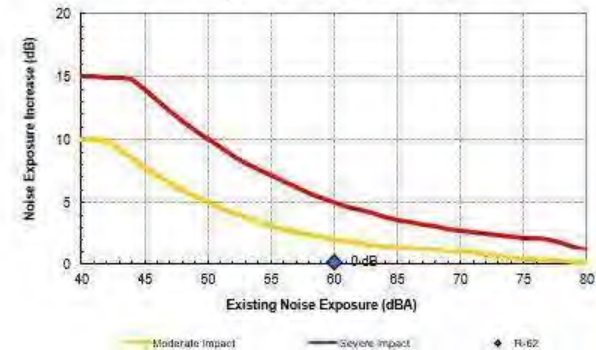
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 42.5 dBA |
| Leq(night): | 38.4 dBA |
| Ldn:        | 45.7 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-63           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 205                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

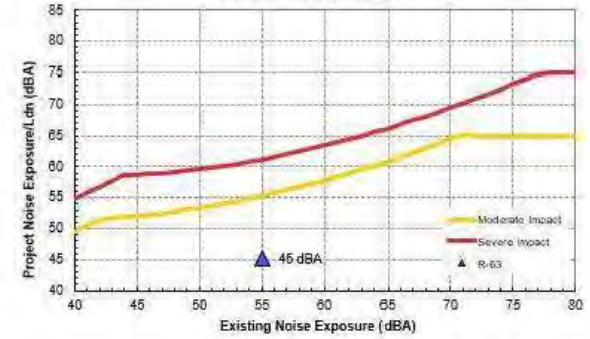
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

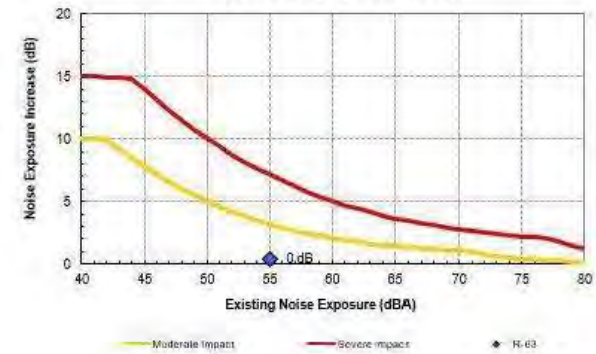
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 42.0 dBA |
| Leq(night): | 37.9 dBA |
| Ldn:        | 45.2 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-64           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 263                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

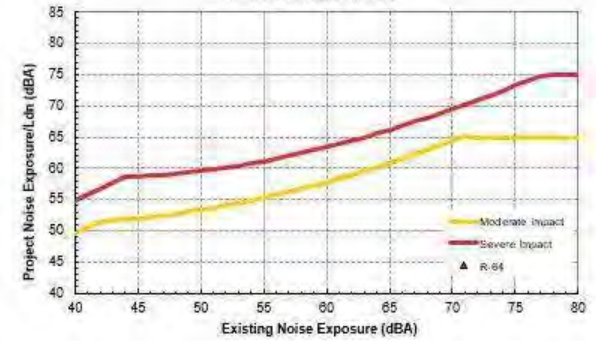
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 81 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 47 ft |

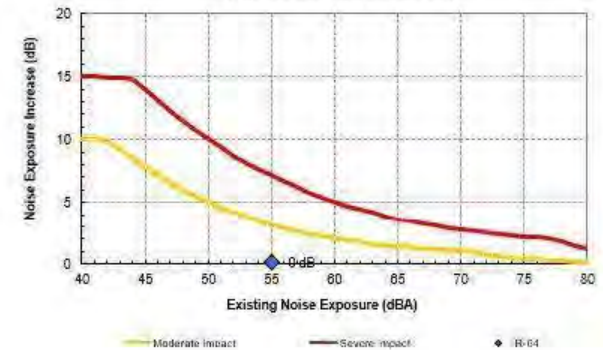
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 34.8 dBA |
| Leq(night): | 30.7 dBA |
| Ldn:        | 38.0 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-65           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 80                 |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 55 dBA |
| Total Noise Exposure: | 65 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

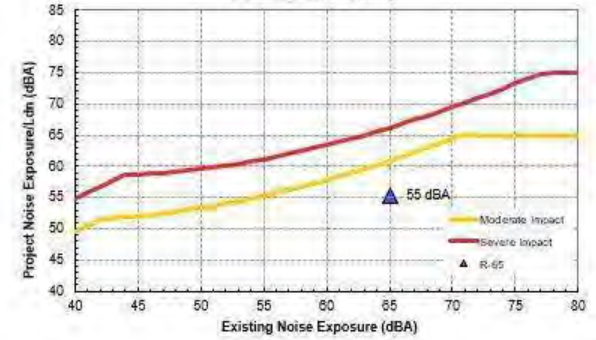
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 48 ft |
| Dist to Sev. Impact Contour (Source 1): | 30 ft |

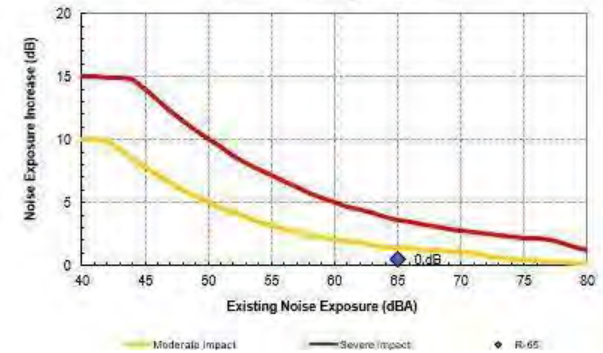
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 52.2 dBA |
| Leq(night): | 48.1 dBA |
| Ldn:        | 55.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-66           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 70 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 44                 |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 70 dBA |
| Total Project Ldn:    | 62 dBA |
| Total Noise Exposure: | 71 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

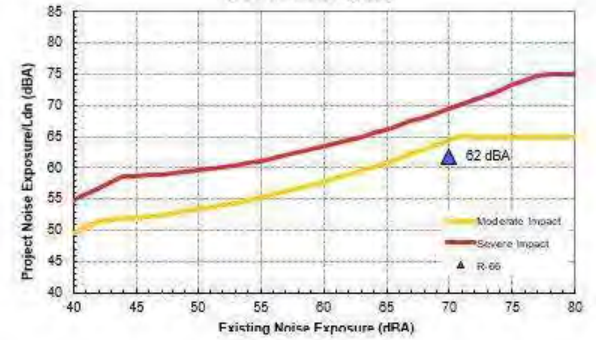
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 35 ft |
| Dist to Sev. Impact Contour (Source 1): | 22 ft |

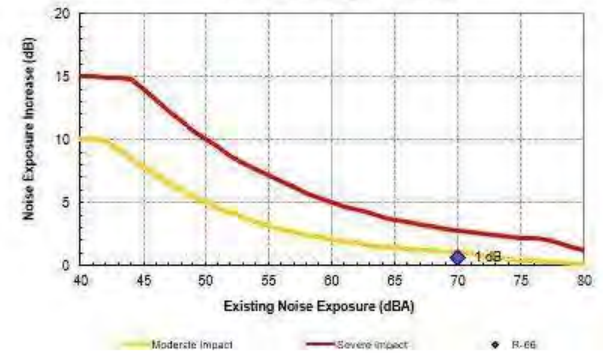
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 58.7 dBA |
| Leq(night): | 54.6 dBA |
| Ldn:        | 61.9 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-67           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 188                |
|                         | Number of Intervening Rows of Buildings: | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 46 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

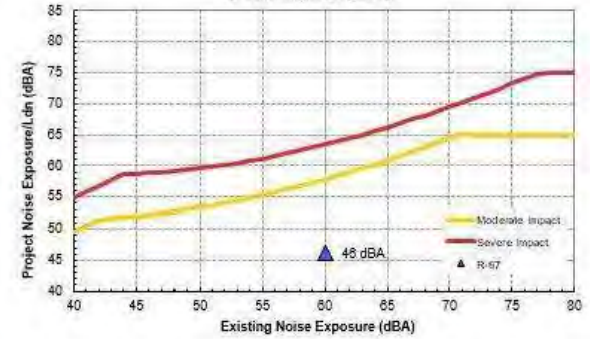
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 64 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 38 ft |

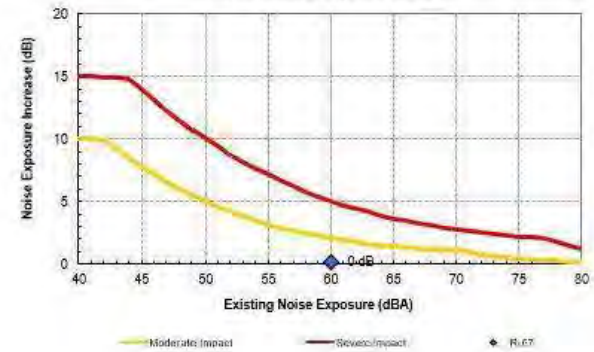
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 42.3 dBA |
| Leq(night): | 38.8 dBA |
| Ldn:        | 46.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-68           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 202                |
|                         | Number of Interceding Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 41 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

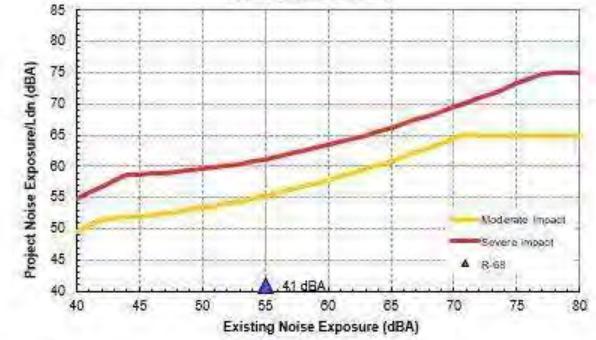
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

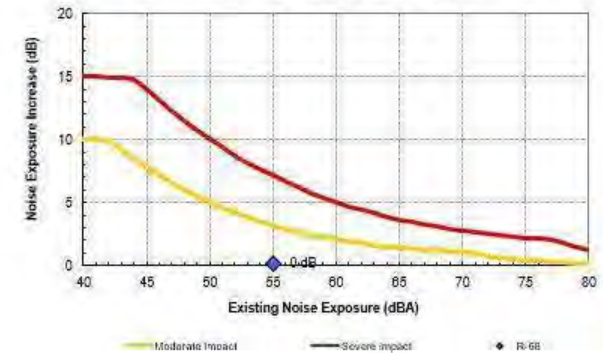
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 37.6 dBA |
| Leq(night): | 33.5 dBA |
| Ldn:        | 40.8 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/23/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-69           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 12                 |
| Distance                | Distance from Source to Receiver (ft)   | 272                |
|                         | Number of Intervening Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dBA  |
| Impact?:              | None   |

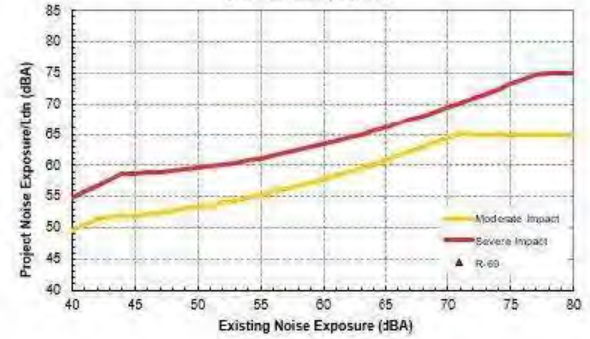
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

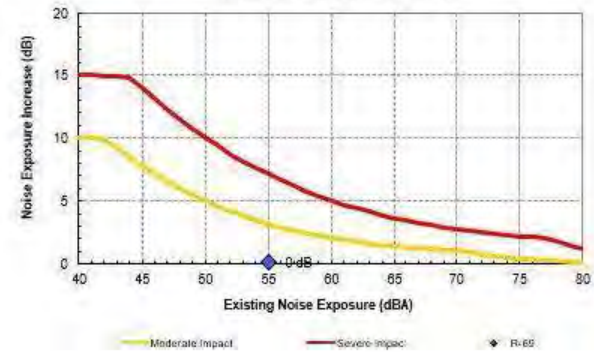
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 34.4 dBA |
| Leq(night): | 30.3 dBA |
| Ldn:        | 37.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-70           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 261                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

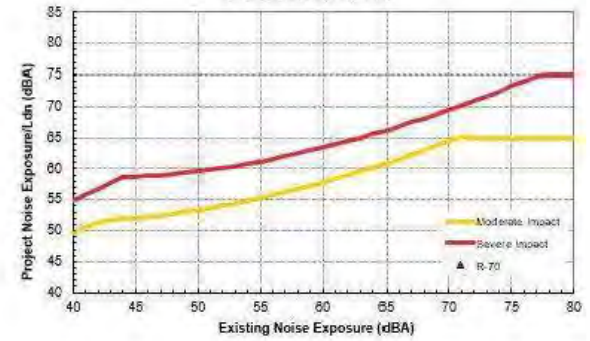
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

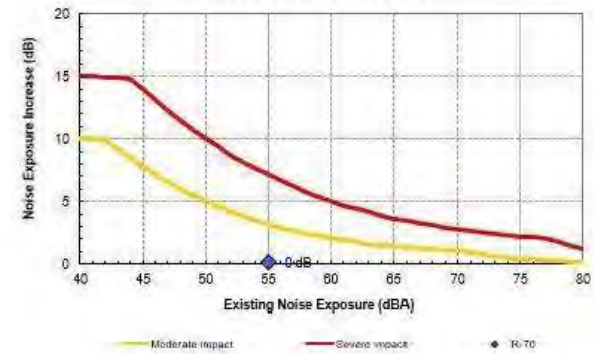
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 34.9 dBA |
| Leq(night): | 30.7 dBA |
| Ldn:        | 38.0 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-71           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 12                 |
| Distance                | Distance from Source to Receiver (ft)    | 249                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

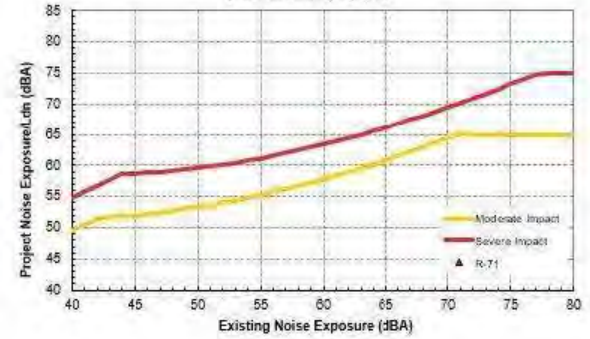
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

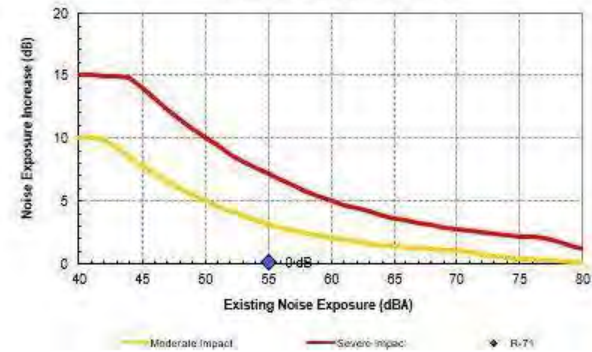
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 35.4 dBA |
| Leq(night): | 31.3 dBA |
| Ldn:        | 38.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-72           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 200                |
|                         | Number of Intersecting Rows of Buildings | 2                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

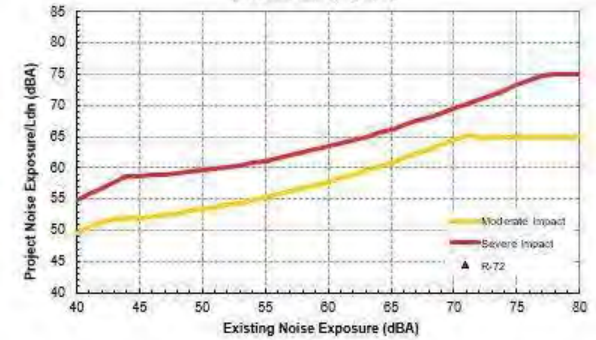
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 64 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 38 ft |

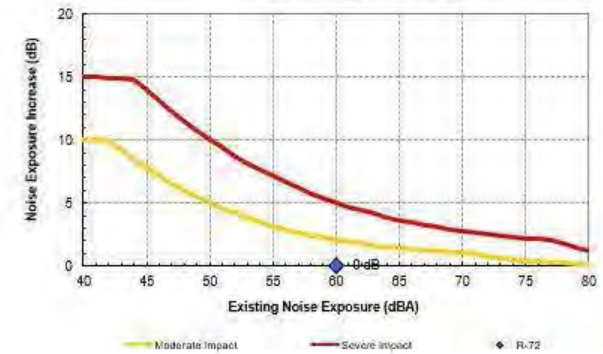
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 36.3 dBA |
| Leq(night): | 32.1 dBA |
| Ldn:        | 35.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-73           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 126                |
|                         | Number of Intervening Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 46 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

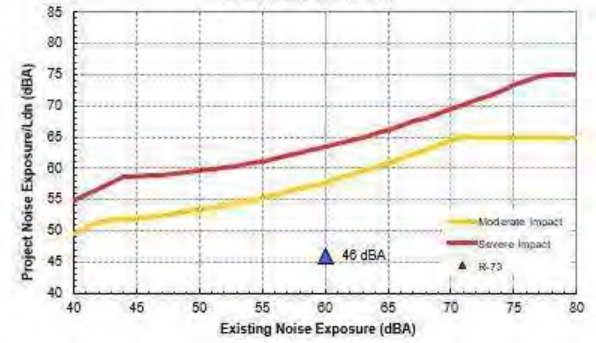
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

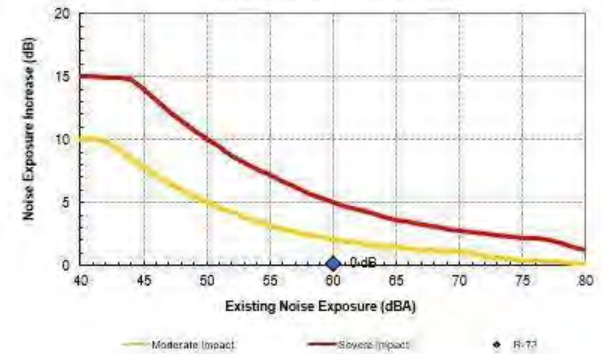
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 42.8 dBA |
| Leq(night): | 38.6 dBA |
| Ldn:        | 45.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-74           |
| Land Use Category:                          | 2. Residential |
| Existing Noise [Measured or Generic Value]: | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 140                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 49 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

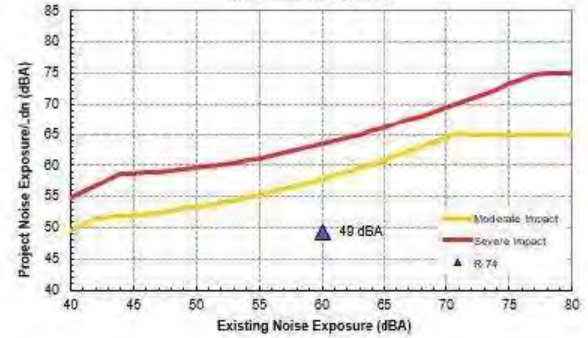
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

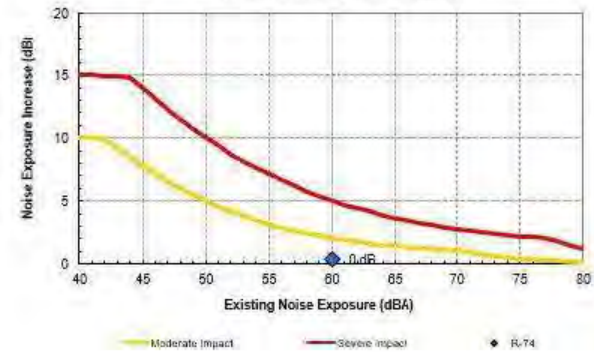
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 46.1 dBA |
| Leq(night): | 42.0 dBA |
| Ldn:        | 49.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-81             |
| Land Use Category:                          | 3: Institutional |
| Existing Noise [Measured or Generic Value]: | 55 dBA           |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters                      |   | Source 1 |
|--|---|----------|
| Source Type:                                 | Stationary Source                       |          |
| Specific Source:                             | Bus Transit Center                      |          |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                      | 4        |
| Distance                                     | Distance from Source to Receiver (ft)   | 203      |
| Adjustments                                  | Number of Intervening Rows of Buildings | 0        |
|  | Noise Barrier?                          | No       |

|                        |    |
|------------------------|----|
| Noise Barrier?         | No |
| Joint Track/Crossover? | No |
| Embedded Track?        | No |
| Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 55 dBA |
| Total Project Leq:    | 43 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

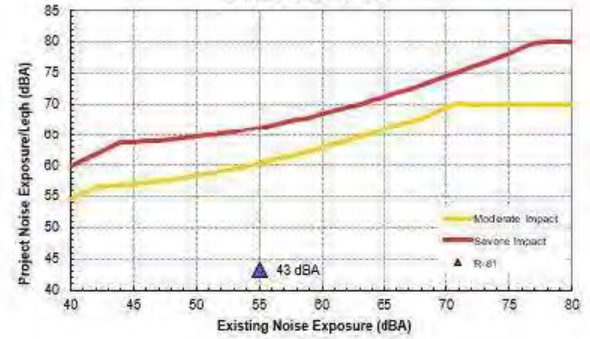
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 42 ft |
| Dist to Sev. Impact Contour (Source 1): | 24 ft |

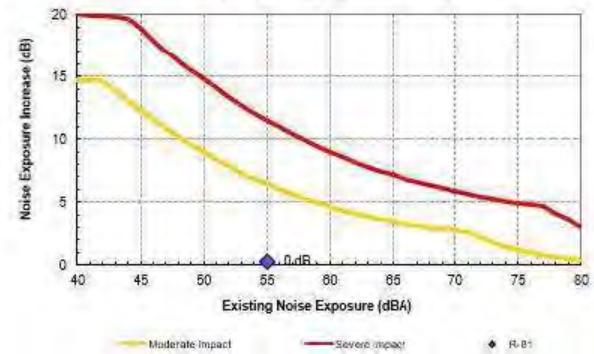
Source 1 Results

|      |          |
|------|----------|
| Leq: | 43.2 dBA |
|------|----------|

Noise Impact Criteria (FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed (FTA Manual, Figs 4-3 and 4.4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-82           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 167                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 43 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

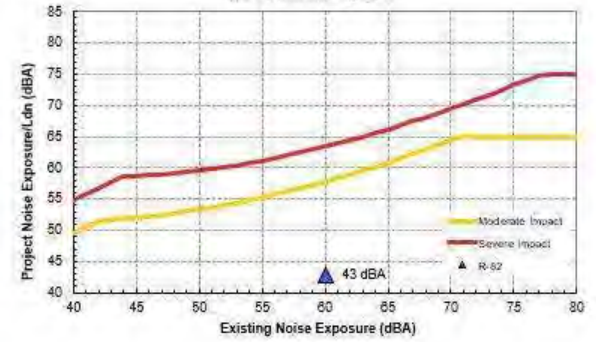
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

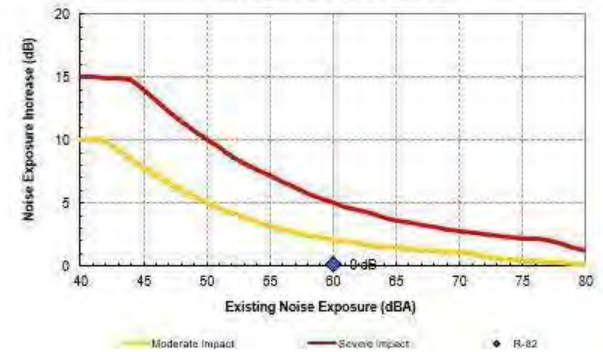
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 39.7 dBA |
| Leq(night): | 35.6 dBA |
| Ldn:        | 42.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-83           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 253                |
|                         | Number of Intervening Rows of Buildings | 2                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 37 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

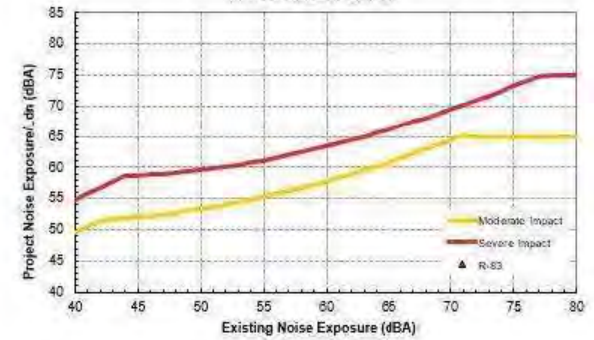
Distance to Impact Contours

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 81ft |
| Dist to Sev. Impact Contour (Source 1): | 47ft |

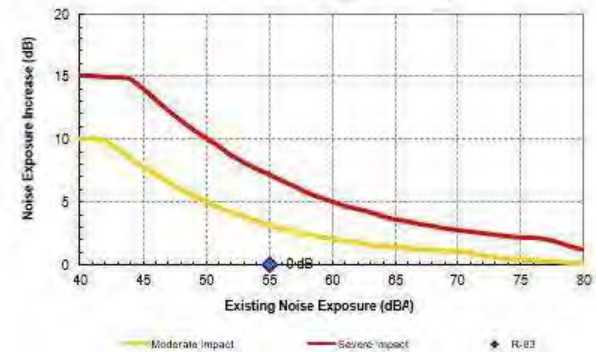
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 33.4 dBA |
| Leq(night): | 29.3 dBA |
| Ldn:        | 36.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-84           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Noise Source Parameters  
Number of Noise Sources: **1**

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 185                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 42 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

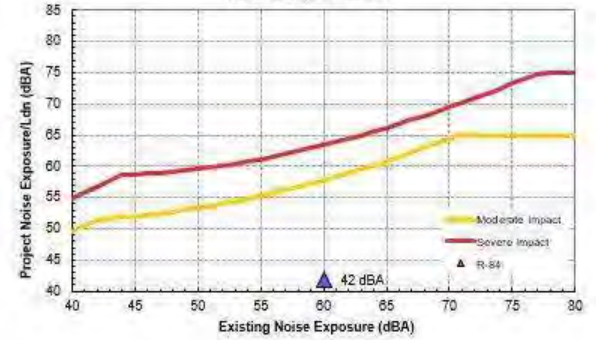
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

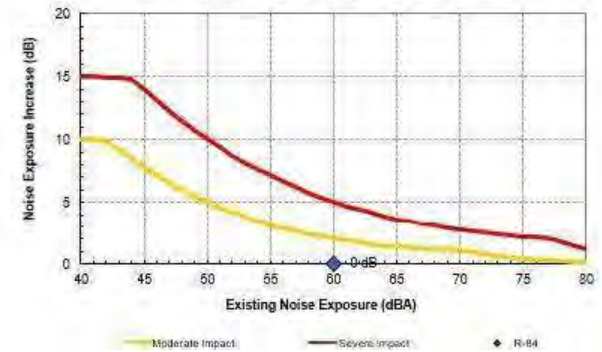
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 38.6 dBA |
| Leq(night): | 34.5 dBA |
| Ldn:        | 41.8 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-85           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 254                |
|                         | Number of Intersecting Rows of Buildings | 2                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 37 dBA |
| Total Noise Exposure: | 65 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

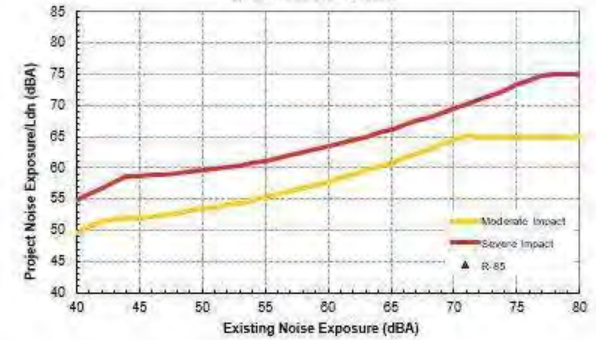
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 48 ft |
| Dist to Sev. Impact Contour (Source 1): | 30 ft |

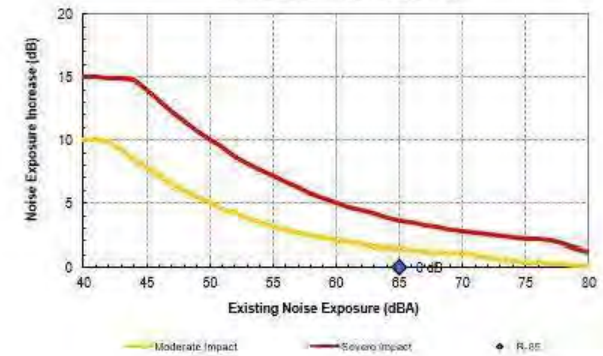
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 33.7 dBA |
| Leq(night): | 29.5 dBA |
| Ldn:        | 36.8 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-86           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 12                 |
| Distance                | Distance from Source to Receiver (ft)    | 229                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

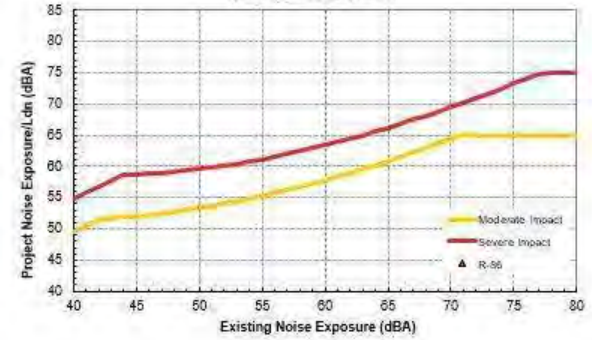
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

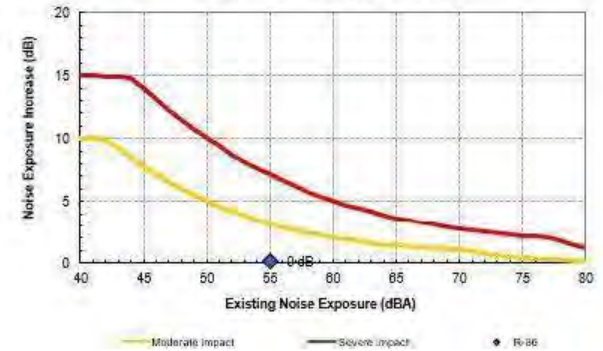
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 36.3 dBA |
| Leq(night): | 32.2 dBA |
| Ldn:        | 39.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-87           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 185                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 46 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

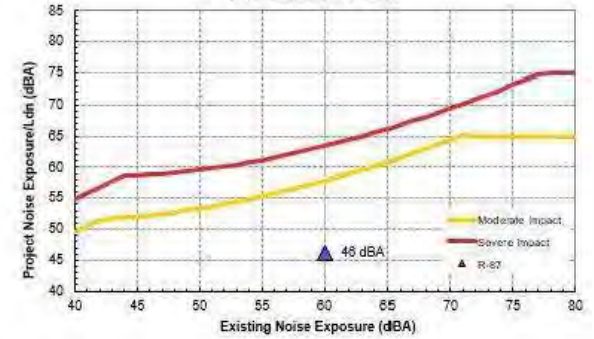
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

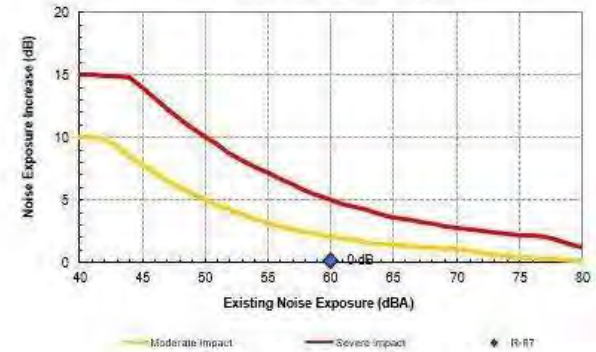
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 43.1 dBA |
| Leq(night): | 39.0 dBA |
| Ldn:        | 46.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-88           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 172                |
|                         | Number of Intersecting Rows of Buildings | 2                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 41 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

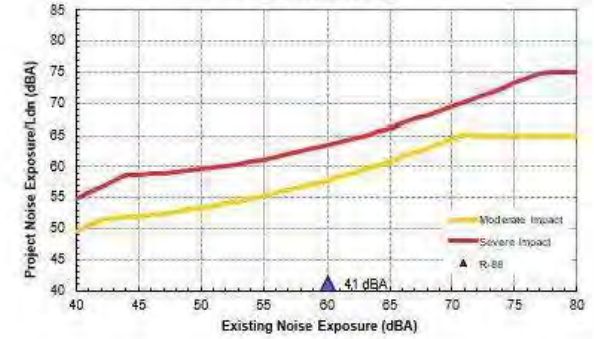
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

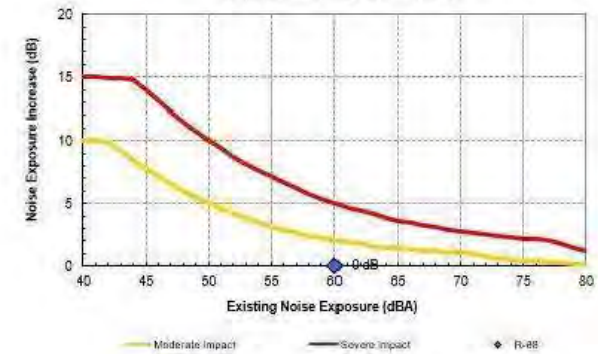
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 37.9 dBA |
| Leq(night): | 33.8 dBA |
| Ldn:        | 41.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-89           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   |                               |
|-------------------------|---|-------------------------------|
|                         | Source Type:                            | Source 1<br>Stationary Source |
|                         | Specific Source:                        | Bus Transit Center            |
| Daytime hrs             | Avg. Number of Buses/hr                 | 31                            |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 12                            |
| Distance                | Distance from Source to Receiver (ft)   | 58                            |
|                         | Number of Intervening Rows of Buildings | 0                             |
| Adjustments             | Noise Barrier?                          | No                            |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 53 dBA |
| Total Noise Exposure: | 66 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

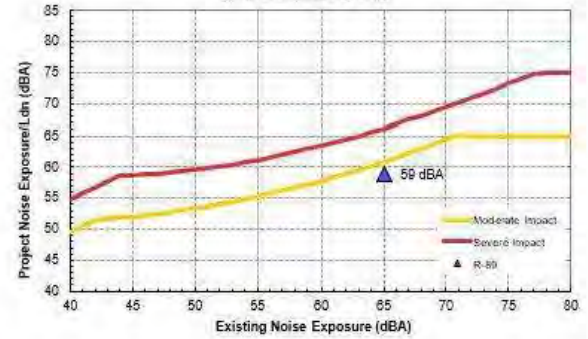
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 48 ft |
| Dist to Sev. Impact Contour (Source 1): | 30 ft |

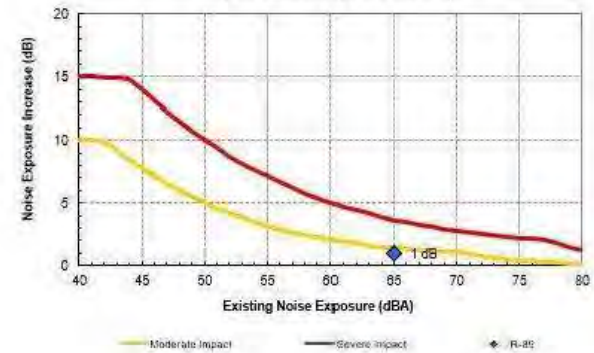
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 55.7 dBA |
| Leq(night): | 51.6 dBA |
| Ldn:        | 58.9 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-90           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 136                |
|                         | Number of Intervening Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

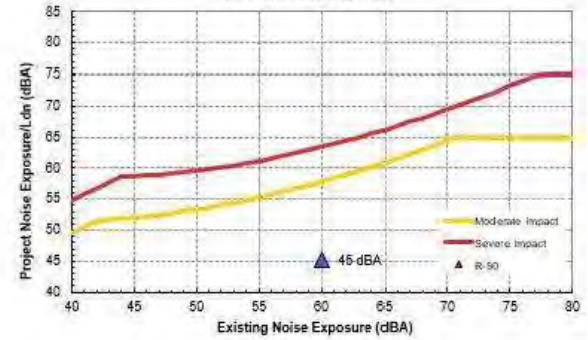
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

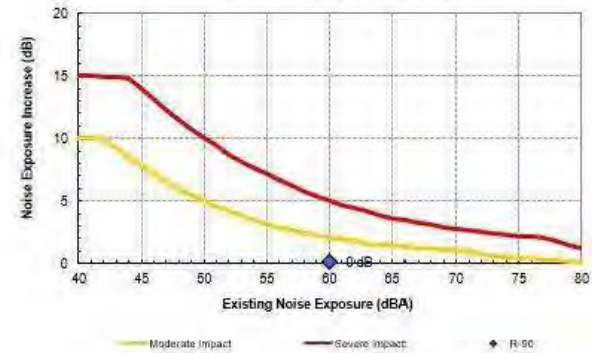
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 41.9 dBA |
| Leq(night): | 37.8 dBA |
| Ldn:        | 45.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-91           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 83                 |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 55 dBA |
| Total Noise Exposure: | 65 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

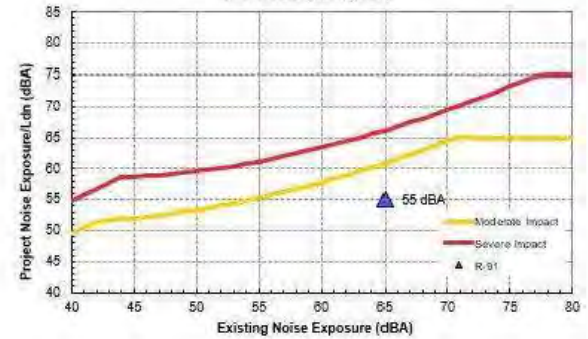
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 48 ft |
| Dist to Sev. Impact Contour (Source 1): | 30 ft |

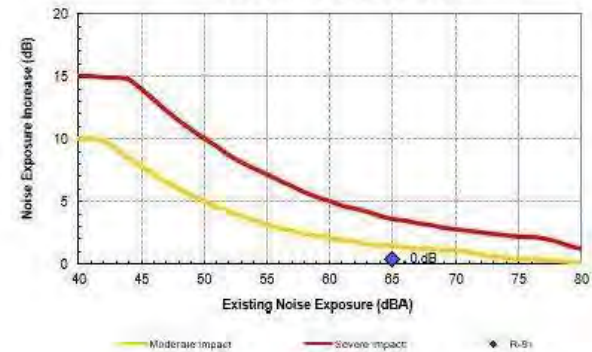
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 51.8 dBA |
| Leq(night): | 47.7 dBA |
| Ldn:        | 55.0 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-92           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 175                |
|                         | Number of Interposing Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 42 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

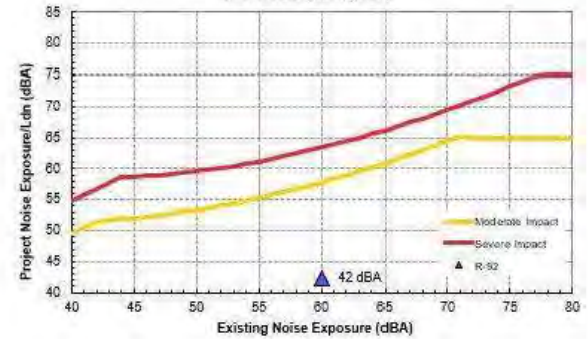
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

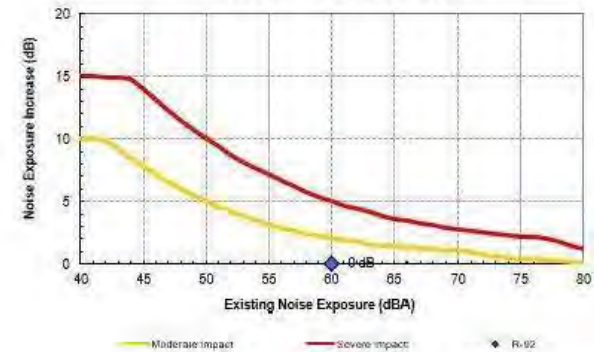
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 39.2 dBA |
| Leq(night): | 35.1 dBA |
| Ldn:        | 42.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-93             |
| Land Use Category:                          | 3: Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters                      |  | Source 1           |
|--|--|--------------------|
|  | Source Type:                             | Stationary Source  |
|  | Specific Source:                         | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                       | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)    | 200                |
|  | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 43 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

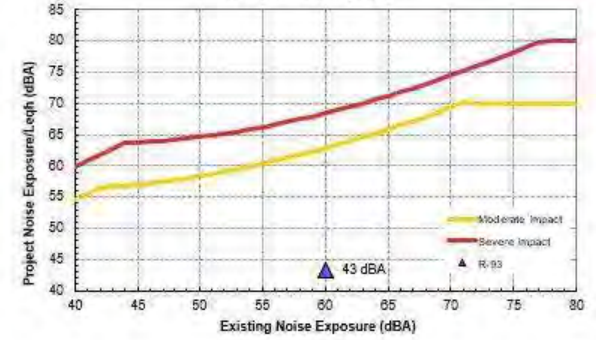
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 33 ft |
| Dist to Sev. Impact Contour (Source 1): | 20 ft |

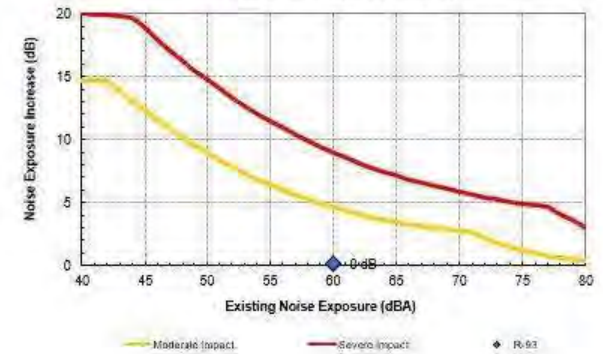
**Source 1 Results**

|      |          |
|------|----------|
| Leq: | 43.4 dBA |
|------|----------|

**Noise Impact Criteria**  
(FTA Manual, Fig 4-2)



**Increase in Cumulative Noise Levels Allowed**  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-98           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 196                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 46 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

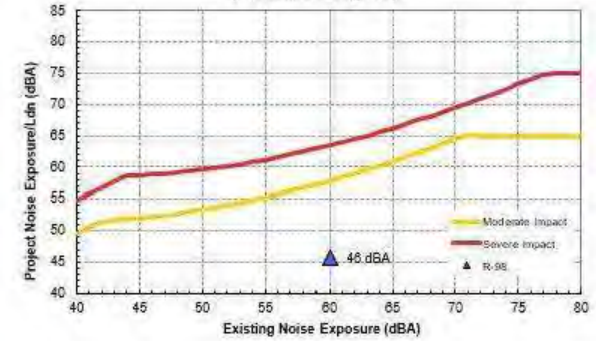
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

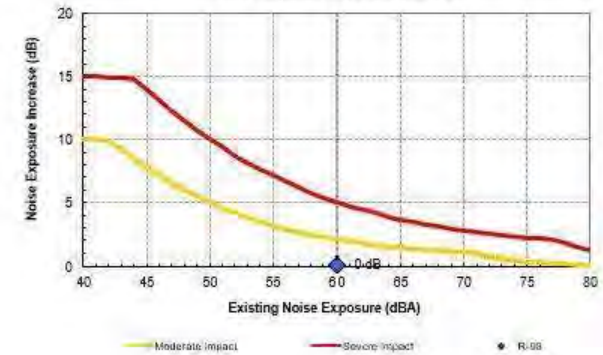
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 42.5 dBA |
| Leq(night): | 38.3 dBA |
| Ldn:        | 45.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-99           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 201                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

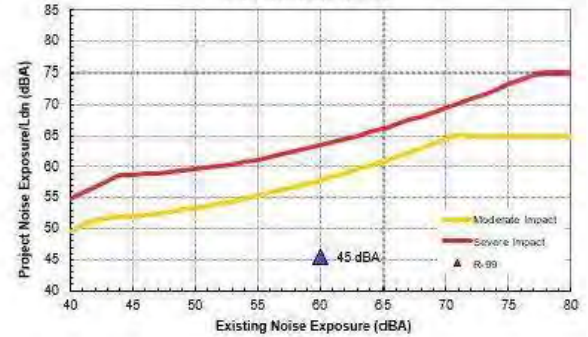
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 64 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 38 ft |

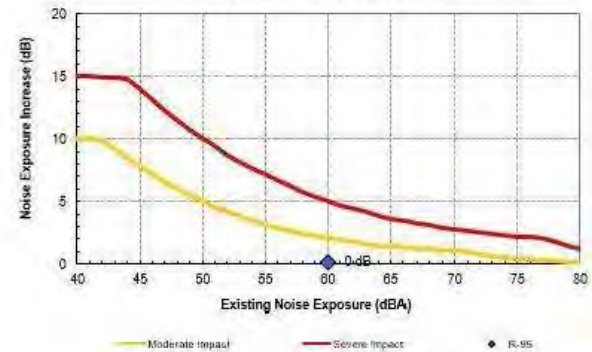
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 42.2 dBA |
| Leq(night): | 38.1 dBA |
| Ldn:        | 45.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-100          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 222                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

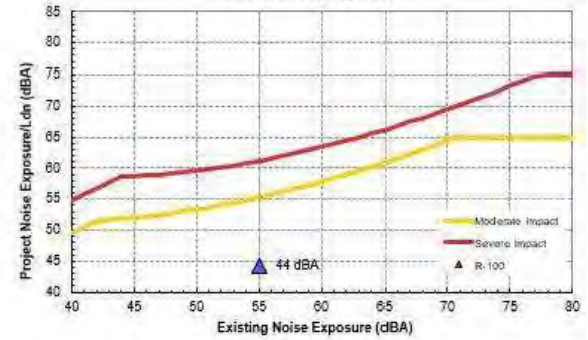
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

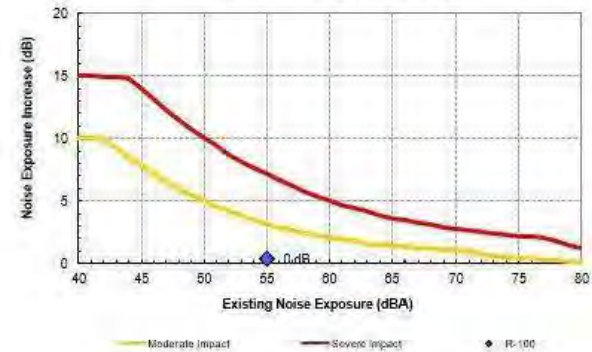
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 41.1 dBA |
| Leq(night): | 37.0 dBA |
| Ldn:        | 44.3 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-101          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 188                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 46 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

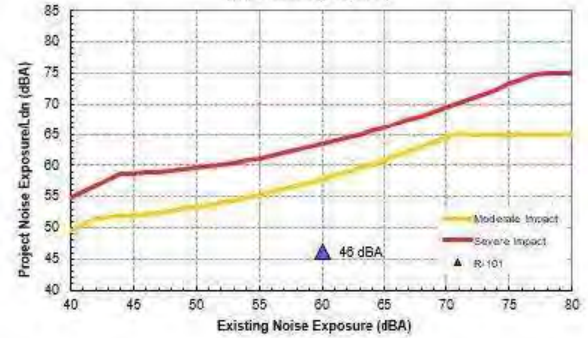
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

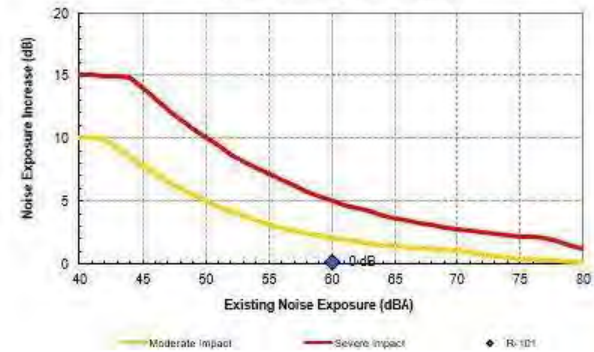
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 42.9 dBA |
| Leq(night): | 38.8 dBA |
| Ldn:        | 46.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-101          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 188                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 46 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

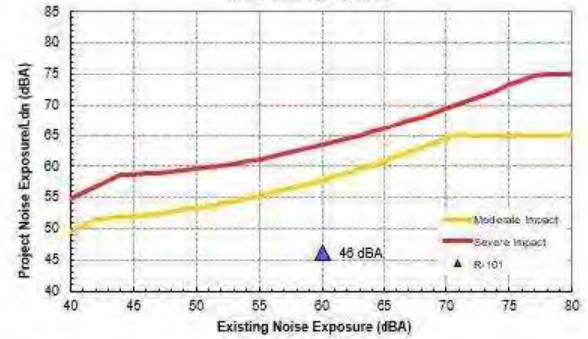
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

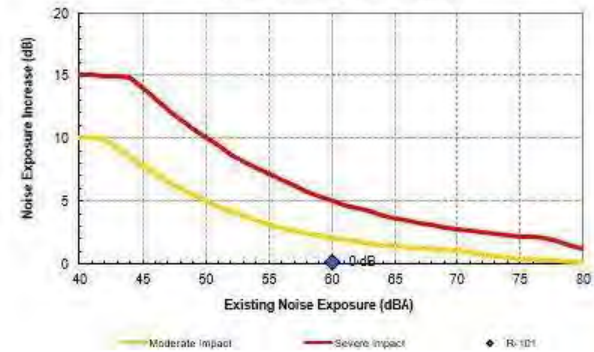
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 42.9 dBA |
| Leq(night): | 38.8 dBA |
| Ldn:        | 46.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-103         |
| Land Use Category:                          | 2-Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA        |

Noise Source Parameters  
Number of Noise Sources: **1**

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 284                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 37 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

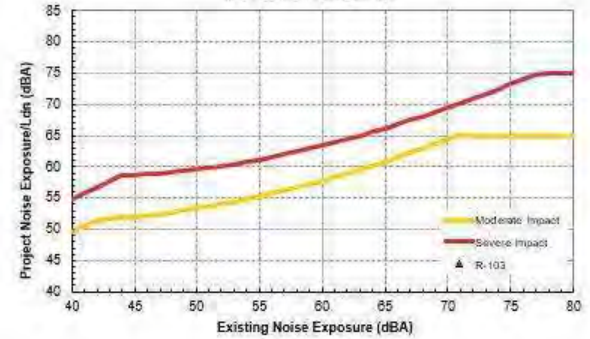
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

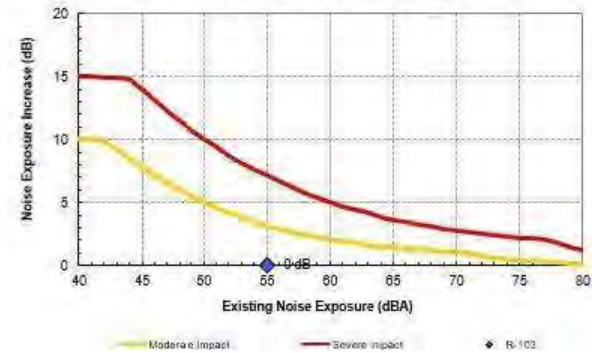
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 33.9 dBA |
| Leq(night): | 29.8 dBA |
| Ldn:        | 37.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-104          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 250                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 43 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

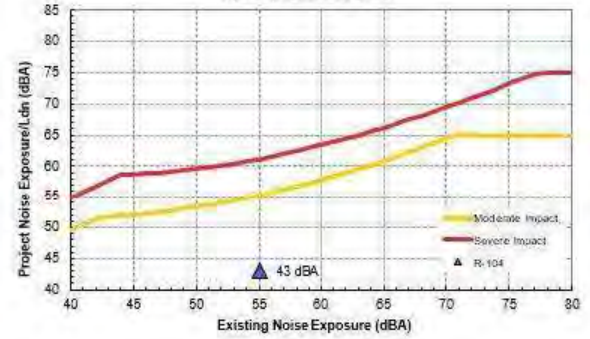
Distance to Impact Contours

|                     |      |
|---------------------|------|
| Dist to Mod. Impact | 81ft |
| Contour (Source 1): | 81ft |
| Dist to Sev. Impact | 47ft |
| Contour (Source 1): | 47ft |

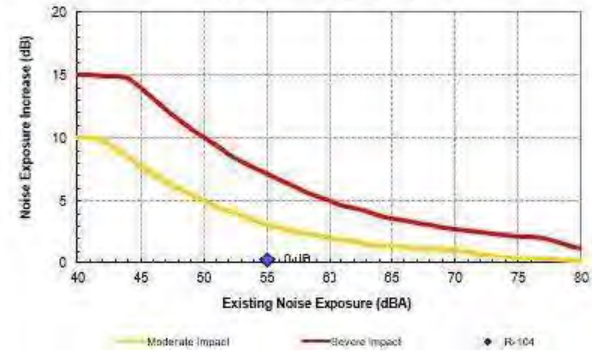
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 39.8 dBA |
| Leq(night): | 35.7 dBA |
| Ldn:        | 43.0 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-105          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 151                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

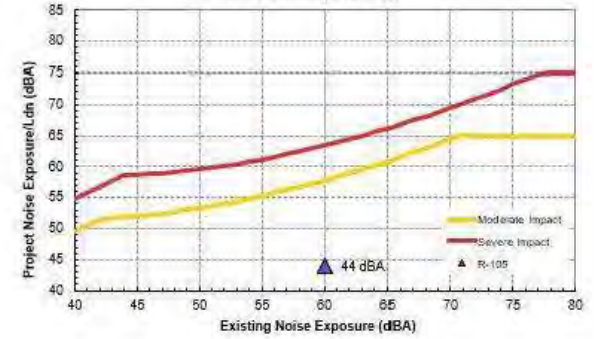
Distance to Impact Contours

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact |       |
| Contour (Source 1): | 64 ft |
| Dist to Sev. Impact |       |
| Contour (Source 1): | 38 ft |

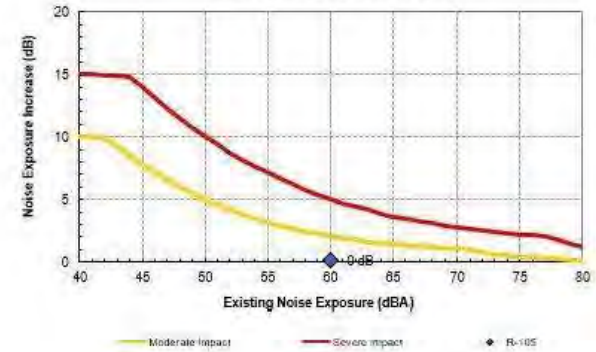
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.8 dBA |
| Leq(night): | 36.7 dBA |
| Ldn:        | 44.0 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-106          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  |                               |
|-------------------------|--|-------------------------------|
|                         | Source Type:                             | Source 1<br>Stationary Source |
|                         | Specific Source:                         | Bus Transit Center            |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                           |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                           |
| Distance                | Distance from Source to Receiver (ft)    | 122                           |
|                         | Number of Intersecting Rows of Buildings | 0                             |
| Adjustments             | Noise Barrier?                           | No                            |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 51 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

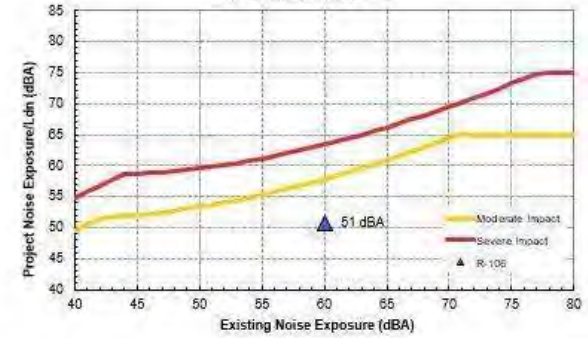
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

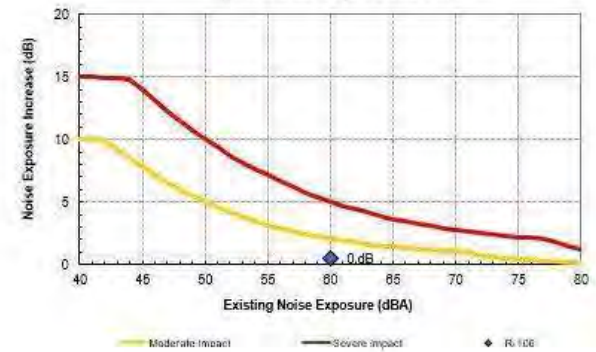
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 47.6 dBA |
| Leq(night): | 43.5 dBA |
| Ldn:        | 50.8 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-107          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 237                |
|                         | Number of Intersecting Rows of Buildings | 2                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

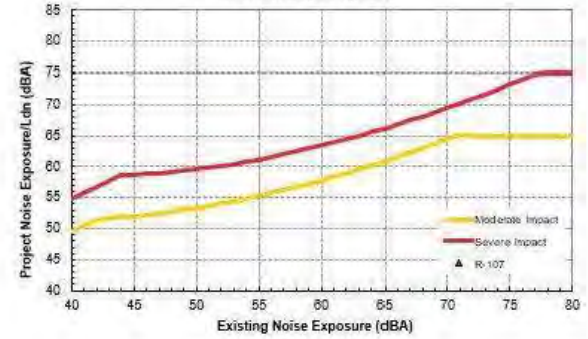
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

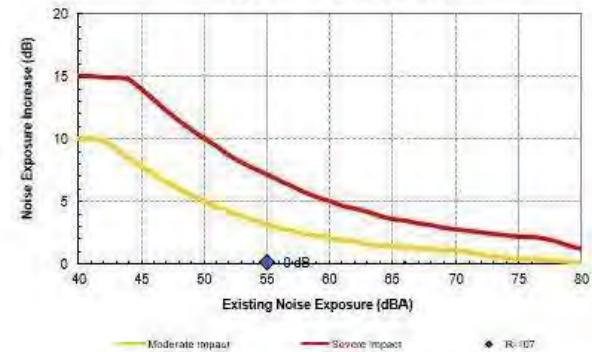
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 34.4 dBA |
| Leq(night): | 30.3 dBA |
| Ldn:        | 37.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-108          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Noise Source Parameters  
Number of Noise Sources: **1**

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 165                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 48 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

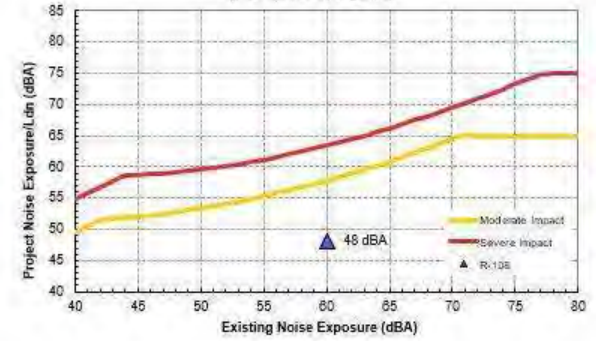
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

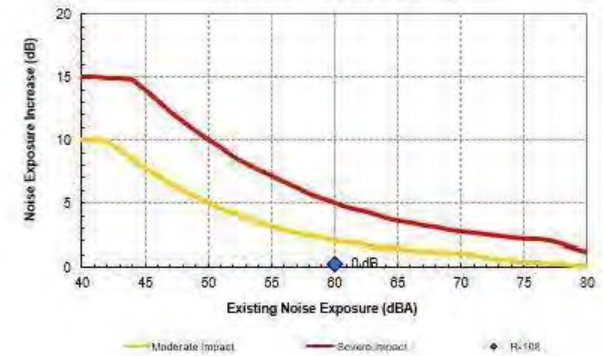
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 45.0 dBA |
| Leq(night): | 40.9 dBA |
| Ldn:        | 48.2 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-110          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 256                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

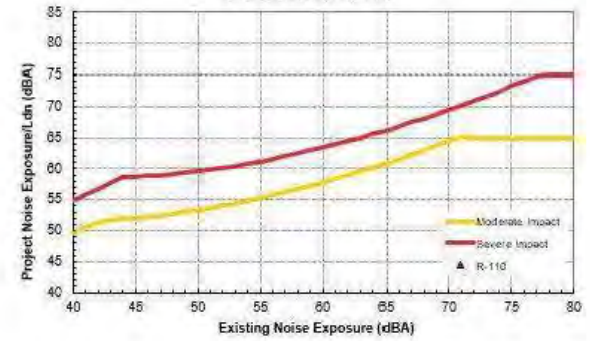
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

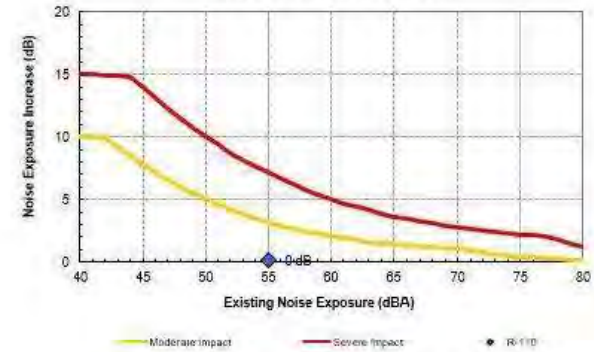
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 35.1 dBA |
| Leq(night): | 30.9 dBA |
| Ldn:        | 38.2 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-111          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 236                |
|                         | Number of Intervening Rows of Building: | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

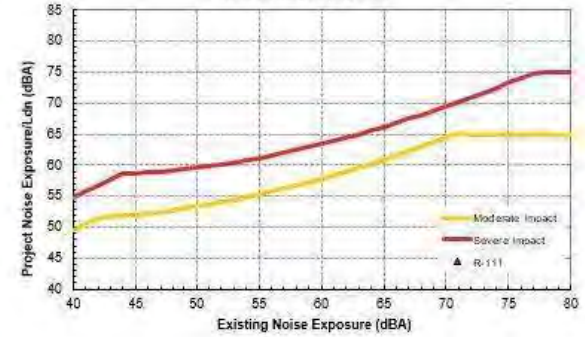
**Distance to Impact Contours**

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 81ft |
| Dist to Sev. Impact Contour (Source 1): | 47ft |

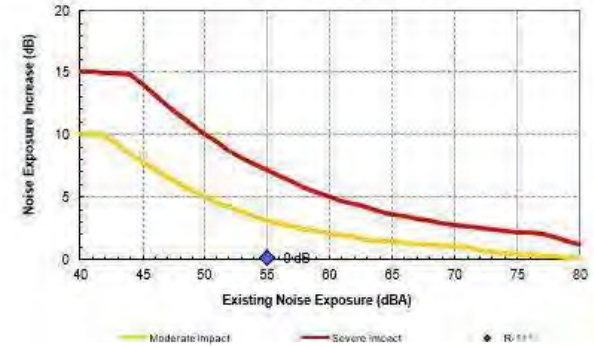
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 36.0 dBA |
| Leq(night): | 31.8 dBA |
| Ldn:        | 39.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2013

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-112          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 215                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

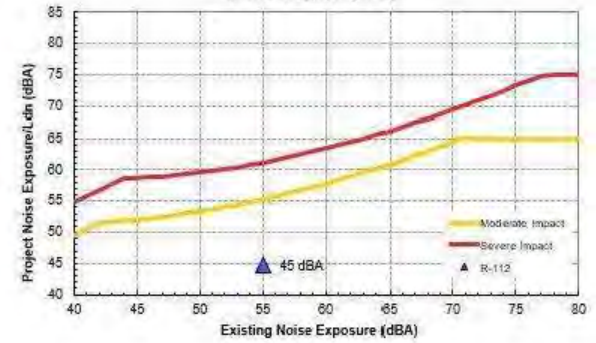
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

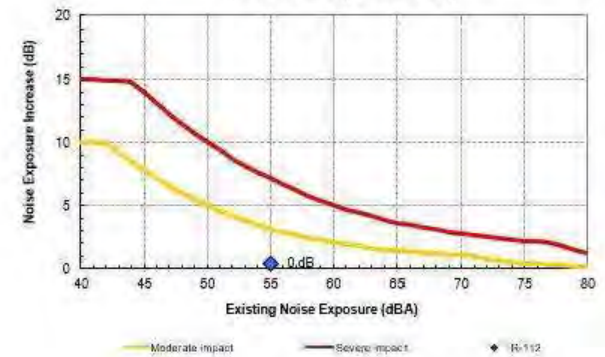
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 41.5 dBA |
| Leq(night): | 37.3 dBA |
| Ldn:        | 44.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-113          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 239                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 43 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

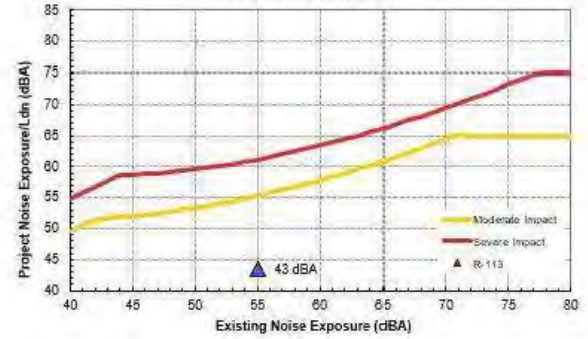
Distance to Impact Contours

|                     |      |
|---------------------|------|
| Dist to Mod. Impact |      |
| Contour (Source 1): | 81ft |
| Dist to Sev. Impact |      |
| Contour (Source 1): | 47ft |

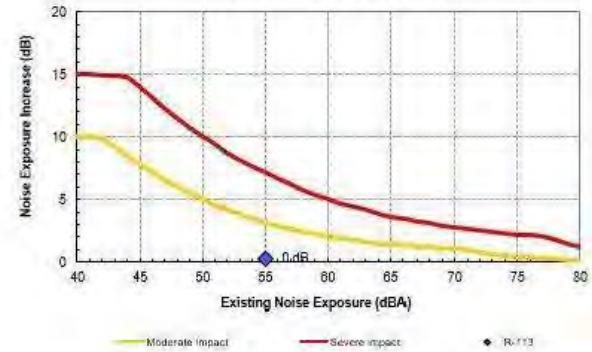
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.3 dBA |
| Leq(night): | 36.2 dBA |
| Ldn:        | 43.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-114          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
| Source Type:            |   | Stationary Source  |
| Specific Source:        |   | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 236                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 65 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

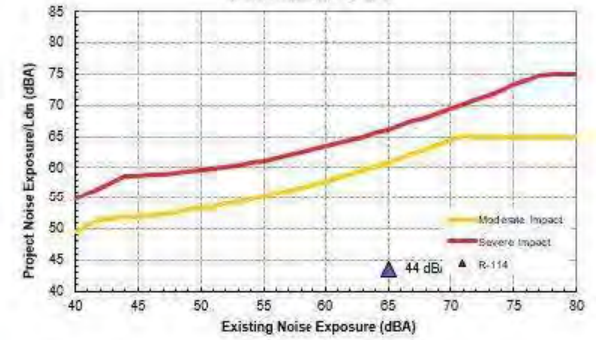
**Distance to Impact Contours**

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact | 48 ft |
| Contour (Source 1): | 48 ft |
| Dist to Sev. Impact | 30 ft |
| Contour (Source 1): | 30 ft |

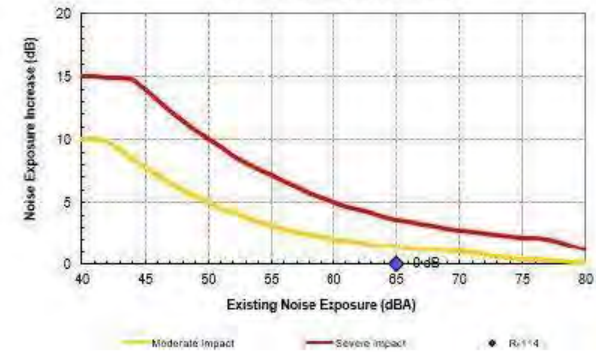
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 40.5 dBA |
| Leq(night): | 36.3 dBA |
| Ldn:        | 43.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-115          |
| Land Use Category:                          | 2, Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 13.1               |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 3.6                |
| Distance                | Distance from Source to Receiver (ft)   | 82                 |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Lda:         | 65 dBA |
| Total Project Lda:    | 66 dBA |
| Total Noise Exposure: | 66 dBA |
| Increase:             | 1dB    |
| Impact?:              | None   |

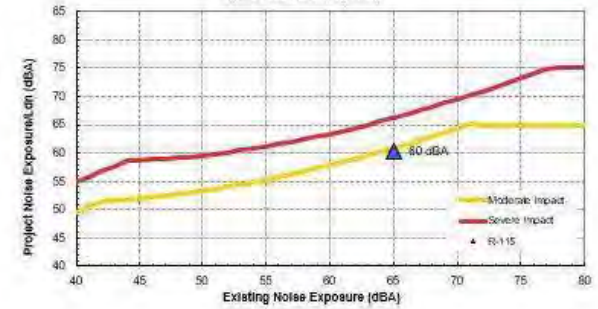
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 79 ft |
| Dist to Sev. Impact Contour (Source 1): | 48 ft |

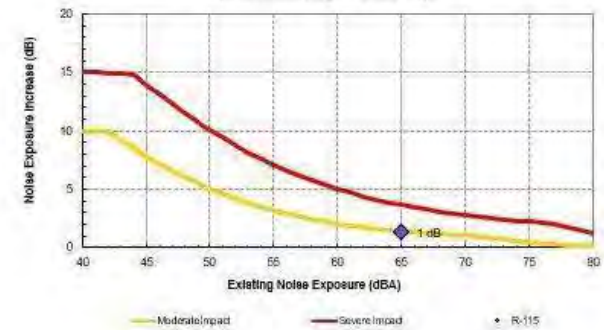
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 58.2 dBA |
| Leq(night): | 52.6 dBA |
| Lda:        | 60.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-116          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 65                 |
|                         | Number of Interposing Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|                        |    |
|------------------------|----|
| Noise Barrier?         | No |
| Joint Track/Crossover? | No |
| Embedded Track?        | No |
| Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 58 dBA |
| Total Noise Exposure: | 66 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

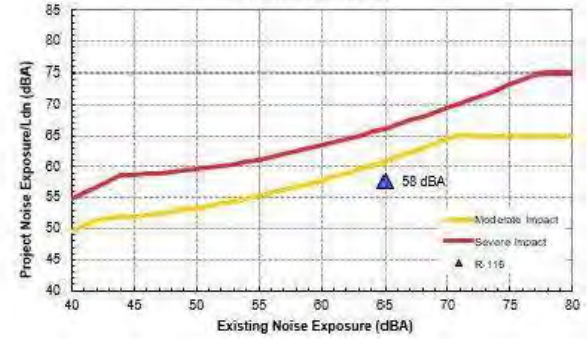
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 48 ft |
| Dist to Sev. Impact Contour (Source 1): | 30 ft |

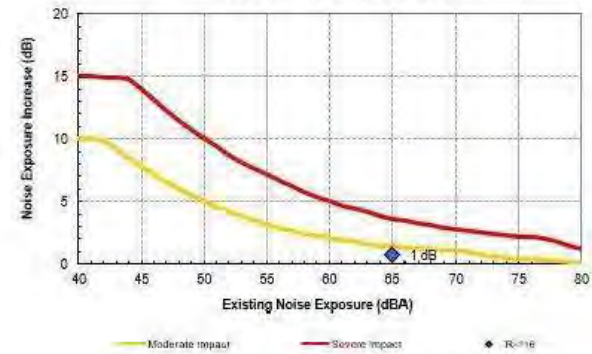
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 54.5 dBA |
| Leq(night): | 50.3 dBA |
| Ldn:        | 57.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

|   |               |
|---|---------------|
| <b>Receiver Parameters</b>                  |               |
| Receiver:                                   | R-119         |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA        |

|                                |   |
|--------------------------------|---|
| <b>Noise Source Parameters</b> |   |
| Number of Noise Sources:       | 1 |

|                                |  |                    |
|--------------------------------|--|--------------------|
| <b>Noise Source Parameters</b> |  | <b>Source 1</b>    |
|                                | Source Type:                             | Stationary Source  |
|                                | Specific Source:                         | Bus Transit Center |
| Daytime hrs                    | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs                  | Avg. Number of Buses/hr                  | 1.2                |
| Distance                       | Distance from Source to Receiver (ft)    | 217                |
|                                | Number of Intersecting Rows of Buildings | 2                  |
| Adjustments                    | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      |    |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

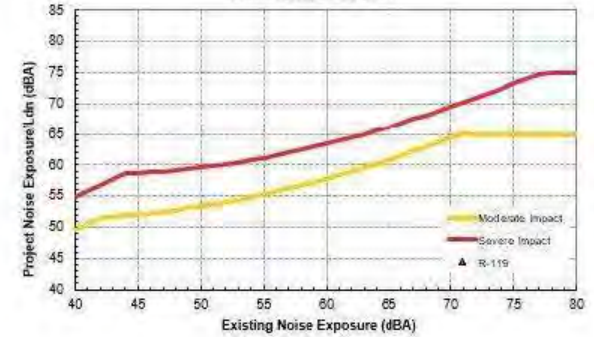
**Distance to Impact Contours**

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 81ft |
| Dist to Sev. Impact Contour (Source 1): | 47ft |

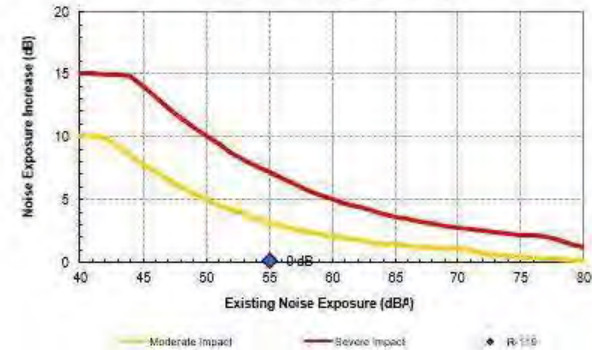
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 35.4 dBA |
| Leq(night): | 31.2 dBA |
| Ldn:        | 38.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2015

Project: **BR Plank-Nicholson BRI**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-120          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 225                |
|                         | Number of Intersecting Rows of Buildings | 2                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

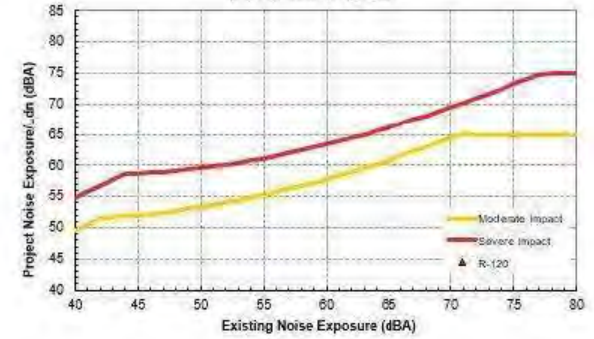
**Distance to Impact Contours**

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 81ft |
| Dist to Sev. Impact Contour (Source 1): | 47ft |

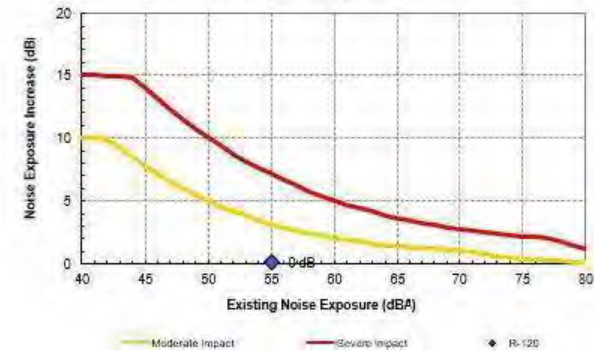
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 35.0 dBA |
| Leq(night): | 30.9 dBA |
| Ldn:        | 38.1 dBA |

**Noise Impact Criteria**  
(FTA Manual, Fig 4-2)



**Increase in Cumulative Noise Levels Allowed**  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-121          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 208                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

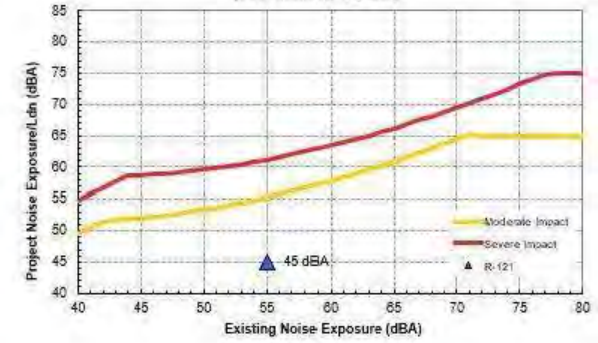
Distance to Impact Contours

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 81ft |
| Dist to Sev. Impact Contour (Source 1): | 47ft |

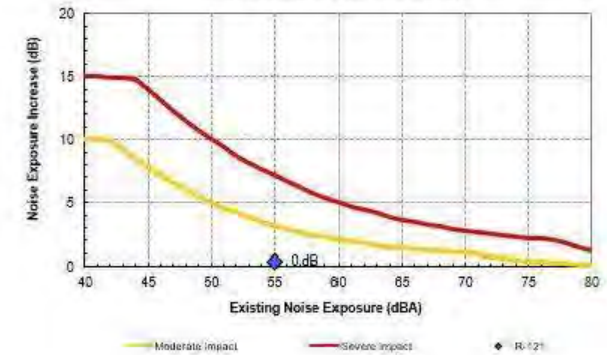
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 41.8 dBA |
| Leq(night): | 37.7 dBA |
| Ldn:        | 45.0 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2015

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-122          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 250                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

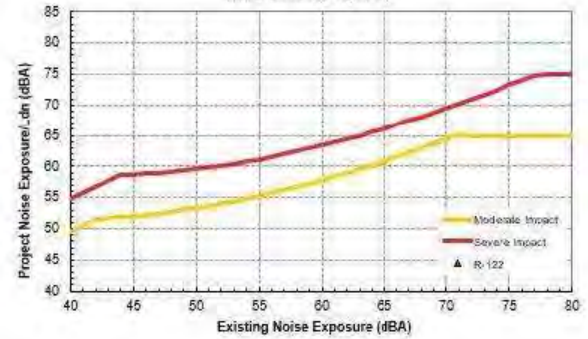
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

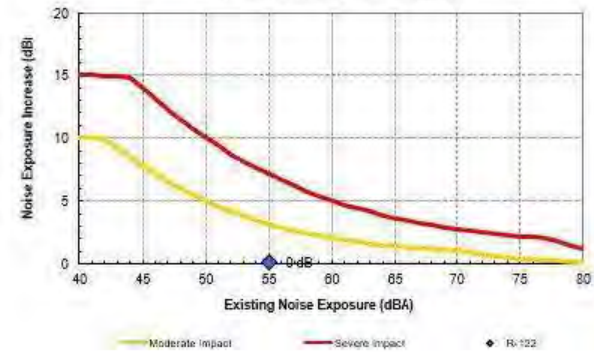
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 35.3 dBA |
| Leq(night): | 31.2 dBA |
| Ldn:        | 38.5 dBA |

**Noise Impact Criteria**  
(FTA Manual, Fig 4-2)



**Increase in Cumulative Noise Levels Allowed**  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-123          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 239                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 43 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

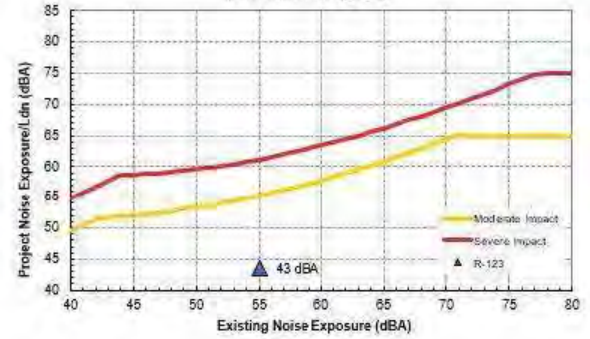
Distance to Impact Contours

|                     |      |
|---------------------|------|
| Dist to Mod. Impact | 81ft |
| Contour (Source 1): | 81ft |
| Dist to Sev. Impact | 47ft |
| Contour (Source 1): | 47ft |

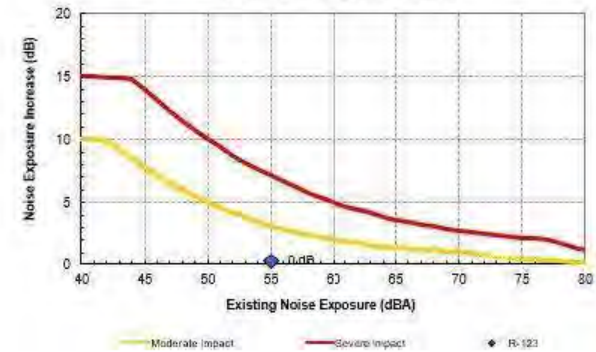
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.3 dBA |
| Leq(night): | 36.2 dBA |
| Ldn:        | 43.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-124          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 240                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 43 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

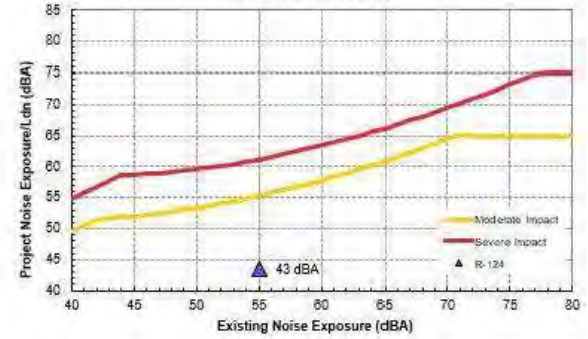
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

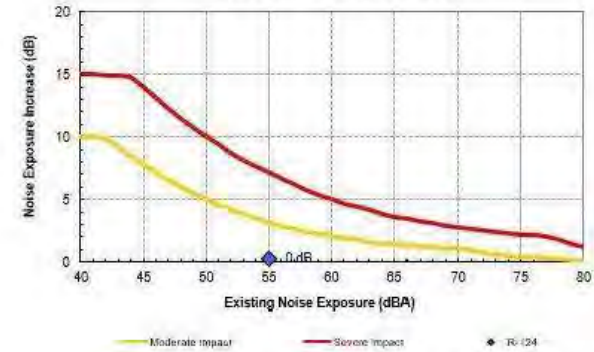
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.3 dBA |
| Leq(night): | 36.2 dBA |
| Ldn:        | 43.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-125          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 263                |
|                         | Number of Interceding Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 42 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

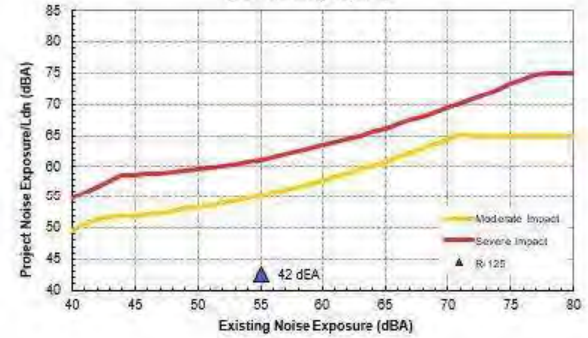
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

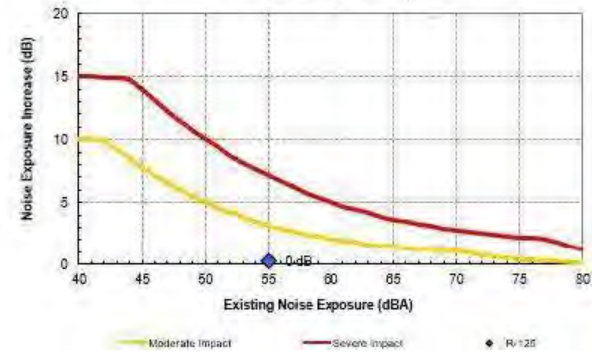
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 39.3 dBA |
| Leq(night): | 35.2 dBA |
| Ldn:        | 42.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-126          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 12                 |
| Distance                | Distance from Source to Receiver (ft)    | 240                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

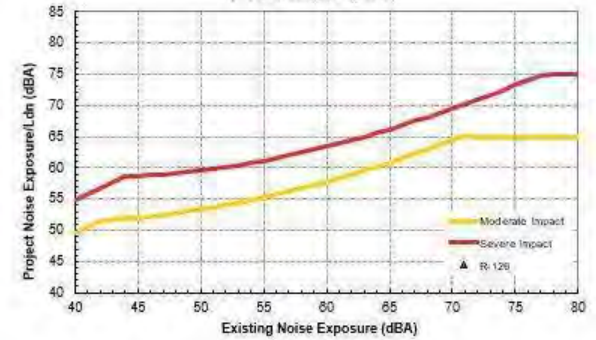
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

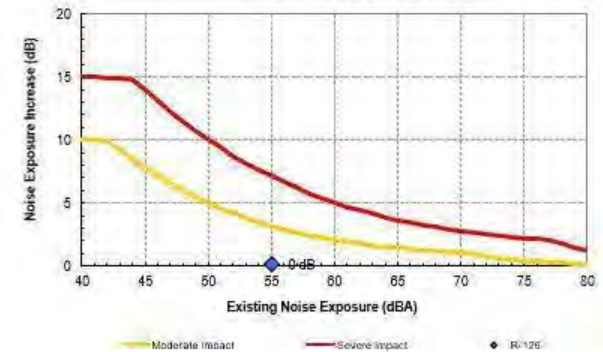
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 35.8 dBA |
| Leq(night): | 31.7 dBA |
| Ldn:        | 36.9 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-127          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 251                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 38 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

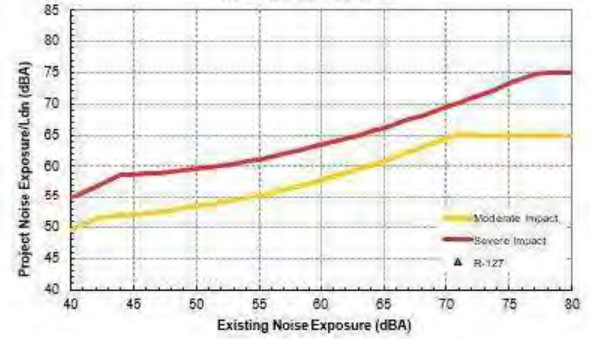
Distance to Impact Contours

|                     |      |
|---------------------|------|
| Dist to Mod. Impact | 81ft |
| Contour (Source 1): | 81ft |
| Dist to Sev. Impact | 47ft |
| Contour (Source 1): | 47ft |

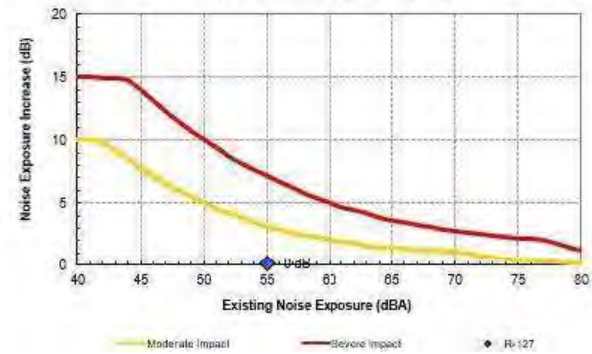
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 35.3 dBA |
| Leq(night): | 31.2 dBA |
| Ldn:        | 38.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-128          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 108                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 52 dBA |
| Total Noise Exposure: | 61 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

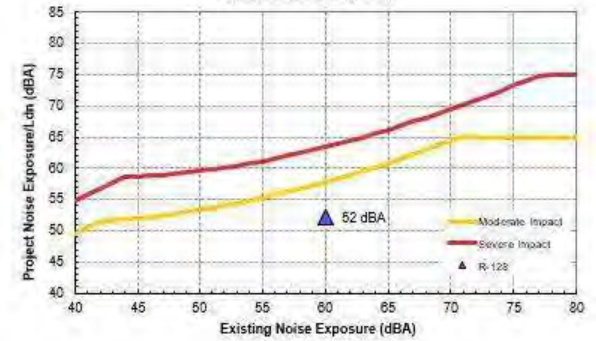
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

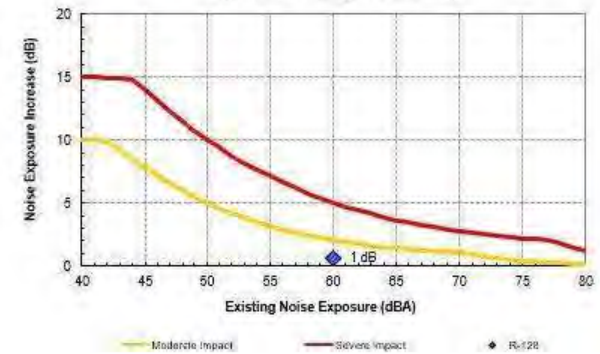
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 48.9 dBA |
| Leq(night): | 44.8 dBA |
| Ldn:        | 52.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-129          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 60 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  |                    |
|-------------------------|--|--------------------|
|                         |  | Source 1           |
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 118                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 60 dBA |
| Total Project Ldn:    | 47 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

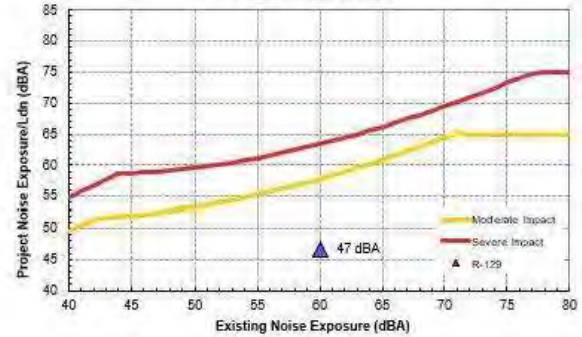
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 64 ft |
| Dist to Sev. Impact Contour (Source 1): | 38 ft |

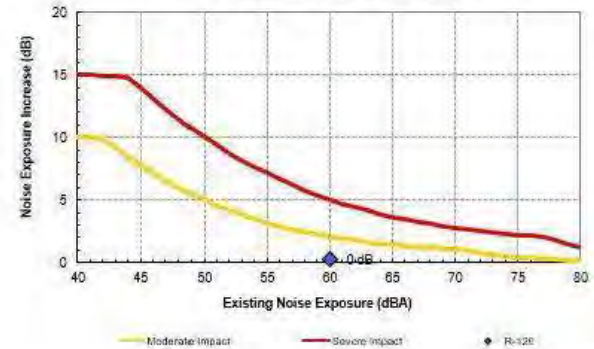
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 43.5 dBA |
| Leq(night): | 39.4 dBA |
| Ldn:        | 46.7 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                 |
|---|-----------------|
| Receiver:                                   | R-130           |
| Land Use Category:                          | 3 Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA          |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters                      |  | Source 1           |
|--|--|--------------------|
|  | Source Type:                             | Stationary Source  |
|  | Specific Source:                         | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                       | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)    | 111                |
|  | Number of Intervening Rows of Buildings: | 0                  |
| Adjustments                                  | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 50 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

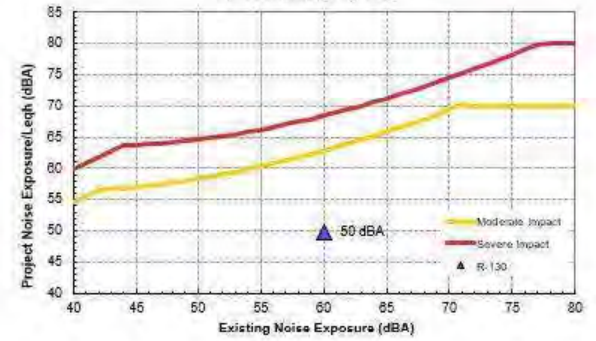
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 33 ft |
| Dist to Sev. Impact Contour (Source 1): | 20 ft |

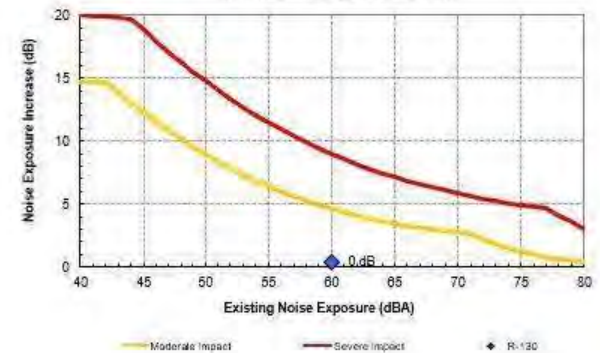
**Source 1 Results**

|      |          |
|------|----------|
| Leq: | 49.8 dBA |
|------|----------|

**Noise Impact Criteria**  
(FTA Manual, Fig 4-2)



**Increase in Cumulative Noise Levels Allowed**  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-131          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   |                               |
|-------------------------|---|-------------------------------|
|                         | Source Type:                            | Source 1<br>Stationary Source |
|                         | Specific Source:                        | Bus Transit Center            |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                           |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                           |
| Distance                | Distance from Source to Receiver (ft)   | 70                            |
|                         | Number of Intervening Rows of Buildings | 0                             |
| Adjustments             | Noise Barrier?                          | No                            |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 65 dBA |
| Total Project Ldn:    | 57 dBA |
| Total Noise Exposure: | 66 dBA |
| Increase:             | 1 dB   |
| Impact?:              | None   |

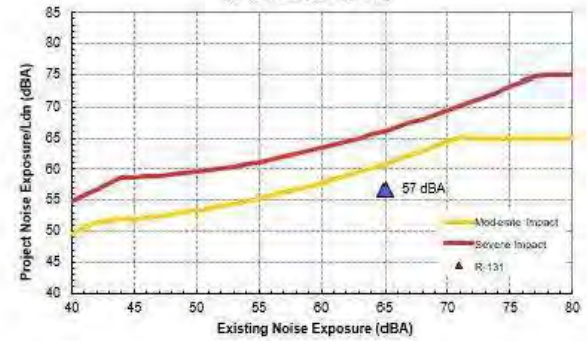
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 48 ft |
| Dist to Sev. Impact Contour (Source 1): | 30 ft |

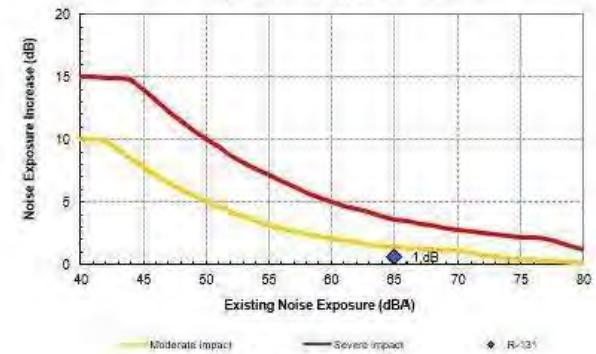
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 53.7 dBA |
| Leq(night): | 49.5 dBA |
| Ldn:        | 56.8 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-132            |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters                      |  | Source 1           |
|--|--|--------------------|
|  | Source Type:                             | Stationary Source  |
|  | Specific Source:                         | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                       | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)    | 183                |
|  | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments                                  | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Leqh:        | 60 dBA |
| Total Project Leqh:   | 40 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

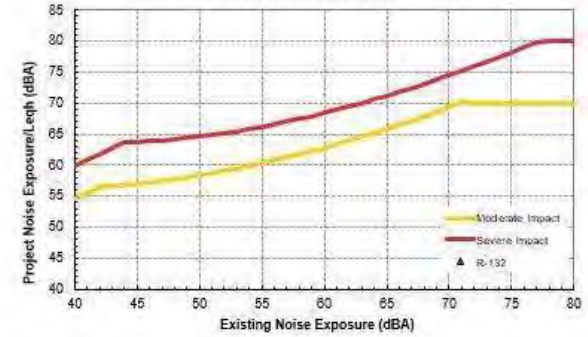
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 33 ft |
| Dist to Sev. Impact Contour (Source 1): | 20 ft |

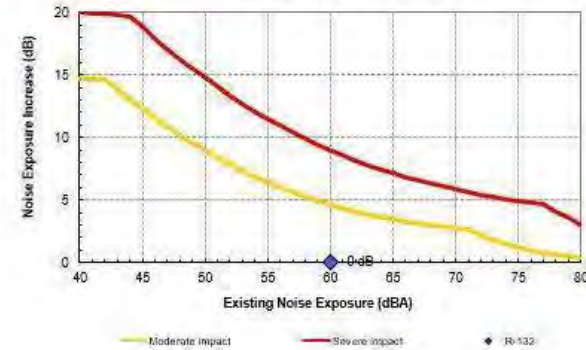
**Source 1 Results**

|       |          |
|-------|----------|
| Leqh: | 39.8 dBA |
|-------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-133          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 229                |
|                         | Number of Intervening Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

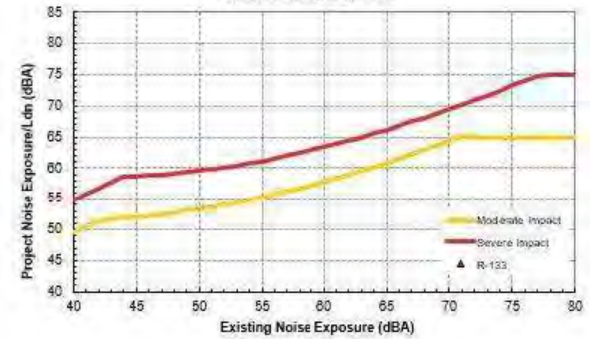
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

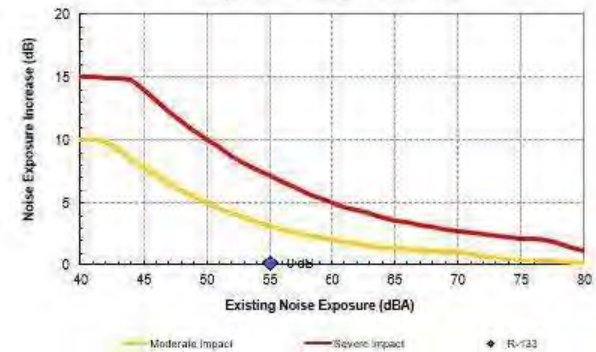
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 36.3 dBA |
| Leq(night): | 32.2 dBA |
| Ldn:        | 39.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-134          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 219                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 40 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

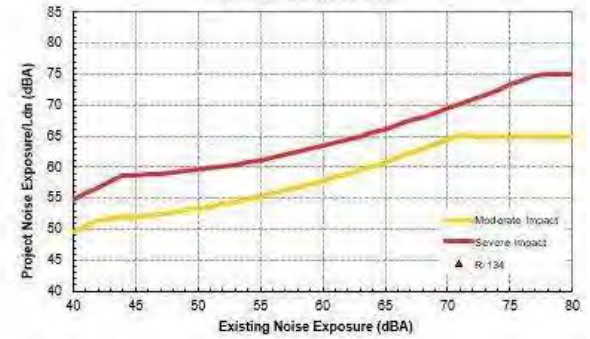
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

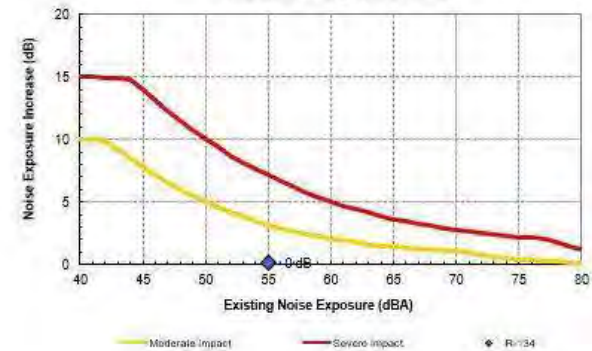
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 36.8 dBA |
| Leq(night): | 32.6 dBA |
| Ldn:        | 39.9 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-135          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 250                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 43 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

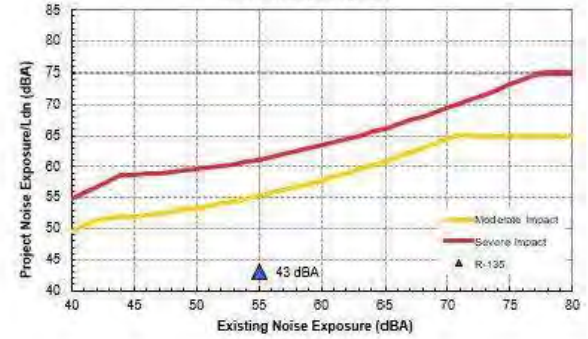
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

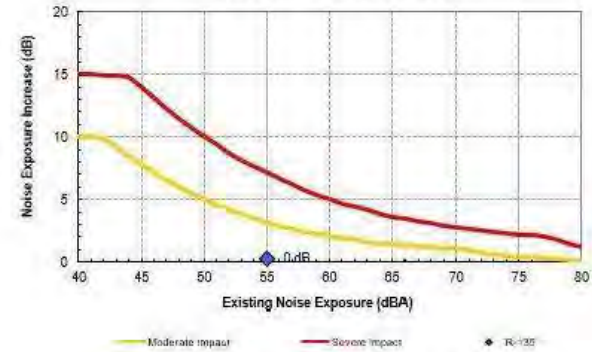
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 39.8 dBA |
| Leq(night): | 35.7 dBA |
| Ldn:        | 43.0 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-136          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 1.2                |
| Distance                | Distance from Source to Receiver (ft)    | 217                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 45 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

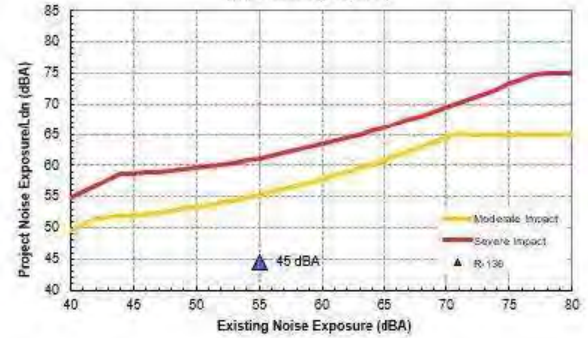
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

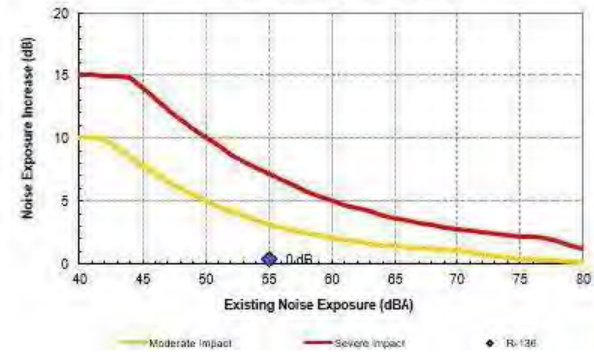
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 41.4 dBA |
| Leq(night): | 37.2 dBA |
| Ldn:        | 44.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-137          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 12                 |
| Distance                | Distance from Source to Receiver (ft)   | 219                |
|                         | Number of Intervening Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 40 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

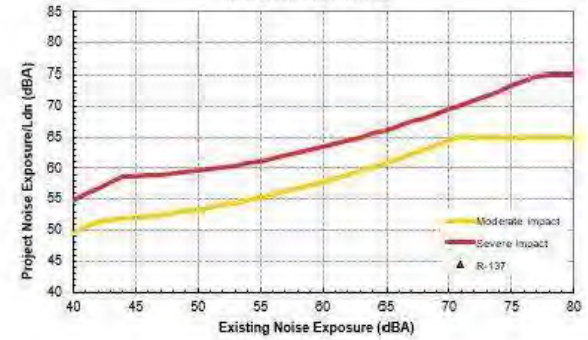
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

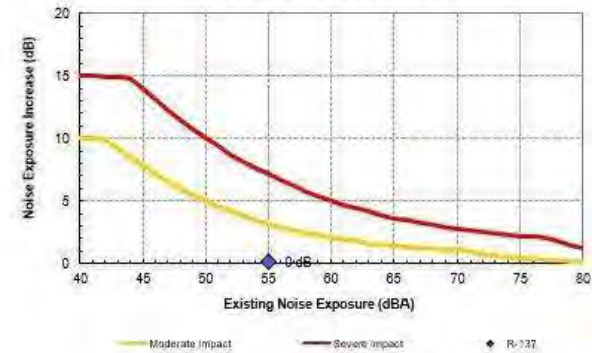
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 36.8 dBA |
| Leq(night): | 32.6 dBA |
| Ldn:        | 39.9 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-138          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 12                 |
| Distance                | Distance from Source to Receiver (ft)    | 259                |
|                         | Number of Intersecting Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 43 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

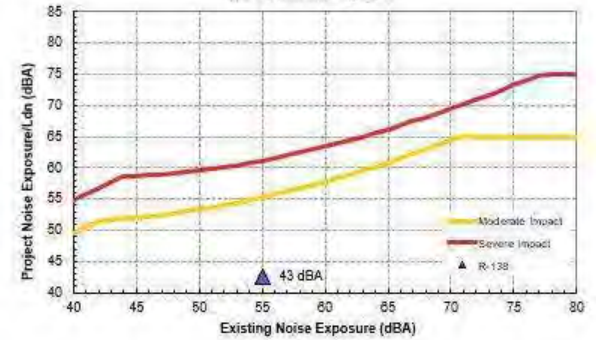
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

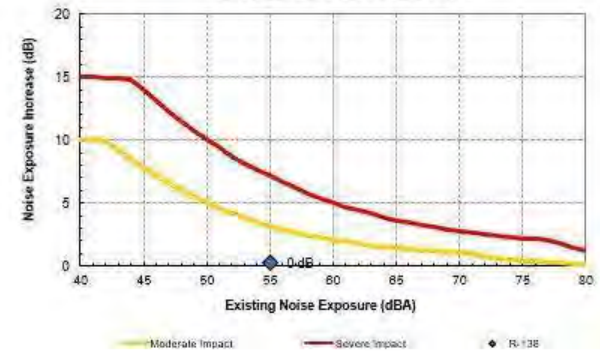
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 39.4 dBA |
| Leq(night): | 35.3 dBA |
| Ldn:        | 42.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/23/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |               |
|---|---------------|
| Receiver:                                   | R-139         |
| Land Use Category:                          | 2 Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA        |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 226                |
|                         | Number of Intervening Rows of Buildings | 0                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 44 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

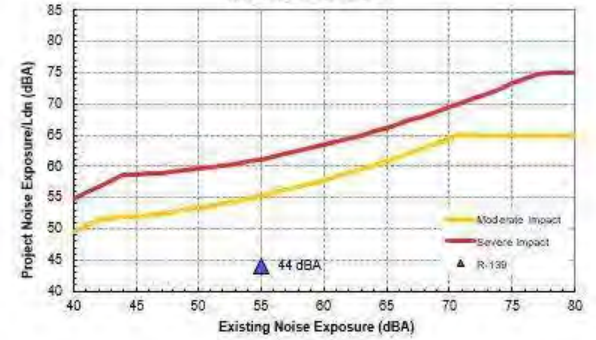
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

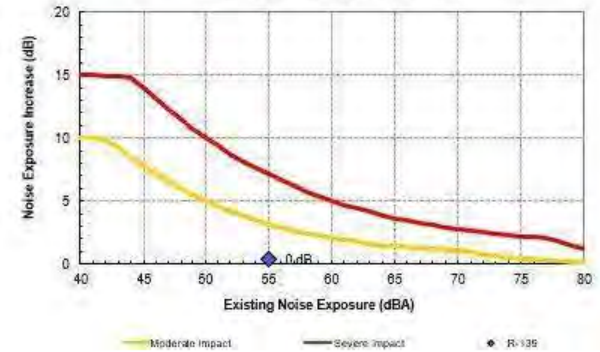
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 40.9 dBA |
| Leq(night): | 36.8 dBA |
| Ldn:        | 44.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/23/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-140            |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters                      |   | Source 1           |
|--|---|--------------------|
|  | Source Type:                            | Stationary Source  |
|  | Specific Source:                        | Bus Transit Center |
| Noisiest hr of Activity During Sensitive hrs | Number of Buses/hr                      | 4                  |
| Distance                                     | Distance from Source to Receiver (ft)   | 146                |
|  | Number of Intervening Rows of Buildings | 0                  |
| Adjustments                                  | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Leqh:        | 60 dBA |
| Total Project Leqh:   | 47 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

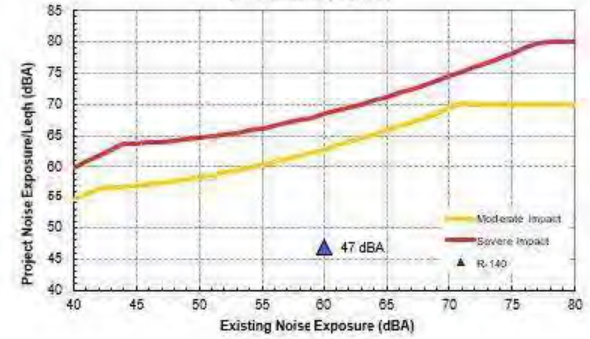
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 33 ft |
| Dist to Sev. Impact Contour (Source 1): | 20 ft |

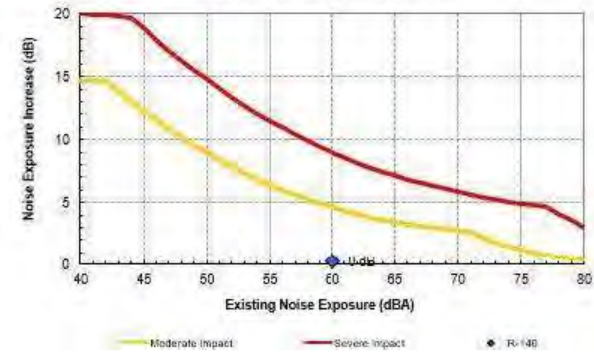
**Source 1 Results**

|       |          |
|-------|----------|
| Leqh: | 46.8 dBA |
|-------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-141          |
| Land Use Category:                          | 2, Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 220                |
|                         | Number of Intervening Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 40 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

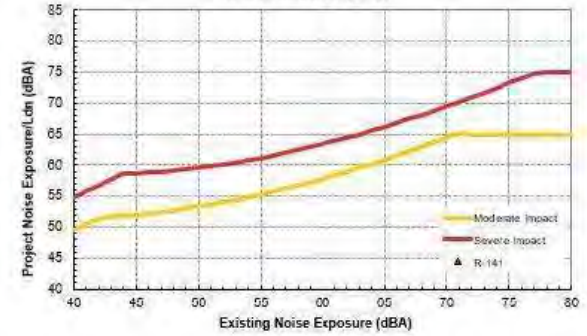
**Distance to Impact Contours**

|                     |       |
|---------------------|-------|
| Dist to Mod. Impact | 81 ft |
| Contour (Source 1): | 81 ft |
| Dist to Sev. Impact | 47 ft |
| Contour (Source 1): | 47 ft |

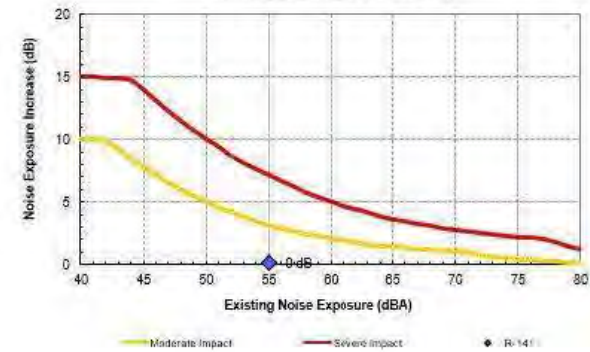
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 36.7 dBA |
| Leq(night): | 32.6 dBA |
| Ldn:        | 39.9 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/23/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-142          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |  | Source 1           |
|-------------------------|--|--------------------|
|                         | Source Type:                             | Stationary Source  |
|                         | Specific Source:                         | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                  | 31                 |
| Nighttime hrs           | Avg. Number of Buses/hr                  | 12                 |
| Distance                | Distance from Source to Receiver (ft)    | 214                |
|                         | Number of Intersecting Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                           | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

**Project Results Summary**

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 40 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

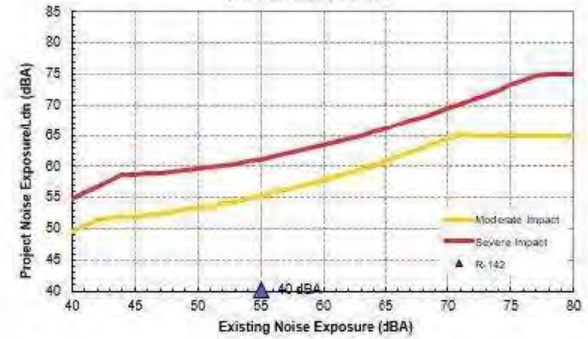
**Distance to Impact Contours**

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

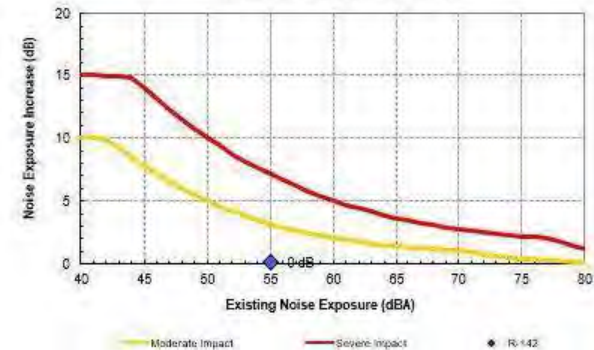
**Source 1 Results**

|             |          |
|-------------|----------|
| Leq(day):   | 37.0 dBA |
| Leq(night): | 32.9 dBA |
| Ldn:        | 40.2 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-143          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1           |
|-------------------------|---|--------------------|
|                         | Source Type:                            | Stationary Source  |
|                         | Specific Source:                        | Bus Transit Center |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                |
| Distance                | Distance from Source to Receiver (ft)   | 237                |
|                         | Number of Intervening Rows of Buildings | 1                  |
| Adjustments             | Noise Barrier?                          | No                 |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 39 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

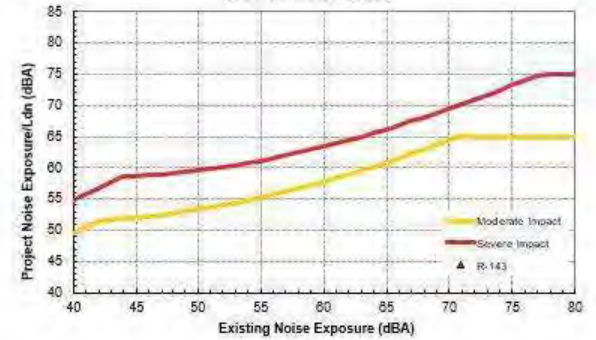
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

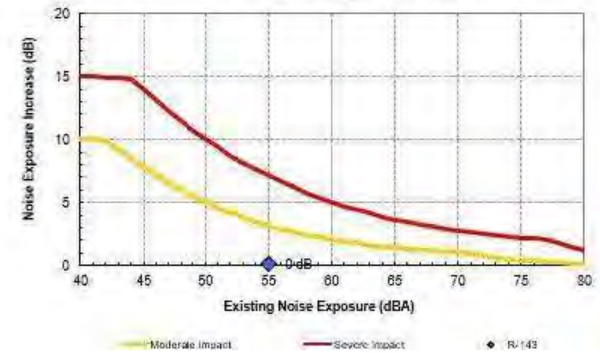
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 35.9 dBA |
| Leq(night): | 31.8 dBA |
| Ldn:        | 39.1 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-144          |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 55 dBA         |

| Noise Source Parameters    |  |
|----------------------------|--|
| Number of Noise Sources: 1 |  |

| Noise Source Parameters |   |                               |
|-------------------------|---|-------------------------------|
|                         | Source Type:                            | Source 1<br>Stationary Source |
|                         | Specific Source:                        | Bus Transit Center            |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1                           |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2                           |
| Distance                | Distance from Source to Receiver (ft)   | 225                           |
|                         | Number of Intervening Rows of Buildings | 1                             |
| Adjustments             | Noise Barrier?                          | No                            |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 55 dBA |
| Total Project Ldn:    | 40 dBA |
| Total Noise Exposure: | 55 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

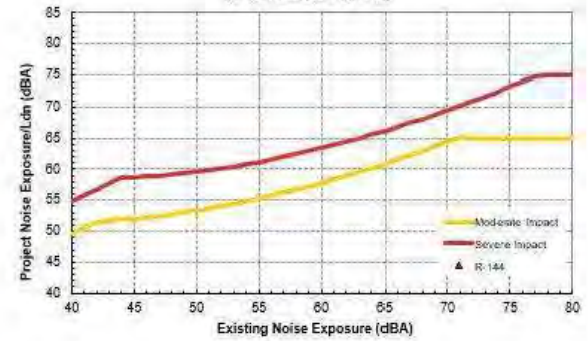
Distance to Impact Contours

|   |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 81 ft |
| Dist to Sev. Impact Contour (Source 1): | 47 ft |

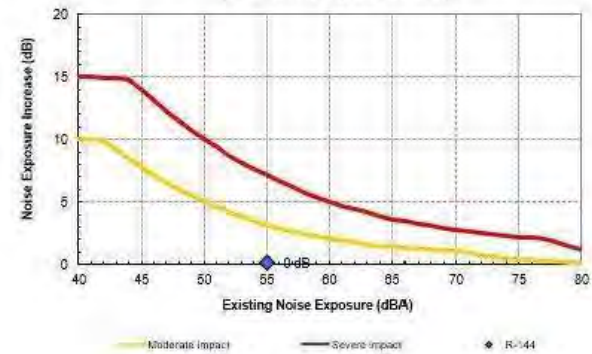
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 36.5 dBA |
| Leq(night): | 32.4 dBA |
| Ldn:        | 39.6 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2019

Project: **BR Plank-Nicholson BRT**

| Receiver Parameters                         |                 |
|---|-----------------|
| Receiver:                                   | R-145           |
| Land Use Category:                          | 2 - Residential |
| Existing Noise (Measured or Generic Value): | 65 dBA          |

| Noise Source Parameters  |   |
|--------------------------|---|
| Number of Noise Sources: | 1 |

| Noise Source Parameters |   | Source 1 |
|-------------------------|---|----------|
| Source Type:            | Stationary Source                       |          |
| Specific Source:        | Bus Transit Center                      |          |
| Daytime hrs             | Avg. Number of Buses/hr                 | 3.1      |
| Nighttime hrs           | Avg. Number of Buses/hr                 | 1.2      |
| Distance                | Distance from Source to Receiver (ft)   | 73       |
| Adjustments             | Number of Intervening Rows of Buildings | 0        |
|                         | Noise Barrier?                          | No       |

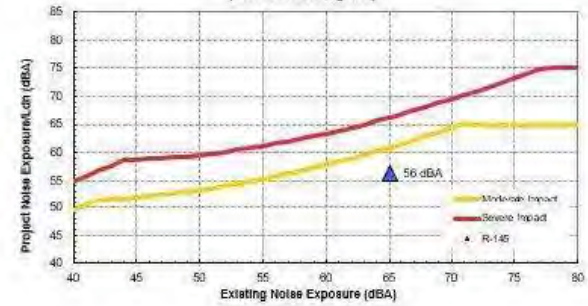
|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

| Project Results Summary |        |
|-------------------------|--------|
| Existing Lda:           | 65 dBA |
| Total Project Lda:      | 66 dBA |
| Total Noise Exposure:   | 66 dBA |
| Increase:               | 1 dB   |
| Impact?:                | None   |

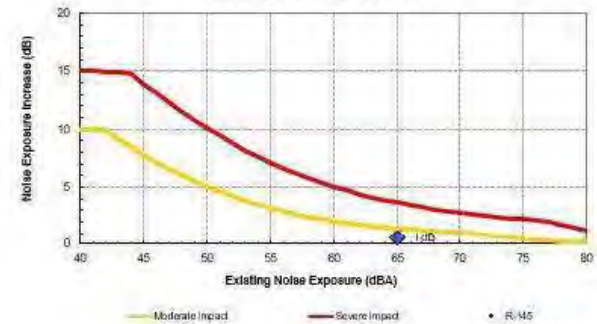
| Distance to Impact Contours             |       |
|---|-------|
| Dist to Mod. Impact Contour (Source 1): | 48 ft |
| Dist to Sev. Impact Contour (Source 1): | 30 ft |

| Source 1 Results |          |
|------------------|----------|
| Leq(day):        | 63.2 dBA |
| Leq(night):      | 49.1 dBA |
| Lda:             | 56.4 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-39             |
| Land Use Category:                          | 1. Outdoor Quiet |
| Existing Noise (Measured or Generic Value): | 60 dBA           |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters                      |   | Source 1                         |
|--|---|----------------------------------|
|  | Source Type:                            | Highway/Transit Buses (electric) |
|  | Specific Source:                        |                                  |
| Noisiest hr of Activity During Sensitive hrs | Speed (mph)                             | 30                               |
|  | Number of Events/hr                     | 4                                |
| Distance                                     | Distance from Source to Receiver (ft)   | 141                              |
|  | Number of Intervening Rows of Buildings | 0                                |
| Adjustments                                  | Noise Barrier?                          | No                               |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 60 dBA |
| Total Project Leq:    | 37 dBA |
| Total Noise Exposure: | 60 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

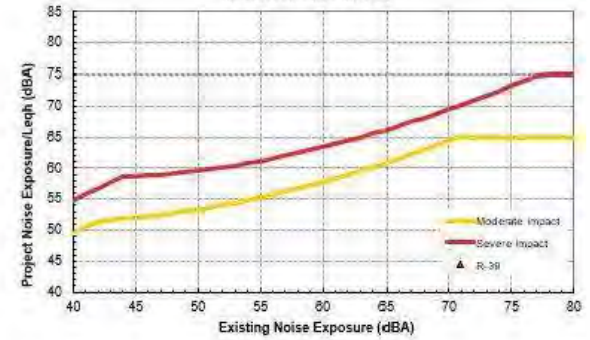
Distance to Impact Contours

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 6 ft |
| Dist to Sev. Impact Contour (Source 1): | 3 ft |

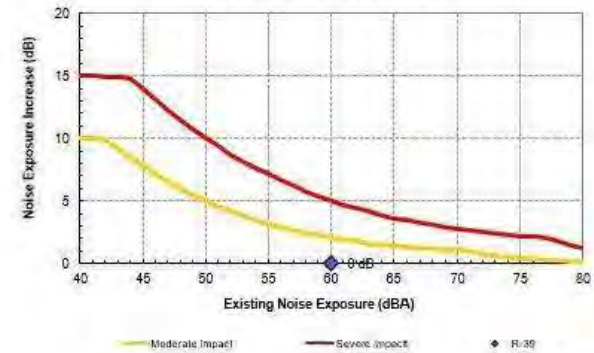
Source 1 Results

|      |          |
|------|----------|
| Leq: | 37.5 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)





Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                |
|---|----------------|
| Receiver:                                   | R-15           |
| Land Use Category:                          | 2. Residential |
| Existing Noise (Measured or Generic Value): | 70 dBA         |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters |  | Source 1         |
|-------------------------|--|------------------|
|                         | Source Type:                             | Highway/Transit  |
|                         | Specific Source:                         | Buses (electric) |
| Daytime hrs             | Speed (mph)                              | 35               |
|                         | Avg. Number of Events/hr                 | 3.1              |
| Nighttime hrs           | Speed (mph)                              | 35               |
|                         | Avg. Number of Events/hr                 | 1.2              |
| Distance                | Distance from Source to Receiver (ft)    | 35               |
|                         | Number of Intersecting Rows of Buildings | 0                |
| Adjustments             | Noise Barrier?                           | No               |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Ldn:         | 70 dBA |
| Total Project Ldn:    | 50 dBA |
| Total Noise Exposure: | 70 dBA |
| Increase:             | 0 dBA  |
| Impact?:              | None   |

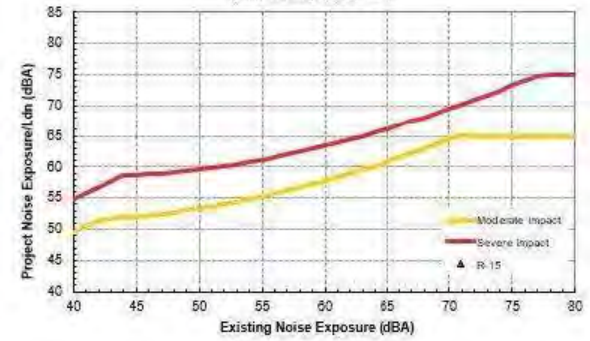
Distance to Impact Contours

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 4 ft |
| Dist to Sev. Impact Contour (Source 1): | 2 ft |

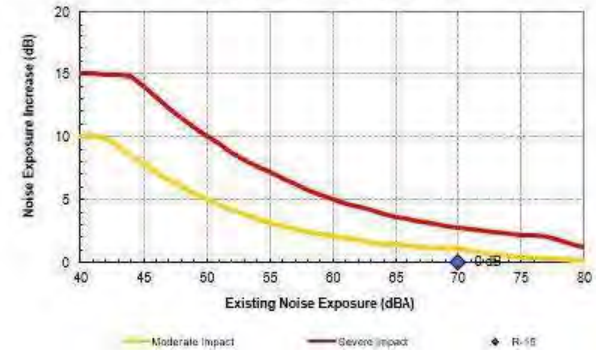
Source 1 Results

|             |          |
|-------------|----------|
| Leq(day):   | 47.3 dBA |
| Leq(night): | 43.2 dBA |
| Ldn:        | 50.5 dBA |

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration  
Noise Impact Assessment Spreadsheet

version: 1/29/2015

Project: BR Plank-Nicholson BRT

| Receiver Parameters                         |                  |
|---|------------------|
| Receiver:                                   | R-42             |
| Land Use Category:                          | 3. Institutional |
| Existing Noise (Measured or Generic Value): | 65 dBA           |

Noise Source Parameters  
Number of Noise Sources: 1

| Noise Source Parameters                      |  | Source 1         |
|--|--|------------------|
|  | Source Type:                             | Highway/Transit  |
|  | Specific Source:                         | Buses (electric) |
| Noisiest hr of Activity During Sensitive hrs | Speed (mph)                              | 35               |
|  | Number of Events/hr                      | 4                |
| Distance                                     | Distance from Source to Receiver (ft)    | 80               |
|  | Number of Intersecting Rows of Buildings | 0                |
| Adjustments                                  | Noise Barrier?                           | No               |

|  |                        |    |
|--|------------------------|----|
|  | Noise Barrier?         | No |
|  | Joint Track/Crossover? | No |
|  | Embedded Track?        | No |
|  | Aerial Structure?      | No |

Project Results Summary

|                       |        |
|-----------------------|--------|
| Existing Leq:         | 65 dBA |
| Total Project Leq:    | 45 dBA |
| Total Noise Exposure: | 65 dBA |
| Increase:             | 0 dB   |
| Impact?:              | None   |

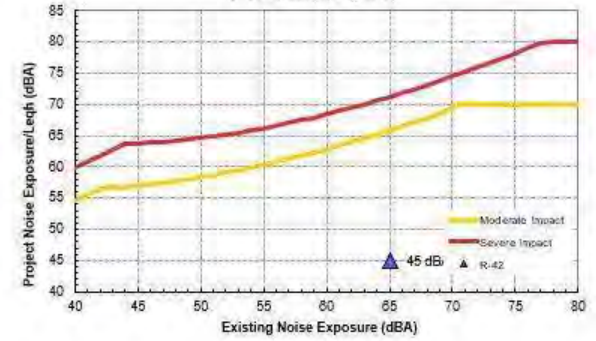
Distance to Impact Contours

|   |      |
|---|------|
| Dist to Mod. Impact Contour (Source 1): | 2 ft |
| Dist to Sev. Impact Contour (Source 1): | 1 ft |

Source 1 Results

|      |          |
|------|----------|
| Leq: | 44.9 dBA |
|------|----------|

Noise Impact Criteria  
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed  
(FTA Manual, Figs 4-3 and 4-4)

