

Appendix G

NJ TRANSIT Pennsauken Junction Transit Center and Park & Ride
RiverLINE and Atlantic City Line
Pennsauken Township, Camden County, New Jersey

NOISE DATA

3.4 Noise

3.4.1. INTRODUCTION

An evaluation was performed to determine the potential noise impact related to the Pennsauken Junction Transit Center and Park and Ride project. The proposed transfer station will be located at the crossing of the RiverLINE and Atlantic City Rail Line (A.C.R.L.). No additional trains are proposed for either line however warning horns will be added to the noise environment as A.C.R.L. trains approach the proposed platform. RiverLINE trains currently provide three (3) short warning horns at the Derausse Avenue grade crossing. In addition to the proposed platforms, a new 283-space commuter parking lot is planned. No New Jersey Transit bus service will be provided at this station.

3.4.2. EXISTING NOISE ENVIRONMENT

Existing noise levels were monitored within the project study area. Noise levels were documented from 7:00-9:00 AM, 12:00-2:00 PM, and 4:00-6:00 PM in April 2009. Vehicular, light rail and commuter train counts were performed during each noise monitoring event. A peak hour noise level of 67 dBA (L_{eq}) was documented from 8:00-9:00 AM. Within this time period, a total of ten (10) trains traveled past the proposed site; 8 RiverLINE light rail trains and 2 A.C.R.L. commuter rail trains. Rail-related noise dominates the existing noise environment, in comparison to vehicular noise within the area. Table 1 details peak hourly existing noise levels at this location while Figure 16, within Appendix 2, details the actual noise monitoring location.

**TABLE 1
EXISTING PEAK HOUR NOISE LEVELS (dBA L_{eq})**

Site Location	AM (8-9AM)	Midday (12-1PM)	PM (4:15-5:15 PM)
Derausse Avenue	67	66	66

To determine noise impact related to federally-funded projects, FTA considers site sensitivity. The study area consists of residences along Derausse, Adams, North Zimmerman and South Zimmerman Avenues. Residential dwellings where nighttime sensitivity is assumed to be of the utmost importance would be considered Category 2 land-use.

Due to the close proximity of residential dwellings, the L_{dn} would be considered an appropriate noise descriptor to evaluate noise impact. The L_{dn} is an equivalent steady state sound level sensitive to the intrusion of noise at night based on a 10 dB penalty to noise levels occurring from 10:00 PM to 7:00 AM. The site-related L_{dn} was computed based on hourly L_{eq} data documented during field measurements. Based on calculations within Appendix D of the FTA *Transit Noise and Vibration Impact Assessment* (May 2006) guidance document, an existing noise level of 65 dBA (L_{dn}) was determined.

3.4.3. 2032 “NO-BUILD” NOISE ANALYSIS

Based on census data and projected background growth for the area, rail activity along the RiverLINE and A.C.R.L. is not expected to increase. Therefore, noise levels are not expected to change over 2009 existing levels. Table 2 details the peak hour noise level of 67 dBA (L_{eq}) and 65 dBA (L_{dn}) under 2032 “No-Build” conditions.

TABLE 2
2032 “NO-BUILD” NOISE LEVELS (dBA)

Site Location	Peak Hour (L_{eq})	24-Hour (L_{dn})
Derousse Avenue	67	65

3.4.4. 2032 “BUILD” NOISE ANALYSIS

Although the number of A.C.R.L. trains traveling will not change due to project implementation, warning horns will be blown as trains approach the platform. Noise levels resulting from the additional warning horns were therefore calculated. For purposes of the train horn calculations, the 24-hour A.C.R.L. train schedule was utilized to determine the exact number of train pass-bys per hour. The A.C.R.L. rail train speed of 30 mph was utilized along with a measured distance between the center of the rail line and closest residential dwelling. An FTA-approved reference level for transit warning horns was also utilized.

In accordance with the State of New Jersey P.U.C. Order dated August 3, 1972, trains approaching a passenger station on a track adjoining a platform must signal one long sound of the engine whistle or horn during “daylight hours”. Trains are not required to sound a whistle or horn during “hours of darkness” unless the engineer observes a person on or near a station platform. For purposes of this analysis, “daylight hours” were assumed to be between 6 am and 9 pm, while “hours of darkness” were between 9 pm and 6 am. A conservative assessment was performed assuming at least one train horn will blow during the “hours of darkness” for safety precautions. As a result, a project-related noise level of 60.4 dBA (L_{dn}) was determined.

FTA noise impact criteria for rail projects compares the existing noise levels with predicted noise levels assuming project implementation. Based on the existing 65 dBA (L_{dn}) and a project-related noise level of 60 dBA (L_{dn}), the project would not produce a noise impact at Category 2 land-use within the study area. As a result, the change in cumulative noise levels should not be noticeable. Additionally, the northbound RiverLINE light rail trains that currently blow horns (8 pass-bys during peak hour) at the Derousse Avenue grade crossing, will no longer need to blow horns as trains depart from the transfer station since the crossing gate will be engaged. Conservatively, this reduction of approximately 50% of horn noise was not included within the project-related horn noise calculation of 60.4 dBA (L_{dn}).

Pennsauken Junction Transit Center and Park and Ride Noise Monitoring Photos



Photo 1 – View of Noise Monitor Facing West (RiverLINE Grade Crossing)



Photo 2 – View of Noise Monitor Facing North (Residential Area)

