

Noise Analysis and Mitigation



Noise analysis has been conducted as part of previous environmental studies for the Corridor Cities Transitway (CCT) project. The analysis was conducted consistent with Federal Transit Administration (FTA) requirements. FTA requires all potential impacts to the natural and human environment be studied, quantified and documented for any proposed transit project seeking federal funding support. Additional noise analysis for the CCT will be conducted to update the previous findings.

NOISE ANALYSIS PROCESS

MTA field staff will contact some property owners to request permission to install noise monitors. Noise monitors will be placed at various locations along the proposed CCT alignment – potential sites could include daycare centers, hospitals, hotels, residential areas and near the proposed locations for the CCT maintenance facility, for a minimum duration of 24 hours per location. Noise measurements are collected at these locations during rain free days with wind speeds of 15 mph or less. Monitors will only be placed at locations with property owners' permission.

Base, or ambient, noise levels will be established for these areas by averaging the readings taken during the 24-hour period. Potential noise associated with the operation and maintenance of the future bus rapid transit (BRT) line and the BRT maintenance facility will be calculated using the FTA standard model outlined in the FTA Noise and Vibration Assessment Manual, report FTA-VA-90-1003-06, May 2006.

The findings of the noise monitor readings will be combined with the anticipated noise from the BRT line and maintenance facility to determine if the areas where noise monitoring occurs will have noise impacts from the new transit system. At each site, noise impact will be determined based on the FTA transit noise criteria, which establishes impact by determining the noise generated solely by BRT daily line operations as compared to the existing ambient noise environment.

NOISE IMPACTS ARE CATEGORIZED BY THREE LEVELS OF NOISE EXPOSURE

- **No Impact** - Additional noise generated by the proposed transit service should not be noticeably different or noticeably louder than the noise level of that particular area prior to the completion and operation of the transitway.
- **Moderate Impact** - Operation of the proposed new transit service may result in noticeably different, louder and perceptible noise to some listeners than the noise level of that same area prior to the completion and operation of the transitway. However, the difference and volume of the noise will not be so significant as to cause considerable disturbance.
- **Severe Impact** - Noise from the operation of the proposed new transit service will be noticeably different, louder and clearly perceptible to most listeners than the noise level of that particular area prior to the completion and operation of the transitway and it may cause significant annoyance within that environment depending on the land use in that area.



LAND USE HELPS DETERMINE IMPACT LEVEL

Land use in an area plays a major role in determining if the noise from the CCT is classified as causing no, moderate or severe impact to the environment. The level and volume of noise created by the transitway yields greater impact in residential areas, hospitals and hotels, than near institutions such as churches, schools, libraries or theaters and in more heavily traveled areas where sensitivity is limited to daytime uses or activities. Per the federal guidelines, the measured noise volume and change in noise created by the CCT can be greater near institutions and in heavily traveled areas before they are considered to have Moderate or Severe Impact to their environment. In residential areas and near hospitals and hotels, the range of increased noise volume and the type

of noise can reach the Moderate to Severe Impact levels with a smaller increase in noise. The FTA impact criteria was designed, with limits, to allow for greater project noise exposure in communities with higher existing ambient noise levels and less project noise exposure in communities with lower background levels.

NOISE MITIGATION

Previous studies have not identified any severe noise impacts along the CCT corridor. The analysis prepared for previous studies indicated moderate noise impacts for two residential locations. No mitigation was anticipated based on the previous analysis. However, future noise analysis will be conducted as part of the next phase of project development, analysis and documentation.



More information about the federal guidelines and requirements on noise analysis and mitigation may be found in the FTA Transit Noise and Vibration Impact Assessment document at:

www.fta.dot.gov/documents/fta_noise_and_vibration_manual.pdf

For more information on the Corridor Cities Transitway, please visit our website: www.mta.maryland.gov/cct

