

time volumes, anticipated speed, and guideway configuration. The speed of the maglev vehicle is assumed to be the same regardless of the direction. If two consists occur at the same point traveling in different directions on the dual guideway section, there would be an increase of 3 dBA (Ldn) in the predicted noise level. A 3 dBA (Ldn) increase is not perceptible to the human ear. Noise propagation characteristics and shielding effects were evaluated on a case-by-case, site-by-site basis.

FRA noise level prediction algorithms were incorporated into a GIS model to facilitate noise level predictions and impact assessment. Based on the results of preliminary GIS model runs, GIS model refinements were incorporated as needed. Model refinements included the extension of model areas (in some cases) as great as 610 meters (2,000 feet) from the alignment centerline to address impact limits that extended beyond the original 212-meter (700-foot) study corridor. Additional noise analyses will be conducted before the FEIS is prepared to verify the potential noise level impacts throughout the project corridor. Additional analysis is needed because the final alignment and speed profile of the maglev system may vary based on the final geometry and ride specifications.

Based on the results of the noise model, future noise levels were grouped into one of three classifications: no impact, impact, or severe impact. Figures 4.3.1-2 and 4.3.1-3 provide background summaries of the FRA Noise Impact Criteria for High Speed Rail Projects.

These criteria are based on land use, existing noise exposure, and project noise exposure for individual land uses. At the conclusion of the noise impact assessment, summary tables were developed for each of the project alternatives to tabulate noise impacts associated with each alternative.

The project was also evaluated for potential annoyance to both humans and wildlife from high onset rate. The potential for annoyance from high onset rate can occur in relation to speed and is limited to close proximity of the guideway. The analysis of potential effects to livestock was performed by evaluating areas where project noise levels are expected to exceed 100 decibel (dBA) sound exposure

