

## 4.8 Noise

### 4.8.1 Methodology for Impact Evaluation

At this preliminary stage of the project impact review process, no information on construction of the proposed project is available regarding the timing, schedule, and types of equipment to be used. Therefore, analysis of detailed construction noise impacts is not feasible. Potential noise abatement measures to be considered in Tier 2, such as those that are typically required by the County of Riverside and/or Caltrans are provided in Section 4.8.5.

Existing noise levels in the project area were documented by ambient noise measurements (in terms of Leq) and traffic noise modeling (in terms of CNEL) with FHWA highway traffic noise prediction model (FHWA RD-77-108). Ambient noise level at each monitoring site was measured for a period of 20 minutes. These measured ambient noise levels are used for the purpose of documenting existing noise environment only in this Tier 1 analysis. In the future Tier 2 analysis, existing ambient noise will be measured during traffic peak noise hour for comparison to future projected traffic noise to determine potential “substantial increase” in traffic noise. Caltrans SOUND32 model was used to estimate future traffic related peak noise levels along the corridor alternatives in western Riverside County. A volume of 1,950 vehicles per lane per hour was assumed for the proposed CETAP corridor, which would accommodate up to an eight lane freeway (six mixed-flow lanes and two high occupancy vehicle lanes) to estimate the potential noise impact, in terms of peak hour Leq. For comparison to FHWA/Caltrans noise standards, the distances from the centerline to the projected future 66 and 71 dBA Leq are listed. For FHWA/Caltrans noise standards, areas within the 66 dBA Leq noise contours are considered to “approach or exceed” the noise abatement criteria (NAC) for Category B land uses, including residences, parks, and schools. For Category C land uses, which include developed lands, properties, or activities not included in Categories A or B shown in Table 3.8.1, areas within 71 dBA  $L_{eq}$  are considered to have noise impacts.

For comparison to the County’s noise standards, traffic noise is presented in a table format in which the distances from the centerline to the 60, 65, and 70 dBA CNEL noise contours and the CNEL level at 15 m (50 ft) from the outermost travel lane centerline are listed. For the existing traffic noise conditions in terms of CNEL, the average daily traffic (ADT) volumes in the area were taken from the County’s traffic counts. The resultant noise levels were weighted and summed over 24 hour periods to determine the CNEL value. CNEL contours are derived through a series of computerized iterations to isolate the 60, 65, and 70 dBA CNEL contours for traffic noise levels. For future traffic noise along the project corridors, traffic model data developed for CETAP and the Riverside County General Plan were used. For the County’s noise standard, areas within the 65 dBA CNEL noise contours are considered to have adverse noise impacts.

### 4.8.2 Impacts

**4.8.2.1 Traffic Noise Impact Assessment.** Potential noise impacts associated with project operations are solely from traffic noise created by vehicles that use the system of roadways. The proposed alternatives were modeled based on FHWA and Caltrans guidelines as described in the Study Method and Procedures section. If the peak hour