

Appendix F

Noise Modeling

FTA Construction Equipment Vibration Reference Levels and Impacts - Common Equipment

| Construction Equipment Type | Reference PPV at 25 feet (in/sec) | Nearest Distance to Building (ft) |
|---|-----------------------------------|-----------------------------------|
| | | 200 |
| Large Bulldozer/Crawler Tractor | 0.089 | 0.004 |
| Caisson Drilling/Boring | 0.089 | 0.004 |
| Loaded Dump Trucks | 0.076 | 0.003 |
| Building Damage Threshold (in/sec) | | 0.2 |
| Human Annoyance Threshold (in/sec) | | 0.1 |
| Potentially Significant? | | No |

Sources: FTA 2018 (Chapter 7.2, Tables 7-4 & 7-5, Equation 7-2), Caltrans 2020 (Table 5)

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/25/2025
 Case Description: Diamond Bar Billboard Construction

**** Receptor #1 ****

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|--------------|-------------|---------|---------|-------|
| Construction | Residential | 60.0 | 60.0 | 60.0 |

Equipment

| Description | Impact Device | Usage (%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|-----------------|---------------|-----------|-----------------|-------------------|--------------------------|---------------------------|
| Auger Drill Rig | No | 20 | 84.4 | 84.4 | 500.0 | 0.0 |
| Crane | No | 16 | 80.6 | 80.6 | 500.0 | 0.0 |

Results

| Equipment Lmax Leq | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | | | |
|------------------------|--------------------|------|------|-----|---------|-----|------------------------------|-----|------|-----|---------|-----|-------|-----|
| | Calculated (dBA) | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Auger Drill Rig N/A | 64.4 | 57.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Crane N/A | 60.6 | 52.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total N/A | 64.4 | 58.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |