

## 7.6 NOISE

### 7.6.1 Affected Environment

No noise monitoring data are available for KTA or KLOA, where the dominant noise sources are military aircraft (mostly helicopters), military vehicle traffic, and training ammunition used during Army exercises. Ordnance use at KTA is primarily blank ammunition, other training ammunition, and some pyrotechnic devices. KTA and KLOA are heavily used for helicopter training.

### 7.6.2 Environmental Consequences

#### ***Summary of Impacts***

Noise sources associated with project alternatives at KTA and KLOA include construction activity, ordnance use, military vehicle traffic, and military aircraft operations. Noise impacts from these sources would be less than significant under all project alternatives.

Construction projects at KTA and KLOA would be far enough from noise-sensitive areas to avoid significant noise impacts under both the Proposed Action and the RLA Alternative. There would be no construction noise impacts under No Action. The use of blank ammunition and SRTA would continue at KTA under all alternatives. The quantity of training ammunition used at KTA would decrease by about 34 percent under the Proposed Action or the RLA Alternative. Noise-sensitive land uses are far enough from KTA so that noise from use of blank ammunition would be a less than significant impact under all alternatives. Training activities at KTA could employ up to 241 vehicles at a time under the Proposed Action or the RLA Alternative, with up to 173 of those vehicles using Helemanō Trail and Drum Road to reach KTA. Resulting hourly average traffic noise levels along Drum Road would have less than significant impacts under all alternatives. Similarly, noise from vehicle maneuver activity at KTA would be a less than significant impact under all alternatives. Extensive helicopter flight operations would continue at KTA and KLOA under all alternatives. UAV flight operations also would occur at KTA and KLOA under the Proposed Action and the RLA Alternative. Noise generated by the added UAV flight activity would be a less than significant impact under the Proposed Action and the RLA Alternative.

Table 7-13 summarizes the significance of noise impacts under the Proposed Action, RLA, and No Action.

#### ***Proposed Action***

##### *Less than Significant Impacts*

*Noise from construction activities.* Three construction projects would be associated with KTA: two FTI antennas, a tactical vehicle wash facility, and a CACIF. Construction activities would occur from 2005 through early 2008. Individual pieces of construction equipment typically generate noise levels of from 80 to 90 dBA at a distance of 50 feet (15 meters). With multiple pieces of equipment operating concurrently, noise levels can be relatively high

**Table 7-13  
Summary of Potential Noise Impacts at KTA/KLOA**

<b>Impact Issues</b>	<b>Proposed Action</b>	<b>Reduced Land Acquisition</b>	<b>No Action</b>
Noise from construction activities	⊕	⊕	○
Noise from ordnance use	⊕	⊕	⊕
Noise from military vehicle use	⊕	⊕	⊕
Noise from aircraft operations	⊕	⊕	⊕
Noise from added personnel vehicle traffic	○	○	○

In cases when there would be both beneficial and adverse impacts, both are shown on this table. Mitigation measures would only apply to adverse impacts.

**LEGEND:**

⊗ = Significant	+	= Beneficial impact
⊖ = Significant but mitigable to less than significant	N/A	= Not applicable
⊕ = Less than significant		
○ = No impact		

daytime at locations within several hundred feet of active construction sites. The zone of relatively high construction noise levels typically extends to distances of 400 to 800 feet (122 to 244 meters) from the site of major equipment operations. Locations more than 1,000 feet (305 meters) from construction sites seldom experience significant levels of construction noise.

Table 7-14 summarizes the estimated minimum distance between the sites for proposed construction projects and the nearest noise-sensitive land uses.

**Table 7-14  
Estimated Minimum Distance Between Construction Sites and Noise-Sensitive Land Uses**

<b>Proposed Project</b>	<b>Distance to Closest Noise-Sensitive Receptor</b>	<b>Noise-Sensitive Land Use Type</b>
S7. FTI	Not evaluated	Construction activities too limited to create noise issues
K1. Tactical Vehicle Wash	9,504 feet	Residential; hospital (Kahuku)
K2. CACTF	6,336 feet	Residential; hospital (Kahuku)

Source: Tetra Tech staff analyses.

Construction of the FTI antennas would require minimal equipment and site preparation, so there would be minimal noise associated with construction of the FTI towers. Most construction noise would be associated with construction of the CACTF and the tactical vehicle wash. Construction activities would generate average daytime noise levels of about 90 dBA at a distance of 50 feet (15 meters) from the construction activity and about 70 dBA at a distance of 500 feet (152 meters). Average daytime noise levels would be less than 65 dBA at distances of 700 feet (213 meters) or more. The Ldn increment generated by construction

activities would drop below 65 dBA at distances of 550 feet (168 meters) or more. No nighttime construction activity is expected. Because the nearest noise-sensitive developments are more than a mile from the construction sites, construction noise would be a less than significant impact.

Noise from ordnance use. Blank ammunition, SRTA, and various pyrotechnic devices are the only types of ordnance items that would be used at KTA. Only blank ammunition is used at KLOA. Small arms firing with SRTA or blank ammunition can produce relatively high peak noise levels at distances of up to 3,000 feet (915 meters) and might remain audible at distances of up to 1.5 miles (2.4 kilometers). The 1/8 second Lmax noise level from SRTA and blank ammunition is typically about 71 to 79 dBA at 2,000 feet (610 meters) and 50 to 58 dBA at 1 mile (1.6 kilometers). Noise levels from firing SRTA and blank small arms ammunition typically drops below levels that cause significant annoyance at distances of 2,500 to 3,000 feet (760 to 915 meters). The closest residential areas are about 1 mile (1.6 kilometers) from the areas where training ammunition would be used at KTA. Consequently, noise impacts from ordnance use at KTA would be less than significant under the Proposed Action.

Noise from military vehicle use. Most military vehicle travel to and from KTA and KLOA would occur on the Helemanō Trail and Drum Road. In addition, vehicle maneuver activity would occur at KTA. Estimated peak pass-by noise levels and average traffic noise levels for military vehicles were discussed in Chapter 5, Section 5.6.2. During an individual training activity at KTA and KLOA, up to 241 vehicles are expected to be operating at any one time, with up to 216 vehicles using Helemanō Trail and Drum Road to reach KTA. For the maximum number of vehicles, resulting hourly average traffic noise levels along Helemanō Trail and Drum Road would be about 72 dBA at a distance of 50 feet (15 meters) from the vehicle trail and about 64 dBA at 200 feet (61 meters) from the vehicle trail. Vehicle activity within KTA and KLOA would produce comparably low noise levels, so noise from military vehicle use at KTA and KLOA would be a less than significant impact under the Proposed Action.

Noise from aircraft operations. The Proposed Action would not result in any meaningful changes in helicopter or fixed-wing aircraft flight operations at KTA or KLOA. The only added military flight activity would involve UAV flight operations. The Shadow 200 UAV produces a noise level of 85 dBA at a distance of about 70 feet (21 meters) when the engine is at an idle power setting, and a noise level of 85 dBA at a distance of about 342 feet when the engine is at a high power setting (US Army 2001a). In most cases, the UAV is expected to operate at relatively high altitudes to avoid conflict with other helicopter and aircraft flight activity. As noted in Chapter 5, Section 5.6.2, the addition of UAV flight activity to current patterns of aircraft and helicopter flight activity would not result in any noticeable change in noise levels from aircraft flight operations. Although residents of areas near KTA or KLOA would continue to file occasional complaints about low-flying aircraft and helicopters, the complaints generally would be about discrete flyovers rather than overall average noise levels. Consequently, noise from aircraft operations at KTA and KLOA would be a less than significant impact under the Proposed Action.

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### No Impact

Noise from added personal vehicle traffic. None of the personnel added under the Proposed Action would be based at KTA or KLOA. Consequently, there would be no noise from added personal vehicle traffic at KTA or KLOA under the Proposed Action.

### **Reduced Land Acquisition**

Noise impacts at KTA under the RLA Alternative would be the same as under the Proposed Action.

### **No Action**

#### Less than Significant Impacts

Noise from ordnance use. Existing training exercises using blank or other ammunition would continue at KTA and KLOA under No Action. As discussed for the Proposed Action, use of blank or other training ammunition would have a less than significant noise impact under No Action.

Noise from military vehicle use. Military vehicle use associated with KTA and KLOA would be less under No Action than that under the Proposed Action or the RLA Alternative. No Stryker vehicles would be used under No Action. Noise levels produced by a continuation of existing vehicle use patterns at KTA and KLOA would have a less than significant noise impact under No Action.

Noise from aircraft operations. Existing patterns of aircraft and helicopter use of airspace over KTA and KLOA would continue under No Action. Although residents of areas near KTA or KLOA would continue to file occasional complaints about low-flying aircraft and helicopters, the complaints generally would be about discrete flyovers rather than overall average noise levels. Noise levels produced by a continuation of existing aircraft operations at KTA and KLOA would have a less than significant noise impact under No Action.

### No Impact

Noise from added personal vehicle traffic. There are no personnel based at either KTA or KLOA, so there would be no noise from added personal vehicle traffic at KTA or KLOA under No Action.