

Analysis results show that sound levels ranging from 56-63 dBA might temporarily occur over several weeks at homes 1,000 feet from turbine construction sites. Such levels would not generally be considered acceptable on a permanent basis or outside normal daytime working hours, but as a temporary, daytime occurrence, construction noise of this magnitude may go unnoticed by many in the Project Area. For others, Project construction noise may be an unavoidable but temporary impact. The estimated sound levels at 50 feet in Table 3-27 also demonstrates that a maximum allowable sound level of 80 dBA recommended in the New York State Department of Transportation (NYSDOT) construction noise guidelines is only likely to occur at, or within 200 feet of any specific construction site. Consequently, construction activities at the site of each turbine will result in sound levels that are substantially below 80 dBA at any homes due to the setback distance of at least 1,000 feet. There may be some instances during road construction or trenching operations where the separation distance from homes is less than 200 feet; however, the occurrences of such instances is unlikely.

Table 3-27
Construction Equipment Sound Levels by Phase

Equipment Description	Typical Sound Level at 50 feet (dBA)	Estimated Maximum Total Level at 50 feet per Phase (dBA) ¹	Maximum Sound Level at a Distance of 1000 feet (dBA)	Distance until Sound Level Decreases to 40 dBA (feet)
Road Construction and Electrical Line Trenching				
Dozer, 250-700 hp	88	92	63	5500
Front End Loader, 300-750 hp	88			
Grader, 13-16 feet blade	85			
Excavator	86			
Foundation Work, Concrete Pouring				
Piling Auger	88	88	59	4200
Concrete Pump, 150 cu yd/hr	84			
Material and Subassembly Delivery				
Off Highway Hauler, 115 ton	90	90	61	4800
Flatbed Truck	87			
Erection				
Mobile Crane, 75 ton	85	85	56	3400

¹ Not all vehicles are likely to be in simultaneous operation. Maximum level represents the highest level realistically likely at any given time.

3.10.2.2 Operation

The Applicant, SLW, has selected the Acciona AW-82/1500 WTG for the Project. Sound power data was obtained by the WTG manufacturer and the critical operational design level was determined for use in the acoustic noise modeling analysis. The critical operational design level is the worst case in terms of potential noise impact and perceptibility as it occurs when the differential between the background level and turbine sound power level is greatest. At higher wind speeds turbine sound power levels increase, while the masking background sound level also