



**APPENDIX 5.10-4**

**Construction Vibration Worksheets**

**South Airport Cargo Center Project  
Construction Vibration Model  
Kaiser Permanente**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance <sup>a</sup>	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	5815	0.000	0.000	16
Jackhammer		1	0.035	5815	0.000	0.000	8
Large bulldozer		1	0.089	5815	0.000	0.000	16
Loaded trucks		1	0.076	5815	0.000	0.000	15
Pile Drive (impact)		1	0.644	5815	0.000	0.000	33
Vibratory Roller		1	0.210	5815	0.000	0.000	23
Small bulldozer		1	0.003	5815	0.000	0.000	-13

**\* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

**South Airport Cargo Center Project  
Construction Vibration Model  
Rancho Ontario Lifestyle Community**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance <sup>a</sup>	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	7270	0.000	0.000	13
Jackhammer		1	0.035	7270	0.000	0.000	5
Large bulldozer		1	0.089	7270	0.000	0.000	13
Loaded trucks		1	0.076	7270	0.000	0.000	12
Pile Drive (impact)		1	0.644	7270	0.000	0.000	30
Vibratory Roller		1	0.210	7270	0.000	0.000	20
Small bulldozer		1	0.003	7270	0.000	0.000	-16

**\* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

**South Airport Cargo Center Project  
Construction Vibration Model  
Residential (Mission Greenwood)**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance <sup>a</sup>	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	7200	0.000	0.000	13
Jackhammer		1	0.035	7200	0.000	0.000	5
Large bulldozer		1	0.089	7200	0.000	0.000	13
Loaded trucks		1	0.076	7200	0.000	0.000	12
Pile Drive (impact)		1	0.644	7200	0.000	0.000	30
Vibratory Roller		1	0.210	7200	0.000	0.000	21
Small bulldozer		1	0.003	7200	0.000	0.000	-16

**\* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

**South Airport Cargo Center Project  
Construction Vibration Model  
Palm Paseo**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance <sup>a</sup>	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	7320	0.000	0.000	13
Jackhammer		1	0.035	7320	0.000	0.000	5
Large bulldozer		1	0.089	7320	0.000	0.000	13
Loaded trucks		1	0.076	7320	0.000	0.000	12
Pile Drive (impact)		1	0.644	7320	0.000	0.000	30
Vibratory Roller		1	0.210	7320	0.000	0.000	20
Small bulldozer		1	0.003	7320	0.000	0.000	-16

**\* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

**South Airport Cargo Center Project  
Construction Vibration Model  
Azure Hotel Suites**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance <sup>a</sup>	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	3840	0.000	0.000	21
Jackhammer		1	0.035	3840	0.000	0.000	13
Large bulldozer		1	0.089	3840	0.000	0.000	21
Loaded trucks		1	0.076	3840	0.000	0.000	20
Pile Drive (impact)		1	0.644	3840	0.000	0.000	39
Vibratory Roller		1	0.210	3840	0.000	0.000	29
Small bulldozer		1	0.003	3840	0.000	0.000	-8

**\* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**