

Appendix C

Noise Assessment

High Speed Transportation Noise Assessment (per FRA, 1998) Chicago - Joliet 90 mph

(red italic text signifies input required)

<i>Car Type</i>	<i>Length, each (ft)</i>	<i>Number per Train</i>	<i>Average Hourly Train Volume</i>
<i>Power =</i>	60	1	<i>Peak Hour =</i> 2
<i>Passenger =</i>	60	9	<i>Daytime (7a-10p) =</i> 21
			<i>Nighttime (10p-7a) =</i> 3
Shielding Type for Tracks in/on			
	<i>Enter letter</i>		<i>Speed (mph) =</i> 90
"S"hallow (8-10 ft) Cut?			Speed regime = 2
"D"eep (25 ft min) Cut?			
"A"erial Structure (30 ft)?	E		
"E"mbankment (5-10 ft)?			
Noise "B"arrier (10ft hi)?			
		Upper bound (mph), excl. =	
		Ref. SEL @ 50 ft (dBA) =	
		charact. Length (ft) =	
		Reference Length (ft) =	
		K =	
<i>Distance of Interest (ft) =</i>	225		
<i>Land Use Category (1-3) =</i>	2		
<i>Ambient Ldn or Leq(h) at Distance of Interest, (dBA) =</i>	62		
		vref (mph) =	
		Shallow Cut =	
		Deep Cut =	
		Aerial =	
		Embankment =	
		Barrier =	
		Shielding correction (dB) =	

Speed Regime Lookup Table

1	2	3
60	120	n/a
72	94	78
60	125	600
60	634	82
2	16	50
20	90	120
0	-10	-3
-10	-15	-10
4	4	2
0	-5	0
0	-10	-5
0	-5	0

Exposure at 50 ft (dBA)

SEL =	86.948208
Leq(h) (with shielding) =	49.358508
LeqD (with shielding) =	59.5704
LeqN (with shielding) =	51.11942
Ldn (with shielding) =	60.219766

Exposure and Impact at Distance of Interest (with shielding)

Ldn = 50.42157851 = ok

Impact Distances

	Threshold for Project (dBA) =	Distance (to nearest 10 ft)
Severe Impact	64	30
Impact	59	60

Potential for Startle

Distance to nearest 10 ft, max, ft) =	n/a
Startle Expected?	no

