

	dB	d1 (meters)	d2 - To East Property Line (meters)	I1	I2 (East Property Line)	dB@I2(east line)	
Pumpkin	100	3.048		518.16	0.01	3.46021E-07	55.39102157
Tractor	78	1.8288		152.4	6.3E-05	9.08579E-09	39.58362492
Music	92	0.9144		259.08	0.00158	1.97426E-08	42.95404658

	dB	d1 (meters)	d2 - To South Property Line (meters)	I1	I2 (South Property Line)	dB@I2(south line)	
Pumpkin	100	3.048		205.74	0.01	2.19479E-06	63.41392454
Tractor	78	1.8288		15.24	6.3E-05	9.08579E-07	59.58362492
Music	92	0.9144		350.52	0.00158	1.07857E-08	40.32846829

Inverse Square Law

$$\frac{I_2}{I_1} = \left(\frac{d_1}{d_2}\right)^2$$

$I_1 =$ Known sound intensity at a known distance (d_1)

$I_2 =$ Unknown sound intensity at a known distance (d_2)

Where I_1 is found by the following:

$\beta(\text{dB}) = 10 \log_{10}\left(\frac{I}{I_0}\right)$; where dB is known and

$I_0 = 10^{-12}$ watts/meter² (Threshold of Hearing)

*Inverse square law assumes equal sound propagation in all directions.