From St. Louis County:

REVISED ORDINACES
County of
ST. LOUIS, MISSOURI

Codified through
Ord. No. 21,925, adopted July 6, 2004.
(Supplement No. 17)

Preliminaries
1985 REPUBLICATION OF THE REVISED ORDINANCES OF ST. LOUIS COUNTY, MISSOURI 1974

Comprising all ordinances and amendments of a general and permanent nature adopted by the St. Louis County Council through October 26, 1984.

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THOMAS W. WEHRLE,
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CERTIFICATION
of the
REVISED ORDINANCES
St. Louis County, State of Missouri.

(O. No. 7287, 1974)

625.050 Permissible Noise Levels--Standards.-- 1. No person shall operate or permit to be operated and stationary noise source which emits noise in such a manner that the level of the noise emitted, when measured at any point outside the boundary of the property upon which the stationary noise source is located using the slow meter characteristic and the A-weighting network of the sound level meter, exceeds the levels set forth in Table I below or exceeds the limit set forth in Section 626.050.6. When the noise emitted is measured upon property which is located in a different land use category than the property upon which the stationary noise source is located, the levels applicable to the property where the noise emitted is measured shall be used to determine if a violation exists. If more than one use exists on the property where the noise emitted is measured such that more than one land use category would be applicable to the property, then the levels set forth in the least restrictive applicable land use category of Table I shall be used to determine if a violation exists.

2. If the stationary noise source emits noise containing a discrete tone, the permissible levels shall be 5dB lower than the applicable levels of Table I.

3. If the stationary noise source emits impulsive noise the levels of Table I shall be lowered by 5dB. A violation of this Code shall exist if the level of the impulsive noise emitted exceeds the applicable levels of Table I, as modified by this subsection, when the measurement is made using the fast meter characteristic and the A-weighting network of the sound level meter or if the level of the impulsive noise emitted exceeds the limit set forth in Section 625.0550.6.

4. In the event the stationary noise source emits impulsive noise containing a discrete tone, the modifications of Table I set forth in subsections 2. and 3. herein shall be cumulative.

5. If the ambient noise level exceeds the level of the noise emitted from

the stationary noise source for one or more periods of time during the period of measurement, then for any such period of time the level of the noise emitted from the stationary noise source shall be deemed to be lower than the level which is permitted for sixty (60) minutes during the period of measurement in the applicable land use category and for the applicable time of day.

6.

If, during the period of measurement, noise shall be emitted from a stationary noise source for periods of time at two (2) or more different levels, a violation of this Code shall exist if the sum of the following fractions C1/T1 + C2/T2 + . . . Cn/Tn exceeds the unit number 1. For purposes of this calculation Cn shall equal the actual time period that noise is emitted at each measured noise level and Tn shall equal the period of time that noise is permitted under Table I to be emitted at each measured noise level. Provided, however, if: (1) the ambient noise level exceeds the level of noise emitted from the stationary noise source for one or more periods of time during the period of measurement; or, (2) the level of the noise emitted from the stationary noise source is lower than the level of noise which is permitted in Table I for sixty (60) minutes during the period of measurement in the applicable land use category and for the applicable time of day for one or more periods of time during the period of measurement, then for the purpose of the calculation set forth in this subsection, for each such period of time, the term Cn shall be deemed to be zero (0) and the fraction Cn/Tn shall be zero (0).

Table I

A. *Residential Land Use Category*

Daytime Hours

TABLE INSET:

Tn *		*(dB(A))* **		
60		55 or less		
30		56-58		
15		59-61		
8		62-64		

4		65-67		
2		68-70		
0		71 or greater		
Nighttime Hours				
60		*50 or less*		
30		*51-53*		
15		*54-56*		
8		*57-59*		
4		*60-62*		
2		*63-65*		
0		*66 or greater*		

*Total Duration of Time Noise To Be Emitted From Noise Source During Period of Measurement (Minutes).

**A-Weighted Sound Pressure Level.

B. *Commercial Land Use Category*

Daytime Hours

TABLE INSET:

*Tn**

(dB(A)) **

60

65 or less

30

66-68

(1999) WHO Community Noise Guide A68672.pdf downloaded Dec 29, 2004 from WHO website BRM 3

a frequency analysis of the noise be performed. It should be noted that a large proportion of low-frequency components in noise may increase considerably the adverse effects on health.

In Dwellings. The effects of noise in dwellings, typically, are sleep disturbance, annoyance and speech interference. For bedrooms the critical effect is sleep disturbance. Indoor guideline values for bedrooms are 30 dB LAeq for continuous noise and 45 dB LAmax for single sound events. Lower noise levels may be disturbing depending on the nature of the noise source. At night-time, outside sound levels about 1 metre from facades of living spaces should not exceed 45 dB LAeq, so that people may sleep with bedroom windows open. This value was obtained by assuming that the noise reduction from outside to inside with the window open is 15 dB. To enable casual conversation indoors during daytime, the sound level of interfering noise should not exceed 35 dB LAeq. The maximum sound pressure level should be measured with the sound pressure meter set at "Fast".

To protect the majority of people from being seriously annoyed during the daytime, the outdoor sound level from steady, continuous noise should not exceed 55 dB LAeq on balconies, terraces and in outdoor living areas. To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound level should not exceed 50 dB LAeq. Where it is practical and feasible, the lower outdoor sound level should be considered the maximum desirable sound level for new development.

In Schools and Preschools. For schools, the critical effects of noise are speech interference, disturbance of information extraction (e.g. comprehension and reading acquisition), message communication and annoyance. To be able to hear and understand spoken messages in class rooms, the background sound level should not exceed 35 dB LAeq during teaching sessions. For hearing impaired children, a still lower sound level may be needed. The reverberation time in the classroom should be about 0.6 s, and preferably lower for hearing impaired children. For assembly halls and cafeterias in school buildings, the reverberation time should be less than 1 s. For outdoor playgrounds the sound level of the noise from external sources should not exceed 55 dB LAeq, the same value given for outdoor residential areas in daytime.

For preschools, the same critical effects and guideline values apply as for schools. In bedrooms in preschools during sleeping hours, the guideline values for bedrooms in dwellings should be used.

In Hospitals. For most spaces in hospitals, the critical effects are sleep disturbance, annoyance, and communication interference, including warning signals. The LAmax of sound events during the night should not exceed 40 dB(A) indoors. For ward rooms in hospitals, the guideline values indoors are 30dB LAeq, together with 40 dB LAmax during night. During the day and evening the guideline value indoors is 30 dB LAeq. The maximum level should be measured with the sound pressure instrument set at "Fast".

Since patients have less ability to cope with stress, the LAeq level should not exceed 35 dB in most rooms in which patients are being treated or observed. Attention should be given to the sound levels in intensive care units and operating theaters. Sound inside incubators may result in health problems for neonates, including sleep disturbance, and may also lead to hearing impairment. Guideline values for sound levels in incubators must await future research.

Ceremonies, Festivals and Entertainment Events. In many countries, there are regular ceremonies, festivals and entertainment events to celebrate life periods. Such events typically

GUIDELINES FOR COMMUNITY NOISE

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