

# ARTICLE VII

## Performance Standards

### 7.1 SPECIAL REGULATIONS IN ALL DISTRICTS

7.11 No activities involving the storage, utilization, or manufacture of materials or products which decompose by detonation shall be permitted, except that those activities customarily incidental to the operation of permitted principal uses may be permitted by a Variation by the Zoning Board of Appeals. Such materials shall be stored, utilized, and manufactured in accordance with the applicable rules and regulations of the County of Bureau and the State of Illinois.

Such materials shall include but shall not be confined to all primary explosives such as lead azide, lead styhmate, fulminates and tetracens; all high explosives such as TNT, RDX, HMX, PETN, and picric acid; propellants and components thereof, such as dry nitrocellulose, black powder, boron hydrides, hydrazine and its derivatives; pyrotechnics and fireworks such as magnesium powder, potassium chlorate, and potassium nitrate; blasting explosives such as dynamite and nitroglycerin; unstable organic compounds such as acetylides, tetrazoles, and ozonides; strong oxidizing agents such as liquid oxygen, perchloric acid, perchlorates, chlorates, and hydrogen peroxide in concentrations greater than thirty-five (35) percent; and nuclear fuels, fissionable materials, and products, and reactor elements such as Uranium 235 and Plutonium 239.

7.12 Any use established in a manufacturing or business district shall be operated in such a manner as to comply with the applicable performance standards as hereinafter set forth governing noise, vibration, smoke, toxic matter, odors, fire, and explosive hazards, radio and electrical interference, glare or heat, air pollution, and water pollution. No use already established on the effective date of this Ordinance shall be so altered or modified as to conflict with or further conflict with the applicable performance standards for the district in which such use is located.

7.13 Established uses found to be in noncompliance with respect to standards listed herein, will be liable for inspection fees and costs. Such uses shall comply with all applicable standards enumerated herein within ninety (90) days of confirmed violation unless otherwise extended or amended by action of the County Board. In the event no due cause is found, the challenger will be liable for fees and costs.

7.14 All performance standards will meet IEPA standards for all districts.

## 7.2 NOISE

- 7.21 In Business and Manufacturing districts, any use established after the effective date of this Ordinance shall meet the performance standards for noise as described below.

For the purpose of measuring the intensity and frequency of sound, the sound level meter, the octave band analyzer, the impact noise analyzer and any other required instruments shall be employed by the Illinois Environmental Protection Agency Noise Pollution Control Board or the Illinois State Police.

The flat network and the fast meter response of the sound level meter shall be used. Sounds of short duration as from forge hammers, punch presses, and metal shears which cannot be measured accurately with the sound level meter shall be measured with the impact noise analyzer.

Octave band analyzers calibrated in the Preferred Frequencies (American Standards Association Sl. 6-1960. Preferred Frequencies for Acoustical Measurements) shall be used with tables marked "Preferred Frequencies". Octave band analyzers calibrated with pre-1960 octave bands (American Standards Association Z24, 10-1953. Octave Band Filter Set) shall use tables marked "Pre-1960 Octave Bands".

The following uses and activities shall be exempt from the noise level regulations:

- 7.21-1 Noises not directly under the control of the property user.
  - 7.21-2 Noises emanating from construction and maintenance activities between 7:00 a.m. and 9:00 p.m.
  - 7.21-3 Noises of safety signals, warning devices, and emergency pressure relief valves or other public and semi-public institutional uses.
- 7.22 At no point beyond a lot line of any lot in the Manufacturing districts or Business districts shall the sound pressure level resulting from any use on that lot exceed the maximum permitted decibel levels for the designated octave bands as set forth in Tables 1 and 2 that follow.

TABLE 1 - PREFERRED FREQUENCIES

<u>Center Frequency, Cycles Per Second</u>	<u>Maximum Permitted Sound Pressure Level, Decibels</u>
31.5	76
63	71
125	65
250	57
500	50
1,000	45
2,000	39
4,000	34
8,000	32

TABLE 2 - PRE-1960 OCTAVE BANDS

<u>Octave Band, Cycles Per Second</u>	<u>Maximum Permitted Sound Pressure Level, Decibels</u>
20 - 75	72
75 - 150	67
150 - 300	59
300 - 600	52
600 - 1,200	46
1,200 - 2,400	40
2,400 - 4,800	34
4,800 - 10 KC	32

7.22-1 Impact noises, as measured on the impact noise analyzer shall not exceed eighty (80) decibels at any point beyond a lot line of any lot in all Manufacturing and Business districts.

7.22-2 Between the hours of 7:00 p.m. and 7:00 a.m., the decibel values tabulated above shall be reduced by six (6) decibels when measured near homes in Residential or Agricultural districts.

### 7.3 EARTHBORNE VIBRATION

7.31 In any Manufacturing district no use shall cause or create earthborne vibrations in excess of the displacement values given as follows:

7.31-1 Measurements shall be made at or beyond the adjacent lot line of the nearest residence as described on the following page. Vibration

displacements shall be measured with an instrument capable of simultaneously measuring in three (3) mutually perpendicular directions.

7.31-2 The maximum permitted displacements shall be determined in each district by the following formula:

$$D = \frac{K}{f^2}$$

Where

D = Displacement in inches  
 K = A constant to be determined by reference to the table below  
 f = The frequency of the vibration transmitted through the ground, cycles per second.

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The maximum earth displacement permitted at the points described below shall be determined by use of the formula in Subsection 7.31-2 and the appropriate K constant shown in Table 3.

TABLE 3

VALUES OF "K" TO BE USED IN VIBRATION FORMULA

<u>LOCATION</u>	<u>K</u>
On or beyond any adjacent lot line	
a. Continuous	0.008
b. Impulsive	0.015
c. Less than 8 pulses per 24-hour period	0.037
<u>LOCATION</u>	<u>K</u>
On or beyond any residence boundary line	
a. Continuous	0.003
b. Impulsive	0.006
c. Less than 8 pulses per 24-hour period	0.015

#### 7.4 AIR AND WATER POLLUTION CONTROLS

7.41 “The Rules and Regulations Governing the Control of Air Pollution”, published by the State of Illinois Air Pollution Control Board, shall prevail unless in conflict with local ordinances, in which case the more restrictive control will take precedence.

7.42 All uses within zones established by this Ordinance must follow the technical standards and recommendations of the State of Illinois Department of Public Health and Environmental Protection Agency, concerning septic tanks, and sewage treatment facilities.

#### 7.5 TOXIC MATTER

7.51 The release of hazardous or toxic matter into the air, surface water, or ground water may create a serious threat to public health in that human exposure to such matter, even in low concentrations, may result in poisoning, cancers, or other serious illnesses over the long term. Therefore, the applicant shall present such clear and convincing evidence as to satisfy the Bureau County Zoning Board of Appeals and the Bureau County Board that no hazardous or toxic substances will be released.

#### 7.6 ODOROUS MATTER

See Article XV - Rules and Definitions for definition.

7.61 When odorous matter is released from any operation, activity, or use in any Manufacturing or Business district, the concentration of such odorous materials shall not exceed the odor threshold when measured beyond the lot line, either at ground level or habitable elevation.

#### 7.7 FIRE AND EXPLOSION HAZARDS

In all Business and Manufacturing districts, a Conditional Use application is required for bulk storage of gasoline, fuel oil, or other flammable or explosive liquids or materials, or fuel gasses under pressure, for sale and distribution, provided the location, plans, and construction shall conform to the laws, rules and regulations of the State of Illinois and have the approval of the State Division of Fire Prevention.

Bulk storage tanks shall not be less than fifty (50) feet from all lot lines.

The following codes shall apply and be in effect:

Current edition of the National Fire Protection Association, Flammable and Combustible Liquids Code (N.F.P.A. No. 30).

Current edition of the National Fire Protection Association, National Fuel Gas (natural gas) Code (N.F.P.A. No. 54).

Current edition of the National Fire Protection Association Standard for the Storage and Handling of Liquefied Petroleum Gasses (N.F.P.A. No. 58).

The current edition of the National Fire Protection Association Code, as specified for any particular hazardous material not mentioned above shall apply and be in effect.

#### 7.8 RADIO AND ELECTRICAL INTERFERENCE

No use may be made of land within any zone established by this Ordinance in such a manner as to create electrical interference with radio communication or create radioactivity or radio wave or electrical interference with utility transmission or reception beyond the lot line nor more than two hundred (200) feet above the average grade of the lot responsible for creating such interference and in all cases shall meet the F.C.C. requirements.

#### 7.9 GLARE OR HEAT

Any operation producing intense glare or heat shall be performed within a completely enclosed building in such a manner as not to create a public nuisance or hazard along lot lines. Glare shall be controlled so that exposed direct or indirect illumination within the lot lines shall not cause illumination in excess of one half ( $\frac{1}{2}$ ) foot candle in residential areas.

#### 7.10 LIGHTING

Any lighting used for illumination purposes in any zoning classification shall be directed downward onto the particular property to be illuminated. Lighting shall be of an intensity, type, or color which does not create a nuisance or glare and has a minimum of sky glow.