

NOISE CONTROL REGULATION - CITY OF CAMBRIDGE

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I. PURPOSE

This ordinance provides standards for the control of noise pollution and prohibits those acts which most frequently create noise pollution. The general objectives of these standards are to secure the public health, comfort, convenience, and safety of, and to promote the welfare, prosperity, peace, and quiet of, the citizens of the City of Cambridge.

Be it ordained by the City Council of the City of Cambridge as follows:

II. DEFINITIONS

Terms used in this ordinance shall be defined as follows:

ACOUSTICAL TERMINOLOGY Acoustical Terminology used throughout these Regulations is that most recently approved as American Standard Acoustical Terminology by the American National Standards Institute (ANSI); except as may be specified otherwise herein.

BUSINESS USE shall be as set forth in the Zoning Ordinance of the City of Cambridge Article IV, Section 2.

CONSTRUCTION shall mean any and all physical activity necessary or incidental to the erection, placement, demolition, assembling, altering, cleaning, repairing, installing, or equipping of buildings and other structures, public or private highways, roads, premises, parks, utility lines, or other property, and shall include land clearing, grading, excavating, filling and paving.

COMMERCIAL SERVICE EQUIPMENT shall mean all engine- or motor-powered equipment intended for infrequent service work in inhabited areas, typically requiring commercial or skilled operators (such as chain saws, log chippers, paving rollers, etc.).

CONSTRUCTION DEVICE shall mean any powered device or equipment, designed and intended for use in construction. Examples of "construction devices" are air compressors, bulldozers, back-hoes, trucks, shovels, derricks, or cranes.

CONSTRUCTION SITE shall mean that area within which a contractor confines a construction operation. This includes defined boundary lines of the project itself plus any contractor staging area outside those defined boundary lines and used expressly for the construction.

DAYTIME shall mean the period between the hours of seven ante meridian (7:00 a.m.) and six post meridian (6:00 p.m.) daily except Sunday according to the time system locally in effect.

dB is the abbreviation for decibel.

dB(A) shall mean the A-weighted sound level in decibels, as measured by a general purpose sound level meter complying with the provisions of Specifications for Sound Level Meters (Sl. 4 1971), American National Standards Institute (ANSI), properly calibrated, and operated on the "A" weighting network.

EMERGENCY WORK Work necessary to restore public or private property to a safe condition following a public calamity or work required to protect persons or property from an imminent exposure to danger. The necessity of such work shall be determined by the Building Superintendent or his deputy or by other authorized emergency or public utility personnel after consultation with the Superintendent of Buildings.

HOMEOWNER'S LIGHT RESIDENTIAL OUTDOOR EQUIPMENT shall mean all engine- or motor-powered garden or maintenance tools intended for repetitive use in residential areas, typically capable of being used by a homeowner (such as lawn mowers, garden tools, riding tractors, snow blowers, snow plows, etc.).

Hz is the abbreviation for Hertz, which means cycles per second.

IMPACT DEVICE shall mean a construction device in which or by which a hammer, meaning a moving mass of hard solid material, is mechanically by means of a working fluid caused to repetitively impact upon and transmit kinetic energy to a tool. The tool may be included as part of the device, as in the case of a moil on a paving breaker or the drill steel or a jackhammer, or it may be a mass to which the impact device is temporarily connected as in the case of a pile and pile driver. Examples of impact devices are pile drivers, paving breakers and power impact hammers, impact wrenches, riveters and stud drivers.

INDUSTRIAL USE shall be as set forth in the Zoning Ordinance of the City of Cambridge, Article IV, Section 2.

INSTITUTIONAL, TRANSPORTATION AND UTILITY USES shall be as set forth in the Zoning Ordinance of the City of Cambridge, Article IV, Section 2.

L₁₀ LEVEL shall mean the A-weighted sound level exceeded 10% of the time.

NOISE POLLUTION means the presence of that amount of acoustic energy for that period of time necessary:

- a) to cause temporary or permanent hearing loss in persons exposed;
- b) to otherwise be injurious, or tend to be, on the basis of current information, injurious, to the public health or welfare;
- c) to cause a nuisance;
- d) to interfere with the comfortable enjoyment of life and property or the conduct of business; or
- e) to exceed standards or restrictions established herein or pursuant to the granting of any permit by the Commission.

NON-MEASURED NOISE POLLUTING ACTS - Uses and activities that create or cause to be created loud and unnecessary noises which, by virtue of the nature, duration or time of occurrence, are not readily subject to measurement by official testing devices.

PAVING BREAKER shall mean any hydraulically or pneumatically-powered impact device intended to cut or trench pavement, subbase macadam, gravel, concrete or hard ground.

PERSON means an individual, partnership, association, firm, syndicate, company, trust, corporation, department, bureau or agency, or any other entity recognized by law as the subject of rights and duties.

PILE DRIVER shall mean an impact device designed or used for the driving of piles, columns and other supports into soil or other material by means of impact, vibrations, pressure or other means.

RESIDENTIAL USE shall be as set forth in the Zoning Ordinance of the City of Cambridge, Article IV, Section 2.

SOUND PRESSURE LEVEL (SPL) shall be numerically equal to 20 times the logarithm (to the base 10) of the sound pressure to the reference sound pressure (the reference sound pressure shall equal 20 micropascals.) Unless otherwise stated, the level is understood to be that of a root mean-square pressure.

ZONING DISTRICTS shall mean the zoning districts and land uses therein as established by the Zoning Ordinance of the City of Cambridge.

III. GENERAL PROHIBITIONS OF NOISE EMISSIONS

A. No person or persons owning, leasing, or controlling the operation of any source or sources of noise shall willfully, negligently, or through failure to provide necessary equipment or facilities or to take necessary precautions, permit the establishment or continuation of a condition of noise pollution.

(OR)

B. It shall be unlawful for any person to make, continue, or cause to be made or continued any loud, unnecessary or unusual noise or any noise which either annoys, disturbs, injures or endangers the comfort, repose, health, peace or safety of others, within the limits of the city.

(OR BOTH)

IV. PROHIBITION OF NON-MEASURED NOISE POLLUTING ACTS

A. The following acts, among others, are declared to be loud, disturbing and unnecessary noises in violation of this ordinance, but said enumeration shall not be deemed to be exclusive, namely:

1) Horns, Signaling Devices, etc. The sounding of any horn or signalling device on any automobile, motorcycle, street car or other vehicle on any street or public place of the city, except as a danger warning; the creation by means of any such signaling device of any unreasonably loud or harsh sound; and the sounding of any such device for an unnecessary and unreasonable period of time. The use of any signalling device except one operated by hand or electricity; the use of any horn, whistle or other device operated by engine exhaust; and the use of any such signaling device when traffic is for any reason held up.

- 2) Radios, Phonographs, etc. The using, operating, or permitting to be played, used or operated any radio receiving set, musical instrument, phonograph, or other machine or device for the producing or reproducing of sound in such manner as to disturb the peace, quiet and comfort of the neighboring inhabitants or at any time with louder volume than is necessary for convenient hearing for the person or persons who are in the room, vehicle or chamber in which such machine or device is operated and who are voluntary listeners thereto. The operation of any such set, instrument, phonograph, machine or device between the hours of twelve o'clock p.m. and seven o'clock a.m. in such a manner as to be plainly audible at a distance of fifty (50) feet from the building, structure, vehicle, or dwelling unit in which it is located shall be prima facie evidence of a violation of this section.
- 3) Yelling, Shouting, etc. Yelling, shouting, hooting, whistling, or singing on the public streets, particularly between the hours of 12 p.m. and 7 a.m. or at any time or place so as to annoy or disturb the quiet, comfort, or repose of persons in any office, or in any dwelling, hotel or other type of residence, or of any persons in the vicinity.
- 4) Animals, Birds, etc. The keeping of any animal or bird which by causing frequent or long continued noise shall disturb the comfort or repose of any persons in the vicinity.
- 5) Steam Whistles. The blowing of any locomotive steam whistle or steam whistle attached to any stationary boiler except to give notice of the time to begin or stop work or as a warning of fire or danger, or upon request of proper city authorities.
- 6) Exhausts. The discharge into the open air of the exhaust of any steam engine, stationary internal combustion engine, motor boat, or motor vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom.
- 7) Defect in Vehicle or Load. The use of any automobile, motorcycle, or vehicle so out of repair, so loaded or in such manner as to create loud and unnecessary grating, grinding, rattling or other noise.
- 8) Loading, Unloading, Opening Boxes. The creation of a loud and excessive noise in connection with loading or unloading any vehicle or the opening and destruction of bales, crates, and containers.

- 9) Drums. The use of any drum or other instrument or device for the purpose of attracting attention by creation of noise to any performance, show or sale.
- 10) Hawkers, Peddlers. The shouting and crying of peddlers, hawkers and vendors which disturbs the peace and quiet of the neighborhood.

V. NOISE RESTRICTIONS ACCORDING TO ZONING DISTRICTS

A. This Regulation shall apply to the use or occupancy of any lot or structure thereon and to the noise produced thereby, but shall not apply to the following:

- 1) To the intermittent or occasional use, during the daytime, of light homeowner's residential outdoor equipment or commercial service equipment provided said equipment and its use complies with other provisions of these Regulations;
- 2) To construction activities and the associated use of construction devices nor to the noise produced thereby, provided such activities, and such equipment and its use, comply with other provisions of these Regulations;
- 3) To the operation of any motor vehicle on any public way, nor to the noise produced thereby.

B. Noise in Residential Zoning Districts or Affecting Residential or Institutional Property

No person shall create or cause to be emitted from or by any source subject to Regulation V any noise which causes or results in a maximum noise level, measured at any lot line of any lot located in any Residential Zoning District or in residential or institutional use elsewhere in conformance with the Cambridge Zoning Ordinance, in excess of any level of the "Residential District Noise Standard". Regulation V. E., provided that if said lot is located in any Industrial District, the maximum noise level measured at the lot line shall not exceed any level of the "Residential-Industrial Noise Standard", Regulation V. E.

C. Noise in Business, Office Zoning Districts

No person shall create or cause to be emitted from or by any source subject to Regulation V any noise which causes or results in a maximum noise level, measured at any lot line of any lot in any Business Zoning District other than a lot in residential or institutional use in conformance with the

Cambridge Zoning Ordinance, in excess of any level of the "Business District Noise Standard", Regulation V.E.

D. Noise in Industrial Zoning Districts

No person shall create or cause to be emitted from or by any source subject to Regulation V any noise which causes or results in a maximum noise level, measured at any lot line of any lot in recreational or business use in any Industrial Zoning District in conformance with the Cambridge Zoning Ordinance, in excess of any level of "Industrial District Noise Standard", Regulation V.E.

E. Zoning District Noise Standards

Noise standards referred to in these Regulations for the several zoning districts of the City of Cambridge, as defined in and established pursuant to the Cambridge Zoning Ordinance are as established by the following Table.

TABLE OF ZONING DISTRICT NOISE STANDARDS

Octave Band Center Frequency of Measurement (Hz)	Maximum Allowable Octave Band Sound Pressure Levels					
	Residential		Residential		Office	
	Institutional		Industrial		Business	Industry
	Daytime	All Other Times	Daytime	All Other Times	Anytime	Anytime
31.5	76	68	79	72	79	83
63	75	67	78	71	78	82
125	69	61	73	65	73	77
250	62	52	68	57	68	73
500	56	46	52	51	62	67
1000	50	40	56	45	56	61
2000	45	33	51	39	51	57
4000	40	28	47	34	47	53
8000	38	26	44	32	44	50
Single- Number-Equivalent (dB(A))	60	50	65	55	65	70

VI. RESTRICTIONS ON NOISE EMITTED FROM CONSTRUCTION SITES

A. Except as provided for in Regulation VI. C. and VI. D., it shall be unlawful for any person to operate any construction device or devices on any construction site if the operation of such device or devices emits noise, measured at the lot line of the affected property, in excess of the values shown below:

Lot Use of Affected Property	Effective June 1, 1975		Effective Jan. 1, 1976	
	L ₁₀ Level	Max. Noise Level	L ₁₀ Level	Max. Noise Level
Residential or Institutional	80 dB(A)	86 dB(A)	75 dB(A)	86 dB(A)
Business or Office	85 dB(A)	-	80 dB(A)	-
Industrial	90 dB(A)	-	85 dB(A)	-

The same level shall apply to a public way as applies to an industrial use. Measurements should not be taken closer than 50 feet from the nearest active construction device on the construction site. The maximum noise level shall be measured on the sound level meter at slow response.

B. The L₁₀ level shall be determined in the following manner:

- 1) Every ten seconds, on the mark, the A-weighted noise level on the sound level meter with slow response is recorded until 100 observations have been made. If, during any of these observations, a measurement is substantially affected by any source outside the construction site (such as aircraft overflight), measurements made during these periods will not be considered. However the observation period shall be extended until 100 valid measurements are obtained. The L₁₀ level will be that level that is equal to the tenth highest level recorded.
- 2) If in the estimation of the person taking the measurements, outside noise sources contribute significantly to the noise level, the above procedure shall be repeated (with the same outside noise source contributions) when construction is inactive, in order to determine the existing background L₁₀ level. The L₁₀ level during construction must exceed the background L₁₀ level by 5 dB(A) to be considered a violation of Regulation VI. A.

- C. Except as provided for in Regulation VI. D, it shall be unlawful to operate a construction device at any street excavation, grading or repair, utility street work installation or repair, which produces a noise level exceeding 86 dB(A) at a distance of 50 feet from the device after June 1, 1975.

The provisions of Regulation VI. A, shall not apply to any construction site covered by Regulation VI. C. The provisions of Regulation VI. C. will not be applicable to any construction device used in emergency service work that is necessary to return utility service to an area provided that within 24 hours such device is brought into compliance with Regulation VI. C. or is not reused within the City until it does comply.

- D. The provisions of Regulation VI. A. and VI. C. shall not be applicable to impact devices.

VII. PERMITS - GENERAL

- A. A permit shall constitute permission to use or to allow the use of a device or to engage in an activity to which reference has been made in these Regulations or in the Ordinances of the City of Cambridge.
- B. All applications for permits shall be made to the Superintendent of Buildings in such form and detail as he shall prescribe. Such application shall not relieve any person from otherwise complying with the provisions of these Regulations or any other law or ordinance.
- C. Such permit shall include such provisions and conditions as the Commissioner may deem necessary to protect the public health, welfare and comfort.
- D. Any permit required by these Regulations shall be displayed to any police officer or employee of the Building Department upon request.
- E. Any permit issued by the Superintendent of Buildings under the provisions of these Regulations may be revoked for violation of any of the terms and conditions of such permit.

VIII. EXEMPTIONS

- A. The following uses and activities shall be exempt from noise level regulations:
- 1) Noises of safety signals, warning devices, and emergency pressure relief valves.
 - 2) Noises resulting from any authorized emergency vehicle, when responding to an emergency call or acting in time of emergency.
 - 3) Any other noise resulting from activities of a temporary duration permitted by law and for which a license or permit therefore has been granted by the city in accordance with Alternate Section.
 - 4) Any aircraft operated in conformity with, or pursuant to, federal law, federal air regulations, and air traffic control instruction used pursuant to and within the duly adopted federal air regulations shall be exempt from the regulations of this ordinance. Any aircraft operating under technical difficulties, in any kind of distress, under emergency orders of air traffic control or being operated pursuant to and subsequent to the declaration of an emergency under federal air regulations shall also be exempt from the provisions of this ordinance.
 - 5) Noises resulting from emergency work as defined in DEFINITIONS SECTION.

IX. PENALTIES

- A. Any person who violates any provision of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not exceeding \$ _____, or by imprisonment for not more than _____ days, or by both said fine and said imprisonment.

X. ENFORCEMENT

- A. The Chief of Police of the City of Cambridge shall be the officer charged with the enforcement of this ordinance. He shall, at any time necessary, call on the Superintendent of Buildings or his deputy to provide personnel to perform such tests as the Chief of Police deems necessary to determine violations of this ordinance.

XI. CONFLICT WITH OTHER REGULATIONS

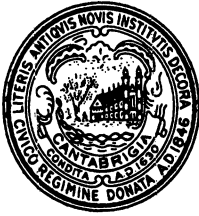
- A. The noise regulations shall not relieve any person from complying with other laws, statutes, codes, regulations, or ordinances of the Commonwealth or of the City of Cambridge.

XII. VARIANCES

- A. The Superintendent of Buildings may grant variances after public hearing or may reject applications on review without a hearing. Variances thus granted may be effective for no longer than one year.

XIII. SEVERABILITY

- A. Each of these Regulations shall be constructed as separate to the end that if any Regulation or section, sentence, clause or phrase thereof shall be held invalid for any reason, the remainder of these Regulations shall continue in full force.



CITY OF CAMBRIDGE

CAMBRIDGE, MASSACHUSETTS 02139
Tel. 876-6800


EXECUTIVE DEPARTMENT
JAMES L. SULLIVAN
City Manager

December 20, 1976

To the Honorable, the City Council:

I transmit herewith a draft of the proposed Noise
Control Ordinance for transmission to the City
Council's Sub-Committee on Ordinances.

Very truly yours,


James L. Sullivan
City Manager

JLS/b

Agenda #1

0-45

Draft of proposed Noise Control Ordinance.

JL

In City Council,
December 20, 1976

12/20/76
Referred to the
Committee on Ordinances