

ARTICLE 25.00

PERFORMANCE STANDARDS

Section 25.01 Scope

After the effective date of this Ordinance, any use established or change to, and any buildings, structure, or tract of land developed, construed or used for, any permitted principal or accessory use shall comply with all of the performance standards herein set forth for the district involved. If any existing use or building or other structure is extended, enlarged, moved, structurally altered or reconstructed, or any existing use of land is enlarged or moved, the performance standards for the district involved shall apply with respect to such extended, enlarged, moved, structurally altered or reconstructed building or other structure or portion thereof, and with respect to land use which is enlarged or moved.

Section 25.02 Procedure for Determination of Compliance

The purpose of these procedures is to insure that an objective, unbiased determination is made in those cases where there may be substantial doubt as to whether an individual use or group of uses complies with the Performance Standards of this Ordinance, and to formulate practical ways for the alleviation of such non-compliance.

- A. Subsequent to a preliminary study of the performance characteristics of an existing or proposed use, the Building Official shall make a determination as to whether there exists reasonable grounds to believe that the use in question may violate the performance standards set forth in this Article and may initiate an official investigation.
- B. Following the initiation of an official investigation, the Building Official is hereby empowered to require the owner or operator of the use in question to submit such data and evidence as he may deem essential to his making an objective determination. Failure to submit data required by the Building Official shall constitute grounds for denying a permit for that use of land. The evidence may include, but is not limited to, the following items:
 - 1. Plans of the existing or proposed construction and development.
 - 2. A description of the existing or proposed machinery, process and products.
 - 3. Specifications for the mechanisms and techniques used or proposed to be used in restricting the possible emission of any of the dangerous and objectionable elements as set forth in this Article.
 - 4. Measurements of the amount or rate of emission of said objectionable elements
 - 5. Where determinations can reasonably be made by the Building Official or other Township official, using equipment and personnel normally available to the Township or obtainable without extraordinary expense, such determinations shall be so made before notice of violation is issued.
 - 6. Where determination of a violation is made, the Building Official shall take or cause to be taken lawful action as provided by this Ordinance to eliminate such violation. Failure to obey lawful orders concerning cessation of violation shall be punishable as provided in this Ordinance.

7. Where determination of violation of performance standards will likely entail the use of highly skilled personnel and expensive or unusual instrumentation not ordinarily available to the Township and when, in the considered judgment of the Building Official a violation exists, the procedure will be as follows:
- a) **Notice** The Building Official shall give written notice, by certified mail (return receipt requested, or by posting the premises, or by other means insuring a signed receipt for such notice, or by personally serving such written notice) to those owners or operators of subject use deemed responsible for the alleged violations. Such notice shall describe the particulars of the alleged violation and the reasons why the Building Official believes there is a violation in fact, and shall require an answer or a correction of the alleged violation to his satisfaction within a reasonable time limit set by him. The notice shall state, and it is hereby declared, that failure to reply or to correct the alleged violation to the satisfaction of the Building Official within the time limited set constitutes admission of violation. The notice shall further state that upon request of those to whom it is directed, technical determinations as described in the appropriate portions of this Ordinance will be made, and that if the violation as alleged is found to exist in fact, costs of determinations will be charged against those responsible in addition to such other penalties as may be appropriate. If it is determined that no substantive violation exists, than the costs of this determination will be paid by the Township.
 - b) **Correction of Violation Within Time Limit** If, within the time limit set, there is no reply but the alleged violation is corrected to the satisfaction of the Building Official, he shall note "Violation Corrected" on his copy of the notice and shall retain it among his records, taking such other action as may be warranted by the circumstances of the case.
 - c) **No Correction; No Reply** If there is no reply within the time limit set above, and the alleged violation is not corrected to the satisfaction of the Building Official within the time limit set, he shall take or cause to be taken such action as warranted by continuation of an admitted violation after notice to cease.
 - d) **Reply Requesting Extension of Time** If a reply is received within the time limit set indicating that an alleged violation will be corrected to the satisfaction of the Building Official, but that more time is required than was granted by the original notice, the Building Official may grant an extension of time, if he deems such extension is warranted in the circumstances in the case, and if such extension will not, in his opinion, cause imminent peril to life, health, or property. In acting on such requests for extension of time, he shall in writing state his reasons for granting or refusing to grant the extension and shall transmit the same by certified mail (return receipt requested or other means insuring a signed receipt) as provided above, to those to whom the original notice was sent.
 - e) **Reply Requesting Technical Determination** If a reply is received within the time limit set requesting technical determinations as described in the appropriate provisions of this Ordinance and if the alleged violations continue, the Building Official may call in properly qualified experts to make the determinations. If expert findings indicate violation of the performance standards do exist in fact, the costs of the determinations shall be paid by the persons responsible for the violations, in addition to such other penalties as may be appropriate under the terms of this Ordinance. If no substantive violation is found, costs of the determination shall be paid by the Township.

- f) If, after the conclusion of the time granted for compliance with the performance standards, the Building Official finds the violation is still in existence, any permits previously issued shall be void and the operator shall be required to cease operation until the violation is remedied.

Section 25.03 Appeals

The Building Official's action with respect to the performance standards procedure may be appealed to the Zoning Board of Appeals within thirty (30) days following said action. In the absence of such appeal, the Building Official's determination shall be final.

Section 25.04 Performance Standards

Any use established in any zoning district shall not be permitted to carry out any activity or operation or use of land, building or equipment that produces an irritant to the sensory perceptions greater than the standard measures for safeguarding human safety and welfare.

A. NOISE

No operation or activity shall be carried out in such a manner to cause or create measurable noise levels exceeding the maximum sound pressure levels prescribed below, as measured on or beyond the property line of the operation or activity.

**TABLE A
MAXIMUM PERMITTED SOUND PRESSURE LEVELS IN DECIBELS
(Pre-1960 Octave Bands American Standards Association, Z24)**

Octave Band (Cycles Per Second*)	Commercial and Light Industrial Districts		General Industrial Districts	
	Day**	Night**	Day**	Night**
00 to 74	76db	70db	84db	76db
75 to 149	70	62	78	70
150 to 299	64	56	72	64
300 to 599	57	49	65	57
600 to 1,199	51	44	59	51
1,200 to 2,399	45	39	53	45
2,400 to 4,799	38	33	46	38
4,800 to and above	36	31	44	36

* Sound level meter set on the "C" or "flat" scale, slow response.

** Day: 7:00 a.m. to 9:00 p.m.
Night: Between 9:00 p.m. and 7:00 a.m.

A sound level meter and an octave band analyzer shall be used to measure the level and frequency of the sound or noise during the day and/or the night. The measuring equipment and measurement procedures shall conform to the latest ANSI specification on acoustics. The sound level meter and octave band

analyzer shall be calibrated before and after the measurements. Sounds of very short duration, which cannot be measured accurately with the sound level meter, shall be measured by an impact noise analyzer; and the measurements so obtained may be permitted to exceed the maximum levels provided in Tables A or B by no more than five (5) decibels. For purposes of this Ordinance, impact noises shall be considered to be those noises whose peak values are more than seven (7) decibels higher than the values indicated on the sound level meter.

For some post-1960 manufactured instruments, the octave bands mentioned above have been converted to the new Preferred Frequencies as established by the American Standards Association. To accommodate the possible use of either type of instrumentation, the preceding table is repeated below, again in decibels, with the conversion to Preferred Frequencies already accomplished. Care must be exercised to assure the proper correlation between instruments and tables used in measuring performance.

**TABLE B
MAXIMUM PERMITTED SOUND PRESSURE LEVELS IN DECIBELS
(Pre-1960 Octave Bands American Standards Association, Z24)**

Octave Band (Cycles Per Second*)	Commercial and Light Industrial Districts		General Industrial Districts	
	Day**	Night**	Day**	Night**
31.5	77db	72db	85db	77db
63	73	68	80	73
125	67	62	75	67
250	62	57	70	62
500	55	50	65	55
1,000	51	46	60	51
2,000	44	39	50	44
4,000	37	32	45	37
8,000	33	28	40	33

* Sound level meter set on the "C" or "flat" scale, slow response.

** Day: 7:00 a.m. to 9:00 p.m.
Night: Between 9:00 p.m. and 7:00 a.m.

Where street traffic noises directly adjacent to the boundary line exceed these maximum permitted levels, the intensity levels permitted may then exceed those levels specified in the tables but may not exceed the level of the subject adjacent street traffic noises. For those areas in which the existing background noise levels exceed maximum permitted levels, the noise levels at the boundary line may not exceed the background noise levels. In such cases, a study shall be made to determine the character of the background noise to include sources, levels and duration.

Sounds of an intermittent nature or characterized by pure tones may be a source of complaints even if the measured level does not exceed that specified. In such cases, the complaints shall be investigated to determine the nature of and justification for the complaint and possible corrective action. If the

complaints are not resolved within sixty (60) days, the Building Official may then proceed to take steps to enforce the terms of the Zoning Ordinance in accordance with the remedies provided herein.

Application for variance from the sound level provisions may be submitted to the Board of Appeals. In such cases, the owner or operator of equipment on the property in the specific district shall submit a statement regarding the effects of noise from his equipment on the noise levels in the surrounding area. This statement will include a study of background noise levels, predicted levels at the boundary lines due to equipment operation and justification for the variance. The requests for variance will be reviewed by the Board of Appeals and granted where unnecessary hardship would otherwise be imposed upon the applicant and where no basic injury to the surrounding area will result. The Board of Appeals may impose conditions of operation in granting a variance.

B. DUST, SOOT, DIRT, FLY ASH AND PRODUCTS OF WIND EROSION

The regulation of smoke, dust, soot, dirt, fly ash and products of wind erosion shall be subject in all respects to the State of Michigan Air Pollution Control Act.

C. VIBRATION

Machines or operations which cause vibration shall be permitted, but no operation shall be permitted to produce ground transmitted oscillations which cause a displacement exceeding that specified below, as measured at the property line. These vibrations shall be measured with a seismograph or accelerometer.

For purposes of this Ordinance, steady state vibrations are vibrations that are continuous, or vibrations in discrete impulses more frequent than sixty (60) per minute. Discrete impulses which do not exceed sixty (60) per minute shall be considered impact vibrations.

Between the hours of 9:00 p.m. and 7:00 a.m. all of the above maximum vibration levels, as measured on or beyond the boundary line of residentially used areas adjacent to a Commercial or Industrial District, shall be reduced to one-half (½) the indicated permissible values.

**TABLE C
MAXIMUM PERMITTED STEADY STATE VIBRATION IN INCHES**

Frequency (Cycles Per Second)	
10 and below	0.001
10 to 19	0.0008
20 to 29	0.0005
30 to 39	0.0003
40 and above	0.0001

**TABLE D
MAXIMUM PERMITTED STEADY STATE VIBRATION IN INCHES**

Frequency (Cycles Per Second)	
10 and below	0.002
10 to 19	0.0015
20 to 29	0.001
30 to 39	0.0005
40 and above	0.0002

D. ODOR

The emission of noxious, odorous matter in such quantities as to be readily detectable at a point along any property line, when diluted in the ration of one (1) volume of odorous air to four (4) or more volumes of clean air, so as to produce a public nuisance or hazard beyond lot lines is prohibited.

E. GLARE AND HEAT

Any operation producing intense glare or heat shall be performed within an enclosure so as to completely obscure and shield such operation from direct view from any point along the lot lines, except during the period of construction of the facilities to be used and occupied.

F. FIRE AND SAFETY HAZARDS

The storage and handling of flammable liquids, liquefied petroleum gases, and explosives shall comply with all regulations of the Township and with all State rules and regulations, and regulations as established by the Fire Protection Act, Act 207, Public Acts of 1941, as amended. Further, all storage tanks for flammable liquid materials above ground shall be located at least one hundred and fifty (150) feet from all property lines, and shall be completely surrounded by earth embankments, dikes or other types of retaining wall which will contain the total capacity of all tanks so enclosed.

Bulk storage tanks of flammable liquids below ground shall be located not closer to the property line than the greater depth to the bottom of the buried tank.

G. SEWAGE WASTES

All wastewater within the Township must meet the standards and requirements of Township Ordinance No. 116, Charter Township of Bangor Regional Wastewater System Use Ordinance.

H. LIGHT

Exterior lighting shall be so installed that the surface of the source of light shall not be visible from the nearest residential district boundary or public thoroughfare and shall be so arranged to reflect light away from any residential use or public thoroughfare and meet the standards of Section 19.08. In no case shall more than one (1) footcandle power of light cross a lot line five (5) feet above the ground into a Residential District. Illumination levels shall be measured with a footcandle meter or sensitive photometer and expressed footcandles.

I. GASES

The escape of or emission of any gas which is injurious or destructive or explosive shall be unlawful and may be summarily caused to be abated. SO₂ gas, as measured at the property line at ground evaluation, shall not exceed .03 p.p.m., H₂S likewise shall not exceed 1 p.p.m., Fluorine shall not exceed 0.1 p.p.m.,

Nitrous fumes shall not exceed 5 p.p.m., and Carbon Monoxide shall not exceed fifteen (15) p.p.m.; all as measured as the average intensity during any two (2) hour sampling period.

J. ELECTROMAGNETIC RADIATION

Applicable rules and regulations of the Federal Communications Commission in regard to propagation of electromagnetic radiation are hereby made a part of this Ordinance.

K. DRIFTED AND AIR-BORNE MATTER, GENERAL

The drifting of air-borne transmission beyond the lot line of dust, particles or debris from any open stock pile shall be unlawful and shall be summarily caused to be abated.