

February 22, 2023



Mr. Dan Soltis  
Real Estate Manager  
CIMA Developers, Inc.  
30W180 Butterfield Road  
Warrenville, IL 60555

Re: 93 Octane Brewery  
30W180 Butterfield Road  
Warrenville, Illinois

Dear Dan,

Eriksson Engineering Associates, Ltd. (EEA) has prepared a review of the applicable performance standards for your proposed brewery operations at 30W180 Butterfield Road in the City of Warrenville, Illinois. There are total of 12 performance standards that may be applicable for a special use. They are shown below. Please note that Item A consisted of introductory remarks without any standards mentioned.

**Performance Standards**

- B. NOISE**
- C. VIBRATION
- D. SMOKE
- E. PARTICULATE MATTER
- F. TOXIC MATTER
- G. ODOR**
- H. FIRE AND EXPLOSION
- I. ILLUMINATION AND GLARE
- J. HEAT
- K. RADIOACTIVE RADIATION
- L. WASTE
- M. UTILITY FACILITIES

Items B (noise) and G (odor) are the most applicable standards related to the proposed brewery.

**PERFORMANCE STANDARD B. NOISE**

The noise standards are:

**1. MAXIMUM SOUND LEVELS**

No operation or activity shall cause or create noise above the sound pressure levels in Tables [9A](#) and [9B](#) at the locations specified therein.

**2. MEASUREMENT**

A sound level meter and associated octave band analyzer conforming to the specifications of the American Standards Association shall be employed to measure the intensity and frequency of sound.

**3. EXEMPTIONS**

The following shall be exempt from noise performance standards:

- a. Noises of construction or maintenance activities from 7 AM to 9 PM.
- b. Noises of safety signals, warning devices, and emergency pressure relief valves.
- c. Transient noises of moving sources such as transportation vehicles.
- d. Noises associated with snow plowing, street sweeping, and mosquito abatement.
- e. Church bells, chimes, and carillons.
- f. Other noises not under the direct control of the property user.

**Table 9A: Permitted Sound Levels**

Preferred Center Frequency in Hertz	Maximum Permitted Sound Pressure Level in Decibels at Boundaries of:	
	Nearest Lot in Residential Zone	Nearest Lot in Business or Industrial
0-75	72	79
75-150	67	74
150-300	59	66
301-600	52	59
601-1,200	46	53
1,201-2,400	40	47
2,402-4,800	34	41
Over 4,800	32	39

Above figures for octave band analyzers calibrated with Preferred Frequencies (American National Standards Institute S1.6-1984, Preferred Frequencies and Band Numbers for Acoustical Measurement)

Sound levels above shall be modified where applicable by the adjustments in [Table 9B](#).

**Table 9B: Adjustments to Permitted Sound Levels**

	Adjustment in Decibels
1. <b>DURATION</b> of noise in any one-hour period (use one adjustment only):	
a. under 12 minutes	Add 5 dB
b. under 3 minutes	Add 10 dB
c. under 1/2 minute	Add 15 dB
2. At boundaries of nearest Office or <b>COMMERCIAL</b> zoned lot	Add 5 dB
3. Noise is <b>IMPULSIVE</b> in character (e.g. hammering)	Subtract 5 dB
4. Noise is <b>PERIODIC</b> in character (e.g. hum, screech)	Subtract 5 dB
5. Noise may be heard between <b>HOURS</b> of 7 PM and 7 AM	Subtract 5 dB

**Response:** The proposed chiller unit to be mounted on the ground by the northwest corner of the building can generate noise levels of 89db from 3.25 feet from the unit per the attached manufactures specification. The nearest property line is 27.8 feet away. At the property line, the side of the chiller will be 24.6 feet east of the property line. The resulting noise levels are estimated to be 71.4 dB which is under the maximum level of 79 dB in the standards.

**PERFORMANCE STANDARD G. ODOR**

The standard for odor is:

*Odorous material released shall not exceed the Odor Threshold Concentration at the property line.*

*Odor shall be measured by Odor Threshold Concentrations with the American Society for Testing and Materials Method D1391-57, Standard Method for Measurement of Odor in Atmospheres (Dilution Method).*

*Odor shall be measured at ground level and habitable elevation, as defined herein. Detailed plans for elimination of odors crossing property lines may be required before issuance of a Building Permit.*

**Response:** The owner will meet the performance standard for odor as specified above by properly and regularly disposing of waste material from the brewing process in enclosed containers and remove the waste from the property before the waste material starts to decompose and cause any odors.

Brew days will occur during a normal work week, Monday – Friday. Spent grains will be collected and placed in the current dumpster on site which has a lid that will remain closed at all times. Spent grains will not continue to ferment during the Winter because of the colder temperatures. They could start to ferment during the Summer with higher temps outside after two days which might produce a smell. Garbage service are occurring twice a week on Tuesdays and Fridays so should odor would not be an issue.

If the odor were to exceed the thresholds, the owner can schedule more frequent waste pick-ups and use different containment dumpsters to mitigate the odor.

The brewing system to be installed in Warrenville is a system similar to the one operation at their existing 93 Octane Brewery located at 1825 Lincoln Highway in St. Charles, Illinois. The St. Charles location is part of a retail corridor and has been in operation for almost four years. No complaints on any production issues at that location to date in relation to noise, odor, or any other issue.

Although the existing St. Charles system is smaller in capacity than the new Warrenville location, the spent grains are handled the same way at the new brew facility.

We appreciate this opportunity to serve you.

Very truly yours,

**ERIKSSON ENGINEERING ASSOCIATES, LTD.**



Stephen B. Corcoran, P.E., PTOE  
Director of Traffic Engineering



# MA Series Dual 13.5 HP Pro Chiller Model: PM212F6R4200-A-V\*

Voltages					Chiller Specifications	
	120/1/60	230/1/60	230/3/60	460/3/60	Chiller Package includes the following:	
MCA	N/A	N/A	132	66	Condensing Unit	Danfoss Maneurop and Emerson reciprocating and scroll compressors.
MOP	N/A	N/A	176	89	Evaporator	Spiral Drum Evaporator or brazed plate evaporator.
System Data					Glycol Pump	Dual stainless steel centrifugal pump configuration with dedicated process and internal circulation pump.
Dimensions	120"L x 50"W x 77"H	Controls	Electronic		Storage Tank	High Density Polyethylene Insulated Storage Tank.
Frame	Coated Steel	Electrical Enclosure	NEMA 4		Control Panel	ETL/UL 508A rating with on/off switches, indicators lights, motor starters, non fused main electrical disconnect.
Housing	Galv Sheet Metal	Shipping Weight	3000 LBS		Factory Tested	Each system factory charged with refrigerant and tested under load at design operating temperatures.
Tank	200 Gal	Operating Weight	4700 LBS		Enclosure	Coated welded structural steel frame with removable service panels.
Compressor	13.5 HP	DB @ 1M	89		Control System	Electronic temperature control with digital temperature display.
Condenser	Air Cooled	Refrigerant	R404A		Warranty	2 years from date of shipment covering parts, pro-rated labor, and workmanship (As of January 2017).
Circulation Pump	2 HP	BTUH @ 20 °F, 90 °F Ambient	N/A			
Process Pump	2 HP	BTUH @ 25 °F, 90 °F Ambient	195792			
Glycol Connection Size	2 IN	BTUH @ 30 °F, 90 °F Ambient	217526			
HX	Spiral Drum	BTUH @ 35 °F, 90 °F Ambient	240674			
		Expansion Fittings	2 ea 2 IN			

