

12 April 2013

Ilene R. Tyler, Practicing Architect and Resident of Ann Arbor
126 N. Division Street
Ann Arbor, MI 48104

The Honorable Mayor and City Council
Of the City of Ann Arbor
301 East Huron Street
Larcom City Hall, 1st Floor
Ann Arbor, MI 48104

Re: 413 E. Huron Street
Site Plan
April 15, 2013 Council Agenda – Item PH-3

Subject: Decibel Comparison Regarding 413 E. Huron Development Agreement

Dear Mayor Hieftje and Council Members:

The Developer's revised site plan for the proposed high rise apartment building is expected to be on your agenda for a public hearing and consideration at your April 15, 2013 meeting. You are hearing from many who oppose the project and who urge your consideration on our behalf for the adverse impacts this project will have on the surrounding properties and neighborhood, and on the present and future character of downtown.

One of the issues not addressed on the drawings, but mentioned in the Development Agreement with a reference to Chapter 119, is the noise associated with the construction process and the resultant use of the property. The information below spells out our concerns about noise levels and the needed protection of the pre-existing uses on the adjacent properties. While Chapter 119 sets some protective limits, it does not go far enough in protecting us as neighbors, especially given the close proximity of the project to pre-existing residential uses on the east and north sides of the site.

The Development agreement requires compliance with Chapter 119 Noise ordinance, "to ensure that any noise emanating from said development will not negatively impact nearby residences or businesses."

Chapter 119 sets maximum noise levels at 61 dB (daytime) and 55 dB (nighttime), but ...

The following limited activities are exempted from the sound level limitations of [section 9:364](#):

Operation, between 7:00 a.m. and 10:00 p.m., of power equipment that does not produce a sound level exceeding **90 dB(A)** beyond the property line of the property on which the equipment is operated.

Construction, repair, remodeling, demolition, drilling, wood cutting or excavation work conducted between 7:00 a.m. and 8:00 p.m. Mondays through Saturdays, except legal holidays, which does not produce a sound level exceeding **105 dB(A)** beyond the property line of the property on which the work is being conducted.

This volume correlates approximately to the following:

<i>Level at which sustained exposure may result in hearing loss</i>	<i>90 - 95dB</i>
Jackhammer at 50'	95dB
Hand Drill	98dB
Power saw at 3'	110dB
Pneumatic riveter at 4'	125dB

It would seem prudent and respectful to modify the Development Agreement to limit all noise from the offending source to a **maximum 90 dB at the property line**, regardless of time of day, and reduce this noise to the code maximum of 55 dB for nighttime. Noise exceeding 90 dB for a sustained period is highly unhealthy, may result in hearing loss, and is disruptive to residential use.

Perceptions of Increases in Decibel Level	
Imperceptible Change	1dB
Barely Perceptible Change	3dB
Clearly Noticeable Change	5dB
About Twice as Loud	10dB
About Four Times as Loud	20dB

In fact, sound at 105 dB is perceived as approximately three times louder than sound at 90 dB. The fact that sound loudness doubles with each 10 dB increase is hard to understand. I downloaded a simple iPhone app to measure ambient sound and to help me demonstrate this to others. I can talk normally at 50-60 dB but I cannot raise my voice loud enough to get it to measure 105 db. The idea of something three times louder than my loudest screech is hard to imagine having to endure for almost two years of construction.

I ask you to please revise the Development Agreement, limiting the allowable dB to 90 for construction, cutting back to 55 dB at night, and to find anything exceeding that in violation of the Development Agreement. We who live and work next to this project will be deprived of our rights and auditory health by the construction and equipment noise, and we deserve to have our rights protected in the same manner as those who use the system to accomplish their goals to build in Ann Arbor.

Thank you.

Sincerely,



Ilene R. Tyler, FAIA, FAPT, LEED AP