

Date: 20 July 2012
To: Joe Antunovich
From: Brian Corry
Re: Project: Children's Hospital Redevelopment Truck Noise Study
Location: Chicago, IL
KA Project N° BD-100

Kirkegaard Associates (KA) was contracted by Antunovich Associates to provide an acoustic study at a Lincoln Park neighborhood adjacent to the old Children's Memorial Hospital in Chicago, Illinois. The purpose of the study was to measure the noise level of various semi-truck operations and its impact on the existing ambient background noise levels at adjacent residential area.

A series of noise measurements were conducted on July 19, 2012 at 5 locations along Fullerton Avenue and Burling Street in the Lincoln Park neighborhood while a mock semi-truck was in operation. The truck operations included (1) idling, (2) revving up which simulated a truck going by that was shifting gears, and (3) reverse which has a backup beeping associated with it.

Measurement locations 1 and 2 were situated on Fullerton Ave sidewalks closest to the truck noise source. Ambient background noise when the truck was not operating included heavy truck and car traffic on Fullerton Ave, moderate pedestrian foot traffic on Fullerton Ave sidewalks, and some occasional aircraft noise overhead. There were a few times when an ambulance and fire engine drove by with sirens on producing noise levels in excess of 100 dBA that were not captured in KA's measurements. Locations 3 - 5 were situated on Burling St at various residential property lines. Ambient background noise when the truck was not operating included light car traffic on Burling St, heavy truck and car traffic on Fullerton Ave, light foot traffic on Burling sidewalks, and some occasional aircraft noise overhead.

The measurement summary table as part of this report indicates the average noise level for each measurement at all locations.

The noise study concludes that the noise produced by the various truck operations will have minimal to no impact on the existing ambient background noise levels at the residential property lines. The truck noise for each condition was somewhat to slightly audible at all residential locations but on average was only just above or equal to the existing ambient noise levels. KA concludes that the future truck noise at the residential property lines closer to Fullerton Ave will be sometimes audible but will not be a major impact on current conditions.



Noise Measurement Summary

Project: Children's Hospital Redevelopment Truck Noise Study

Date: July 19, 2012

Location Truck: Parked on south side of Fullerton Ave near Location 1

Location 1: Fullerton Ave - south side across from Burling St

Location 2: Fullerton Ave and Burling St - northwest corner

Location 3: 2410 Burling St - sidewalk

Location 4: 2422 Burling St - sidewalk

Location 5: 2432 Burling St - sidewalk

Noise Measurement	Average Octave Band Sound Pressure Level, dBA				
	Location 1	Location 2	Location 3	Location 4	Location 5
Truck Idling	79 dBA	67 dBA	60 dBA	55 dBA	53 dBA
Truck Rewing	85 dBA	72 dBA	64 dBA	58 dBA	52 dBA
Truck Reverse	79 dBA	68dBA	60 dBA	55 dBA	53 dBA
Ambient Background Noise - Daytime	66 dBA	69 dBA	59 dBA	58 dBA	52 dBA
Ambient Background Noise - Evening	66 dBA	66 dBA	58 dBA	57 dBA	53 dBA

Notes:

Truck Measurements: 1-2 minute measurements while truck was operating

Ambient Daytime Measurements: 5-10 minute measurements between 10 AM - 11:30 AM without truck present

Ambient Evening Measurements: 5-10 minute measurements between 5 PM - 6 PM without truck present