

MEMORANDUM TO: Jake Zunamon
HTG Illinois Developer, LLC

FROM: Luay R. Aboona, PE, PTOE
Principal

DATE: June 30, 2021

SUBJECT: Traffic Signal Warrant Evaluation
Rand Road with Chestnut Avenue/Techy Road
Arlington Heights, Illinois

As requested by the Village of Arlington Heights, Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) has completed an evaluation to determine if a traffic signal is warranted at the intersection of Rand Road with Chestnut Avenue/Techy Road in Arlington Heights, Illinois.

Signal Warrant Requirements

The installation of a traffic signal primarily requires the satisfaction of one or more of the three volume warrants from the Federal Highway Administration's *Manual on Uniform Traffic Control Devices* (MUTCD). Given that Rand Road is classified by the Illinois Department of Transportation (IDOT) as a Strategic Regional Arterial (SRA), only one of the three volume warrants, Warrant 1 – Eight Hour Volumes, was considered. In order to meet this warrant, traffic on the minor approach (Chestnut Avenue or Techy Road) will have to be equal to or exceed 150 vehicles per hour (vph) for eight hours.

Signal Warrant Evaluation

Based on the traffic counts conducted by KLOA, Inc. as summarized in the traffic study dated April 15, 2021, the traffic volumes on Chestnut Avenue exiting onto Rand Road were 34 and 58 vehicles during the weekday morning and evening peak hours, respectively and on Techy Road were 68 vehicles during both peak hours. Since these volumes represent the highest amount of traffic that exits Chestnut Avenue and Techy Road, the traffic for the remaining hours of the day is expected to be lower. Based on that, it is clear that existing traffic is significantly lower than the threshold (150 vph) and, as such, does not meet the warrant for the installation of a traffic signal.

When considering the proposed 40-unit apartment development, given the low amount of traffic that will be generated, the increase in traffic that will utilize Chestnut Avenue and Techy Road to exit onto Rand Road will be minimal (nine trips in the morning peak hour and two trips in the evening peak hour for Chestnut Avenue and zero trips in the morning peak hour and one trip in the evening peak hour for Techy Road). As such, even with the buildout of the proposed development, a traffic signal will not be warranted.