

CITY OF KINGSTON
Office of the City Engineer
jschultheis@kingston-ny.gov

John M. Schultheis, P.E., City Engineer



Steven T. Noble, Mayor

June 22, 2021

Andrea Shaut., Alderman-At-Large, President of the Common Council
Kingston City Hall
420 Broadway
Kingston, New York 12401

RE: Removal of Traffic Signal, Greenkill at Wilbur

Dear President Shaut:

My communication dated April 23, 2021 requested that the traffic signal at this location be removed and replaced with all-way stop control. At the May meeting of the PS/GG committee, this matter was considered and then tabled due to questions presented by aldermen. This letter contains my response to questions that have been expressed.

Questions have been raised about the capacity of the intersection if the change is made and whether the change is warranted. I am attaching the results of the warrant analysis showing that a signal is not warranted at this location for Warrants 1 and 2. The traffic volume would need to increase approximately 50% in order to warrant a signal.

Questions have been raised about truck movements through the intersection. I found that the proportion of trucks on Greenkill Avenue is 4% from 2019 counts. The constrained geometry of the intersection does make truck movements more difficult, however this alone is not a reason to keep a signal here at this level of trucks.

With regard to safety, I include this excerpt from the recent study of 11 City locations for signal removal: *The removal of unwarranted traffic signals at intersections with high accident rates located in urban areas has been shown to decrease all types of accidents by 24 percent and reduces pedestrian crashes by 17 percent based on an assessment of 199 intersections, as noted in the Signalized Intersection Informational Guide – Second Edition published by the U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA).*

Questions have been raised about night operations and sign visibility. I note that stop signs will include required retroreflective sheeting for visibility, and that such sign features are used in unlit areas such as rural areas. Installing stop signs does not inherently require street lighting; nonetheless there is lighting in this vicinity.

CITY OF KINGSTON
Office of the City Engineer
jschultheis@kingston-ny.gov

John M. Schultheis, P.E., City Engineer



Steven T. Noble, Mayor

Questions have been raised about the cost of the change, both construction costs and ongoing maintenance costs. There will be a cost to implement the change, however it is expected that the labor and materials are available within DPW's operating budget. Maintenance costs will be less with stop signs than with the current signal. We do not track signal operation and maintenance costs for specific locations, however our recent report on the 11 signal removals cited another source claiming that average maintenance costs for a signal are \$5,500 per year. It is believed that maintenance of stop signs will be less expensive.

It is my recommendation that this signal removal be implemented. Doing so will benefit the City and the general public, especially given the age of the signal equipment and difficulty in maintaining this signal. Further, this signal does not include modern features such as pedestrian push buttons. Unwarranted signals also have the undesirable effect of decreasing the public's respect for traffic control devices generally.

Therefore, my request remains that the Common Council amend the Code as follows:

Amend 390-84 Schedule I: Traffic Signals to delete the intersection of Greenkill at Wilbur, and
Amend 390-92 Schedule IX: Stop Intersections to add the intersection as an All-way Stop intersection.

I plan to attend the meeting of the committee so that I may answer any questions that arise.

Respectfully,

John M. Schultheis, P.E.
City Engineer

Cc: Steve Noble, Mayor
Ed Norman, Superintendent, Department of Public Works

Attachment: signal warrant analysis

Warrant 1: Eight - Hour Vehicular Volume

100%

Warrant Evaluated? Yes

Condition A :
 Min. Veh. Volume

Volume Level	100%	80%
Major Rd. Req	600	480
Minor Rd. Req	150	120
Number of Hours	0	4

Satisfied? No

Condition B:
 Interruption of Continuous Traffic

Volume Level	100%	80%
Major Rd. Req	900	720
Minor Rd. Req	75	60
Number of Hours	0	0

Satisfied? No

Condition C:
 Combination of A & B at 80%

Satisfied? No

Warrant No **Manually Set To: No**

Time Period	Enter Start Time (Military Time) (HH:MM)		Major Road	Minor Road	Total
	From	To			
1	6:00	7:00	77	49	126
2	7:00	8:00	207	182	389
3	8:00	9:00	345	184	529
4	9:00	10:00	410	117	527
5	10:00	11:00	367	113	480
6	11:00	12:00	440	125	565
7	12:00	13:00	442	123	565
8	13:00	14:00	486	133	619
9	14:00	15:00	470	184	654
10	15:00	16:00	498	220	718
11	16:00	17:00	537	162	699
12	17:00	18:00	533	126	659
13	18:00	19:00	446	84	530
14	19:00	20:00	305	55	360
15	20:00	21:00	277	40	317
16	21:00	22:00	213	26	239

Warrant 2: Four-Hour Volume

100%

Hour Start	15:00	16:00	14:00	17:00
Major Road Vol.	498	537	470	533
Minor Road Vol.	220	162	184	126

Warrant Evaluated? Yes
Warrant Satisfied? No
Manually Set To:

