March 29, 2023

Bobby Watkins, PLA
Alliance Engineering + Planning, LLC
299 S. Main Street, Suite A
Alpharetta, GA 30009

Re: Mitigation Letter for 1125 Newton Bridge Road Tract
Athens, Georgia

Mr. Watkins:

As a follow up to the traffic impact study prepared by NV5 Engineers and Consultants, Inc. for the proposed 1125 Newton Bridge Road Tract in Athens, Georgia dated June 8, 2022, we conducted supplemental analysis for potential mitigation at the intersections of: Vincent Drive at Newton Bridge Road; and Kathwood Drive at Newton Bridge Road. As we understand it, the City expressed concerns about the Levels of Service and delay increasing on the minor street approaches at these two intersections as result of the proposed development.

As shown in Table 1 for 2025 No-Build conditions, the eastbound minor street approach of Kathwood Drive at Newton Bridge Road intersection is expected to operate at undesirable Levels of Service (LOS) E during the PM peak hour.

Table 1: 2025 No-Build Conditions Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
2	Vincent Dr & Newton Bridge Rd	Stop-Control	EB	C	23.3	C	20.8
			NBL	A	8.7	A	9.2
3	Kathwood Dr & Newton Bridge Rd	Stop-Control	EB	C	16.4	E	44.3
			NBL	A	9.2	B	8.3

As shown in Table 2 for 2025 Build conditions, the eastbound minor street approach of Kathwood Drive at Newton Bridge Road intersection is expected to change from LOS E to F during the PM peak hour, and the eastbound minor street approach of Vincent Drive at Newton Bridge Road intersection is expected to change from LOS C to E during the AM peak hour. However, it is noted that the proposed development is expected to only add project trips to the mainline northbound and southbound approaches of Newton Bridge Road.

Table 2: 2025 Build Conditions Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
2	Vincent Dr & Newton Bridge Rd	Stop-Control	EB	E	37.6	D	27.3
			NBL	A	9.2	A	9.5
3	Kathwood Dr & Newton Bridge Rd	Stop-Control	EB	C	19.3	F	88.2
			NBL	A	9.7	A	8.6

Mitigation was developed for the two subject intersections in the form of eastbound minor street approach left-turn lane at each intersection while maintaining minor street approach stop control. The results of the proposed mitigation are shown in Table 3.

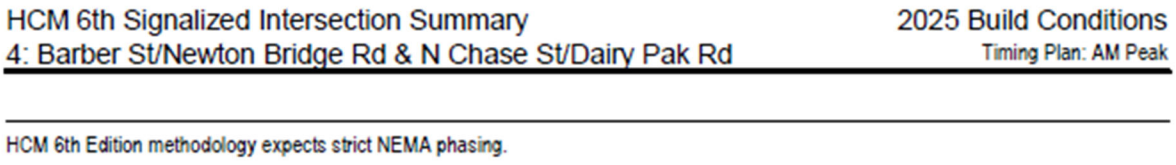
Table 3: 2025 Build Improved Conditions Capacity Analysis

ID	Intersection	Control / Mitigation	Movement	AM		PM	
				LOS	Delay	LOS	Delay
2	Vincent Dr & Newton Bridge Rd	Stop-Control with EB left-turn lane	EB	C	21.1	C	19.3
			NBL	A	9.2	A	9.5
3	Kathwood Dr & Newton Bridge Rd	Stop-Control with EB left-turn lane	EB	C	15.2	E	40.0
			NBL	A	9.7	A	8.6

As shown in Table 3, with the mitigation, the eastbound minor street approach of Vincent Drive at Newton Bridge Road intersection is expected to operate with satisfactory Levels of Service (LOS) during both AM and PM peak hours. However, the eastbound minor street approach of Kathwood Road at Newton Bridge Road intersection is expected to operate at undesirable LOS E during the PM peak hour although there is a significant reduction in delay from 88.2 seconds to 40.0 seconds.

The City also requested clarification that delays decreased at the intersection of N Chase Street at Newton Bridge Road during the AM peak hour for Build conditions. The subject signalized intersection has split phase operations. Synchro 11 traffic analysis software using Highway Capacity Manual (HCM) 6th Edition methodology was used for the analysis. However, HCM 6th Edition cannot analyze split phase operations. Figure 1 shows the error message for the subject intersection using HCM 6th Edition.

Figure 1: Synchro Error Message – N Chase Street at Newton Bridge Road



For this reason, the analysis used the LOS and delay results from Synchro 11, which calculates delay differently to HCM 6th Edition methodology. Since the reduction in overall intersection delay was about 1.5 seconds and the intersection is expected to operate with satisfactory LOS, additional explanation was not considered to be required. Further, the subject intersection shows increases in delay for the PM peak hour.

If you have any questions regarding this assessment, please do not hesitate to call.

Sincerely,

Naveed Jaffar, PE, PTOE