

**From:** [William Berg](#)  
**To:** [Madison Mayor](#); [Munger, Sam R.](#); [Harrington-McKinney, Barbara](#); [Transportation Commission](#); [Traffic](#); [Lynch, Thomas](#)  
**Subject:** Arterial Street Speed Limits and Traffic safety  
**Date:** Monday, August 5, 2024 1:39:02 PM  
**Attachments:** [Segoe Rd Speed Study.pdf](#)  
[Speed Study Cumulative Distribution002.pdf](#)

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I am a Madison resident and live on the City's southwest side. I am a Professor Emeritus in the Department of Civil and Environmental Engineering at the UW-Madison, a Fellow in the Institute of Transportation Engineers, was a registered Professional Engineer in the State of Wisconsin for over 40 years, and have testified in hundreds of tort litigation actions involving serious highway traffic accidents. I have observed the City's recent posting of 25-mph speed limits on numerous principal and minor arterial streets. In my professional opinion these speed limits are inappropriate for such streets and do not promote and protect public safety.

As opposed to local residential streets, principal arterial streets such as Whitney Way are intended to serve major centers of activity, and typically carry the highest traffic volumes and longest trip lengths. Minor arterial streets such as Segoe Road are intended to accommodate trips of shorter lengths and at lower volumes. The speeds of travel on arterial streets are appropriately higher than on local residential streets or in congested central business districts where 25-mph speed limits are common. For decades, engineering studies have found that most drivers will travel at a speed that is reasonably safe for the prevailing conditions. Accordingly, highway and traffic engineers generally recommend a posted speed limit that is approximately equivalent to the 85th percentile speed of observed vehicular traffic.

As a frequent user of both Whitney Way and Segoe Road, it has been clear to me that most drivers operate their vehicles at speeds significantly greater than the recently posted 25-mph speed limits. I am confident that this would also apply to other areas of the City where there are 25-mph speed limits on arterial streets. On the morning of July 30, 2024, I noticed a City of Madison motorcycle patrol officer arrive at South Segoe Road to presumably start a speed enforcement activity. On Friday of that week, August 2, I performed an engineering speed study on South Segoe Road between Hilton and Berwyn Drives. The purpose was to quantitatively measure the typical speed characteristics of traffic along that minor arterial, and to determine if the enforcement action that took place two days earlier had any impact on achieving compliance with the posted 25-mph speed limit. The speed study was performed during the period from the 9:20 to 10:20 am and measured the elapsed times for both northbound and southbound vehicles to traverse a measured distance. As shown in the attached table and cumulative frequency distribution graph, only 2 percent of the 111 observed vehicles were traveling at the posted speed limit. The mean speed was about 32 mph, the 85th percentile speed was about 34 mph, and 70 percent of the observed vehicles were traveling at speeds between about 29 and 34 mph. Ten percent of the observed vehicles were traveling at a speed in excess of 35 mph. Based on engineering, human factors, and safety considerations, it is my professional opinion that the posting of 25-mph speed limits on arterial streets such as Whitney Way and South Segoe Road is inappropriate, and will not promote and protect public safety. A basic principle of traffic control devices is that to be effective, the traffic control device must command respect from road users. The 25-mph speed limits on Madison's arterial streets are not respected by motorists, and will not achieve even moderate compliance, nor will occasional traffic enforcement have any impact on prevailing speeds. An appropriate speed limit for South Segoe Road would be 30 mph.

If a speed study were to be conducted along Whitney Way, I would expect similar results, with the speed distribution shifted to slightly higher speeds. Regarding that portion of Whitney Way over which the new express buses are to operate, it seems contradictory to the intent of the buses to limit their speeds to 25 mph. Certainly the other vehicle traffic will be traveling at a significantly higher speed regardless of the posted 25-mph speed limit. In my professional opinion, a 35-mph speed limit would be appropriate for Whitney way.

I have not seen any accident records for either arterial street, but if available I would be willing to conduct an accident reconstruction and causal factors analysis of those records to determine if any engineering countermeasures, including speed limits, were appropriate based on safety considerations.

Finally, there is a significant traffic operation and safety problem at the intersection of South Segoe Road and Mineral Point Road where significant hazardous maneuvers are occurring due to a large number of left-during vehicles on Mineral Point Road and the lack of any left-turn lanes for those maneuvers. This is especially the case during peak travel hours.

Please let me know should you have any questions or wish to discuss the above. An acknowledgement that you have received and reviewed this email would also be appreciated.

Sincerely,

William D. Berg  
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