



4605-C Pinecrest Office Park Dr.
Alexandria , VA 22312 - 1442
(703) 914 - 4850
FAX (703) 914 - 4865
Email - mcv@mcvainc.com
www.mcvainc.com

PLANNING . ENGINEERING . INFORMATION TECHNOLOGY

RESPONSE BY JOE MEHRA, P.E. PTOE, TO THE JUNE 18 TRAFFIC SUBMITTAL BY VISION McMILLAN PARTNERS FOR THE McMILLAN SAND FILTRATION SITE PUD RELATED TO THE MASTER PLAN

The following comments are divided in to two parts:

1. Response by Gorove/Slade on my traffic analysis
2. Response by Gorove/Slade on DDOT's Staff Report and Transportation Commitments

Response by Gorove/Slade on My Traffic Analysis

I have followed industry standard practice that I have been following for the last forty years along with my peers in the industry to prepare my traffic review of Gorove/Slade reports in my submission to the Commission. Further, I would like to add that I co-wrote the book on how to conduct a traffic impact study. This handbook was developed for the US Department of Transportation. I presented seminars through the Institute of Transportation Engineers (ITE) on how to conduct a traffic impact study.

Capacity Analysis Assumptions and Methodologies - As I noted in my report, there are errors and omissions by Gorove/Slade in their traffic analysis. For example, the truck/bus vehicle counts are not shown and the analysis utilized a default value of 2 percent for the entire network. This is important because hundreds of additional buses will be added to the adjacent roadway network. The greater the number of trucks/buses in the vehicle stream, the lower the levels of service. The truck/bus volumes could have been counted for existing conditions with no additional manpower and

adjusted for future conditions. These values should have been used for capacity and levels of service analysis and the mitigation should be based on bus included capacity/levels of service. The ITE Recommended Practice for Transportation Impact Analysis for Site Development also supports this requirement.

Another example of an error is that Gorove/Slade assumed that all intersections have right turn on red permitted. However, there are intersections in the study area where right turn on red is prohibited.

Modal Split – The modal split assumed by Gorove/Slade for the residential and medical office building results in bus transit use of 1,710 during the PM peak hour and 24,414 on a daily basis. These numbers of bus transit use at a site located more than a mile from a metrorail station is unheard of and almost impossible to achieve. Only 14 out of the total of 86 metro rail stations on the WMATA system have boardings that exceed the projected bus transit use at the site. The daily transit use forecasts would require more than 610 bus trips to serve only the site traffic. More than 100 bus trips would be needed to serve exclusively the site and the background developments in the study area during the peak one hour. In my opinion, this level of transit use can only be accomplished by serving the site with Metrorail, creating the ‘McMILLAN SAND FILTRATION’ Metrorail Station.

Transit Capacity Needed to Serve Demand – Gorove/Slade transit capacity analysis is based on 1,100 trips during peak hour and are requesting this number as a Zoning Order Commitment. Gorove/Slade analysis shows that 1,710 persons will use bus transit in one hour. Gorove/Slade is requesting a commitment for only 1,100 trips. Who will provide bus transit service to the other 610 persons?

Saturday Peak Hour – Gorove/Slade acknowledges that “Mr. Mehra is technically correct” in that Gorove/Slade did not analyze the Saturday peak hour. As stated in Gorove/Slade report, the Saturday peak hour for the site traffic is 3 PM to 4 PM and Gorove/Slade analyzed the 4 PM to 5 PM as the peak hour. Due to this error, the Saturday peak hour analysis conducted by Gorove/Slade is meaningless.

Traffic Simulation – First of all, I want to clarify Gorove/Slade statement that Mr. Mehra testified that the SimTraffic software can analyze the impact of bus routes on a network. I stated that SimTraffic software can analyze the impact of bus stops on the roadway network. This is critical because hundreds of additional buses will be travelling on the

adjacent roadway network and the buses would be stopping for a considerable amount of time to allow 30 to 40 persons to board or alight the buses. In the meantime, this lane would be blocked to traffic. SimTraffic can assess the impact of such bus stops.

I did not use the simulation to analyze capacity or levels of service for the study area intersections. My reason to show the simulation video to the Commission was to present them a visual of how the traffic will flow or show the gridlock that would occur if the development was approved, as currently planned. I would like to point out that this simulation did not include the additional buses that would be travelling on the roadway network. This simulation did not include the impact of buses as they stop to pick-up or discharge passengers. The simulation would show even worse conditions if these were incorporated.

The simulation presents what would happen when 31,560 additional vehicles are added to the roadway network. According to Gorove/Slade the proposed development is estimated to generate a total of 31,560 vehicle trips on a weekday. Gorove/Slade estimate of 31,560 daily vehicle trips are more than the current traffic volumes on North Capitol Street between Michigan Avenue and Irving Street (daily traffic volume of 30,900 vehicles). It should also be noted that 31,560 additional vehicle trips is based on 30 to 35 percent of transit use. As the transit use decreases the number of vehicle trips will increase.

Response by Gorove/Slade on DDOT's Staff Report and Transportation Commitments

The critical component of DDOT's report is the monitoring program. The monitoring program consists of annual reporting once the project reaches 90% residential occupancy and 85% commercial occupancy. In the event the trip caps are exceeded in two consecutive years, the Applicant will conduct a robust survey of users to determine travel patterns. Based on this, the Applicant will develop an implementation plan to help meet monitoring goals. This is a little too less and a little too late. The monitoring should be done at 50% occupancy. If the goals are not met, there should be a severe penalty to the Applicant which may consist of monetary penalty or funding of additional mandatory programs to ensure that the goals are met. The mandatory programs would go beyond the measures already proposed by the Applicant.

CONCLUSIONS

The Gorove/Slade analysis of existing conditions have several errors and omissions that lead to erroneous levels of service results. Gorove/Slade estimates that the site will generate in excess of 31,500 weekday trips and this exceeds the existing daily traffic volume on North Capitol Street. Further, the site is estimated by Gorove/Slade to generate in excess of 24,000 daily transit trips. Only 14 out of a total of 86 metro rail stations have boarding that exceed the projected transit use at the site. This level of transit use can only be served by Metrorail with a station at the site and not one mile away. Gorove/Slade is requesting 1,100 transit trips additional capacity during the peak hour as a Zoning Order Commitment. Gorove/Slade analysis shows that 1,710 persons will use bus transit in one hour. Gorove/Slade is requesting a commitment for only 1,100 trips. How will the additional 610 persons travel to and from the site?

Gorove/Slade analysis shows that the peak hour on Saturday occurs between 3 PM and 4 PM. However, Gorove/Slade does not analyze this hour at all. All Saturday analysis is meaningless since it did not include the peak hour. Gorove/Slade should redo the Saturday analysis and present to DDOT for review. DDOT has stated that the Applicants analysis shows that several intersections experience a significant degradation of levels of service even with the changes included in the PUD application. The levels of service computations do not include the additional transit buses, transit passenger crossing streets, pedestrians and bicycle trips. Their inclusion would worsen the levels of service than presented in the report. The Synchro/SimTraffic model simulation shows a roadway network with long queues. Based on this review the Applicant should be denied until a revised traffic study is submitted and reviewed by DDOT.