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5.15.01

TESTIMONY OF JOE MEHRA, P.E.
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IN OPPOSITION
TO Edmund Burke School APPLICATION

I am Joe Mehra, President of MCV Associates, Inc. I have over 25 years of experience in traffic engineering and transportation planning. I was the co-author of the first ever handbook on Site Impact Traffic Evaluation that was prepared for the U.S. Department of Transportation. I will present a review and critique of the Gorove/Slade Traffic Reports dated September, November and December 2000 and April 2001, followed by our own traffic analysis.

Comments on Gorove/Slade Reports Dated September 25, November 8, December 20, 2000 and April 10, 2001.

Existing Data - The turning movement counts at all locations are over one year old. These counts were not adjusted to make them current. Further, some of the counts were taken on July 8, 1999 during the summer break and the Edmund Burke School was not in session. These counts will not reflect the typical traffic volumes when the school is in session. The traffic analysis based on summer counts do not reflect real world conditions when the school is in session. The results and findings based on these counts are therefore NOT VALID.

The traffic report indicates on Page 2 that the intersection of the Public Alley and Upton Street was analyzed. However, the report does not present any data or findings in reference to this statement. The report notes on page 6 that the maximum queues on Upton Street is 4 to 5 vehicles and extends for 10 minutes during the AM peak hour.

The Gorove/Slade data shows that the peak one hour during the morning is between 7:45 to 8:45 AM, however they have used the peak hour as 7:30 to 8:30 AM. The traffic volumes are approximately 10 percent less during the 7:30 to 8:30 AM in comparison to 7:45 to 8:45 AM. The selection of the peak one hour during the PM peak period (2:00 to 4:00 PM) is also not correct. The data shows that the peak one hour is 3:00 to 4:00 PM, however, the levels of service calculations are based on 2:30 PM to 3:30 PM time period (approximately 10% less traffic).

The selection of the PM peak hour between the hours of 2:00 PM to 4:00 PM as the schools afternoon peak hour is wrong. The Institute of Transportation Engineers Recommended Practice for Traffic Access and Impact Studies for Site Development notes "The time period(s) that provide the highest cumulative directional traffic demands should be used to assess the impact of site traffic on

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the adjacent street system and to define the roadway configurations and traffic control measure changes needed in the study area". Gorove/Slade Report notes on page 4 that approximately half of the students participate in after school programs and athletics until 6:30 PM. The selection of the 2:30 PM to 3:30 PM time period by Gorove/Slade results in approximately 50% less traffic on Connecticut Avenue than the later peak hour. Thus, the Recommended Practice for traffic impact studies is not being followed. G/S is not being consistent in their analysis. It should be noted that Gorove/Slade analyzed the commuter peak hour for the Levine School Traffic Impact Study although the commuter peak hour did not coincide with the school peak hour.

Edmund Burke School Trip Generation (Existing Conditions) - The Gorove/Slade Report does not show the trips or trip rates for the existing school site. It does not show the use of public transportation or carpooling. The report does note that the faculty of 60 utilize 36 vehicles (or 1.7 persons per vehicle). Further, the Gorove/Slade report shows that a total of 21 students drive to school. The report does not provide the data regarding existing vehicle trip generation. Based on these numbers the existing school needs at least 57 parking spaces for the faculty/staff and students.

Existing Levels of Service - Gorove/Slade used the Highway Capacity Manual (HCM), 1997 to estimate capacity and levels of service at the four intersections under study. The signalized intersections were analyzed as being in "other areas". These intersections should be analyzed as being in CBD or similar areas. The HCM notes that if the areas characteristics are such that the streets are narrow or narrow sidewalks, several parking maneuvers, taxi or bus activity, limited use of exclusive turn lanes , mid-block curb cuts, high pedestrian activity, etc. then the CBD or similar areas should be used. A LOS C at Connecticut and Tilden in the AM peak hour for the existing conditions by Gorove/Slade, using "other areas" is actually a LOS D. Due to the reasons noted above, all levels of service provided by Gorove/Slade are not correct and show better levels of service than the real world conditions.

Future Traffic Volumes - The future traffic volumes consist of the existing traffic volumes, the normal growth in through traffic volumes, the traffic from other developments and the traffic from the proposed school. The Gorove/Slade Report has not grown the traffic that was counted in 1999 to the future year (2002 or later), has not shown the traffic from the approved adjacent developments such as the full occupancy of the International Center, the Levine School of Music Auditorium and the Howard Law School. The total future traffic volumes are therefore incorrect.

A comparison of existing traffic volumes on Connecticut Avenue (See Figure 3 on

Page 7) and the future traffic volumes with the school expanded (See Figure 7 on Page 16) show that the total traffic volumes on Connecticut Avenue during the AM peak hour with the expanded school are less than the existing conditions. On southbound Connecticut Avenue, the existing volumes are 2,595 vehicles and the future volumes with the school expansion is 2,586 vehicles. On northbound Connecticut Avenue at Tilden Street, the existing volumes are 685 vehicles and the future volumes with the school expansion is 681 vehicles.

The four reports do not show the school trip assignment to the roadway network. The trip distribution shows that 40% of the school traffic is coming from the east on Tilden Street during the AM hour and they would prefer to use Upton Street for drop-off and pickup instead of using the Connecticut Avenue entrance (since Connecticut Avenue northbound backs up from Van Ness through Upton). Therefore the Gorove/Slade statement that 80 to 90 percent of the school traffic will use Connecticut Avenue entrance is erroneous. Further, most of the departing traffic will use Upton Street since approximately 25 percent of the traffic is heading north on Connecticut Avenue.

The circulation plan (I-F) shows that all vehicles using the Connecticut Avenue entrance can exit on to Upton Street, adjacent to the Public Alley. The intersections of the Public Alley and the School driveway at Upton Street will result in a severe conflict at Upton Street. The left turns from the school driveway will conflict with the right turns from the Public Alley and in turn conflict with the traffic on Upton Street. Approximately 125 vehicles may be using the school driveway to Upton Street, in addition to the normal traffic on the Public Alley and Upton Street. This will result in a major conflict and unsafe conditions on Upton Street, the Public Alley and the school driveway.

The report notes on page 11, that southbound Connecticut Avenue traffic will shift to Reno Road, turn left on to Tilden Street, left on to Connecticut Avenue and right in to Connecticut Avenue access point. This circuitous route (involving five turning movements and passing through several traffic controls) will add a considerable amount of travel time to the school traffic. The easier and shorter route is to turn left from southbound Connecticut Avenue on to Veazey Terrace (using the protected left turn green arrow), cut through the Alley between Veazey Terrace and Van Ness Street and the Alley between Van Ness Street and Upton Street and the drop-off students on Upton Street.

Total Future Levels of Service - As noted before, the total future levels of service have been estimated based on a 2:30 to 3:30 peak hour and have been estimated using wrong area type. The intersection of Connecticut and Tilden is projected to operate at LOS B by Gorove/Slade, however, I estimate it to be LOS F with their new circulation plan and with the "CBD or other" area type. The use of the ITE

recommended peak hour (5:00 to 6:00 PM) would result in LOS F at all three intersections on Connecticut Avenue.

Stacking Spaces - The report states that the maximum stacking during the PM peak hour is 12 vehicles and the school is providing 13 spaces. However, with the elimination of stacking in front of the new school building on Upton Street and with only three spaces available on Upton Street in front of the existing building (as shown in the graphic) and 6 in the proposed school building, the total stacking provided is only 9, resulting in a shortfall of 3 spaces.

Conclusion - Due to the major errors in the use of the existing traffic data, the traffic analysis including the levels of service are not valid. The Gorove/Slade Report conclusion that all (except Connecticut Avenue at Van Ness during the AM peak hour) of the studied intersections are projected to operate at acceptable levels of service during the AM and PM peak hours is **NOT VALID**. The proposed circulation plan would result in unsafe conditions on Upton Street at its intersections with the school driveway and the Public Alley. The traffic impacts of the proposed school expansion will make the existing bad conditions worse on Upton Street, the Alleys between Veazey Terrace, Van Ness and Upton Streets and Connecticut Avenue. The circulation plan and access routing proposed by the school for the parents, students and faculty/staff is not enforceable. Use of school buses on Upton Street is unsafe due to the narrow roadway width, parking on both sides of the street and the fact that Upton Street is a two-way street.

MCV TRAFFIC ANALYSIS

New Traffic Data Collection - MCV collected new traffic counts on Thursday, November 9, 2000. Data was collected at the intersection of Upton Street and the "Alley" and also at the intersection of Van Ness Street and the "Alley" between Veazey Terrace and Van Ness Street during the hours of 7:00 to 9:00 AM, 2:00 to 6:30 PM, and 7:00 to 8:00 PM (since an evening activity was planned by the school on this day). Further, the pedestrian activity and the queues on Upton Street were also observed.

A comparison of the traffic volumes on Upton Street and Van Ness Street between the Alley and Connecticut Avenue during the AM peak hour is as follows:

	MCV (Nov. 2000)	GSA (Sept./Oct. 1999)	Difference GSA-MCV
Eastbound Upton	131	142	+11 (8%)
Westbound Upton	171	93	-78 (-84%)
Total Upton	302	235	-67 (-29%)
Eastbound Van Ness	127	109	-18 (-17%)
Westbound Van Ness	185	149	-36 (-24%)
Total Van Ness	312	258	-54 (-21%)

The above comparison shows that the Gorove/Slade traffic volumes on Upton Street and Van Ness Street are 21 percent to 29 percent less than current existing volumes. This supports our conclusion above, that the Gorove/Slade data is outdated and therefore their conclusions based on old data is not valid.

The traffic volumes on these streets during the other time periods on November 9, 2000 were as follows:

Street	AM Peak Hour	Afternoon Peak Hour	Commuter PM Peak	7:00 to 8:00 PM
Upton Street	302	201	178	87
Alley between Van Ness and Upton	57	27	55	13
Van Ness Street	312	232	293	206
Alley between Van Ness and Veazey Tr	88	53	89	36

This shows that Upton Street and Van Ness Street along with the two alleys are used extensively during the school hours.

I also observed the queues in front of the school between the hours of 7:30 AM to 8:15 AM. A queue of 3 to 4 cars were observed prior to 7:55 AM. The queues on Upton Street started to build up reaching a maximum of 26 vehicles in the westbound direction at 8:07 AM. The queue began to dissipate and reached 6 cars at 8:15 AM. Between the hours of approximately 8:00 AM to 8:15 AM, the alley's access on to Upton Street was blocked.

A significant amount of pedestrian activity was observed during the AM peak period. A total of 166 pedestrians were observed on Upton Street near the school. Many of these pedestrians crossed Upton Street, thus creating a vehicle/pedestrian conflict.

Several vehicles were observed to travel north on the one-way southbound alley, creating an unsafe condition.

Levels of Service Analysis - The Highway Capacity Manual for unsignalized intersections does not provide for a methodology to estimate the levels of service at the intersection of Upton Street and the Alley that would include the effect of the intersection of Connecticut Avenue and Upton Street. Based on field observations during the peak one hour, vehicles were observed to undergo severe delays.

Based on MCV traffic analysis, it can be concluded that the existing conditions in the area are unsafe and congested and any additional traffic on the adjacent roadways will make it worse.