

April 11, 2023

Mr. Douglas McLean, Principal Planner
City of Cranston
869 Park Avenue
Cranston, RI 02910

Re: **Traffic Engineering Review Services**
Achievement First Illuminar Mayoral Academy Expansion
85 Garfield Avenue
Cranston, Rhode Island
Pare Project No.: 23065.00

Dear Mr. McLean:

Pare Corporation (Pare) has completed our review of materials associated with the proposed expansion of the Achievement First Illuminar Mayoral Academy facility at 85 Garfield Avenue in Cranston, RI. The information provided that was included as part of our review are:

- **Traffic Impact and Access Study, Proposed Expansion on Achievement First Illuminar School, Prepared by Green International Affiliates, Inc., dated March 2023**

In addition, Pare staff observed traffic operations at the school during the morning arrival and afternoon dismissal peaks on Tuesday, April 4, 2023. Based on our review and observations, we offer the following comments:

Traffic Impact and Access Study:

1. *Introduction and Executive Summary Section:* Standard practice for traffic studies in Rhode Island dictates a design year of five years from the study date, which would be 2028.
2. *Study Roadway Network Section:* Appears accurately described.
3. *School Traffic Circulation Section:* It was noted that during Pare's visit to the site, none of the school buses went behind the building. Instead, they double-stacked near the southeastern corner of the building. Pare noted 11 school buses and five vans during both the morning arrival and afternoon dismissal.

In addition, it was noted that there were cones placed across the connection between the school's south lot and the Texas Roadhouse lot during the afternoon dismissal. It was also noted that the cones were then moved (presumably by a parent) to allow for parents to egress through the Texas Roadhouse lot, although few did. Several parents were observed parking in the Texas Roadhouse lot, walking to the school to pick up their child/children, and then walking back to their car to avoid parking in one of the school lots.

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4. *School Parking Section:* Appears accurately described. Pare did not conduct a count of staff cars, but based on observations, this number appears reasonable.
5. *Traffic Volumes Section:* No comments.
6. *Public Transportation Network Section:* No comments.
7. *Crash History Section:* No comments.
8. *No-Build Traffic Volumes Section:*
 - a. Between 2010 and 2020, Cranston's population grew at an average rate of 0.3 percent per year. The 1% per year background growth factor appears appropriate.
 - b. The methodology utilized to determine the anticipated increase in site trips appears appropriate and should yield a conservative future analysis.
 - c. As noted in Comment 1, the design year for the project should be 2028.
 - d. Assuming the 875 students anticipated is the maximum allowed at the facility under existing permits, it is acceptable to include the student increase as part of the background growth and in the no-build traffic volumes.
9. *Intersection Capacity Analysis Section:*
 - a. The capacity analyses appear to have been conducted within commonly accepted professional standards.
 - b. It is noted that there is a significant drop in LOS for eastbound vehicles between existing and no-build conditions due to the addition of the anticipated traffic for the Trolley Barn Plaza development.
 - c. Pare concurs that the addition of additional athletic facilities for the existing student body is not anticipated to generate additional trips during the morning arrival peak or afternoon dismissal peak. Any increases in traffic volumes will be for sporting events or other special events that will primarily be outside of these times.
10. *Proposed Traffic Circulation Section:*
 - a. Pare notes that buses do not currently load and unload behind the building. Pare believes the proposed bus circulation route and loading/unloading zone is superior to the current pattern. However, it is noted that exiting buses will conflict with the parent queue area. When buses leave, they will likely cause a temporary extension of the parent vehicle queue.
 - b. Pare's observations noted that during the morning arrival peak, vehicles intermittently, but repeatedly, backed up onto Garfield Avenue. This appears due to a choke point as parents turn right into the northern parking lot, where that turning movement conflicts with pedestrians walking from the northern lot to the school. The proposed traffic pattern will eliminate this choke point, which should help alleviate congestion. However, Pare also noted that some parents, rather than drop off in the drop off queue, prefer to park and walk their child to the door. The revised pattern reduces the availability of this option, potentially adding to the queue line demand. It is also noted that the queue area, even if the additional parent stacking area is used, is shorter than the current queuing area.
 - c. During the afternoon dismissal peak, parents park their vehicles and walk to the door to pick up their children. As a result, queues do not extend into Garfield Avenue. It was

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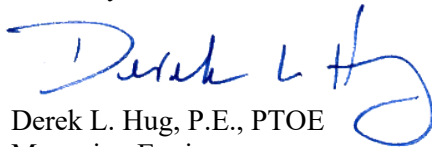
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noted during Pare's site observations that far more than 23 parent vehicles are on-site at dismissal, although a specific count was not taken. Under the revised circulation pattern, where will all these excess vehicles go? It appears this revised pattern has the potential to cause significant queues that would spill over into Garfield Avenue during the dismissal peak, potentially for an extended period of time.

11. *Proposed Parking Section:* While a detailed count was not made of staff parking, it is estimated that approximately 100 staff vehicles were on-site during Pare's observations. The paved play area may be needed for staff parking immediately. In the short term, will excess staff parking be able to use the open parking on the adjacent parcels? In addition, roughly 30 parked parent vehicles were observed during the morning arrival peak and well in excess of 50 parked parent vehicles were observed at dismissal. The 23 proposed parent spaces will not serve current demand and will force additional parents into drop-off and pick-up queues.
12. *Sight Distance Analysis Section:* Pare agrees there is ample sight distance from the driveway to the school.
13. *Conclusions Section:*
 - a. Pare concurs with the conclusion that the proposed addition will not present additional capacity concerns at area intersections, as the proposed addition is for amenities for existing students, not to accommodate additional students or staff.
 - b. Pare has significant concerns about the effect of the proposed circulation changes, especially during the afternoon dismissal period. Pare believes there is significant risk that without the use of the northern lot, there will be significant queues just before dismissal that have the potential to significantly affect the intersection of the school driveway and Garfield Street that could also potentially spill over into Route 10.
14. *Recommendations Section:* Pare generally concurs with the recommendations listed, but believes more may need to be done to prevent queues from extending into Garfield Avenue, especially during the dismissal peak period.

We hope that this review is helpful in the Planning Commission's review of the proposed development application. If you have any questions, feel free to reach out to me.

Sincerely,

A handwritten signature in blue ink that reads 'Derek L. Hug'.

Derek L. Hug, P.E., PTOE
Managing Engineer

DLH/