



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. Box 778
DOVER, DELAWARE 19903

SHAILEN P. BHATT
SECRETARY

MEMORANDUM

TO: Leonard Massotti, Sussex County Subdivision Coordinator

FROM: Troy Brestel, Project Engineer 

DATE: August 1, 2012

SUBJECT: **Laurel School District – New Middle / High School
Results of Traffic Operational Analysis**

We have conducted a traffic operational analysis (TOA) for the proposed middle / high school in the Town of Laurel. The analysis evaluates the traffic impacts of the proposed school, to be located on Central Avenue (Sussex Road 13), south of Oak Lane. The proposed development would combine the existing 700-student middle school with the existing 700-student high school onto the same site which the existing high school currently occupies. Three access points are proposed for this project: one full access on Central Avenue, one exit-only access onto Central Avenue, and one bus-specific entrance on Oak Lane. Construction is expected to be complete by 2014.

Based on our review, we find that the intersection of Central Avenue / Oak Lane as well as the site entrances along Central Avenue and Oak Lane will operate at level of service (LOS) D or better during the weekday school peak hours in the existing and future conditions, and would meet the LOS criteria listed in our Standards and Regulations for Subdivision Streets and State Highway Access.

Should the school district choose to develop the property per the proposed land use listed above, we recommend that a southbound left-turn lane and a northbound right-turn lane be constructed at the north school entrance on Central Avenue. Due to the proximity of this entrance to the post office north of the site, the school district should coordinate with our Subdivision Section on the design of these turn lanes.

Mr. Leonard Massotti
August 1, 2012
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Please note that this analysis generally focuses on capacity and level of service issues. Level of Service tables for the existing and future cases are attached with this memorandum.

TB:km

cc: Patrick Vanderslice, President, Laurel School District Board of Education
Jamie Smith, Operations Manager, Town of Laurel
T. William Brockenbrough, Jr., County Coordinator, Development Coordination
J. Marc Cote', Subdivision Engineer, Development Coordination
Derek Sapp, Subdivision Manager, Development Coordination
W. Paul Hogge, Project Engineer, Development Coordination
Naa-Atswei Tetteh, Traffic Engineer, Traffic, DOTS

Table 1
PEAK HOUR LEVELS OF SERVICE (LOS)
Laurel School District - TOA
Prepared by DelDOT

Unsignalized Intersection ¹	LOS per DelDOT	
	Weekday AM	Weekday PM
Central Avenue / North Site Entrance		
2014 with development		
Westbound Site Entrance	C (15.1)	B (11.7)
Southbound Central Avenue Left-Turn	A (8.9)	A (8.0)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 2
PEAK HOUR LEVELS OF SERVICE (LOS)
Laurel School District - TOA
Prepared by DelDOT

Unsignalized Intersection ¹	LOS per DelDOT	
	Weekday AM	Weekday PM
Central Avenue / South Site Exit		
2014 with development		
Westbound Site Entrance	B (10.4)	B (10.6)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 3
PEAK HOUR LEVELS OF SERVICE (LOS)
Laurel School District - TOA
Prepared by DelDOT

Unsignalized Intersection ¹	LOS per DelDOT	
	Weekday AM	Weekday PM
Oak Lane / Bus Entrance		
2014 with development		
Westbound Oak Lane Left-Turn	A (8.2)	A (8.4)
Northbound Site Entrance	B (10.2)	B (10.6)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 4
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Laurel School District - TOA
 Prepared by DelDOT

Unsignalized Intersection ¹	LOS per DelDOT	
	Weekday AM	Weekday PM
Central Avenue / Oak Lane		
2012 Existing (without school traffic)		
Eastbound Dutch Inn Entrance	A (9.7)	B (10.2)
Westbound Oak Lane	A (9.6)	B (10.8)
Northbound Central Avenue Left-Turn	A (7.4)	A (7.5)
Southbound Central Avenue Left-Turn	A (7.5)	A (7.6)
2014 with development		
Eastbound Dutch Inn Entrance	B (14.0)	B (12.7)
Westbound Oak Lane	C (15.5)	C (15.5)
Northbound Central Avenue Left-Turn	A (8.1)	A (7.7)
Southbound Central Avenue Left-Turn	A (8.2)	A (8.6)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.