



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
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JENNIFER COHAN
SECRETARY

MEMORANDUM

TO: Will Mobley, New Castle County Subdivision Manager

FROM: Troy Brestel, Project Engineer TEB

DATE: January 31, 2018

SUBJECT: Newark Commons - Daycare
Results of Traffic Operational Analysis Review

We have reviewed the traffic operational analysis (TOA) for the proposed Newark Commons Daycare (Tax Parcel 09-015.00-011) in New Castle County by Landmark Science & Engineering (LSE) and dated October, 2018. The analysis evaluates the traffic impacts of the daycare, proposed to be located on Delaware Route 273 in New Castle County. The proposed development would consist of a 10,000 square foot daycare. One rights-in, rights-out access to the site would be located on Delaware Route 273. Construction is expected to be complete by 2020.

Based on our review, we find that all of the intersections analyzed would operate at level of service (LOS) D or better during the a.m. and p.m. peak hours for both present and future conditions, and would meet the LOS criteria listed in Chapter 2 of the Development Coordination Manual.

Mr. Will Mobley
January 31, 2019
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Please note that this analysis generally focuses on capacity and level of service issues. Other comments relating to bicycle, pedestrian, and frontage improvements may be made during the plan review process. Level of Service tables for the existing and future cases are attached with this memorandum.

TB:km

Enclosures

cc: Ted Williams, Landmark Science and Engineering, Inc.
George Haggerty, New Castle County Department of Land Use
Owen Robatino, New Castle County Department of Lane Use
J. Marc Coté, Assistant Director, Development Coordination
T. William Brockenbrough, Jr., County Coordinator, Development Coordination
Matthew Vincent, Canal District Public Works Engineer, Canal District, DOTS
Claudy Joinville, Project Engineer, Development Coordination

Table 1
PEAK HOUR LEVELS OF SERVICE (LOS)
Newark Commons Daycare - TOA
Prepared by Landmark Science and Engineering, Inc.

Unsignalized Intersection¹	LOS per TOA		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Delaware Route 273 / Site Entrance				
2020 with development				
Southbound Site Entrance	N/A	N/A	C (15.1)	D (25.6)

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)
 Newark Commons Daycare - TOA
 Prepared by Landmark Science and Engineering, Inc.

Signalized Intersection²	LOS per TOA		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Delaware Route 273 / Stafford Way / White Clay Center Drive				
2018 Existing	A (10.0)	B (14.2)	B (10.4)	B (13.9)
2020 without development	B (10.0)	B (17.1)	B (10.6)	B (16.7)
2020 with development	B (10.9)	B (20.0)	B (11.4)	B (19.2)

² The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 3
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Newark Commons Daycare - TOA
 Prepared by Landmark Science and Engineering, Inc.

Unsignalized Intersection ³	LOS per TOA		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Delaware Route 273 / Garden Center Entrance / Main entrance to Armed Forces Reserve Center				
2018 with development				
Eastbound Delaware Route 273 left-turn	B (N/A)	C (N/A)	B (13.6)	C (21.1)
Northbound Armed Forces entrance	B (N/A)	B (N/A)	B (12.3)	B (12.5)
Southbound Garden Center Entrance	B (N/A)	C (N/A)	B (12.7)	C (16.1)
2020 with development				
Eastbound Delaware Route 273 left-turn	B (N/A)	D (N/A)	B (14.8)	D (29.0)
Northbound Armed Forces entrance	B (N/A)	B (N/A)	B (13.4)	B (13.6)
Southbound Garden Center Entrance	B (N/A)	C (N/A)	B (13.2)	C (19.0)
2020 with development				
Eastbound Delaware Route 273 left-turn	C (N/A)	D (N/A)	C (15.5)	D (31.3)
Northbound Armed Forces entrance	B (N/A)	B (N/A)	B (13.8)	B (14.2)
Southbound Garden Center Entrance	B (N/A)	C (N/A)	B (13.6)	C (19.7)

³ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 4
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Newark Commons Daycare - TOA
 Prepared by Landmark Science and Engineering, Inc.

Unsignalized Intersection⁴	LOS per TOA		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Delaware Route 273 / Secondary entrance to Armed Forces Reserve Center				
2018 with development				
Westbound Delaware Route 273 left-turn	B (N/A)	C (N/A)	B (11.7)	C (18.0)
Northbound Armed Forces Entrance	B (N/A)	B (N/A)	B (13.8)	B (12.6)
2020 with development				
Westbound Delaware Route 273 left-turn	B (N/A)	C (N/A)	B (13.2)	C (21.9)
Northbound Armed Forces Entrance	C (N/A)	B (N/A)	C (15.3)	B (13.6)
2020 with development				
Westbound Delaware Route 273 left-turn	C (N/A)	D (N/A)	C (21.1)	D (30.1)
Northbound Armed Forces Entrance	C (N/A)	B (N/A)	C (15.3)	B (13.6)

⁴ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.