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

NICOLE MAJESKI
SECRETARY

July 19, 2021

Mr. Michael Kaszyski, Jr.
Duffield Associates
5400 Limestone Road
Wilmington, DE 19808

Dear Mr. Kaszyski:

The enclosed Traffic Impact Study (TIS) review letter for the proposed **1800 Naamans Road** (Tax Parcel: 06-034.00-005) development has been completed under the responsible charge of a registered professional engineer whose firm is authorized to work in the State of Delaware. They have found the TIS to conform to DelDOT's Development Coordination Manual and other accepted practices and procedures for such studies. DelDOT accepts this letter and concurs with the recommendations. If you have any questions concerning this letter or the enclosed review letter, please contact me at (302) 760-2124.

Sincerely,

Claudy Joinville
Project Engineer

CJ:km
Enclosures
cc with enclosures: Mr. David L. Edgell, Office of State Planning Coordination
Mr. Spencer Qualls, SJQ1800, LLC
Mr. David Qualls, SJQ1800, LLC
Mr. Brian Clarke, Duffield Associates, Inc
Mr. Bradford Shockley, New Castle County Department of Land Use
Mr. Owen C. Robatino, New Castle County Department of Land Use
Mr. Andrew Parker, McCormick Taylor, Inc.
DelDOT Distribution

DelDOT Distribution

Brad Eaby, Deputy Attorney General
Shanté Hastings, Deputy Secretary
J. Marc Coté, Director, Planning
Mark Luszcz, Deputy Director, DOTS
Pamela Steinebach, Chief, Project Development North, DOTS
Todd Sammons, Assistant Director, Development Coordination
T. William Brockenbrough, Jr., County Coordinator, Development Coordination
Peter Haag, Chief Traffic Engineer, Traffic, DOTS
Wendy Polasko, Subdivision Engineer, Development Coordination
LaTonya Gilliam, North District Engineer, North District
Brian Schilling, Canal District Engineer, Canal District
Matthew Vincent, Canal District Public Works Engineer, Canal District
Jared Kaufmann, Service Development Planner, Delaware Transit Corporation
Anthony Aglio, Planning Supervisor, Statewide & Regional Planning
Sireen Muhtaseb, New Castle Review Coordinator, Development Coordination
Thomas Gagnon, Subdivision Manager, Development Coordination
Mark Galipo, Traffic Engineer, Traffic, DOTS
Troy Brestel, Project Engineer, Development Coordination
Annamaria Furmato, Project Engineer, Development Coordination

McCORMICK TAYLOR

July 19, 2021

Mr. Claudy Joinville
Project Engineer
DelDOT Division of Planning
P.O. Box 778
Dover, DE 19903

RE: Agreement No. 1946F
Traffic Impact Study Services
Task No. 2A Subtask 03A – 1800 Naamans Road

Dear Mr. Joinville:

McCormick Taylor has completed its review of the Traffic Impact Study (TIS) for the 1800 Naamans Road development prepared by Duffield Associates, LLC dated April 2021. Duffield Associates prepared the report in a manner generally consistent with DelDOT's Development Coordination Manual.

The TIS evaluates the impacts of the proposed 1800 Naamans Road development, proposed to be located on the south side of Naamans Road (Delaware Route 92 / New Castle Road 17) approximately 700 feet west of Marsh Road (Delaware Route 3 / New Castle Road 23) in New Castle County. The proposed development would consist of a 5,585 square-foot convenience store with gas pumps along with 16,420 square feet of retail space. This proposed use of the site would replace an existing development consisting of a 26,033 square-foot fitness club, a 5,000 square-foot small office, and a 3,588 square-foot medical office. One unsignalized right-in/right-out/left-in driveway is proposed on Naamans Road. The proposed access currently exists and serves the existing uses to be replaced. Construction is expected to be complete by 2022.

The subject land is located on an approximately 4.51 acre parcel. The land is zoned CN (Commercial Neighborhood) in New Castle County, and the developer does not plan to rezone the land.

Currently, there are no active DelDOT projects within the study area.

Based on our review, we have the following comments and recommendations:

The proposed 1800 Naamans Road development would meet the New Castle County Level of Service (LOS) Standards as stated in Section 40.11.210 of the Unified Development Code (UDC), for all intersections included in the scope of study.

However, as shown in the table below, based on the criteria listed in Chapter 2 of DelDOT's *Development Coordination Manual*, one intersection may exhibit LOS deficiencies without the implementation of physical roadway and/or traffic control improvements. The potential LOS deficiencies are on the stop-controlled minor street approach at the site access. Because this

unsignalized intersection is controlled by a stop sign on only the minor street approach, the deficiencies pertain to that approach only, and the intersection is not subject to New Castle County's concurrency requirements.

Intersection	*Existing Traffic Control*	*Situations for which deficiencies occur*
Naamans Road and Site Access	Unsignalized	2022 with development PM (Case 3)

Naamans Road and Site Access

This unsignalized intersection experiences a LOS deficiency in the PM peak hour during 2022 with development conditions. The deficiency is less than five seconds into the LOS E range for the northbound site driveway approach (right-turn only), with a 95th percentile queue length of approximately six vehicles (150 feet). Because this is a relatively minor deficiency which is only anticipated to occur during the PM peak hour, the queues are internal to the site itself, and there appear to be no viable means to address the deficiency via intersection modifications, no additional improvements are recommended at this intersection beyond those described below in Item 2.

Naamans Road Site Frontage

Along the Naamans Road site frontage there are existing bicycle and pedestrian facilities, but these facilities don't meet current standards. Perhaps this is because standards were different when they were installed, but there are also constraints present that may have led to alternate designs. The bicycle lane on Naamans Road is not appropriately striped through the right-turn lane at the site access, and there does not appear to be adequate width available to continue the bicycle lane through the turn lane without widening Naamans Road. The existing sidewalk does not have the required five-foot buffer from the roadway, which also true along almost the entire length of the Naamans Road corridor. To achieve the desired buffer between roadway and sidewalk along the Naamans Road corridor, DelDOT Bridge 52B over Naamans Creek would need to be widened and the wetlands on the south side of the road would be impacted. The subject site's stormwater management facilities and parking would also be affected. As noted below in Items 4a and 4f, the substandard bicycle lane and sidewalk along the site frontage may need to be improved and the developer should coordinate with DelDOT's Subdivision Section regarding specific requirements.

Should the County choose to approve the proposed development, the following items should be incorporated into the site design and reflected on the record plan by note or illustration. All applicable agreements (i.e. letter agreements for off-site improvements and traffic signal agreements) should be executed prior to entrance plan approval for the proposed development.

1. The developer shall improve the State-maintained road(s) on which they front (Naamans Road), within the limits of their frontage, to meet DelDOT's standards for their Functional Classification as found in Section 1.1 of the Development Coordination Manual and elsewhere therein. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. Frontage is defined in Section 1 of the Development Coordination Manual, which states "This length includes

the length of roadway perpendicular to lines created by the projection of the outside parcel corners to the roadway." Questions on or appeals of this requirement should be directed to the DelDOT Subdivision Review Coordinator in whose area the development is located.

2. The developer of 1800 Naamans Road should maintain the existing right-in/right-out/left-in site access on Naamans Road. The proposed configuration of the fully-improved intersection is shown in the table below, which includes improvements that are needed when the proposed Brandywine Pavilion development is constructed on the north side of Naamans Road (across from the subject development) and adds a fourth leg to the intersection.

Approach	Existing Configuration	Proposed Configuration
Northbound Site Access	One right-turn only lane	One right-turn only lane
Southbound future Brandywine Pavilion Access	Approach does not exist (stub only)	One right-turn only lane (to be added by Brandywine Pavilion)
Eastbound Naamans Road	One u-turn lane, two through lanes, and one right-turn lane	One left-turn lane, two through lanes, and one right-turn lane
Westbound Naamans Road	One left-turn lane and two through lanes	One left-turn lane, two through lanes, and one right-turn lane (to be added by Brandywine Pavilion)

As shown above, at this time no changes to the existing lane configurations at the site access intersection are recommended to be made by the developer of 1800 Naamans Road.

Initial recommended minimum turn-lane lengths (excluding tapers) of the separate turn lanes are listed below. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn-lane lengths and other design details during the site plan review.

Approach	Left-Turn Lane	Right-Turn Lane
Northbound Site Access	N/A	N/A
Southbound future Brandywine Pavilion Access	N/A	N/A
Eastbound Naamans Road	185 feet *	290 feet *
Westbound Naamans Road	235 feet *	290 feet **

* Length based on DelDOT's *Auxiliary Lane Worksheet*, using maximum allowable AADT for Naamans Road. Existing turn-lane length is nearly equivalent to, or in excess of, the recommended minimum turn-lane length. However due to high AADT on Naamans Road, additional discussion with DelDOT's Development Coordination Section is required.

** Length based on DelDOT's *Auxiliary Lane Worksheet*, using maximum allowable AADT for Naamans Road. The westbound right-turn lane should be the responsibility of the developer of Brandywine Pavilion.

3. The developer should provide a cross-access easement along their eastern property boundary to allow for a potential future interconnection to be made by the owner of the adjoining shopping center when that parcels redevelops.

4. The following bicycle, pedestrian and transit improvements should be included:

   a. Per the DelDOT Development Coordination Manual section 5.2.9.2, bicycle lanes are required where right turn lanes are being installed. No new right-turn lanes are being installed by the 1800 Naamans Road developer, but the existing right-turn lane on eastbound Naamans Road at the site access is being maintained. The bicycle lane in this location is substandard and its improvement may be required. The developer should coordinate with DelDOT's Subdivision Section regarding specific requirements.

   b. Appropriate bicycle symbols, directional arrows, pavement markings, and signing should be included along bicycle facilities and turn lanes within the project limits.

   c. Utility covers should be made flush with the pavement.

d. Bicycle parking should be provided near building entrances. Where building architecture provides for an awning, other overhang, or indoor parking, the bicycle parking should be covered.

e. A minimum 15-foot wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT within the site frontage along Naamans Road.

f. The existing sidewalk within the easement along the Naamans Road site frontage is substandard and its improvement may be required. The developer should coordinate with DelDOT's Subdivision Section regarding specific requirements.

g. ADA compliant curb ramps and crosswalks should be provided at all pedestrian crossings, including all site entrances. Type 3 curb ramps are discouraged.

h. Internal sidewalks for pedestrian safety and to promote walking as a viable transportation alternative should be constructed within the development. These sidewalks should each be a minimum of five-feet wide (with a minimum of a five-foot buffer from the roadway) and should meet current AASHTO and ADA standards. Internal sidewalks in the development should connect to the sidewalk along Naamans Road.

i. Where internal sidewalks are located alongside of parking spaces, a buffer should be added to prevent vehicular overhang onto the sidewalk.

j. The developer should coordinate with the Delaware Transit Corporation (DTC) regarding design and construction of the bus stop pad at the location of the existing bus stop in the Naamans Road site frontage, just east of the site access.

k. The developer should coordinate with DTC and DelDOT regarding the need to maintain an area along eastbound Naamans Road for the bus to pull out of the through lanes when stopped at the bus stop. Coordination of this element may find that the proposed design will suffice, or it may result in the need to design and implement striping modifications and/or widening along eastbound Naamans Road.

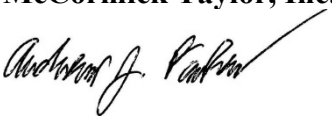
Improvements in this TIS may be considered "significant" under DelDOT's *Work Zone Safety and Mobility Procedures and Guidelines*. These guidelines are available on DelDOT's website at http://deldot.gov/Publications/manuals/de_mutcd/index.shtml.

Please note that this review generally focuses on capacity and level of service issues; additional safety and operational issues will be further addressed through DelDOT's site plan review process.

Additional details on our review of this TIS are attached. Please contact me at (610) 640-3500 or through e-mail at ajparker@mccormicktaylor.com if you have any questions concerning this review.

Sincerely,

McCormick Taylor, Inc.



Andrew J. Parker, PE, PTOE
Project Manager

Enclosure

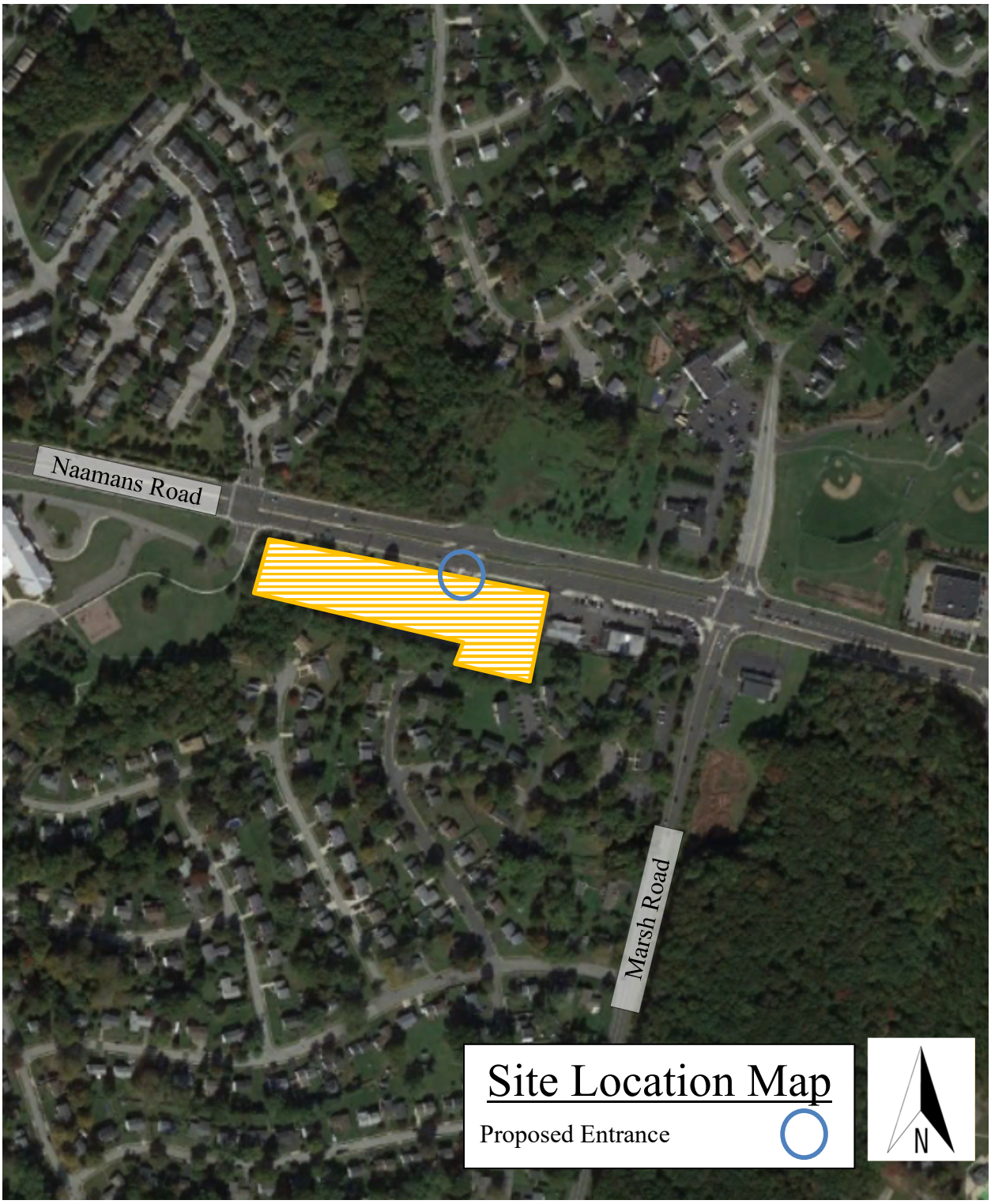
General Information

Report date: April 2021
Prepared by: Duffield Associates, Inc.
Prepared for: SJQ 1800, LLC
Tax parcel: 06-034.00-005
Generally consistent with DelDOT's Development Coordination Manual: Yes

Project Description and Background

Description: The proposed 1800 Naamans Road development consists of a 5,585 square-foot convenience store with gas pumps along with 16,420 square feet of retail space. This proposed use of the site would replace an existing development consisting of a 26,033 square-foot fitness club, a 5,000 square-foot small office, and a 3,588 square-foot medical office.
Location: The land is located on the south side of Naamans Road (Delaware Route 92 / New Castle Road 17) approximately 700 feet west of Marsh Road (Delaware Route 3 / New Castle Road 23) in New Castle County. A site location map is included on page 8.
Amount of land to be developed: approximately 4.51 acre parcel
Land use approval(s) needed: Subdivision approval. The land is zoned CN (Commercial Neighborhood) in New Castle County, and the developer does not plan to rezone the land.
Proposed completion year: 2022
Proposed access locations: One unsignalized right-in/right-out/left-in driveway is proposed on Naamans Road. The proposed access currently exists and serves the existing uses to be replaced.
Daily Traffic Volumes (per DelDOT Traffic Summary 2019):

- 2019 Average Annual Daily Traffic on Naamans Road: 25,198 vehicles/day


Naamans Road
Marsh Road
Site Location Map
Proposed Entrance
N

2020 Delaware Strategies for State Policies and Spending

Location with respect to the Strategies for State Policies and Spending Map of Delaware: The proposed 1800 Naamans Road development is located within Investment Level 1.

Investment Level 1
Investment Level 1 Areas are often municipalities, towns, or urban/urbanizing places in counties. Density is generally higher than in the surrounding areas. There are a variety of transportation opportunities available. Buildings may have mixed uses, such as a business on the first floor and apartments above.

In Investment Level 1 Areas, state investments and policies should support and encourage a wide range of uses and densities, promote a variety of transportation options, foster efficient use of existing public and private investments, and enhance community identity and integrity. Overall, it is the State's intent to use its spending and management tools to maintain and enhance community character, to promote well-designed and efficient new growth, and to facilitate redevelopment in Investment Level 1 Areas. These areas would be a prime location for designating "pre-permitted areas" to help steer development where the local government and citizens are most prepared to accept it.

Proposed Development's Compatibility with Strategies for State Policies and Spending:
The proposed 1800 Naamans Road project consists of a convenience store with gas pumps and a small retail space developed in an Investment Level 1 area. Investment Level 1 supports this type of development. As such, the proposed development appears to comply with the guidelines set forth in the 2020 "Strategies for State Policies and Spending".

Comprehensive Plan

New Castle County Comprehensive Plan:
(Source: New Castle County Comprehensive Plan, Updated June 2012)

The New Castle County Comprehensive Plan 2012 Future Land Use Map indicates that the proposed development is located entirely within the Office/Commercial/Industrial Development Area (OCI).

The New Castle County Comprehensive Plan indicates that a combination of Centralized Southern Growth and Northern New Castle County Redevelopment (which calls for directing more of the future growth into the infill and Office/Commercial/Industrial (OCI) Development Areas north of the canal) is the most cost-effective, environmentally prudent and infrastructurally efficient manner to meet the County's future growth needs.

Proposed Development's Compatibility with Comprehensive Plan: The proposed 1800 Naamans Road project includes a convenience store with gas pumps and retail space approximately 4.5 acre lot. The land is currently zoned as CN (Commercial Neighborhood). The developer does not plan to rezone the land. The scale and intensity of development in the CN district is intended to ensure that uses primarily serve the surrounding neighborhoods and reflect

their suburban character. Roof design and landscaping are intended to reinforce the compatibility of these uses with surrounding neighborhoods. Size and spacing of this district is regulated to ensure that strip commercial development that serves highway traffic or regional uses is not promoted. The New Castle County Comprehensive Plan 2012 Future Land Use Map indicates that the proposed development parcel is within the Office/Commercial/Industrial Development Area (OCI) Area. The proposed development appears to comply with the New Castle County's Comprehensive Plan 2012 as well as the CN zoning.

Relevant Projects in the DelDOT Capital Transportation Program

Currently, there are no active DelDOT projects within the study area.

Trip Generation

Trip generation for the proposed development was computed using comparable land uses and equations contained in Trip Generation, Tenth Edition, published by the Institute of Transportation Engineers (ITE). The following land use was utilized to estimate the amount of new traffic generated for this development:

- 5,585 square-foot super convenience market/gas station (ITE Land Use Code 960)
- 16,420 square-foot shopping center (ITE Land Use Code 820)

Table 1
1800 NAAMANS ROAD PEAK HOUR TRIP GENERATION

Land Use	**Weekday AM Peak Hour**			**Weekday PM Peak Hour**		
	In	Out	Total	In	Out	Total
5,585 sf convenience market with gas pumps	251	252	503	194	194	388
Passby Trips	-190	-191	-381	-147	-147	-294
16,420 sf shopping center	9	6	15	69	74	143
Passby Trips	0	0	0	-23	-25	-48
TOTAL TRIPS	**70**	**67**	**137**	**93**	**96**	**189**

Overview of TIS

Intersections examined:

1) Naamans Road & Site Access
2) Naamans Road & Marsh Road

Conditions examined:

1) 2021 Existing (Case 1)
2) 2022 No-Build (Case 2)
3) 2022 Build (Case 3)

Peak hours evaluated: Weekday morning and evening peak hours

Committed developments considered:

1) Darley Green (US 13 north side & Darley Road west side): Unbuilt 3 single-family detached houses, 38 duplexes, 138 townhouses, 60 stacked townhouses (2-over-2), 38 manor houses, 8 apartments, and 8,000 square feet of retail
2) Presidential Towers (Society Drive outer side): Unbuilt 115 apartments
3) Society Office Complex (Society Drive outer side): Unbuilt 6,200 SF general office space
4) Brandywine Pavilion (SR 92 north side & SR 3 west side): Unbuilt 36,682 SF office space, 18,068 SF retail, and 13 apartments
5) Wilmington University – Brandywine Campus (southwest side of SR 202 and SR 92): 200,000 SF / 1,000 Student University

Intersection Descriptions

1) **Naamans Road & Site Access**
   Type of Control: unsignalized right-in/right-out/left-in intersection
   Northbound Approach: (Site Access) one right-turn only lane, stop controlled
   Eastbound Approach: (Naamans Road) one u-turn lane (also for future left turns into Brandywine Pavilion development), two through lanes, and one right-turn lane
   Westbound Approach: (Naamans Road) one left-turn lane and two through lanes. In the future, one right-turn lane will be added for the Brandywine Pavilion access.
   Southbound approach: (future Brandywine Pavilion access) approach is currently only a stub, but will be one right-turn only lane, stop-controlled

2) **Naamans Road & Marsh Road**
   Type of Control: signalized
   Northbound Approach: (Marsh Road) one left-turn lane, one through lane, and one channelized right-turn lane
   Southbound Approach: (Marsh Road) one left-turn lane, one through lane, and one channelized right-turn lane
   Eastbound Approach: (Naamans Road) one left-turn lane, two through lanes, and one channelized right-turn lane
   Westbound Approach: (Naamans Road) one left-turn lane, two through lanes, and one channelized right-turn lane

Safety Evaluation

Crash Data: Delaware Crash Analysis Reporting System (CARS) data was provided in Appendix E of the TIS for the three-year period from December 2017 through December 2020. The crash data shows that at/near the intersection of Naamans Road & Marsh Road, there were 37 crashes over those three years, with 3 crashes resulting in at least one injured person. There were no fatal crashes. 16 of the crashes were rear-ends, 3 were head-on crashes, 7 were angle crashes, 8 were sideswipes, and 3 were single-vehicle crashes (run-off-the-road).

Sight Distance: The proposed site access on Naamans Road is located on a divided highway and allows for right-in/right-out/left-in movements. Naamans Road is straight and flat in this area, so there is ample sight distance for drivers looking west (left) when entering or exiting the proposed development. As always adequacy of available sight distance should be confirmed during the site plan review process for all proposed movements at the site access. Aside from the site access, the study area generally consists of relatively flat roadways and there are few visual obstructions. Sight distance appears adequate throughout the study area.

Transit, Pedestrian, and Bicycle Facilities

Existing transit service: Based on the current DART Bus Stop Map, the Delaware Transit Corporation (DTC) currently operates one bus route that travels through the study area. Bus Route 61 provides weekday service along Naamans Run and includes a stop along eastbound Naamans Road in the site frontage, just east of the site driveway.

Planned transit service: Site plans for the proposed development include a bus stop pad in the location of the existing bus stop in the Naamans Road site frontage, just east of the site access. DTC has requested that area be maintained along eastbound Naamans Road for the bus to pull out of the through lanes when stopped at the bus stop, and that bus users have a pedestrian pathway to and from the site that doesn't require them to walk in the vehicular driveway. It is noted that a contiguous sidewalk from the bus stop into the site is shown on the plans included in the TIS.

Existing bicycle and pedestrian facilities: The following study area roadways are identified as "Bicycling Routes" on the *New Castle County Bicycle Map* published by DelDOT:

- Naamans Road:
  - Regional Bicycle Route with bikeway
  - Over 10,000 vehicles daily
- Marsh Road:
  - Connector Bicycle Route with bikeway

There are existing sidewalks on both sides of the road within this stretch of Naamans Road. There are crosswalks and ped signals at the intersection of Naamans Road & Marsh Road, and limited sidewalks on both legs of Marsh Road. There are dedicated bike lanes in both directions along Naamans Road.

Planned bicycle and pedestrian facilities: Given the existing facilities to remain, no additional bicycle or pedestrian facilities are planned along Naamans Road.

Previous Comments

In a review letter dated March 29, 2021, DelDOT indicated that the Preliminary TIS was acceptable as submitted.

It appears that all substantive comments from DelDOT's TIS Scoping Memorandum, Traffic Count Review, revised Traffic Count Review, Preliminary TIS Review, and other correspondence were addressed in the Final TIS submission.

General HCS Analysis Comments
(see table footnotes on the following pages for specific comments)

1) Both Duffield Associates and McCormick Taylor utilized Highway Capacity Software (HCS) version 7.8 to complete the traffic analyses.

2) For all intersections, McCormick Taylor conservatively applied heavy vehicle factors (HV) by movement of 3% for all movements. McCormick Taylor assumed future HV to be the same as existing HV at all intersections. 3% was used per guidance in DelDOT's Development Coordination Manual, given that existing turning movements counts for this TIS were from 2013 (recent counts could not be conducted due to Covid-19). The data from the 2013 counts showed HV of less than 3% for all movements, so using 3% is a conservative approach. Duffield Associates also used 3% for HV for the site access intersection, but it is unknown what they used for the signalized intersection because their HCS reports did not show that input.

3) Due to the age of the raw count data, PHFs were determined as per guidance in DelDOT's Development Coordination Manual section 2.2.8.11.6.F, which resulted in a PHF of 0.92 for both intersections in both peak hours, for existing and future conditions.

4) For analyses of signalized intersections, McCormick Taylor used a base saturation flow rate of 1,900 pc/hr/ln per DelDOT's Development Coordination Manual.

5) The TIS and McCormick Taylor used different signal timings when analyzing the signalized intersection.

6) For analyses of all intersections, the TIS assumed 0% grade for all movements. McCormick Taylor conservatively assumed 2% grade for all movements.

Table 2
Peak Hour Levels of Service (LOS)
Based on 1800 Naamans Road Traffic Impact Study – April 2021
Prepared by Duffield Associates, LLC

Unsignalized Intersection [1] **Two-Way Stop (right-in/right-out/left-in)**	**LOS per TIS**		**LOS per McCormick Taylor**	
Naamans Road & **Site Access**	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2022 With Development (Case 3)				
Northbound Site Access – Rights	C (15.7)	E (35.1)	C (16.1)	E (38.6) [2]
Southbound Brandywine Pavilion – Rights	B (12.7)	C (18.2)	B (12.9)	C (18.9)
Eastbound Naamans Road - Lefts	B (11.3)	B (14.7)	B (11.3)	B (14.7)
Westbound Naamans Road – Lefts	B (11.0)	C (17.2)	B (11.0)	C (17.2)

[1] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[2] For the Case 3 PM scenario, the 95th percentile queue length on the northbound site access approach is approximately 6 vehicles.

Table 3
Peak Hour Levels of Service (LOS)
Based on 1800 Naamans Road Traffic Impact Study – April 2021
Prepared by Duffield Associates, LLC

Signalized Intersection [3]	**LOS per TIS**		**LOS per McCormick Taylor**	
Naamans Road & Marsh Road	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2021 Existing Condition (Case 1)	C (24.2)	C (31.3)	C (28.0)	C (34.4)
2022 Without Development (Case 2)	C (25.2)	D (38.7)	C (28.6)	D (38.9)
2022 With Development (Case 3)	C (29.5)	D (52.1)	C (32.8)	D (53.6)

[3] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.