COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
87 Deacon Road
Fredericksburg, VA 22405

DAVID S. EKERN P.E.
COMMISSIONER

October 22, 2007

Re: Aquia Towne Center
Stafford County

County of Stafford
P.O. Box 339
Stafford, VA 22554-0339
Attn: Mike Zuraf

Dear Mr. Zuraf:

I am forwarding to you the comments from The Fredericksburg District Planning Department for the above mentioned project.

Note: Traffic Engineer comments will be forwarded when they are received by this office.

If further information is desired, please call our office at (540) 899-4202.

Sincerely,

Clyde Hamrick
Fredericksburg District
Land Development Manager

cc: Fulton deLamorton
Jamie Steopwany
Jeff Harvey
Clark Leming

VDOT Fredericksburg District Office – Planning Office

87 Deacon Road
Fredericksburg, Virginia 22405

Preliminary Comments on Town Center at Aquia TIA

October 9, 2007

Prepared by: Eric Vogel, District Planning program Manager
Eric.vogel@vdot.virginia.gov; 540-899-4280

Material Reviewed

- Traffic Impact Study, Wells & Assoc., August 2007

Introduction

This review addresses the offsite impacts of the proposed Town Center at Aquia development on the road network in Stafford County. It does not address the internal street system or detail engineering issues. These will be addressed at a later stage in the project development process. Please note this traffic impact analysis (TIA) is not subject to the requirements of "Chapter 527" recently passed by the General Assembly. A Chapter 527 review would likely have required a larger analysis area and a longer time period for the analysis. The requirements of Chapter 527 do not go into effect in VDOT's Fredericksburg District until January 2008. The TIA submitted for review has been determined by this office to be adequate to discuss the transportation impacts of the proposed development.

Project Summary

The application before the County is for the redevelopment of the Aquia Towne Center, located in the southeast quadrant of the Route 1 / Route 610 intersection near I-95. The proposed redevelopment of an existing 224,447 square feet of the shopping center will produce a net gain of 109,000 square feet of retail, 289,000 square feet of office, and 350 residential condominiums. According to the applicant's TIA, this increase will result in a net increase of 6800 daily trips at the site, for a total of more than 15,000 daily trips on the average weekday. Please note that this does not include 75,000 square feet of retail and 105,000 square feet of office space contained on the 36 acre site and controlled by others. The project is proposed as a Planned Traditional Neighborhood Development, to include a mix of uses and travel demand strategies that are aimed at reducing the number of vehicle trips. The TIA notes that several individual movements at key intersections in the immediate vicinity of the proposed development currently operate at unacceptable levels of service, including the overall intersection at Route 1 and Route 610, which currently has an average PM peak hour delay of nearly 3 minutes. This situation will

worsen considerably as the proposed project and other approved developments in this portion of the County, and general background traffic growth materialize.

Transportation Concerns

Area Road Network

The performance of the road network is an important quality of life issue to existing and future residents, regional mobility, and sustainable economic vitality. This section of the review examines existing and projected performance at key locations of the network.

1. This area currently performs under congested conditions during the peak periods of the day, with unacceptable performance at the intersection of Route 1 (Jefferson Davis Highway) and Route 610 (Garrisonville Road) at Washington Street (AM at LOS E and PM at LOS F with 177 seconds of average delay) . It is noted by this reviewer that in the early 1990s, a publicly funded $26 million VDOT project improved the interchange with I-95 at Routes 1 and 610. No road improvements are currently programmed for this area.
2. The TIA notes that the performance of the area road network continues to deteriorate with traffic from other developments, through travel, and the proposed development. By the build-out year of the proposed development, 2012, the Route 1 / Route 610 intersection is projected to perform at LOS F in both AM and PM peak hours, and in the Saturday peak hour. The delay in the PM peak hour increases to 341 seconds, or more than five minutes. By 2018, the last year analyzed in the TIA, the PM peak hour delay is projected to increase to more than six and a half minutes. This intersection will be asked to carry 15% more traffic per approach lane that is currently handled by the Falmouth intersection, which is in the Six Year Program for improvement.
3. The TIA notes that the proposed development will only comprise 2 to 6 percent of the traffic volume at the Route 1 intersections in the immediate area (up to 20% on Washington Drive). However, for some individual movements at these intersection, the proposed development's traffic is up to 35% of the movement's volume. Providing adequate capacity to accommodate each movement's volume is key to the design of an efficient intersection.
4. The TIA proposes inadequate mitigation to address the proposed project's impacts on the road network. Much of the mitigation proposed consists of travel demand management concepts that are uncharacteristic of development in the region. Even with the proposed mitigation, some network performance levels deteriorate with the project's traffic.
5. No improvements are identified in the TIA to raise network performance to an acceptable level, as recommended in VDOT's current "Guidelines for a Traffic Impact Study" from the Land Development Manual. Estimated improvement costs are also recommended in the manual.

Multi-modal

The Virginia Department of Transportation includes comments on modes of transportation other than highways due to an increased focus on meeting the needs of

transportation demand through a multi-modal approach. This section of the review focuses on these other modes.

1. The proposed development relies heavily on travel demand management (TDM) strategies to reduce its traffic impacts on the area road network. Many of these strategies are confined on site. Many are not currently utilized in the immediate vicinity of the development. These TDM strategies cannot function effectively in isolation.
2. It is recommended that the applicant make a significant commitment to support off site TDM measures, including the provision of bicycle and pedestrian facilities, the funding of increased transit service, etc. in an effort to meet the trip reductions applied in the TIA.

Trip Generation

This section of the review comments on the methodology used in the development of the TIA to identify the number of vehicle trips that will be generated by the proposed development. Standards of VDOT and the Institute of Transportation Engineers are generally used to develop the number of trips.

1. *Trip Reductions:* A total trip reduction from the standard ITE rates of 22% has been taken in the TIA, including internal trips, non-auto trips, and pass-by. A number of these reductions are dependent on the effectiveness of the TDM strategies and the "synergy" of the TND.
2. *Trip Generation:* These preliminary VDOT comments do not include a thorough analysis of the trip generation methodology applied to the proposed development. However, a cursory review indicates the methodology is largely consistent with VDOT guidelines. Any differences that may be identified become increasingly critical in determining improvement measures for areas projected to experience poor traffic performance.

Traffic Impacts

The TIA paints a gloomy picture of future traffic performance on the road network in the vicinity of the development. No strategies are identified in the TIA to raise performance to an acceptable level.

1. Given the abundance of future LOS F conditions on the road network in the vicinity of the proposed development, a detailed analysis of the TIA by VDOT's Northern Region Traffic Operations Group is necessary. Many intersection are projected to operate above capacity, have turn lane storage requirements (queues) that exceed existing capacity, and have delays for individual movements of up to 20 minutes.
2. Please note that VDOT routinely monitors the performance of intersections and adjusts their signal timings. A mitigation measure that proposes to "modify" signal timing in year 2018 from what it is today in 2007, is not a significant form of mitigation. VDOT modifies signal timing to adjust to changing conditions.
3. The Washington Drive access performs significantly poorer that other intersections for the northbound left out movement. This will severely impact the utilization of the intersection during peak periods, potentially directing development traffic to other

site access points. Revision of site traffic entrance distribution in the TIA may be necessary.

Summary of Comments

The proposed development is located in an increasingly developing area of the County, which, consequently, is becoming more congested. The development application proposes insufficient mitigation to adequately address future traffic congestions. Rather than add to the problem, the applicant should be more aggressive in identifying and participating in solutions.

1. The County's long term improvement goal for Route 1 consists of three through lanes in each direction. This improvement would provide some relief to most of the congested intersections. The applicant could be a participant in helping to achieve this goal.
2. A greater commitment is suggested for off site TDM measures in order to realize the trip reductions taken in the TIA.
3. A thorough review of the TIA and projected future traffic conditions should be undertaken by VDOT's Northern Region Traffic Operations Center. The applicant may wish to explore solutions to the identified traffic problems, as recommended in VDOT's TIA guidelines.
4. While this office has not reviewed a proffer statement associated with this development, it is strongly suggested that the statement contain substantial contributions to improve the performance of the transportation network.

This office is willing to work with the applicant to better address the transportation issues associated with the proposed development. At this time, a recommendation of support cannot be provided for this project due to the projected gridlock traffic conditions.