



April 3, 2014

Mr. John Bassett, P.E.
Transportation Engineer
Virginia Department of Transportation
4985 Alliance Drive
Fairfax, VA

RE: **Mayfair (formerly Autumn Hill)
Response to 1st Submission Comments – Final Development Plan (FDP)
Town of Purcellville Application RZ 13-01
BCG Project # 005184-01-008**

Dear Mr. Bassett,

This correspondence is provided in response to your comment letter dated March 7, 2014, regarding the Final Development Plan (FDP) for the Mayfair project located in the Town of Purcellville. As you are aware, a meeting was held on March 27, 2014, between the Applicant, VDOT staff, and representatives of Bowman Consulting and J2 Engineers, during which the comments were reviewed and corresponding plan revisions identified. The responses provided herein reflect the conclusions reached during said meeting, and are as follows:

1. *“Incorporate the attached set of the most recent VDOT General Notes (Revised 3/28/13) into the plan set.”*
Response: The most recent VDOT General Notes (Revised 3/28/13) have been incorporated into the FDP plan set, as requested. (See Sheet 1)

2. *“Label ADT Route 611, Purcellville Road.”*
Response: A label identifying the ADT for Route 611 (Purcellville Road) has been added, as requested. (See Sheet 4)

3. *“Label projected ADT for Purcellville VA Route 7 North Collector Road.”*
Response: A label identifying the projected ADT for Purcellville VA Route 7 North Collector Road (i.e. Northern Collector Road) has been added, as requested. (See Sheet 4)

4. *“Provide frontage improvements to Route 611, Purcellville Road. These roadway improvements should be in accordance with the appropriate VDOT Geometric Standard (GS).”*
Response: The property comprising the Mayfair project has limited frontage on Route 611, and the existing right of way is approximately 35 feet in width. The proffers accepted by the Town of Purcellville with annexation of the Mayfair property stipulate that the Applicant will make improvements to Route 611 within the existing right of way. As discussed during the March 27, 2014

meeting, given the narrow width of pavement (+/- 18 feet), improvements to the shoulder and/or ditch would discernibly enhance the condition of Route 611, particularly at the intersection with the Northern Collector Road. Such improvements will be investigated and detailed with final engineering plans for the Mayfair project.

5. *“Clearly label the functional classification of Route 611, Purcellville Road throughout the plan set.”*

Response: The functional classification of Route 611 (Purcellville Road) has been labeled throughout the plan set, as requested. (See Sheets 3, 4, and 5)

6. *“Provide a complete, dimensioned typical section Route 611, Purcellville Road incorporating all the above-cited improvements (comment #4) as well as turn lanes, lane shift transition, etc.”*

Response: As noted in the response to Comment #4 above, improvements to Route 611 will be limited in scope to those that can be completed within the existing right of way, as per the applicable proffer statement. Such improvements will likely be focused on should and/or ditch enhancements, which will be investigated and detailed with final engineering plans for the Mayfair project. It is further noted that a turn lane warrant analysis prepared by Bowman Consulting Group (dated 3/24/2014) indicated that dedicated turn lanes are not warranted on Route 611 at its intersection with the Northern Collector Road. A copy of the warrant analysis is enclosed for your reference.

7. *“Provide a complete, dimensioned typical section Purcellville VA Route 7 North Collector Road.”*

Response: A complete, dimensioned typical section of the Northern Collector Road (Purcellville VA Route 7 North Collector Road) has been added to the FDP, as requested. (See Sheet 7)

8. *“Provide a complete, dimensioned typical for all on-site public roads.”*

Response: A complete, dimensioned typical section for the on-site public road systems has been added to the FDP, as requested. (See Sheet 7)

9. *“Provide projected ADT for all on-site roadways.”*

Response: The projected ADT for all on-site public roadways have been added to the FDP, as requested. (See Sheet 4)

10. *“Will there be a vehicular connection to E. Nichols Lane?”*

Response: A vehicular connection is not proposed to E. Nichols Lane.

11. *“Why was site plan “Mayfair – Section 1 and 2A” STPL 2012-0044 submitted prior to review and approval of associated rezoning application?”*

Response: The Applicant filed the referenced site plan application with Loudoun County pursuant to the original Autumn Hill rezoning approval (ZMAP-1990-0019), which enabled development of up to 492 multiplex units on the property. The property was subsequently annexed into the Town of Purcellville in February 2014, and the corresponding annexation agreement included a new Concept Development Plan (CDP) and proffer statement reflecting the requirements of the Town's PDH (Planned Development Housing) Zoning District. The CDP and proffer statement approved with the annexation replaced those originally approved by the County, and the FDP is the next development application required by the Town's PDH ordinance prior to submission of final engineering plans. The referenced site plan is therefore no longer relevant to development of the property due to the annexation and will be formally withdrawn by the Applicant. All subsequent development plans for Mayfair will be processed through the Town pursuant to its processes and ordinances.

12. *"VDOT "Corner Clearance" criterion is not met for all of the first side street intersections off Purcellville VA Route 7 North Collector Road. See VDOT Road Design Manual, Appendix F."*

Response: The layout of the public street network on the north side of the Northern Collector Road has been revised to ensure conformance with VDOT "Corner Clearance" criterion. Specifically, the cross street whose intersections were located too near the Northern Collector Road has been removed from the layout. (See Sheets 3, 4, and 5)

13. *"Applicant should escrow funds for removal of temporary cul-de-sac and extension of Purcellville VA Route 7 North Collector Road at western property line."*

Response: The Applicant has committed by proffer to construct a two-lane section of the Northern Collector Road from its intersection with Route 611 to the western property line consistent with the *Purcellville Townwide Transportation Plan* (adopted September 2009), and such construction is shown on the FDP. Extension of the Northern Collector Road across the adjoining County-owned property will be completed by others, to include removal of the cul-de-sac.

14. *"We recommend a vehicular interparcel connection to the north."*

Response: Mayfair is adjoined to the north by existing single family residential lots comprising the Chestnut Hills subdivision. Provision of a vehicular connection to the north is therefore not feasible.

15. *"We recommend extending Berkley Street to the west to provide an additional vehicular interparcel connection. (See also comment # 16 below)."*

Response: As discussed during the March 27, 2014 meeting, the County-owned Fields Farm property adjoins the entirety of Mayfair's western boundary, and is intended to develop in the future as an athletic field complex. The Applicant is committed by proffer to constructing the Northern Collector

Road to the western property line as shown on the FDP, which will provide the necessary vehicular interparcel connection to the Fields Farm property. The Applicant will investigate the possibility of providing a pedestrian connection from the Berkley Street cul-de-sac with final engineering as a means of alternative access between the properties.

16. *“The cul-de-sac at the western terminus of Berkley Drive has insufficient length. See VDOT Road Design Manual, “SSAR”, p. B (1) – 24. For circular turnarounds, a well-defined street segment, equal to the normal lot width along the intersected street that serves the cul-de-sac or 50’, whichever is greater, shall extend from the intersected street to the turning area.”*

Response: The subject cul-de-sac has been extended to ensure provision of the required minimum length. (See Sheets 3, 4, and 5)

17. *“If right of way is required in order to provide the above-noted roadway improvements to Route 611, Purcellville Road then the applicant should dedicate that necessary right of way.”*

Response: As noted in the response to Comment #4 above, improvements to Route 611 will be limited in scope to those that can be completed within the existing right of way, as per the applicable proffer statement. Such improvements will likely be focused on should and/or ditch enhancements, which will be investigated and detailed with final engineering plans for the Mayfair project.

18. *“Purcellville VA Route 7 North Collector Road (Minor Collector; U4; V= 40 mph) is identified in the Loudoun Countywide Transportation Plan (CTP) as a 4-Lane Undivided roadway, not a 2-Lane facility as noted on this plan.”*

Response: Purcellville VA Route 7 North Collector Road is identified in the *Purcellville Townwide Transportation Plan* (adopted September 2009) as the Northern Collector Road, which is further specified as a two-lane ditch section roadway within the Town’s limits. The CDP and proffer statement approved with the annexation of the Mayfair property are consistent with the Town’s plan, and commit the Applicant to construct the Northern Collector Road as a two-lane facility from Route 611 to the western property boundary within a 70’ right of way, as depicted on the FDP. An excerpt from the *Purcellville Townwide Transportation Plan* describing the Northern Collector Road is attached for reference.

19. *“Where is Traffic Impact Analysis (TIA)? (See also comment # 20 below).”*

Response: The FDP is not being processed as part of a rezoning application, but instead has been submitted following approval of the CDP and proffer statement for Mayfair as an intermediate step prior to submission of final engineering plans, as permitted by the Town’s PDH ordinance. As such, a Traffic Impact Analysis (TIA) is not provided with this stage of the plan review process.

20. *“Provide traffic signalization warrant study for site entrance. If warranted, signal should be proffered to be designed and installed by applicant.”*

Response: As noted in the response to Comment #19 above, the FDP constitutes an intermediate step in the plan review process for PDH zoned projects in the Town of Purcellville, and is intended to ensure design consistency with the approved CDP prior to submission of final engineering plans. A traffic signalization warrant study for the site entrance is therefore not provided with the FDP. That said, it is worth noting that a turn lane warrant analysis was completed for the intersection of Route 611 and the Northern Collector Road, which concluded that dedicated turn lanes were not warranted based on projected traffic volumes. The lack of warrants for dedicated turn lanes reasonably suggests that signalization would also not be warranted. A copy of the turn lane warrant analysis is attached for review.

21. *"Provide draft proffers for review."*

Response: As noted in previous responses, annexation of the Mayfair property into the Town of Purcellville included approval of a CDP and proffer statement. A copy of the approved proffer statement is attached for review.

22. *"Dedicate right of way a minimum of 25' from centerline Route 611, Purcellville Road along entire site frontage. Dimension this at several locations. (See also above-related comments which may require additional right of way dedication and should be dimensioned accordingly)."*

Response: The FDP has been revised to indicate future right-of-way dedication along the site frontage a minimum of 25' from the centerline of Route 611, as requested. (See Sheet 4)

23. *"Dimension cul-de-sac radii."*

Response: The dimensions of all cul-de-sac radii have been added to the FDP, as requested. (See Sheets 3, 4, and 5)

24. *"Dimension all roadway horizontal curve centerline radii."*

Response: The dimensions of all roadway horizontal curve centerline radii have been added to the FDP, as requested. (See Sheets 3, 4, and 5)

If you should have any further questions or comments please feel free to me directly at (703) 443-2400.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.



Christopher M. Mohn, AICP
Director of Planning

Enclosures: Mayfair FDP, revised through April 1, 2014
Mayfair Proffer Statement, Amended, dated December 6, 2013
Turn Lane Warrant Analysis, dated March 24, 2014
Purcellville Townwide Transportation Plan, Page 47 (Northern Collector Road)

Mr. John Bassett
Mayfair
April 3, 2014
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cc: Mr. Neil Patel, Brookfield Autumn Hill, LLC
Mr. Scott Gookin, Brookfield Autumn Hill, LLC
Mr. Thomas Moore Lawson, Esquire, Lawson and Silek, P.L.C.
Mr. Daniel Galindo, AICP, Town of Purcellville

Final Original: June 10, 1991

Amended: December 6, 2013

**Mayfair Proffer Statement Amendment
To ZMAP 1990-0019**

Prepared for: Brookfield Autumn Hill, L.L.C.

Owner/Applicant: Brookfield Autumn Hill, L.L.C. (“Owner”)

Project Name: Mayfair (formerly known as Autumn Hill)

Concept Development Plan: “Mayfair Amended Concept Development Plan” prepared by Bowman Consulting and dated December 6, 2013, (the “CDP”)

Property: A 52 +/- portion of Loudoun County PIN 487-36-5498 depicted for development as the Mayfair community per the CDP (the “Property”)

Date: December 6, 2013

The Owner, on behalf of itself, its successors in interest and assigns, hereby voluntarily proffers and agrees that the development of the Property upon annexation and incorporation into the corporate limits and jurisdiction of the Town of Purcellville, Virginia (the "Town"), will be in substantial conformance with the CDP and the following proffered conditions (together, the "Proffers"), pursuant to Sections 15.2-2302 and 15.2-2303(A) of the 1950 Code of Virginia, as amended, and Article 4, Section 12 and Article 10, Section 6 of the Zoning Ordinance of the Town. These Proffers are voluntarily tendered by the Owner as an amendment of and variation to those proffers for the Property previously accepted by Loudoun County as Autumn Hill Proffers, ZMAP 1990-0019, dated June 10, 1991, revised June 18, 1991 (the "ZMAP 1990-0019") and any prior proffers (including ZMAP 1990-0019) are hereby void and of no effect and are superseded in full by these Proffers.

The Proffers will be effective only upon the Town of Purcellville's annexation of the Property into the Town's corporate limits and jurisdiction. In the event annexation of the Property is denied or otherwise does not occur, these Proffers shall immediately be null and void and of no further force or effect.

1. General Development Requirements

(a) Upon annexation, the Property shall be developed in accordance with all requirements for PD-H8 development and in substantial conformance with the CDP, which is attached hereto and made a part hereof as **Exhibit A**. Variations from the CDP shall be permitted only as reasonably necessary to accommodate final engineering.

(b) Owner agrees to restrict the development of residential units on the Property to no more than 257 single family detached dwelling units and townhouse units, of which no more than 151 will be townhouse units.

(c) To the greatest extent possible, Owner shall provide for free and clear fire protection and emergency response access to each townhouse row at the front of the building.

2. Open Space and Recreation Requirements

(a) Owner shall provide passive recreation areas on the Property in the area of the storm water management pond, including, but not limited to, the storm water management pond as well as open, well drained green space surrounding the pond. The passive recreation areas will be installed on or before delivery of the 175th zoning permit. All passive recreation areas and the storm water management facility shall be owned and maintained by the homeowners association for Mayfair (the "Mayfair HOA").

(b) Owner shall provide open space in substantial conformance with the CDP. The exact configuration of open space shall be determined at final engineering based on the final layout and shall meet or exceed all open space requirements of the Town Zoning Ordinance. All open space shall be owned and maintained by the Mayfair HOA.

(c) Owner shall provide a complete pedestrian trail system as depicted on the CDP. The trails shall be constructed as not less than six-foot wide asphalt paths within an eight-foot public access easement. The pedestrian trail system will be installed on or before delivery of the 175th zoning permit. The pedestrian trail system shall be owned and maintained by the Mayfair HOA.

(d) Owner shall provide developed recreational facilities (“Active Recreation”) on the Property. The Active Recreation shall include at least one asphalt multi-court, a pavilion, and one tot lot. Said Active Recreation areas shall be installed on or before the delivery of the 175th zoning permit. Per the Town’s ordinance, the expenditure by Owner for Active Recreation areas shall not be less than \$300.00 per unit (\$77,100.00 total). Should the total expenditure of the Active Recreation as shown on the CDP be less than \$300.00 per unit, Owner will contribute the amount of the shortfall to the Town as a cash contribution, with the payment of any shortfall to be made by Owner on a per unit basis with each payment made after the completion of the final inspection for each unit but prior to issuance of a certificate of occupancy for each unit per the timing mechanism set forth in Virginia Code §15.2-2303.1:1. The Active Recreation shall be installed on or before the delivery of the 175th zoning permit.

(e) Owner shall submit a storm water management plan for the overall site and incorporate water quality measures into the Property’s storm water management facilities to improve the quality of storm water runoff from the site. Owner shall construct one or more wet or enhanced extended detention and best management practices pond(s) based on Town and State criteria. The exact type of the facility will be determined at final engineering based on the final layout. The storm water management facility and the pond will be owned by the Mayfair HOA and maintained by the Mayfair HOA as further described herein.

(f) Owner shall notify prospective homeowners of the existence of the storm water management facility and its incorporation into the final build out of Mayfair as a passive recreation area. This shall be accomplished by providing graphic identification in advertising and on site promotional materials. Also, identification of the pond and responsibility for maintenance shall be included in the Mayfair HOA documents. Owner shall address these issues and put forth its best efforts to draft specific, requisite language and will submit draft language for review and approval by the Town prior to record subdivision plat approval.

3. Public Improvements and Contributions

(a) Owner shall construct the Northern Collector Road from the eastern border of the Property through to the adjoining property currently owned by the Loudoun County Board of Supervisors and identified as PIN 522-29-5928. The aforesaid Northern Collector Road shall be constructed as a two-lane, 24’ wide undivided roadway within a 70’ public right of way. Owner shall construct a temporary cul-de-sac or hammerhead design turn around at the west end of this road or such other road termination which will conform with Virginia Department of Engineering (“VDOT”) and Town standards, whichever is applicable. The aforesaid Northern

Collector Road shall be completed by Owner prior to the Town’s issuance of a zoning permit for a single-family detached unit(s) which fronts on Public Road “D” as depicted on the CDP.

(b) In addition to the transportation improvements on the Property noted herein and shown on the CDP, Owner also shall contribute \$750,055.97 in cash and/or design and construction of transportation improvements that directly service the Property as follows:

(i) Owner shall design and construct improvements to upgrade, to the maximum width possible in the available right of way, the section of Route 611 north from existing East Nichols Lane to the entrance of the Mayfair development (thus terminating at the intersection of Route 611 and the eastern terminus of the Northern Collector Road through Mayfair). This improvement has an estimated value of \$394,783.83. This improvement shall be completed prior to the Town’s issuance of the first zoning permit. Some, but not all of these improvements are depicted on the CDP.

(ii) Regardless of the costs of the improvements described in (i) above, Owner shall contribute \$177,636.07 to the Town to be used solely for transportation improvements within the Town. This contribution will be made prior to delivery of the 50th zoning permit.

(iii) Regardless of the cost of the improvements described in (i) above, Owner shall contribute \$177,636.07 to the Town to be used solely for transportation improvements within the Town. This contribution will be made prior to delivery of the 75th zoning permit.

(c) Owner shall make an additional contribution to the Town of \$531,733 to be used at the Town’s sole discretion for capital, transportation or other improvements by the Town. Of this amount, \$26,471 will be distributed equally to the fire and rescue companies serving the Property. The contribution shall be paid as follows and at the following times:

	Total To Be Paid	Portion of Total To Be Paid To Fire and Rescue
Prior to issuance of the 1 st zoning permit	\$0.00	\$0.00
Prior to issuance of the 113 th zoning permit	\$231,728.00	\$11,536.00
Prior to issuance of the 225 th zoning permit	\$231,728.00	\$11,536.00
Prior to build-out of the Project	\$68,277.00	\$3,399.00

(d) The value of all proffers and contributions herein shall be increased annually using the Consumer Price Index for all urban consumers, as published by the Bureau of Labor Statistics, U.S. Department of Labor, for the Washington-Baltimore, MD-VA-DC-WV Consolidated Metropolitan Statistical Area (“CPI”), beginning January 1, 2015.

(e) Owner shall dedicate all public roads on the Property to the Town and construct all public roads to VDOT standards.

(f) Owner shall construct the private streets serving the development, as depicted on the CDP, to the applicable standards for private streets in the Town. Owner shall provide capital reserves of not less than \$250.00 per townhouse unit to the Mayfair HOA to be held in a capital reserve fund dedicated to use only for the maintenance of private roads on the Property.

4. Alternatives to Construction

(a) In the event that one or more of the individual road improvements proffered or shown on the CDP is substantially completed by others prior to bonding for such construction by Owner or is determined by VDOT to be an unnecessary improvement, Owner shall make a cash contribution to the Town equal to or greater than the cost of the improvement in lieu of which cash is being contributed. The cash equivalent would be provided at the time stated in the specific proffer.

(b) As an alternative to a cash equivalent contribution of 4(a), the Town and Owner may agree that, in lieu of making such contribution, Owner shall construct an alternative, equivalent-cost road improvement(s) which is not otherwise required by Owner under the terms of these Proffers, but would directly or indirectly serve the Mayfair development and be utilized within the Town corporate limits.

(c) The intent of Owner is to construct the improvements outlined herein given the opportunity to do so and consistent with the applicable bonding policy for improvements within the Town.

(d) All public road improvements are subject to VDOT approval. In the event Owner is not able to obtain VDOT approval of a transportation improvement, a cash equivalent shall be provided to the Town to be used for other road improvements which directly or indirectly serve the Mayfair development. The cash equivalent would be provided at the time stated in the specific proffer.

5. Water & Sewer

(a) Owner shall utilize Town water and sewer service for the 257 residential units on the Property on the terms and conditions set forth in the Water and Sewer Agreement between Owner and the Town ("Water and Sewer Agreement"). All extensions of existing water and sanitary sewer lines necessary to serve the Property shall be provided by Owner, at no cost to the Town, in conformance with Town ordinances and requirements and the Water and Sewer Agreement. Owner shall acquire any offsite easements, if needed, to extend public water and/or sanitary sewer lines to the Property and shall dedicate them to the Town at no cost to the Town.

(b) Regardless of the number of residential units constructed in each year, and subject to the terms of the Water and Sewer Agreement, Owner shall pay for the water availability fee,

sewer availability fee and meter fee (together "Availability and Metering Fees") for a minimum number of dwelling units each year. Availability and Metering Fees shall be paid at the rate in effect on September 1, 2013. Minimum Availability and Metering Fee purchases for each year shall be as follows, with "Year 1" calculated to begin on the date of annexation of the Property and include the next 364 days thereafter, and each successive year calculated as a successive 365 day period consistent with the establishment of Year 1:

Year 1:	25 Availability and Metering Fees
Year 2:	25 Availability and Metering Fees
Year 3:	50 Availability and Metering Fees
Year 4:	50 Availability and Metering Fees
Year 5:	50 Availability and Metering Fees
Year 6:	57 Availability and Metering Fees*

*Subject to the terms and conditions of the Water and Sewer Agreement.

6. Homeowners' Association

(a) Owner shall establish the Mayfair HOA and encumber the Property with a declaration of conditions, covenants, restrictions and easements for the purpose of (i) protecting the value and desirability of the Property; (ii) facilitating the planning and development of the development in a unified and consistent manner; and (iii) providing for the installation, maintenance, and repair for all landscaping, on-site amenities, open space, and other common areas. The declaration shall limit the density on the Property to no more than 257 residential units. The declaration shall be recorded simultaneously with the first subdivision record plat and shall attach to the Property and run with the land.

(b) Owner shall prepare the necessary documentation to form the Mayfair HOA and shall establish the Mayfair HOA prior to approval of the first zoning permit for a dwelling unit on the Property. The Mayfair HOA documents will be submitted to the Town for review and approval. The Mayfair HOA shall eventually be managed by the homeowners.

(c) The Mayfair HOA shall own and maintain all private roads, recreation facilities, open space areas, storm drainage, storm water management pond, pedestrian trails, etc.

7. Buffers and Plantings

(a) Buffers shall be installed with or before the construction of residential units adjoining the applicable buffer line.

(b) Owner agrees to construct landscaping as depicted on the CDP and, where possible, to save existing vegetation and incorporate it into the buffers and planting schemes. Owner shall design buffers in a flexible manner so as to accommodate the desire to save existing vegetation and will see that the buffers are installed in a manner to provide the maximum screening

between the residential units and, in some cases, differing ones. Existing vegetation that is of lower quality or has no screening benefit may be removed and replaced with plantings as indicated on the CDP. The addition of architectural berms to further enhance the screening benefit of the buffer areas may be utilized based upon final engineering.

(c) As part of the private street and townhouse community portion of the Property, plantings shall be installed so as to be in substantial conformity with the CDP. At a minimum, Owner will plant one large deciduous tree for each end unit in the townhouse community and one small deciduous tree for each interior unit in the townhouse community. All tree plantings for the townhouse community will either be in the front yard or rear yard of the townhouse units. If space does not permit planting on a particular townhouse lot, Owner shall plant the trees in the common space areas near the townhouse community.

8. Residue Property Rezoning

(a) Owner shall submit an application for rezoning to a Light Industrial Zoning classification of that portion of PIN 487-36-5498 not covered by these Proffers and currently zoned Transition X. This application for rezoning shall be submitted within 120 days after annexation of that property by the Town.

9. Miscellaneous

(a) These Proffers shall run with the Property and be binding on the heirs, successors, and assigns of Owner.

(b) The undersigned hereby warrants that all of the owners of a legal interest of the subject Property have signed this proffer statement, that it has full authority to bind the Property to these conditions, and that these proffers are entered into voluntarily.

(c) Brookfield hereby proffers that the development of the Property of this application shall be in substantial accordance with the conditions set forth in this submission.

(d) Brookfield Washington, L.L.C. executes these Proffers for the limited purpose of acknowledging their consent to the placement of a modified buffer on PIN 487-47-4375 as depicted on the CDP.

BROOKFIELD AUTUMN HILL, L.L.C
a Virginia limited liability company

By: _____

Name: _____

Title: _____

BROOKFIELD WASHINGTON, L.L.C
a Delaware limited liability company

By: _____

Name: _____

Title: _____

MAYFAIR RESIDENTIAL

LEFT TURN LANE WARRANT ANALYSIS FOR ROUTE 611 - PURCELLVILLE ROAD ONTO WESTBOUND NORTHERN COLLECTOR ROAD

DESIGN SPEED = 40 MPH

EXISTING PEAK HOUR TRAFFIC COUNTS WERE CONDUCTED BY BOWMAN CONSULTING GROUP AT THE PURCELLVILLE ROAD/EAST NICHOLS LANE INTERSECTION IN MARCH, 2014 AND SERVE AS THE BASIS FOR THE ANALYSIS. THE COUNTS ARE ATTACHED FOR REFERENCE.

THE ANALYSIS TAKES INTO ACCOUNT THE APPROVED MAYFAIR DEVELOPMENT (257 UNITS) AND THE PROPOSED REZONING DEVELOPMENT (32 UNITS).

THE TRIPS GENERATED BY THE APPROVED AND PROPOSED PORTIONS OF THE DEVELOPMENT ARE SHOWN IN TABLE 1. THE TRIPS WERE DISTRIBUTED TO THE ENTRANCE BASED ON THE FIGURE 10 (ATTACHED) FROM THE PREVIOUSLY COMPLETED TRAFFIC STUDY BY THE TIMMONS GROUP.

THEREFORE IT WAS ASSUMED THAT 95% OF TRIPS WOULD MAKE A NORTHBOUND LEFT TO ENTER THE SITE AND 5% WOULD MAKE A SOUTHBOUND RIGHT.

ALL INDUSTRIAL TRIPS ASSOCIATED WITH THE MAYFAIR REZONING WOULD USE EAST NICHOLS LANE FOR SITE ACCESS. NONE WOULD USE THE NORTHERN COLLECTOR.

ADVANCING VOLUME (NORTHBOUND):

	AM PEAK HOUR	PM PEAK HOUR
EXISTING ⁽¹⁾ :	221	132
APPROVED MAYFAIR DEVELOPMENT ⁽²⁾ :	31	120
PROPOSED MAYFAIR DEVELOPMENT ⁽³⁾ :	<u>8</u>	<u>23</u>
TOTAL ADVANCING TRIPS:	260	275

OPPOSING VOLUME (SOUTHBOUND):

	AM PEAK HOUR	PM PEAK HOUR
EXISTING ⁽⁴⁾ :	198	163
APPROVED MAYFAIR DEVELOPMENT ⁽⁵⁾ :	2	6
PROPOSED MAYFAIR DEVELOPMENT ⁽⁶⁾ :	<u>0</u>	<u>1</u>
TOTAL ADVANCING TRIPS:	200	170

NORTHBOUND LEFT TURNS:

	AM PEAK HOUR	PM PEAK HOUR
APPROVED MAYFAIR DEVELOPMENT ⁽²⁾ :	31	120
PROPOSED MAYFAIR DEVELOPMENT ⁽³⁾ :	<u>8</u>	<u>23</u>
TOTAL ADVANCING TRIPS:	39	143
LEFT TURN PERCENTAGE:	15.0%	52.0%

THE OPPOSING AND ADVANCING VOLUMES WERE PLOTTED ON FIGURES 3-7 AND 3-10 OF THE VDOT ROAD DESIGN MANUAL APPENDIX F.

AS INDICATED BY THE LOCATION OF THE PLOTTED POINT ON THE NOMOGRAPHS, NO LEFT TURN IS WARRANTED.

NOTES:

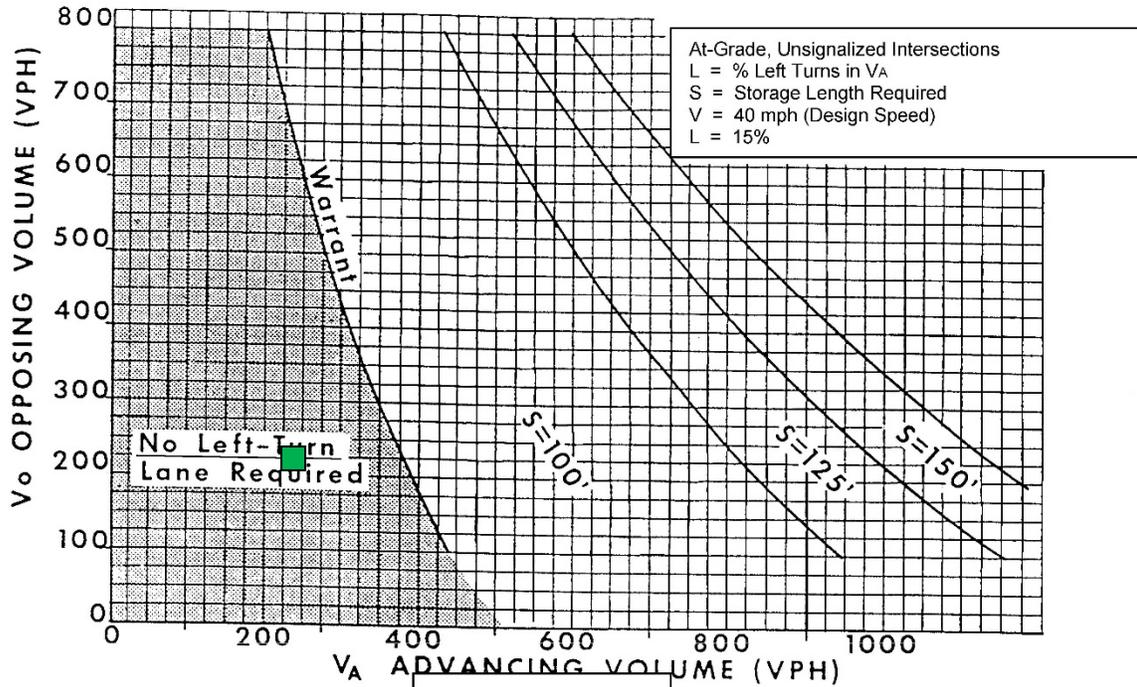
1. EXISTING ADVANCING VOLUME IS THE SUM OF THE NORTHBOUND THROUGH AND EASTBOUND LEFT COUNTS AT THE PURCELLVILLE ROAD/EAST NICHOLS LANE INTERSECTION.
2. APPROVED MAYFAIR TRIPS = TOTAL IN X 95%
3. PROPOSED MAYFAIR TRIPS = TOTAL IN X 95%
4. EXISTING OPPOSING VOLUME IS THE SUM OF THE SOUTHBOUND THROUGH AND RIGHT COUNTS AT THE PURCELLVILLE ROAD/EAST NICHOLS LANE INTERSECTION.
5. APPROVED MAYFAIR TRIPS = TOTAL IN X 5%
6. PROPOSED MAYFAIR TRIPS = TOTAL IN X 5%

Table 1 - ITE Trip Generation Analysis⁽¹⁾

Land Use	Size	Units	Land Use Code	Weekday						
				AM Peak Hour			PM Peak Hour			Daily Trips
				In	Out	Total	In	Out	Total	
<u>Approved Mayfair Development</u>										
Single Family Dwelling Units	106 D.U.	210		21	63	84	70	41	111	1,108
Townhomes	151 D.U.	230		<u>12</u>	<u>60</u>	<u>72</u>	<u>56</u>	<u>28</u>	<u>84</u>	<u>921</u>
Total Approved Mayfair Development Trips				33	123	156	126	69	195	2,029
<u>Proposed Mayfair Rezoning Development</u>										
<u>Residential</u>										
Single Family Dwelling Units	32 D.U.	210		8	24	32	24	14	38	368
<u>Industrial</u>										
<u>Option A - High Intensity Multiple User (Industrial Park)</u>										
Industrial Park	304,920 S.F.	130		<u>187</u>	<u>41</u>	<u>228</u>	<u>56</u>	<u>212</u>	<u>268</u>	<u>2,200</u>
<u>Option B - Low Intensity Multiple User (Industrial Park)</u>										
Industrial Park	182,952 S.F.	130		<u>125</u>	<u>27</u>	<u>152</u>	<u>36</u>	<u>137</u>	<u>173</u>	<u>1,591</u>
<u>Total Mayfair Rezoning Development Trips</u>										
Option A (Residential + High Intensity Industrial Park)				195	65	260	80	226	306	2,568
Option B (Residential + Low Intensity Industrial Park)				133	51	184	60	151	211	1,959

Notes:(1) Based on the Institute of Transportation Engineers Trip Generation, 9th Edition.

WARRANT FOR LEFT-TURN STORAGE LANES ON TWO-LANE HIGHWAYS



Intersection: Purcellville Road/Northern Collector
 Approach: Northbound Left
 Scenario: Existing (2014) + Approved Mayfair + Proposed Mayfair

	AM Peak Hour
VO, Opposing Volume	200
VA, Advancing Volume	260
VL, Left Turning Volume	39
Percent Left Turns	15.0%
Symbol	■

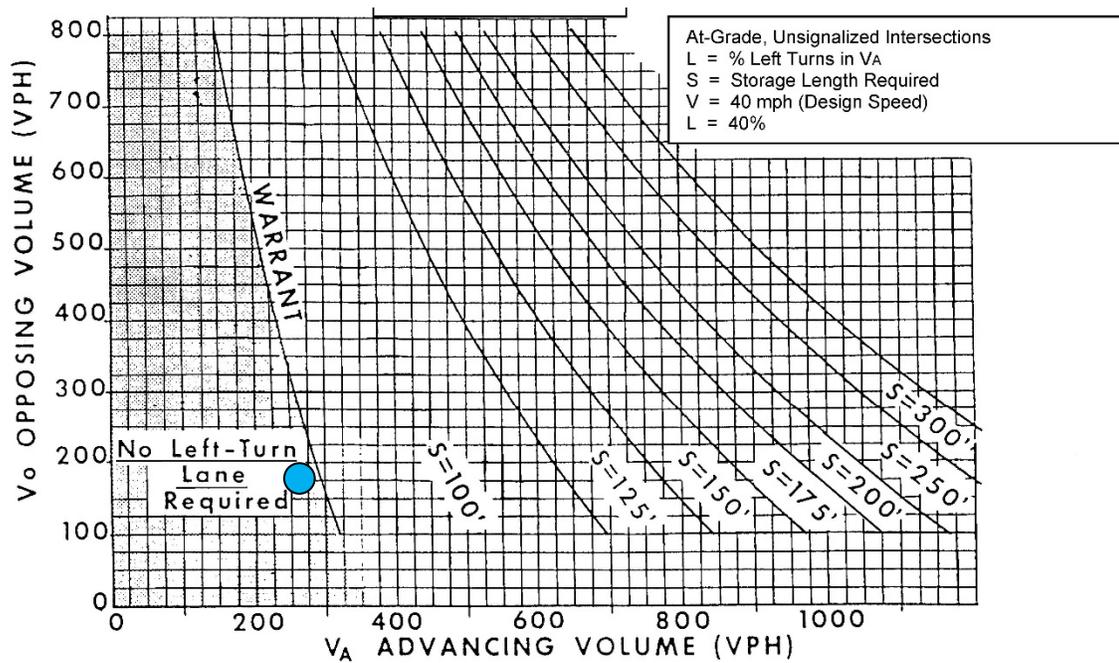


FIGURE 3-10

Intersection: Purcellville Road/Northern Collector
 Approach: Northbound Left
 Scenario: Existing (2014) + Approved Mayfair + Proposed Mayfair

	PM Peak Hour
VO, Opposing Volume	170
VA, Advancing Volume	275
VL, Left Turning Volume	143
Percent Left Turns	52.0%
Symbol	

Bowman Consulting

3951 Westerre Parkway, Suite 150
 Richmond, Virginia 23233
804.616.3240

Project: Mayfair
 Counted By: Earl Woosley
 Weather:

File Name : Purcellville Road and E Nichols AM
 Site Code : 00000000
 Start Date : 3/13/2014
 Page No : 2

Start Time	Purcellville Road From North					From East					Purcellville Road From South					E. Nichols Lane From West					Int. Total
	Right	Thru	Left	HV	App. Total	Right	Thru	Left	HV	App. Total	Right	Thru	Left	HV	App. Total	Right	Thru	Left	HV	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	43	0	2	47	0	0	0	0	0	0	34	15	1	50	9	0	1	1	11	108
08:15 AM	1	34	0	1	36	0	0	0	0	0	0	60	13	10	83	5	0	2	3	10	129
08:30 AM	2	45	0	6	53	0	0	0	0	0	0	80	4	10	94	5	0	3	0	8	155
08:45 AM	3	68	0	9	80	0	0	0	0	0	0	41	8	7	56	4	0	0	1	5	141
Total Volume	8	190	0	18	216	0	0	0	0	0	0	215	40	28	283	23	0	6	5	34	533
% App. Total	3.7	88	0	8.3		0	0	0	0	0	0	76	14.1	9.9		67.6	0	17.6	14.7		
PHF	.667	.699	.000	.500	.675	.000	.000	.000	.000	.000	.000	.672	.667	.700	.753	.639	.000	.500	.417	.773	.860

Bowman Consulting

3951 Westerre Parkway, Suite 150
 Richmond, Virginia 23233
804.616.3240

Project: Mayfair
 Counted By: Earl Woosley
 Weather:

File Name : Purcellville Road and E Nichols PM
 Site Code : 00000000
 Start Date : 3/12/2014
 Page No : 2

Start Time	Purcellville Road From North					From East					Purcellville Road From South					E. Nichols Lane From West					Int. Total
	Right	Thru	Left	HV	App. Total	Right	Thru	Left	HV	App. Total	Right	Thru	Left	HV	App. Total	Right	Thru	Left	HV	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	3	78	0	8	89	0	0	0	0	0	0	23	11	8	42	17	0	6	2	25	156
04:15 PM	2	31	0	1	34	0	0	0	0	0	0	28	19	4	51	22	0	2	5	29	114
04:30 PM	2	18	0	0	20	0	0	0	0	0	0	26	12	8	46	16	0	7	1	24	90
04:45 PM	0	29	0	0	29	0	0	0	0	0	0	34	12	6	52	17	0	6	5	28	109
Total Volume	7	156	0	9	172	0	0	0	0	0	0	111	54	26	191	72	0	21	13	106	469
% App. Total	4.1	90.7	0	5.2		0	0	0	0	0	0	58.1	28.3	13.6		67.9	0	19.8	12.3		
PHF	.583	.500	.000	.281	.483	.000	.000	.000	.000	.000	.000	.816	.711	.813	.918	.818	.000	.750	.650	.914	.752



Autumn Hill Development
Residential Traffic Distribution
Loudoun County, Virginia

Figure
10

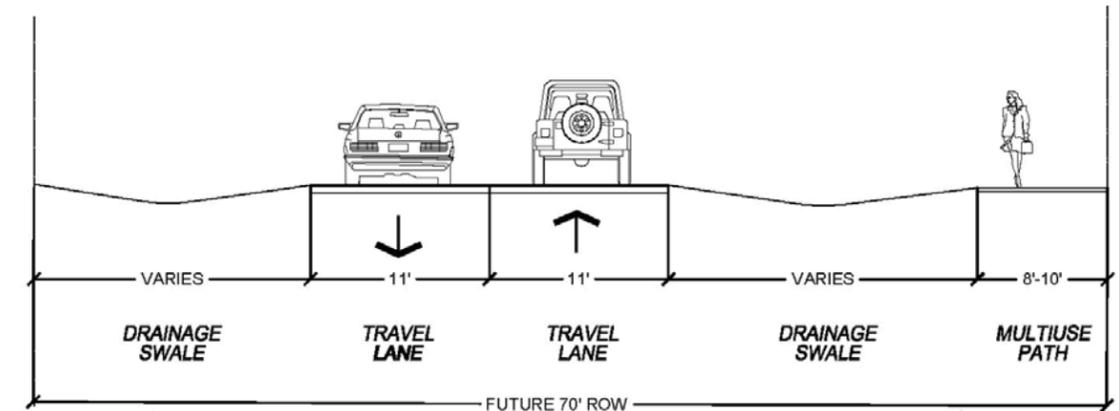
Northern Collector Road

West of 21st Street and north of Route 7 Bypass, Purcellville is not well-served by local streets. As the Town and surrounding areas continue to grow, additional cross-town street connections will benefit Purcellville and unincorporated areas at its fringes. Additionally, when a new interchange is constructed with Route 7 Bypass on the west side of Purcellville, the Northern Collector Road will help route traffic to the interchange without the use of very constrained streets in downtown Purcellville.

Included in Loudoun County's transportation plan and Purcellville's comprehensive plan, the Northern Collector Road will increase east/west mobility north of Route 7 Bypass. Through the Wright Farm subdivision, portions of the corridor's right-of-way already have been reserved. The connection shown in the recommended plan represents a connection, not an engineered alignment. Further studies will need to be completed to develop an acceptable alignment.

When completed, the Northern Collector Road will connect Berlin Turnpike to Hillsboro Road. The Northern Collector Road would help relieve Hirst Road, better distribute east/west trips, and provide access to land for development. Travel demand forecasts indicate that this corridor will carry a considerable volume of traffic. To accommodate projected traffic volumes as well as pedestrians and bicyclists, the following are recommended:

- Conduct an engineering study to develop a feasible alignment for the Northern Collector
- Construct the corridor as a two-lane roadway with left-turn lanes at major development entrances and public streets
- Construct a single-lane roundabout at the Northern Collector Road/Purcellville Road intersection
- Construct an 8- to 10-foot multiuse path along the south side of the corridor



Idealized recommended typical cross-section for the Northern Collector between Hillsboro Road and Berlin Turnpike

