

Kingsview Station
Preliminary Plan No. 120210210
Site Plan No. 820210130
Statement of Justification and Narrative Description

I. Introduction

Kingsview Station Joint Venture (the "Applicant") is submitting this application for Preliminary Plan and Site Plan Approval (collectively, the "Application") for consideration by the Montgomery County Planning Board, for the property located in the southeastern quadrant of the intersection of Clopper Road (MD Route 117) and Germantown Road (MD Route 118) in Germantown, Maryland (the "Property"). The Applicant proposes to subdivide the Property into 61 lots and 8 parcels to facilitate development of this vacant, underutilized Property with a high-quality mixed-used, predominantly residential development, to include up to 12,000 square feet of commercial use and 61 townhouse living units (the "Project").

As discussed in detail in this Statement, the Project will provide additional, needed, diverse housing stock, in furtherance of the housing goals established by the Montgomery County Council, and a limited amount of neighborhood serving commercial uses (located along Clopper Road). The Project also proposes significant enhancements to pedestrian and vehicular connectivity, by reintroducing a connection between Clopper Road and Leaman Farm Road through the realignment and reconstruction of Liberty Mill Road and other streetscape improvements. All of this is accomplished while preserving the environmental features on this significantly constrained site.

The Project implements the goals and recommendations of the *1989 Approved and Adopted Germantown Master Plan* (the "Master Plan") and complies with the development standards established by the Floating Zone Plan and the requirements of Chapter 59 (the "Zoning Ordinance") and Chapter 50 (the "Subdivision Regulations") of the Montgomery County Code.

II. Prior and Pending Approvals

A. Local Map Amendment

The Montgomery County Council, sitting as the District Council, approved Local Map Amendment ("LMA") H-131 on March 31, 2020 to rezone the Property from the R-200 and R-200/TDR 6.0 zones to the Commercial/Residential Neighborhood Floating Zone – CRNF-1.0, C-0.25, R-0.75, H-55'.

B. Abandonment

The Applicant is in the process of seeking approval of an abandonment and subsequent disposition for portions of the Liberty Mill Road right-of-way, which is necessary to facilitate the

realignment and extension of Liberty Mill Road, in connection with the redevelopment of the Property. The Applicant is seeking to abandon only those portions of the existing right-of-way that fall outside of the proposed new Liberty Mill Road. Additionally, the Applicant is concurrently seeking disposition of portions of the right-of-way owned in fee simple by Montgomery County. MCDOT held a public hearing on the Abandonment Application (No. AB 774) on May 4, 2021.

III. Background

The Applicant worked closely with M-NCPPC and MCDOT staff during the Local Map Amendment process. The Preliminary Plan and Site Plans reflect this substantial coordination, and significant changes made in response to the comments received from M-NCPPC and MCDOT. By way of background, these changes are summarized below.

In preparation for filing the LMA, a Natural Resource Inventory/Forest Stand Delineation was prepared and approved for the Property on July 24, 2018 (NRI/FSD No. 420182510). After finalizing the NRI/FSD and adjusting the Project layout accordingly, the Applicant met with both M-NCPPC and MCDOT staff to review the proposed layout. As a result of these meetings and the feedback received (particularly from M-NCPPC Staff) the Applicant made significant revisions to the Floating Zone Plan, including reorienting the building east of Liberty Mill Road to better define the street character, adjusting the layout of townhome units to create a central open space, and classifying internal streets as public (as opposed to private), where appropriate. This revised plan then became the basis for the Applicant's LMA submission on December 27, 2018.

After the initial submittal of the LMA Application, it was brought to the Applicant's attention, through the DRC process, that M-NCPPC and MCDOT staff had substantial, additional comments on the plan. The Applicant worked closely with both agencies to address these additional comments. As a result, the Applicant revised the plans to incorporate expanded environmental buffers, a main internal spine road running through the approximate center of the Property (public road, designed as a "S-curve" to connect Clopper Road with Leaman Farm Road), and associated adjustments to the layout of the townhome units. As a result of these revisions, the central open space was reconfigured into a series of diverse open spaces throughout the Project to serve the needs of the future residents and public. No additional changes were made to the layout of the commercial component of the Project.

IV. Property Description

A. Site Location and Existing Conditions

The Property is comprised of six individual parcels, generally bounded to the north by Clopper Road (MD 117), Germantown Road (MD 118) to the west, the Germantown Commuter Parking Lot and Kingsview Village Center Commercial to the east, and Leaman Farm Road to the

south.¹ The Property has a gross tract area of 9.94 acres. Subsequent to Preliminary Plan of Subdivision, the Property will have a combined net lot area of 8.84 acres.

Liberty Mill Road, which was previously operated as MD-118 (prior to its expansion and relocation in the 1980's), runs through the approximate center of the Property and terminates in a cul-de-sac just north of Leaman Farm Road. The existing right-of-way is poorly maintained and also presents safety concerns given that it is a dead-end street and surrounded by vacant land on all sides.

The Property is currently undeveloped and contains numerous environmental features that make redevelopment of this site challenging. There are existing stream(s), associated stream valley buffers, wetlands, and existing forest that significantly constrain the developable area of the Property. The Applicant is excited to be in a position to move forward with development of the Property, which will provide much needed, additional housing and neighborhood commercial serving uses that respects and preserves the existing environmental features. As discussed in detail below, the Project will transform this prominent, undeveloped Property into a mixed-use, predominately residential development that is compatible with the surrounding neighborhood and promotes many of the County's goals and objectives.

B. Zoning and Permitted Uses

The Property was previously zoned R-200 and R-200/TDR 6.0 but was recently rezoned to the CRNF-1.0, C-0.25, R-0.75, H-55' in connection with Local Map Amendment No. H-131. Sections 5.3.3.A.1 and 3.1.6 of the Zoning Ordinance permits Townhouse Living and Retail/Service Establishments up to 5,000 square feet by right in the CRNF Zone. Retail/Service Establishments (between 5,001 and 50,000 square feet) are permitted as a limited use in the CRNF Zone, subject to compliance with the requirements in Section 3.5.11.B.2.a.ii of the Zoning Ordinance.

C. Surrounding Zoning and Land Uses

The Property is surrounded by a mix of commercial and residential uses, including:

- North: Confronting the Property to the north, across Clopper Road, is an undeveloped lot zoned CRN-0.5, C-0.5, R-0.25, H-35' located in the northwest quadrant of Liberty Mill Road and Clopper Road. Farther north is the Forest Green Estates townhouse community zoned RT-8.0. In the northeast quadrant of Liberty Mill Road and Clopper Road intersection are a gasoline filling station and convenience store and a strip commercial shopping center, with associated surface parking, both zoned NR-0.75, H-45.

¹ A parcel located in the southwest quadrant of the intersection of Liberty Mill Road and Clopper Road, more particularly known as part of Parcel P168 in the "Friend in Need" Subdivision, is owned by Potomac Electric Power Co. ("Pepco"), and is not included in this Application.

- East: To the east of the Property is the Kingsview Village Center, zoned PD-11, which includes a variety of retail/service and residential uses. Immediately abutting the Property are the Kingsview Park and Ride commuter parking lot, a gas station and stand-alone retail/service establishment. To the east of this is a larger strip commercial shopping center (Kingsview Village Center), including a Giant Food grocery store, multiple retail/restaurant tenants, associated surface parking, and a garden apartment complex known as the Park at Kingsview Village.
- South: Confronting the Property to the south, across Leaman Farm Road, are an undeveloped property and a large garden apartment complex known as Millstone at Kingsview, both zoned R-200 with a TDR 6.0 Overlay Zone.
- West: Confronting the Property across Germantown Road is the Montgomery County Fire Station 22. Beyond the fire station is the Trinity United Methodist Church. Both properties are zoned R-200 with a TDR 4.0 Overlay Zone.

V. Proposed Development

A. Overview

The Applicant is proposing to develop the Property with a mixed-use, predominately residential development. The Project will include up to 12,000 square feet of commercial use and 61 townhouse living units, including 12.5 percent moderately priced dwelling units ("MPDUs") (or up to 8 MPDUs), with associated parking, open space, and amenities. The Project will be constructed in multiple phases.

As discussed in greater detail below, the Project has been designed to activate the internal and external street frontages and provides significant circulation improvements. The Project reintroduces an important public connection between Clopper Road and Leaman Farm Road, through the realignment and reconstruction of Liberty Mill Road, and also provides a new connection to MD 118. The Project will provide enhanced streetscapes, not only through the building placement and design, but also by providing tree-lined sidewalks that are buffered from the street by landscape panels (where feasible). The Project will significantly enhance the pedestrian environment and further promote both pedestrian and vehicular connectivity.

The Project will be delivered in two or more phases. This Site Plan application covers Phase One. The Applicant will subsequently seek Site Plan approval(s) for Phase Two once commercial users have been selected. The phases are broken down as follows:

- Phase One includes the development of up to 61 residential townhouse units. The townhomes are arranged to create a sense of community and encourage pedestrian activity. The majority of the townhomes have been oriented with their front doors

facing the public realm, with individual lead walks to each unit and garage parking typically located in the rear. Rear-loaded garages are accessed via internal alleyways. Wide, tree-lined sidewalks are included adjacent to the streets throughout the Project, to further enhance the pedestrian environment.

- Phase Two includes up to 12,000 square feet of commercial development located along Clopper Road. The Applicant is proposing to construct two free-standing commercial buildings, including an approximately 6,000 square foot building near the intersection of Germantown Road and Clopper Road and an approximately 6,000 square foot building at the intersection of Clopper Road and Liberty Mill Road. Both buildings have been moved closer to Clopper Road to help define the street character and engage the pedestrian environment. Additionally, at the direction of Park and Planning Staff, the Applicant has moved the building in the southwest quadrant of the intersection of Liberty Mill Road and Clopper Road up to the intersection to create an identifiable entrance to the Project at this intersection. Given the current state of the retail market, resulting from the COVID-19 pandemic, the Applicant has not yet secured users for these buildings. As such, the Applicant is seeking flexibility to break Phase Two into two potential sub-phases, to allow one or both of the commercial buildings to proceed as soon as a user is selected. The architecture, layout, and design of the commercial buildings will be tenant driven and will be finalized at the time of Site Plan.

The Project has been designed to ensure compatibility with the surrounding community. The commercial buildings will effectively buffer the townhome units from Clopper Road, a four-lane divided highway (M-26 major highway). The majority of the townhouses will be buffered from Germantown Road, a six-lane divided highway (M-61 major highway), by an expanded forested environmental buffer, although a small group of units are adjacent to Germantown Road. These units are oriented towards the internal open space or the internal lower classification Public Road “A”. This design allows only ends of units to face Germantown Road and not the fronts or backs. This also allows adequate area for berming and landscape to buffer the roadway.

The Project also has been strategically laid-out to protect and preserve the existing natural features on the Property, to the extent feasible. The environmental features on the Property are discussed in greater detail in Section VIII.D below.

B. Architecture

The architectural concept for the townhomes reflects the intent of the developer to create a vibrant, elegant and traditional community, with special attention paid to details and design. The townhomes will be (3) three-story units. The façades will include typical residential materials and design elements such as brick masonry (in various colors), siding, gable roofs, projecting bay windows, shutters, decorative trim and awnings. The townhomes will feature a number of different elevations, with various combinations of these materials and design elements, to provide

visual interest and varied design. MPDU units will be provided in accordance with the County's requirements. As mentioned above, the townhomes have been laid out in a manner that will encourage pedestrian activity and have been oriented toward the street and/or public realm, with individual lead walks to each unit. The majority of the townhomes have been designed to be rear loaded, to minimize disruptions to the pedestrian environment. However, in an effort to minimize impacts to the environmental features on-site, a small stick of townhomes located in the northeastern portion of the site will provide vehicular access from the front – however, these units are located on the periphery of the site and will be largely screened from view of Liberty Mill Road.

C. Open Space

In accordance with the requirements of Sections 5.3.5.D.2.a and 4.5.3.C of the Zoning Ordinance, the Project will include a minimum of 10% of open space. As required by Section 6.3.2, this open space will be designed as both common open space and public open space.

The Zoning Ordinance requires that a minimum of 10% of the site area devoted to the townhouse development (*i.e.* approximately 7.45 acres residential site area) be provided as common open space. The Project exceeds this requirement and provides approximately 1.06 acres of common open space on-site. The common open space will be provided throughout the site and will provide diverse opportunities for residents to gather and recreate. In accordance with the requirements of Section 6.3.5.B of the Zoning Ordinance, the majority of the common open space will have a minimum width of 50 feet and be in a contiguous area. Importantly, per Section 6.3.5.B.1, the open space has been strategically placed to take advantage of the natural features on-site. An approximately 0.21 acre common open space will be provided on the east side of Liberty Mill Road, which provides opportunities for active and passive recreation. This area will include lawn area surrounded by seating opportunities, which overlooks the natural features in the southeastern corner of the site. A total of approximately 0.85 acres of common open space will be provided on the west side of Liberty Mill Road (through 0.78 acres of contiguous open space and an addition 0.07 acres adjacent to Liberty Mill Road), which provides opportunities for passive recreation and connections with nature. This common open space will include small lawn areas scattered throughout and a portion of existing forest, which will provide diverse opportunities for reflection and connections with nature. The commercial component of the Project will provide approximately 0.22 acres of public open space which will be finalized at the time of Site Plan approval for Phase Two.

D. Parking and Circulation

To ensure the Project will not have any adverse impacts on the surrounding neighborhood, the Project will provide adequate parking on-site to accommodate all users of the Property.

Parking for the townhouse units will be provided through in-unit parking garages, and ample on-street parking will be provided for visitors.

Because of the requested zoning, and due to the location of the Property within one mile of the Germantown MARC Station, it is in a designated reduced parking area. The Property is also directly adjacent to a Montgomery County Park & Ride Lot. Accordingly, Sections 5.3.5.D.1 and 6.2.4.B require a minimum of one parking space per unit and allow for a maximum of two parking spaces per unit. This results in a minimum parking requirement of 61 spaces and maximum parking allowance of 122 spaces in Phase One. The Project will provide 125 private parking spaces for the residents and their visitors/guests (including 114 spaces in individual garages and 14 private surface parking spaces). The Project also provides an additional 28 on-street parking spaces that will be available to the general public and will provide a buffer between the pedestrian sidewalks and the street.

As discussed above, the Project will significantly improve vehicular access and circulation. Vehicular access to the Property is currently provided via one access point along Clopper Road. This access point will remain unchanged. Additional vehicular access points are proposed along Germantown Road and Leaman Farm Road as shown on the Preliminary Plan. The vehicular access on Germantown Road will be restricted to right-in and right-out movements. The full-movement access along Leaman Farm Road has been designed to align with Ale House Circle, directly to the south as required by the Montgomery County Subdivision Regulations, Section 50.4.3.E.2.f.ii, Intersection Spacing. Liberty Mill Road will be realigned and reconstructed to provide a mid-block connection between Clopper Road and Leaman Farm Road, which will reintroduce an important connection that hasn't existed since MD-118 was relocated and expanded in the 1980's.

VI. Master Plan Conformance

The Property is located within the *1989 Approved and Adopted Germantown Master Plan*. It should be noted that this Master Plan is almost 30 years old, and some of the projections in that Master Plan for the development of this area have not occurred. In addition, countywide land use policies and zoning changes have occurred in the years since the passage of the Master Plan. A significant change in land use policy is the application of mixed use zones in many areas of the County. The Project substantially conforms to the general and specific goals and recommendations outlined in the Master Plan, but the Project also reflects more current land use policies.

The Master Plan contains eight themes that were intended to guide the vision for Germantown: (1) Townscape Design; (2) Land Use; (3) Environment; (4) Transportation; (5) Community Facilities; (6) Human Services; (7) Historic Resources; and (8) Implementation. Specifically, the Project will further the following specific objectives of the Master Plan:

1. **Townscape Design.** *To develop a greater sense of community identity and a positive sense of place.*

The Master Plan area is divided into several villages. The Property is located in the Clopper Village area (Analysis Area CL-6). The Master Plan provides specific objectives for each village, with the overall recommendations aimed at ensuring each village accomplishes the following:

- Be distinguished by its own identity and character,
- Provide a mix of housing types at varying prices and rental levels,
- Have an identifiable activity area, and
- Have a functional pedestrian/bikeway, sidewalk, and roadway system that facilitates inter- and intra-village circulation.

The Project will offer a relatively small enclave with its own character that includes a new housing type for area residents. It includes diverse open space offerings for both area residents and the public at large. It also embodies smart growth as it will be served by the existing roadway system. New internal roadways and sidewalks will be constructed to connect the Project to adjacent areas. These will also fully serve the residents of this new community.

2. **Land Use.** *To provide a wide range of housing and employment opportunities accompanied by a complete range of public facilities, services, and amenities.*

There are two major portions of this Analysis Area. They are separated by a stream valley and publicly-owned land. The "western" portion of the Analysis Area adjoins other areas recommended for a combination of single-family and multi-family residential development. The "eastern" portion is located adjacent to Clopper Road (M-26) and extends from Great Seneca Highway to Existing MD 118. The Property is located within the 42-acre, "eastern" portion of the Clopper Village Analysis Area CL-6 (the "Analysis Area").²

The Master Plan recommends rezoning the "eastern" portion of the Analysis Area (which includes the Property) to the Planned Development zone, specifically PD-11.³ The eastern portion of the Analysis Area was also to include a Village Center to serve the nearby Kingsview Village. The Master Plan recommended that the Village Center include "up to 170,000 square feet of retail development and professional office space with most of the area (approximately 90%) devoted to retail use." The precise location of the Village Center was not identified, but it appeared it was

² The Master Plan divided Analysis Area CL-6 into two areas, separated by a stream valley buffer and publicly owned land. However, the directional classification assigned to these two areas (*i.e.* "eastern" and "western" areas) does not conform to the true directional orientation of the properties, as this stream valley buffer generally runs east-west. The "eastern" portion of CL-6, which includes the Property, is located to the north of the stream valley buffer, adjacent to Clopper Road.

³ The PD (Planned Development) zones cannot be applied to new properties under the recently adopted Zoning Ordinance, (effective October 30, 2014). Instead, pursuant to Section 5.1.3.B. of the Ordinance, the Property was rezoned to an "equivalent zone" – the Commercial Residential Neighborhood Floating (CRNF) zone.

envisioned to be near the western edge of the Analysis Area. The remaining portion of the Analysis Area not to be developed as a Village Center was recommended for garden apartments (at a density of 11 units per acre). In addition, the Master Plan recommended that a park-and-ride facility be constructed in the eastern portion of the Analysis Area. Exhibit CL-6 in the Germantown Master Plan depicts the then envisioned build-out of the Analysis Area.

The Village Center was ultimately constructed in the middle of the Analysis Area rather than on the western edge. The park-and-ride facility was constructed between the Property and the Village Center. With the exception of the Property, garden apartments were constructed in the balance of the Analysis Area. After the build-out of the Village Center, the park-and-ride facility and the garden apartments, only a small portion of the Analysis Area, comprising the 9.94 acre Property, remains undeveloped. The “remainder” Property also has significant environmental constraints due to a stream valley, which reduce the actual developable area to approximately 5.09 acres.

The Master Plan recommendation for garden apartments for the Property, which is the small remaining portion of the "eastern" Analysis Area is no longer appropriate. At a recommended density cap of 11 units per acre, this product type is not economically feasible for a site of only ten acres. A typical garden apartment project requires a minimum of approximately 200 dwelling units to support the cost of required amenities for tenants. This site would only yield about 112 units ($9.94 \text{ Ac} \times 11 \text{ Du/Ac} = 109 \text{ DU}$) and could not support the required amenities.

Further, the Property is at the intersection of two major highways, Clopper Road and Germantown Road. This portion of the Property is suitable for commercial uses to serve the neighborhood. The mixed-use CRNF zone allows some commercial to serve area residents as desired by current land use policies.

The Applicant's proposal to construct townhomes and some limited commercial use will continue to achieve the Master Plan's overall recommendations. It will provide a different housing type that will complement the garden style apartments available in the remainder of the 42-acre "eastern" portion of the Analysis Area. As such, it will provide additional housing diversity (both in terms of housing type and ownership) in the area. The limited retail proposed in Phase 2 will complement the existing Village Center and serve local residents.

As stated previously, the Master Plan is almost thirty years old and land use goals and policies have evolved since its passage. Mixed use zones were recommended much more widely with the recent County wide map amendment (District Map Amendment, October 30, 2014). Further, a new Zoning Ordinance was adopted, effective October 30, 2014. Although the PD-11 Zone was retained in the adopted 2014 Zoning Ordinance, it cannot be applied to new properties. Pursuant to Section 59-5.1.3.B. of the Ordinance the equivalent zones for the PD zones are the AF and the CRNF zones. In this case the CRNF zone is more appropriate because Section 59-5.3.2.A provides that in the AF zone, a parcel of this density (less than 20 Du/Ac) and total development

size (less than 150 DU) cannot include commercial uses, which are appropriate at this location. In connection with the recently approved LMA, the Montgomery County Planning Board, Montgomery County Hearing Examiner and County Council all found that the proposed development was in substantial conformance with the goals and recommendations of the Master Plan.

3. **Environment.** *To protect natural resources while permitting intense Corridor City Development.*

Included among the Master Plan's environmental objectives are the following:

- *Maintain the planning area's natural features, particularly stream valleys and other environmentally sensitive areas.*
- *Assess, control, and mitigate the environmental impacts of development to preserve natural features and ecological quality.*
- *Recommend a comprehensive system of stormwater management facilities in developing areas that preserve the natural stream environment and provide wildlife habitat and recreation opportunities.*
- *Recommend protecting the other environmentally sensitive areas such as mature hardwood forests, wetlands, areas of unique vegetation, and prime wildlife habitat.*

The Project proposes to protect the environmentally sensitive areas on the Property, including wetland and streams by maintaining the integrity of the stream valley buffers. As described in Section III.D.2 an extensive Environmental Site Design (ESD) Stormwater Management system will be designed to preserve the natural stream environment and provide wildlife habitat.

4. **Transportation.** *To provide a roadway and transit system that adequately serves the planned land uses at acceptable levels of service.*

The Master Plan includes the following relevant transportation objectives:

- *Plan Germantown as a community with transit-serviceable land use.*
- *Encourage the provision of bikeways for commuter as well as recreational uses.*
- *Encourage landscaping along the edge of the right-of-way and in medians.*

The proposed Project will be a pedestrian friendly community. It will provide vehicular linkages to existing roadways. Located one mile from the Marc station, and adjacent to the park & ride lot, the Project will have connections to existing locally available transit options. Landscaping will be provide along right-of-ways. Furthermore, the proposed commercial

buildings (in Phase Two) will help define and activate the pedestrian environment along Clopper Road.

VII. Zoning Ordinance Conformance

A. Objectives

Section 59-5.3.2A of the Zoning Ordinance sets forth the specific purposes of the Commercial/Residential Floating Zones, including:

- a) *Allow development of mixed-use centers and communities at a range of densities and heights flexible enough to respond to various settings;*
- b) *Allow flexibility in uses for a site; and*
- c) *Provide mixed-use development that is compatible with adjacent development.*

The Project meets these specific objectives. The Project includes a mix of uses that will complement the surrounding community. The proposed townhouse living units will provide housing diversity both in terms of housing type (given the prevalence of garden style apartments in the Analysis Area) and ownership opportunities. The limited commercial proposed in Phase 2 will complement the existing Village Center and serve both existing and future residents. Furthermore, the commercial development, which is located up along Clopper Road and at its intersection with Germantown Road, will provide a visual and physical buffer to the residential units.

B. Development Standards

As the data table on the Cover Sheets for the Preliminary Plan and Site Plan illustrate, the proposed Project will satisfy the development standards for standard method of development in the CRNF Zone.

C. Limited Use

The Project proposes up to 12,000 square feet of commercial use. A Retail/Service Establishment between 5,001 and 50,000 square feet is permitted as a limited use in the CRNF zone, subject to the following standards (as set forth in Section 3.5.11.B.2.a.ii):

- a. *If the subject lot abuts or confronts a property zoned Agricultural, Rural Residential, or Residential Detached that is vacant or improved with an agricultural or residential use, site plan approval is required under Section 7.3.4.*

The Property confronts land in the R-200 Zone that is improved with a residential use. As such, site plan approval will be required. As mentioned above, the Applicant will subsequently seek site plan approval for Phase Two when the commercial is ready to proceed.

- b. *A Retail/Service Establishment over 15,000 square feet of gross floor area must be a grocery store.*

This provision is not applicable, as the retail/service establishments proposed are each only 6,000 square feet.

VIII. Findings Required for Preliminary Plan Approval

The purpose of this portion of the statement is to provide justification that the Preliminary Plan satisfies the applicable provisions of Section 50.4.2.D of the Subdivision Regulations.

A. Subdivision Regulation Compliance

As discussed above, the Preliminary Plan proposed to subdivide the Property into 61 lots, 2 commercial parcels and 8 HOA parcels to allow for the proposed mixed-use, predominately residential development. The Preliminary Plan indicates that the size, width, shape, and orientation of the proposed lot/parcels will be appropriate for the location of the proposed subdivision and standards of the CRNF Zone.

B. Substantial Conformance to the Master Plan

The Project substantially conforms to the Master Plan, which is described in detail in Section VI of this Statement.

C. Adequate Public Facilities

The public facilities are adequate to support and service the proposed development.

a. Traffic

The Applicant is submitting a transportation impact study prepared by Lenhart Traffic Consulting, which addresses the Project's projected traffic impacts. The Property falls within the Yellow Policy Area in the current FY 2020-2024 Growth and Infrastructure Policy. An analysis of peak hour person trips generated by the proposed development was performed in accordance with the 2017 update to the Maryland-National Capital Park and Planning Commission's (M-NCPPC) Local Area Transportation Review (LATR) Guidelines. The study shows that the Project is anticipated to generate a maximum total of 61 AM peak hour person trips and 215 PM peak hour person trips. The traffic study concludes that all intersections in the Project area will operate at level of service "A" or better with critical lane volumes (CLVs) of less than 1350 under total traffic conditions. As such, all intersections meet the M-NCPPC and MDOT SHA requirements for adequacy. The transportation impact study also discusses existing and planned facilities for pedestrians, bicyclists, and transit users and provides recommendations for these facilities as required by the FY 2020-2024 Growth and Infrastructure Policy.

b. Schools

The Property is served by Germantown Elementary School, Roberto Clemente Middle School and Northwest High School. Based on the current regional student trip generation rates, the 61 townhouse units will generate 16 elementary, (61 x.248), 8 middle school (61 x.121) and 10 high school (61 x.157) students. The current FY 2021 Growth and Infrastructure Policy School Test indicates that Northwest High School is currently operating at over 105% utilization and will require a Tier 1 Utilization Premium Payment (“UPP”). Germantown Elementary School and Roberto Clemente Middle School are operating within acceptable levels and do not require any UPP payments.

c. Other Services

The Property will be served by existing water and sewer mains. The majority of the Property is located within water and sewer categories W-1 & S-3. Two small areas of the site (P.220 & P.274) were previously in water and sewer categories W-5 & S-5, but the water and sewer categories were administratively changed to W-1 and S-3 by the Director the Montgomery County Department of Environmental Protection on January 2, 2019 (AD 2018-4 Amendment). Water and sewer needs are expected be met by the Washington Suburban Sanitary Commission ("WSSC") through connections to the existing water and sewer lines located in the abutting right-of-ways. WSSC will evaluate the water and sewer capacity through a Hydraulic Planning Analysis.

D. Forest Conservation

The Property is subject to the requirements of Chapter 22A of the Montgomery County Code (the "Forest Conservation Law"). A Natural Resources Inventory/ Forest Stand Delineation ("NRI/FSD") (No. 420182510) was approved for the Property on July 24, 2018, which denotes certain forested areas, existing forest conservation easement area, significant trees, existing stream, wetland areas and a stream valley buffers on the Property. The Applicant has expanded the stream valley buffer (as compared to what is shown on the NRI/FSD) in response to subsequent comments received from Park and Planning Environmental Staff. These expanded buffers are shown on the Floating Zone Plan and are reflected on the Preliminary Forest Conservation Plan.

The Applicant has carefully designed the Project to protect the existing environmental features to the extent practicable. In order to facilitate the proposed Project, a portion of the existing forest conservation easement will be vacated. This is largely due to the Montgomery County Subdivision Regulation requirement (Section 50.4.3.E.2.f.ii, Intersection Spacing) that Liberty Mill Road connect to Leaman Farm Road directly across from Ale House Circle for safety and efficiency – this proposed connection falls within a portion of the existing forest conservation easement area. The Planning Board approved the modification of the existing forest conservation easement in connection with the Preliminary Forest Conservation Plan (Resolution No. 19-130).

The Planning Board also approved a tree variance for the removal of three trees in connection with the Preliminary Forest Conservation Plan. The Applicant is submitting a Final Forest Conservation Plan concurrently with these Preliminary and Site Plan applications.

The Property contains no protected soils, endangered species, or other natural features not mentioned above that would impact development.

E. Stormwater Management, Water Quality Plan, and Floodplain Requirements

The Project will comply with the requirements of Chapter 19 of the Montgomery County Code. The Applicant has submitted a Stormwater Management Concept Plan to the Department of Permitting Services (“DPS”) for review. In accordance with 2010 MDE Stormwater Management Regulations, the site will implement Environmental Site Design (“ESD”) practices to the maximum extent practicable.

In order to manage the required stormwater volume, the Applicant proposes to utilize a mix of stormwater management practices which will include: micro-bioretenention facilities, submerged gravel wetlands (SGW), porous pavement, and planter boxes. The majority of the volume will be managed with micro-bioretenention facilities. Submerged gravel wetlands will be utilized when high groundwater does not allow utilization of micro-bioretenention facilities. Porous pavement will be utilized in parking spaces and sidewalks where appropriate, and planter boxes will be utilized as needed in order to treat the required volume. Pursuant to the approved Preliminary Forest Conservation Plan, some of the stormwater management facilities will be located in the expanded buffers. However, in accordance with Condition a.vi of the Preliminary Forest Conservation Plan, the Applicant has minimized the amount of stormwater management facilities and associated grading in the expanded buffers, to the extent practicable. As demonstrated by the Stormwater Concept Plan, the Project will provide 100% of the required ESD volume on-site, in accordance with applicable County and State requirements.

The Property is not in a Special Protection Area, so no separate water quality monitoring plan is required. A Sediment and Erosion Control Plan will be submitted to DPS for approval prior to commencement of construction on the Property.

IX. Findings Requires for Site Plan Approval

The purpose of this portion of the statement is to provide justification that the Site Plan satisfies the applicable provisions of Section 7.3.4 of the Zoning Ordinance, governing the Planning Board’s approval of a site plan application.

- 1. The proposed development satisfies any previous approval that applies to the site, including any development plan or schematic development plan in effect on October 29, 2014. The proposed development satisfies applicable use standards, development standards, and general requirements in the Zoning Ordinance.*

The proposed Project is fully consistent with the approved Floating Zone Plan (LMA H-131). The Floating Zone Plan established three binding elements, which include:

- No more than 12,000 square feet of commercial building area;
- No more than 61 townhouse dwelling units; and
- A maximum building height of 50'.

As discussed herein and illustrated on the plans, the Project complies with these binding elements.

2. *The proposed development satisfies the applicable requirements of Chapter 19, Erosion, Sediment Control, and Stormwater Management, and Chapter 22A, Forrest Conservation.*

Compliance with the applicable requirements of Chapter 19 and 22A are discussed in Section VIII.D and VIII.E above.

3. *The proposed development provides safe, well-integrated parking, circulation patterns, building massing and, where required, open spaces and site amenities.*

As discussed above, the Site Plan is designed to ensure the adequacy, safety, and efficiency of the overall development. The Project provides a context sensitive design that is compatible with the surrounding neighborhood and provides significant improvements to pedestrian and vehicular circulation.

4. *The proposed development substantially conforms with the recommendations of the applicable master plan and any guidelines approved by the Planning Board that implement the applicable plan.*

As discussed in Section VI above, the Project is in substantial conformance with the goals and recommendations contained in the Master Plan.

5. *The proposed development will be served by adequate public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage, and other public facilities.*

As discussed in Section VIII.C above, there are adequate public services and facilities to support the Project.

6. *Proposed development on a property in a Rural Residential or Residential zone, is compatible with the character of the residential neighborhood.*

The provision is not applicable.

7. *The proposed development is compatible with the existing and approved or pending adjacent development.*

The Project has been designed to ensure that it is physically compatible with, and not detrimental to, existing and future development surrounding the Property. As discussed in detail

in this Statement, the Project responds to the Property's prominent location at the intersection of Germantown Road and Clopper Road. The Project is specifically designed to promote compatibility with its surroundings by providing neighborhood serving commercial uses along Clopper Road and contributing to the housing diversity.

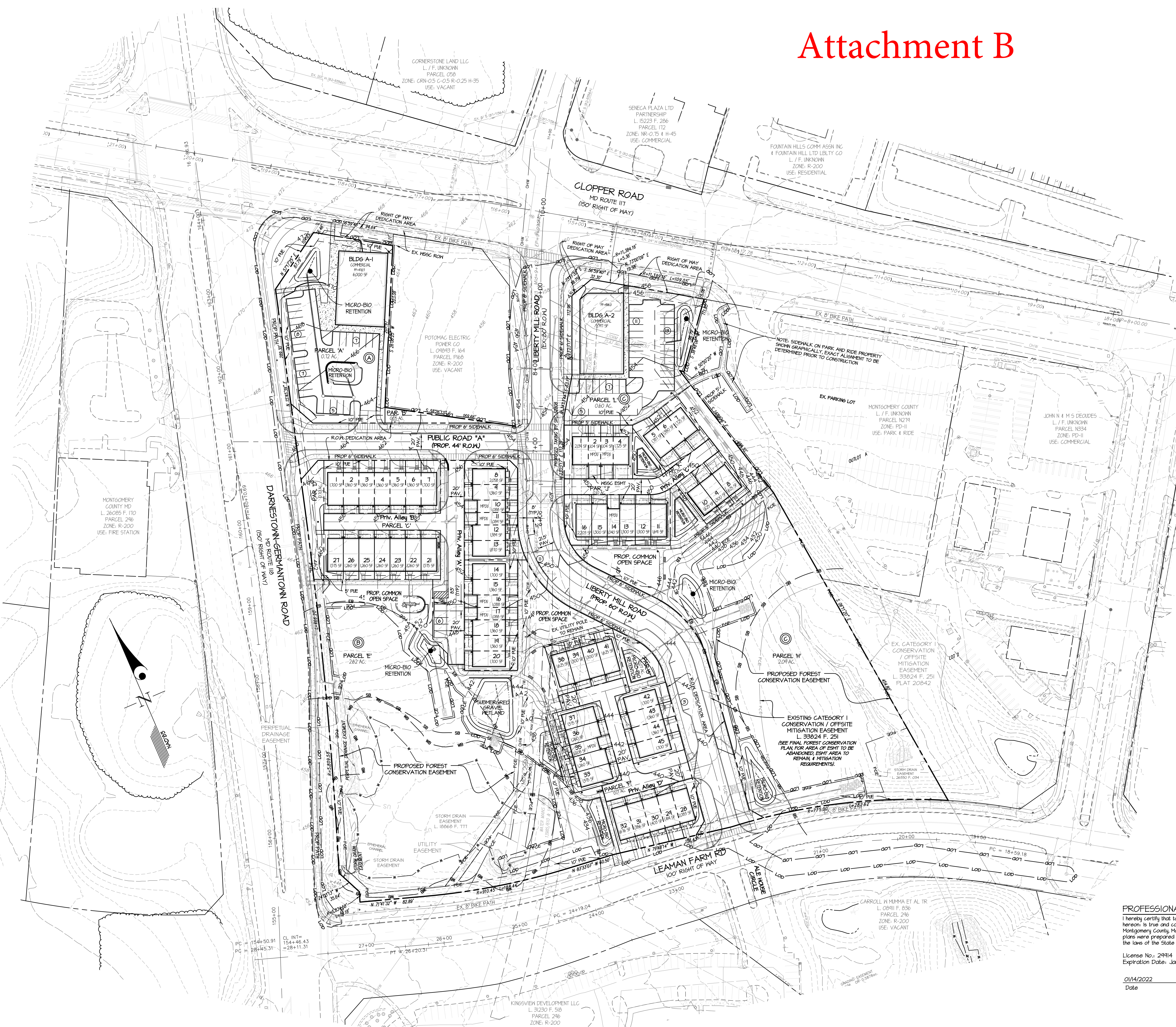
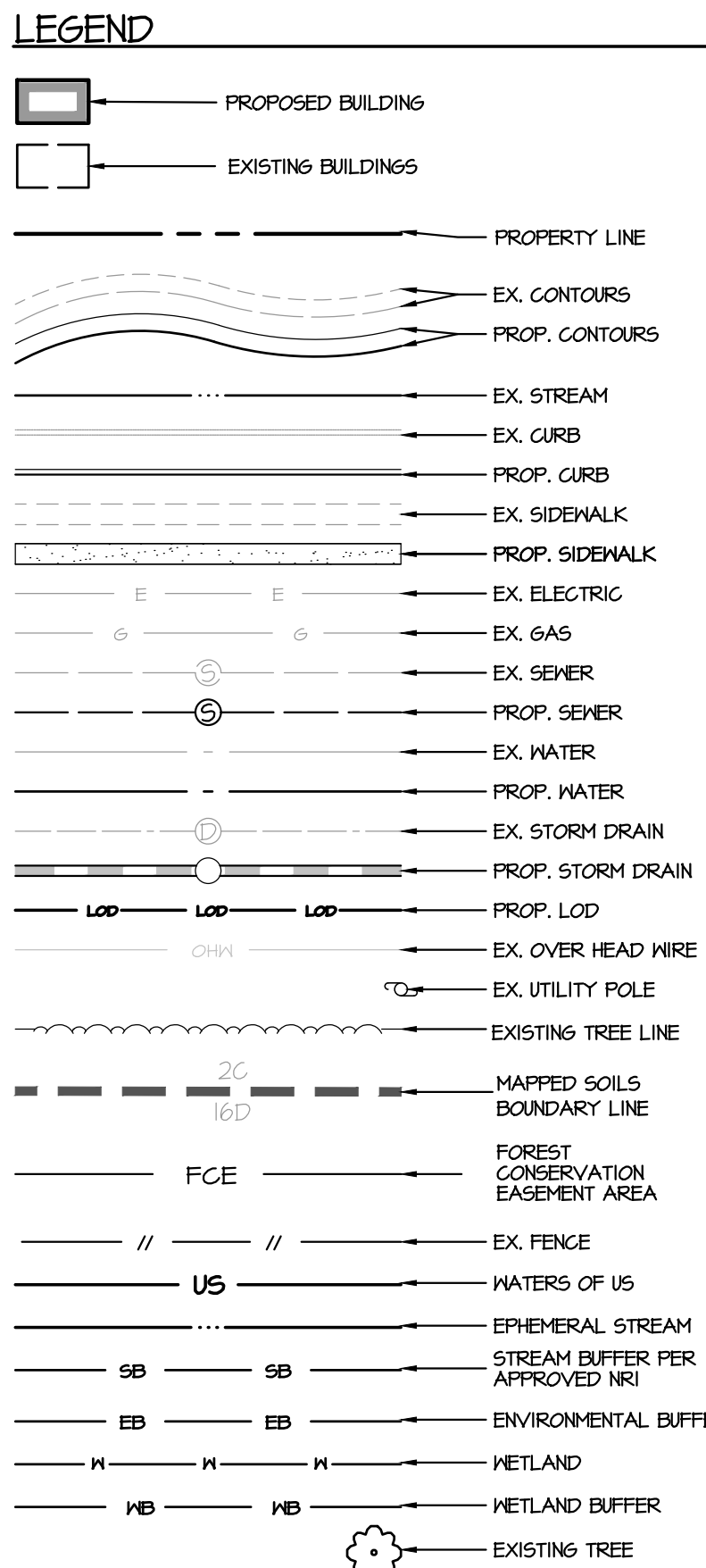
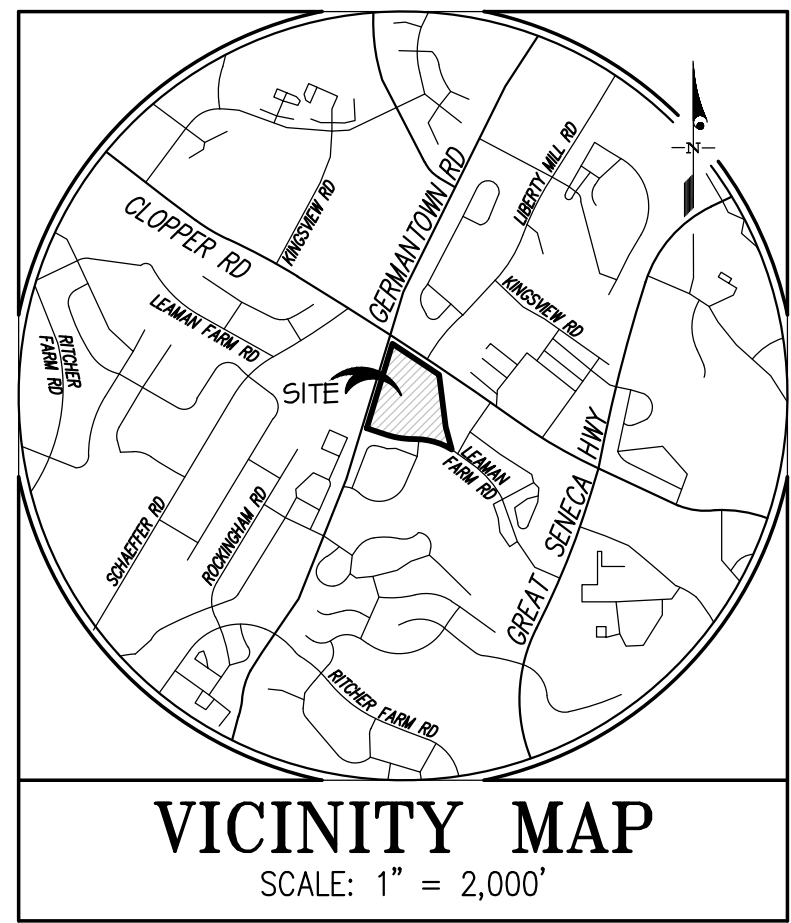
X. Community Outreach

The Applicant recognizes the importance of community engagement. Although not required, the Applicant held a community outreach meeting in connection with the LMA (on June 28, 2018). Additionally, the Applicant held a pre-submission community meeting for the Preliminary and Site Plan applications on May 4, 2021 using the virtual GoToMeeting platform.

XI. Conclusion

As demonstrated by this Statement, these Applications comply with all applicable requirements of the Zoning Ordinance and Subdivision Regulations that govern development under the CRNF Zone. Furthermore, the Project substantially conforms to the recommendations of the Master Plan. The Project will transform this vacant Property into a mixed-use, predominately residential development that provides high-quality residential townhomes that promote housing diversity within the immediate area and neighborhood serving commercial uses. For these reasons, we respectfully request approval of the Preliminary Plan and Site Plan applications.

Attachment B



PROFESSIONAL CERTIFICATION

I hereby certify that to the best of my knowledge, information and belief that the plan shown hereon is true and correct; has been prepared in accordance with the Subdivision Regulations of Montgomery County, Maryland; and the boundary has been field surveyed. I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.

License No. 24914
Expiration Date: January 20, 2024

01/14/2022
Date

Tim Longfellow
Professional Engineer
Gutschick, Little & Weber, P.A.

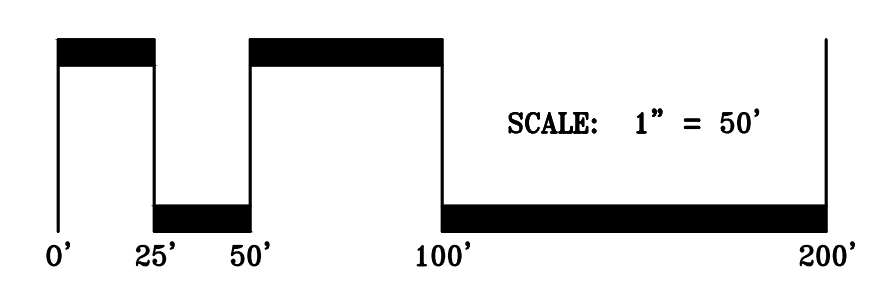
MNCPPC PRELIMINARY PLAN No. 120210210

PRELIMINARY PLAN
KINGSVIEW STATION
Lots 1-45 Block B, Lots 1-16 Block C & Parcels A-K

G. L. W. FILE No.
18020
SHEET
3 OF 3

GLW
PLANNING | ENGINEERING | SURVEYING
3809 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20866 | GLW/PA/COM
PHONE: 301-421-4024 | BALT: 410-880-1800 | DC/VA: 301-589-2524 | FAX: 301-421-4186

DESIGNED BY	KAF				
DRAWN BY	KAB				
CHECKED BY	KAF				
DATE		REVISION		BY	APPR.



PREPARED FOR:
KINGSVIEW STATION, A JOINT VENTURE
C/O PLEASANTS DEVELOPMENT
24012 FREDERICK ROAD, SUITE 200
CLARKSBURG, MD 20871
ATTN: DAN FRYER
PH: 301-428-0800

SCALE
1"=50'
DATE
JAN. 2022

ZONING
CRNF-1.00,
C-0.25, R-0.75,
H-55
TAX MAP - GRID
225NW13
ET-343

DARNSTOWN ELECTION DISTRICT No. 06

MONTGOMERY COUNTY, MARYLAND

VICINITY MAP
SCALE: 1" = 2,000'

VICINITY MAP
SCALE: 1" = 2,000'

WSSC GRID: 225NW13 - TAX MAP: ET343

LEGEND

-
- PROPOSED BUILDING
- EXISTING BUILDINGS
- PROPERTY LINE
- EX. CONTOURS
- PROP. CONTOURS
- EX. STREAM
- EX. CURB
- PROP. CURB
- EX. SIDEWALK
- PROP. SIDEWALK
- EX. ELECTRIC
- EX. GAS
- EX. SEWER
- PROP. SEWER
- EX. WATER
- PROP. WATER
- EX. STORM DRAIN
- PROP. STORM DRAIN
- PROP. LOD
- EX. OVER HEAD WIRE
- EX. UTILITY POLE
- EXISTING TREE LINE
- MAPPED SOILS
- BOUNDARY LINE
- FOREST CONSERVATION EASEMENT AREA
- FCE
- EX. FENCE
- US
- WATERS OF US
- EPIHEMERAL STREAM
- STREAM BUFFER PER APPROVED NRI
- EB
- ENVIRONMENTAL BUFFER
- WB
- NETLAND
- NETLAND BUFFER
- EXISTING TREE



PROFESSIONAL CERTIFICATION

I hereby certify that to the best of my knowledge, information and the belief that the plan shown hereon is true and correct; has been prepared in accordance with the Subdivision Regulations of Montgomery County, Maryland; and the boundary has been field surveyed. I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.

License No.: 29914
Expiration Date: January 20, 2024

01/14/2022
Date

DEVELOPER'S CERTIFICATE

The Underigned agrees to execute all the features of the Site Plan Approval No. 820210130, including Approval Conditions, Development Program, and Certified Site Plan.

Developer's Name: KINGSVIEW STATION, A JOINT VENTURE Don Fryer
c/o PLEASANTS DEVELOPMENT Contact Person

Address: 24012 FREDERICK ROAD, SUITE 200
CLARKSBURG, MD 20871

Phone: 301-428-0800

Signature: _____
Dan Fryer Wagner, Regional Vice President

MNCPPC SITE PLAN No. 820210130

COMPOSITE PLAN

KINGSVIEW STATION
 Lots 1-45 Block B, Lots 1-16 Block C & Parcels A-K

L. W. FILE No.

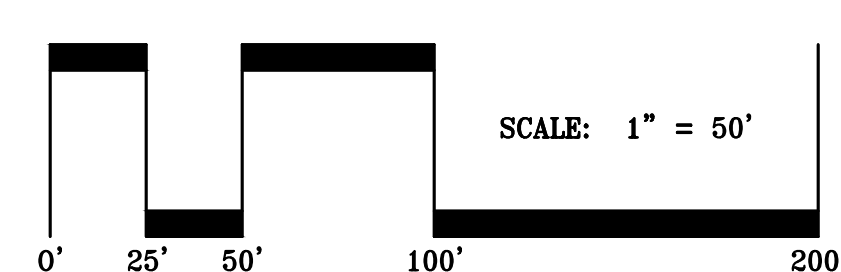
18020

SHEET

3 OF 15



DESIGNED BY:					
KAF					
DRAWN BY:					
KAB					
CHECKED BY:					
KAF					
DATE		DESCRIPTION		BY	APP'D



PREPARED FOR:
KINGSVIEW STATION, A JOINT VENTURE
c/o PLEASANTS DEVELOPMENT
24012 FREDERICK ROAD, SUITE 200
CLARKSBURG, MD 20871
ATTN: DAN FRYER
PH: 301-428-0800

SCALE 1"=50'	ZONING CRNF-1.00, C-0.25, R-0.75 H-55'
DATE MAY, 2021	TAX MAP - GR 225NW13 ET-343

5.	<p>Lots 1-</p> <p>DARNSTOWN ELECTION DISTRICT No. 06</p>
D	

COMPOSITE PLAN

KINGSVIEW STATION
 Lots 1-45 Block B, Lots 1-16 Block C & Parcels A-K

L. W. FILE No.

18020

SHEET

3 OF 15



Attachment E

DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

Mitra Pedoeem
Director

June 29, 2021

Mr. Will Newman
Gutshick, Little & Weber, P.A.
3909 National Dr.
Burtonsville, MD 20866

Re: **COMBINED STORMWATER MANAGEMENT
CONCEPT/SITE DEVELOPMENT
STORMWATER MANAGEMENT PLAN** for
13520 CLOPPER RD
Preliminary Plan #: 120210210
SM File #: 287016
Tract Size/Zone: 9.94 ac.
Total Concept Area: 7.79 ac
Parcel(s): P332, P274, P220, N210, P330,
P536,
Watershed: Middle Great Seneca Creek

Dear Mr. Newman:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above-mentioned site is **acceptable**. The stormwater management concept proposes to meet required stormwater management goals via Microbioretention (12), MBR Planter Boxes (20), Permeable Paving, and Submerged Gravel Wetland (1).

The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

1. The placement of several SWM facilities may require the use of extensive use of retaining walls and railing to make certain the placement of the SWM practice isn't in the zone of influence of the adjacent buildings and that it complies with MC DOT safe placement of SWM facilities. The cost of these retaining walls and railings will not be a reason for the detailed SWM plan not complying with the approved SWM Concept.
2. The concept plan relies on planter boxes that must be constructed separately from the structure and outside its zone of influence. The cost of these planter boxes will not be a reason for the detailed SWM plan not complying with the approved SWM Concept.
3. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
4. An engineered sediment control plan must be submitted for this development.
5. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.



2425 Reddie Drive, 7th Floor, Wheaton, Maryland 20902 | 240-777-0311
www.montgomerycountymd.gov/permittingervices

Mr. Will Newman
June 29, 2021
Page 2 of 2

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 **is not required**.

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact Bill Musico at 240-777-6340.

Sincerely,



Mark C. Etheridge, Manager
Water Resources Section
Division of Land Development Services

MCE: WJM

cc: N. Braunstein
SM File # 287016

ESD: Required/Provided 25,644 cf / 26,631 cf
PE: Target/Achieved: 1.74"/1.80"
STRUCTURAL: 0.00 cf
WAIVED: 0.00 ac.



DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS

Marc Elrich
County Executive

Scott Bruton
Acting Director

May 1, 2023

Mr. Ryan Sigworth
Montgomery County Planning Department
8787 Georgia Avenue
Silver Spring, Maryland 20910

Re: Kingsview Station
Site Plan # 120210210

Dear Mr. Sigworth:

The Montgomery County Department of Housing and Community Affairs (DHCA) has reviewed the above referenced plan and recommends Approval. The development currently plans to provide 61 total dwelling units including eight (8) MPDUs.

The applicant requires an Agreement to Build to be submitted to DHCA for the eight (8) MPDUs before building permits are obtained from the Department of Permitting Services (DPS).

Sincerely,

Maggie Gallagher, Program Manager I
Affordable Housing Programs Section

Affordable Housing

Division of Housing
Landlord Tenant Affairs

Multifamily Housing

1401 Rockville Pike, 4th Floor • Rockville, Maryland 20852 • 240-777-0311 • 240-777-3691 FAX • www.montgomerycountymd.gov/dhca

montgomerycountymd.gov/311



240-773-3556 TTY



DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS

Marc Elrich
County Executive

Scott Bruton
Acting Director

May 1, 2023

Mr. Jeffrey Server
Montgomery County Planning Department
8787 Georgia Avenue
Silver Spring, Maryland 20910

Re: Kingsview Station
Site Plan # 820210130

Dear Mr. Server:

The Montgomery County Department of Housing and Community Affairs (DHCA) has reviewed the above referenced plan and recommends Approval. The development currently plans to provide 61 total dwelling units including eight (8) MPDUs.

The applicant requires an Agreement to Build to be submitted to DHCA for the eight (8) MPDUs before building permits are obtained from the Department of Permitting Services (DPS).

Sincerely,

Maggie Gallagher, Program Manager I
Affordable Housing Programs Section

Affordable Housing

Division of Housing
Landlord Tenant Affairs

Multifamily Housing

1401 Rockville Pike, 4th Floor • Rockville, Maryland 20852 • 240-777-0311 • 240-777-3691 FAX • www.montgomerycountymd.gov/dhca

820210130 Kingsview Station

Contact: Sam Farhadi at 240 777-6333

We have reviewed site plan files:

“07-SITE-820210130-003.pdf V3” uploaded on/ dated **“1/14/2022”** and

The followings need to be addressed prior to the certification of site plan:

1. Provide truck turning movement for all (especially right turn) movements.
2. Public storm drain system:
 - a. Show SD easements and ensure they are free of any private structures/features.
 - b. Clarify connections to the existing systems to be removed (TBR).
3. On landscaping plan, provide street trees per approved tree species list at the required spacing.
4. Parking spaces should not interfere with intersections operation.

And the followings need to be conditions of the certified site plan:

1. Private streets to be built to the corresponding public road classification standards per County Code 50.4.3.E.4.c. Provide a note accordingly.
2. The followings will be reviewed at ROW permit:
 - a. Locating the proposed headwall within Liberty Mill Road ROW.
 - b. On-street parking locations.



**Department of Permitting Services
Fire Department Access and Water Supply Comments**

DATE: 16-Sep-19
TO: Kevin Foster
Gutschick Little & Weber, PA
FROM: Marie LaBaw
RE: Kingsview Station
H-131 820210130

PLAN APPROVED

1. Review based only upon information contained on the plan submitted ~~10/24/2019~~ Review and approval does not cover
K satisfactory installation resulting from errors, omissions, or failure to clearly indicate conditions on this plan
2. Correction of unsatisfactory installation will be required upon inspection GY Service of notice of violation to a party
K responsible for the property

***** Parking restrictions and hydrant placement to be reviewed at preliminary plan *****

***** 1/18/2022 FD access approval for site plan *****



MONTGOMERY COUNTY FIRE AND RESCUE SERVICE

Date: January 14, 2022

Fire Lane Establishment Order

Pursuant to Section 22-33, Montgomery County Code, 1971, as amended, you are hereby notified that a Fire Lane has been established as described in this order. You are hereby ordered to post fire lane signs and paint curbs/pavement as identified below. When signs or paint work has been completed, this order will authorize the enforcement of this Fire Lane by appropriate police or fire officials. Compliance with this order must be achieved within 30 days of receipt when any of the following conditions are met:

- One or more structures addressed from the subject road are occupied;
- The road or accessway is available for use and at least one building permit for an address on the subject road has been issued; or
- The road or accessway is necessary fire department access.

☐ **SIGNS** -- (See attached diagram for location of sign placement)



(Red letters on white background)

Signs must be posted so that it is not possible to park a vehicle without being in sight of a sign. Signs may be no further apart than 100 feet.

☐ **PAINT** -- (See attached diagram when painting is required)

Paint must be traffic yellow with lines of sufficient width to be readily identifiable/readable by motor vehicle operators.

Signature of Order Writer/I.D. #

Cc: Fire Code Enforcement Section
Attachment: Fire Lane Diagram

FIRE LANE ESTABLISHMENT FORM

LOCATION: **Kingsview Station – (Sheet F-01)**

1. Private Alley "A", from Public Road "A" to Lot 16, Block "B".
2. Private Alley "B", from Private Alley "A" to Lot 6 & 22, Block "B".
3. The North side of the Fire Lane in front of Units 1-7, Block "C".
4. Private Alley "C", From Liberty Mill Road to Lots 5 & 10, Block "C".
5. Private Alley "D" from Liberty Mill Road to Lot 32 & 33.

Delineate all areas where indicated by signs and/or paint.

See attached drawing for designated fire lanes:

I have received the drawing and instructions for installing the designated fire lanes on property not owned by state or local government.

NAME AND TITLE OF PROPERTY REPRESENTATIVENAME: J. Dan Fryer TITLE: Vice PresidentSIGNATURE: PHONE: 301-428-0800 DATE: 1/18/2022

ADDRESS (where processed order will be mailed):

24012 Frederick Road, Suite 200, Clarksburg, MD 20871

The designated fire lanes are the minimum necessary for fire/rescue access and are in accordance with Section 22-33 of the Fire Safety Code.

NAME: _____ SIGNATURE: _____

STA.#: _____ I.D.#: _____ DATE: _____

Comments: _____

Fire Lane Installed Per Order

NAME: _____ DATE: _____

0092N/23

L:\CADD\DRAWINGS\18020\PLANS BY GLW\EXHIBITS\FIRE-TRAFFIC& PRIV. FIRE LANE ORDERS\18020mcfrs02 - Fire Lane Order.dwg.
PLOTTED: 1/18/2022 4:31 PM, LAST SAVED: 1/14/2022 4:18 PM, PLOTTED BY: Keith Bennett

YELLOW LINE & PARKING STRIPE



LINE SPECIFICATIONS
NTS

STRIPING NOTES:

1. ALL PAINT SHALL BE TWO COATS OF SHERWIN-WILLIAMS LATEX "SETFAST" TRAFFIC MARKING YELLOW, OR EQUAL - YELLOW.
2. APPLY 2 COATS OF TRAFFIC TYPE PAINT. APPLY THE FIRST COAT NOT LESS THAN FIVE (5) DAYS AFTER THE PLACING OF BITUMINOUS PAVEMENT APPLY SECOND COAT JUST PRIOR TO STORE OPENING.

STRIPING DETAILS
NTS

PRIVATE FIRE LANE ORDER

LEGEND

"NO PARKING-FIRE LANE" SIGN
CURB PAINTING LIMITS



KINGSVIEW STATION

PRIVATE FIRE ACCESS LANES
ADDRESS'



GLW
PLANNING | ENGINEERING | SURVEYING

3909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20866 | GLWPA.COM
PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4166

DESIGNED BY:

KAB

DRAWN BY:

KAB

CHECKED BY:

TML

PREPARED FOR :

KINGSVIEW STATION, A JOINT VENTURE
c/o PLEASANTS DEVELOPMENT
24012 FREDERICK ROAD, SUITE 200
CLARKSBURG, MD 20871
ATTN: DAN FRYER
PH: 301-428-0800

G. L. W. No.

18020

ZONING

CRNF

TAX MAP/GRID

ET-343

DATE

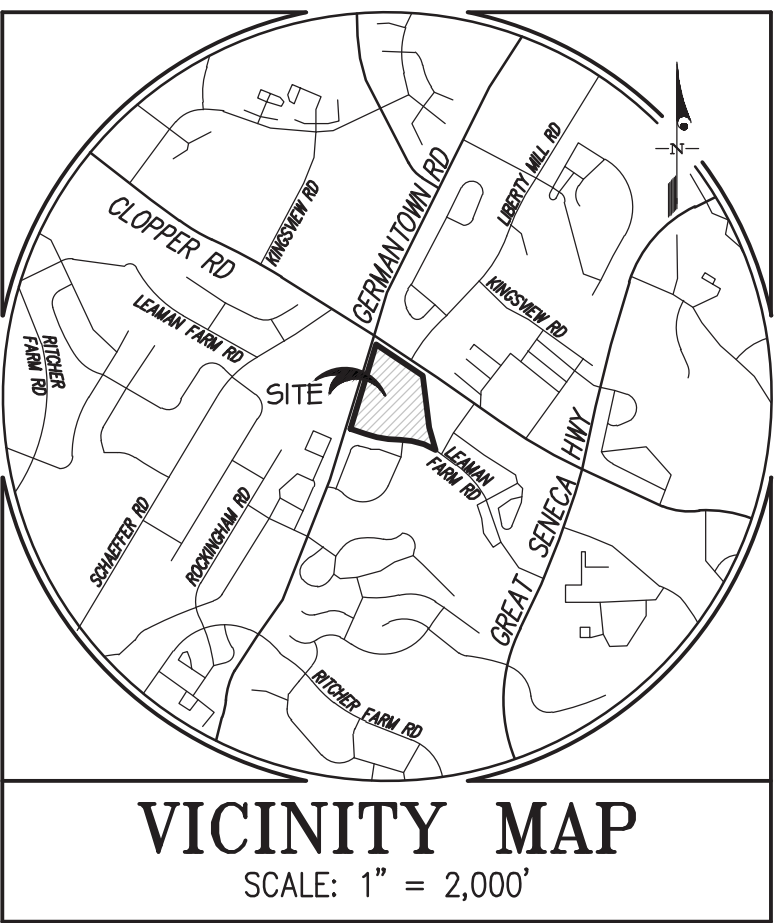
JAN. 2022

SCALE

AS NOTED

SHEET

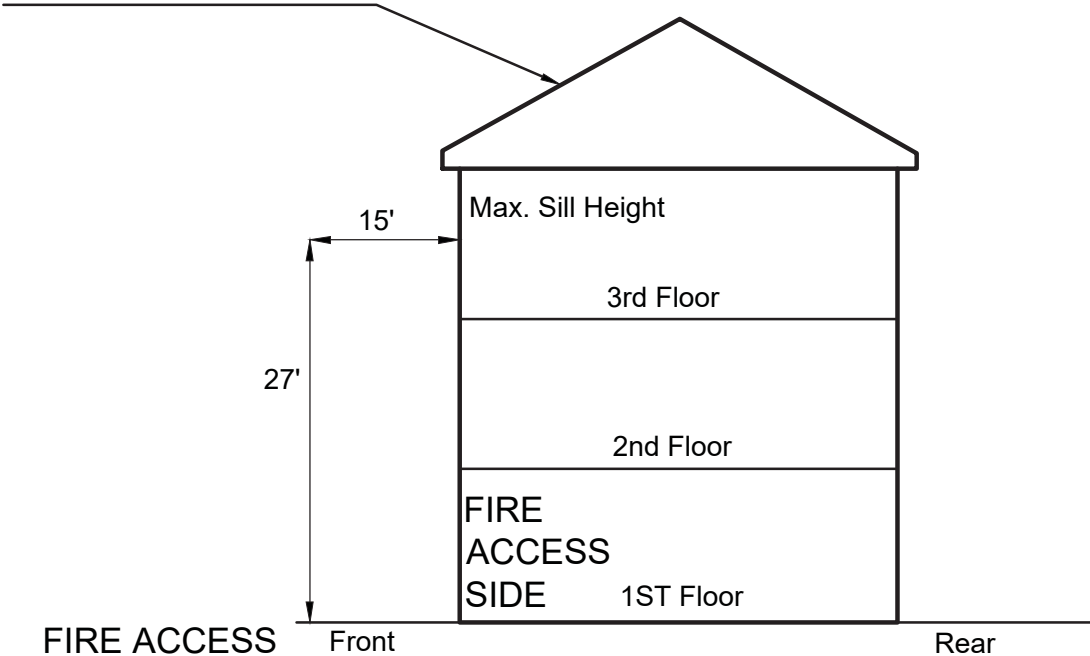
F-2



LEGEND

- EX. BUILDING
PROP. RESIDENTIAL BUILDING
EX. CURB
PROP. CURB
EX. SIDEWALK
PROP. SIDEWALK
EX. SEWER
PROP. SEWER
EX. WATER
PROP. WATER
EX. STORM DRAIN
PROP. STORM DRAIN
PROP. FIRE ACCESS ROUTE
EX. FIRE HYDRANT
PROP. FIRE HYDRANT
PROP. TURNING RADIUS
PROP. ACCESS PAVEMENT WIDTH (CURB TO CURB)

NO WINDOWS/DORMERS



- ✱ Townhouse Unit Building Height Detail -
★ FIRE HEIGHT RESTRICTION UNIT

General Notes:

1. One and two-family dwellings of three (3) stories (27' to highest sill, including false dormers) or less must provide access to the occupied interior through a main, side-hinged door within 150 feet of a fire department access route. For units of three (3) stories or more, access must be within fifty (50) feet of access route.

HEIGHT RESTRICTIONS

NOTE: all units in this subdivision are fee simple townhouse units (no 2 over 2's). FDC's are not applicable and Fire Hydrants have been located to meet all coverage requirements.

FIRE CODE ENFORCEMENT

Fire Department Access Review

Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation.

BY: S.M.C. PW: 43 DATE: 1/18/2022
original 9/16/2019

PROFESSIONAL CERTIFICATION

I hereby certify that to the best of my knowledge, information and the belief that the plan shown herein is true and correct; has been prepared in accordance with the Subdivision Regulations of Montgomery County, Maryland; and the boundary has been field surveyed. I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.

License No.: 24414
Expiration Date: January 20, 2024

01/18/2022
Date

Tim Longfellow
Professional Engineer
Gutschick, Little & Meier, P.A.

MNCPPC SITE PLAN No. 820210130

FIRE ACCESS PLAN

KINGSVIEW STATION
Lots 1-45 Block B, Lots 1-16 Block C & Parcels A-K

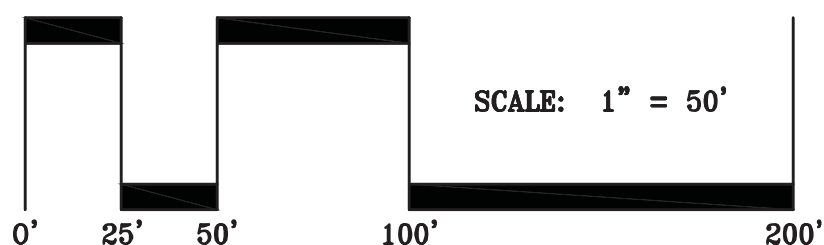
G. L. W. FILE No.

18020

SHEET

1 OF 1

DARNTOWN ELECTION DISTRICT No. 06 MONTGOMERY COUNTY, MARYLAND



GLW
PLANNING [ENGINEERING] SURVEYING
3809 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20866 | (GLWPA.COM)
PHONE: 301-421-4024 | BALT: 410-880-1800 | DC/VA: 301-589-2524 | FAX: 301-421-4186

DESIGNED BY	KAF				
DRAWN BY	KAB				
CHECKED BY	KAF				
DATE		REVISION	BY	APP'R	

PREPARED FOR:
KINGSVIEW STATION, A JOINT VENTURE
c/o PLEASANTS DEVELOPMENT
24012 FREDERICK ROAD, SUITE 200
CLARKSBURG, MD 20871
ATTN: DAN FRYER
PH: 301-428-0800

SCALE
1"=50'
DATE
OCT., 2021

ZONING
CRNF-1.00,
C-0.25, R-0.75,
H-55
TAX MAP - GRID
225NW13
ET-343



DEPARTMENT OF TRANSPORTATION

Marc Elrich
County Executive

Christopher Conklin
Director

June 1, 2023

Mr. Ryan Sigworth, Planner II
Upcounty Planning Division
The Maryland-National Capital
Park & Planning Commission
2425 Reedie Drive
Wheaton, MD 20902

RE: Preliminary Plan No. 120210210
Kingsview Station

Dear Mr. Sigworth:

We have completed our review of the revised preliminary plan uploaded to eplans on January 14, 2022. A previous version of this plan was reviewed by the Development Review Committee (DRC) at its meeting on August 17, 2021. We recommend approval of the plans subject to the following comments:

Significant Plan Review Comments

1. The subject property has frontage along Germantown Road (MD 118) and Clopper Road (MD 117), which are maintained by Maryland State Highway Administration (MSHA). Therefore, MCDOT does not have any jurisdiction other than the maintenance and operation of the traffic signal and sidepaths; therefore, we defer to them for access and improvements along these roads. Per Montgomery County Code Chapter 50, Section 4.2, MCDOT shall provide the following recommendations about the subject property for the attention of concerned agencies:
 - Per the Germantown Master Plan, Germantown Road (MD 118) is classified as a Major Highway with a 150-foot right-of-way. The full width was previously dedicated as part of Plat No. 20972. Per the Bicycle Master Plan, Germantown Road (MD 118) shall have a sidepath on both sides. We recommend that, prior to issuance of the 15th building permit, the applicant replace the existing sidewalk with an 11-foot wide, asphalt path and minimum 6-foot wide tree panel.
 - Per the Germantown Master Plan, Clopper Road (MD 117) is classified as a Major Highway with a 150-foot right-of-way. The applicant shall dedicate 35 feet from centerline along the property frontage. Per the Bicycle Master Plan, Clopper Road (MD 117) shall have a sidepath on west side. We recommend that prior to issuance of the 15th building permit, the applicant replace the existing sidewalk with an 11-foot wide, asphalt path and minimum 6-

Office of the Director

101 Monroe Street 10th Floor · Rockville Maryland 20850 · 240-777-7170 · 240-777-7178 FAX
www.montgomerycountymd.gov

Located one block west of the Rockville Metro Station

foot wide tree panel.

2. **Liberty Mill Road is proposed to have 100' centerline radii.** The Planning Board must make a finding that this road will function as a tertiary street.
3. To comply with the 2018 Bicycle Master Plan, prior to issuance of the 15th building permit, the applicant will be required to construct an 11-foot wide, asphalt sidepath with a minimum 6-foot wide tree panel along the **site's** Leaman Farm Road frontage. New ramps that meet the ADA standards will also need to be provided for all legs of the intersections. Proper signing will also need to be required and must be included with the right-of-way plans.
4. The applicant shows the alleys to have intersection driveways. MCDOT recommends that the applicant provide driveway aprons for all alley accesses. This is more standard detail that provides safer operations for pedestrians. This will remove the ramps that are shown on the plan.
5. At the intersection Liberty Mill Road and Leaman Farm Road, the applicant is installing ramps on their side. The applicant will need to bring all intersection ramps for the four legs up to standard for this intersection unless no sidewalk is currently present. At right-of-permit, the applicant will need to provide this detail.
6. The sidewalks along the public roads are not straight and parallel with the road. At the time of certified preliminary plan, MCDOT will evaluate whether the deviations are acceptable.
7. The applicant submitted a revised Traffic Impact Study (TIS) dated January 6, 2022. Per the LATR proportionality guide, the off-site improvement guide for this project is \$325,152. Prior to the specified development triggers below, the Applicant must provide the following off-site improvements:
 - a. Prior to the recordation of the plat, provide for review designs for offsite mitigation improvements of up to a cost of \$325,152 to improve the Germantown Road (MD118)/Clopper Road (MD 117) intersection. The improvements should be for increased bike and pedestrian safety and comfort, or a comparable improvement, as agreed to by Planning Staff. The improvements will be reviewed by staff from Planning, MCDOT and MDSHA.
 - b. Prior to the release of the first building permit, the Applicant must receive approval for designs for all off-site improvements by staff from Planning, MCDOT and MDSHA.
 - c. Prior to the release of the 15th building permit, the Applicant must construct all off-site improvements.

Standard Plan Review Comments

8. All Planning Board Opinions relating to this plan or any subsequent revision, project plans or site plans should be submitted to the Montgomery County Department of Permitting Services in the package for record plats, storm drain, grading or paving plans, or application

for access permit. This letter and all other correspondence from this department should be included in the package.

9. Design all vehicular access points to be at-grade with the sidewalk, dropping down to street level between the sidewalk and roadway. This includes the alley access.
10. The sight distance study has been accepted. A copy of the Sight Distance Evaluation certifications form is included with this letter.
11. The storm drain analysis was reviewed and is acceptable to MCDOT. No improvements are needed to the downstream County storm drain system for this plan.
12. Size storm drain easements prior to record plat. No fences will be allowed within the storm drain easements without a revocable permit from the Department of Permitting Services and a recorded Maintenance and Liability Agreement.
13. Provide on-site handicap access facilities, parking spaces, ramps, etc. in accordance with the Americans with Disabilities Act.
14. Relocation of utilities along existing roads to accommodate the required roadway improvements shall be the responsibility of the applicant.
15. No steps, stoops, retaining walls or other structures for the development are allowed in County right-of-way. In addition, doors are not allowed to swing into the County right-of-way.
16. In all **underground utility installations, install identification tape or other "toning" device** approximately two feet above the utility.
17. If the proposed development will alter any existing streetlights, replacement of signing, and/or pavement markings, please contact Mr. Dan Sanayi of our Traffic Engineering Design and Operations Section at (240) 777-2190 for proper executing procedures. All costs associated with such relocations shall be the responsibility of the applicant.
18. Trees in the County rights of way – spacing and species to be in accordance with the applicable MCDOT standards. Tree planning within the public right of way must be coordinated with DPS Right-of-Way Plan Review Section.
19. Posting of a ROW permit bond is a prerequisite to MCDPS approval of the record plat. The permit will include, but not necessarily be limited to, the following improvements:
 - a. Paving, curb, gutter, sidewalk, handicap ramps, storm drain, street trees and streetlights along Liberty Mill Road and Public Road A.
 - b. Eleven-foot wide, asphalt sidepath and handicap ramps along Leaman Farm Road.

- c. Permanent monuments and property line markers, as required by Section 50-4.3(G) of the Subdivision Regulations.
- d. Erosion and sediment control measures as required by Montgomery County Code 19-10(02) and on-site stormwater management where applicable shall be provided by the Developer (at no cost to the County) at such locations deemed necessary by the Department of Permitting Services (DPS) and will comply with their specifications. Erosion and sediment control measures are to be built prior to construction of streets, houses and/or site grading and are to remain in operation (including maintenance) as long as deemed necessary by MCDPS.

Thank you for the opportunity to review this preliminary plan and TIS. If you have any questions or comments regarding this letter, please contact me at william.whelan@montgomerycountymd.gov or (240) 777-2173.

Sincerely,

William Whelan

William Whelan
Development Review Team
Office of Transportation Policy

[SharePoint/transportation/directors_office/development_review/WhelanW/120210210 Kingsview Station-MCDOT review letter 060123.docx](#)

Enclosures (1)

Sight Distance Certifications

cc: Correspondence folder FY 2023

cc-e:	Keith Bennett	GLWPA
	Chris Van Alstyne	MNCP&PC
	Sandra Pereira	MNCP&PC
	Mark Terry	MCDOT DTEO
	Kutty Menon	MCDOT DTEO
	Sam Farhadi	MCDPS RWPR

**BEFORE THE COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND
SITTING AS THE DISTRICT COUNCIL FOR THE MARYLAND-
WASHINGTON REGIONAL DISTRICT IN
MONTGOMERY COUNTY, MARYLAND
Office of Zoning and Administrative Hearings
Stella B. Werner Council Office Building
100 Maryland Avenue, Room 200
Rockville, Maryland 20850
(240) 777-6660**

IN THE MATTER OF:

Kingsview Station, A Joint Venture
Applicant

Clark Wagner
Timothy Longfellow
Kevin Foster

For the Application

Elizabeth Rogers, Esquire
Attorney for the Applicant

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OZAH Case No. H-131

Before: Lynn Robeson Hannan, Hearing Examiner

HEARING EXAMINER'S REPORT AND RECOMMENDATION

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I. SUMMARY

Applicant:	Kingsview Station, A Joint Venture
LMA No. & Date of Filing:	H-131, filed March 6, 2019.
Current Zone:	R-200 and R-200/TDR 6.0 Zones.
Current Use	Unimproved except for a partial extension of Liberty Mill Road and transmission lines.
Zoning Sought:	CRNF-1.0, C-0.25, R-0.75, H-55 (Commercial/Residential Neighborhood Floating Zone).
Use Sought:	61 townhouse dwelling units; 12,000 square feet of commercial space.
Location:	6 parcels (N210, P. 220, P. 274, Pt. P. 322, Pt. P. 330, P. 536 and Liberty Mill Road R.O.W) located in the southeast quadrant of the intersection of Clopper Road (Md. 117) and Germantown Rd. (Md. 118), shown on the vicinity map below (Ex. 50):



Acreage to be Rezoned:	10.27 acres +/-.
Density/Height Proposed:	Total of 1.0 FAR, 0.75 FAR Residential, 0.25 FAR Commercial; height of 50 feet.
Open Space Required:	10% Common Open Space/10% Public Open Space.

Open Space Proposed:	10% Common Open Space/10% Public Open Space.
Maximum Building Height:	50 feet.
MPDUs Required/Provided:	12.5% (8 MPDUs)/ 12.5% (8 MPDUs).
Environmental Issues:	Adequacy of Stormwater Management/Accuracy of NRI/FSD.
Consistency with Master Plan:	Consistent with the 1989 Germantown Master Plan.
Neighborhood Response:	No Opposition.
Traffic Issues:	None.
Planning Board Recommends:	Approval
Technical Staff Recommends:	Approval
Hearing Examiner Recommends:	Approval

II. STATEMENT OF THE CASE

Kingsview Station, A Joint Venture (Kingsview or Applicant) filed LMA Application No. H-131 on March 6, 2019. The application asks to rezone approximately 10.27 acres of property from the R-200 and R-200/TDR 6 (Residential) Zones to the CRNF (Commercial Residential Neighborhood Floating Zone) 1.0, C-0.25, R-0.75, H-55. Exhibit 1. The subject property consists of six parcels (N210, P. 220, P. 274, Pt. P. 322, Pt. P 330, P.536 and the Liberty Mill Road right-of-way). The property is in the southeast quadrant of the intersection of Germantown Road (Md. Rte. 118) and Clopper Road (Md. Rte. 117).

Kingsview submitted revised plans on August 14, 2019, and September 16, 2019. Exhibits 37, 38. Notice of the public hearing (Exhibit 39) to be held on December 16, 2019, was mailed out and posted on OZAH's website on November 14, 2019. After noticing the public hearing, OZAH was advised that the Planning Board did not have enough time to issue its written recommendation on the application within the time required by the Zoning Ordinance.¹ With the consent of the Applicant, the public hearing was postponed to January 3, 2020.

The public hearing proceeded as rescheduled. The Applicant presented three expert witnesses and a representative of Applicant. The record was left open until January 24, 2020, to receive additional information from the Planning Board on the accuracy of the delineation of the environmental buffers, the Planning Board's resolution approving the Preliminary Forest Conservation Plan (PFCP), and additional information on the Applicant's stormwater management strategy. Information on the environmental buffer and the stormwater strategy were provided prior to January 24, 2020. The PFCP was issued on February 3, 2020. The Hearing Examiner re-opened

¹ Section 59.7.2.1.D.2.b of the Zoning Ordinance requires the Planning Board to issue its written recommendation on a Local Map Amendment application at least 7 business days before the public hearing.

the record to include the Planning Board's resolution approving the PFCP and the record closed on February 3, 2020.

III. FACTUAL BACKGROUND

A. Subject Property

The subject property contains six parcels (identified above) totaling 10.27 acres in the southeast quadrant of the intersection of Clopper and Germantown Roads. The Staff Report contains an aerial photograph of the subject property (Exhibit 44, p. 4), below):



Mr. Kevin Foster, the Applicant's expert land planner, testified that Germantown Road initially extended to the middle of the property. That road was relocated many years ago and the right of way became what is now called Liberty Mill Road, which terminates in a cul-de-sac in the middle of the property. T. 15; Exhibit 44, p. 4. PEPCO transmission lines bisect the property. The lines do not provide local service. PEPCO owns adjacent land to the north. T. 15-16. Adjacent developed uses include a Park and Ride lot, gas station and service use to the east, a fire station to the west, townhouses and a community center to the north, and multi-family to the south. Exhibit 44, p. 4.

The remaining portions of the property are vacant. The center of the property contains a field, which is surrounded by two stream valleys along the east and west sides of the property. The bulk of the property is zoned R-200, although there is a portion of R-200/TDR 6 in the lower southwest corner. T. 21-22.

B. Surrounding Area

A "surrounding area" is identified and characterized in a Floating Zone case to assess the compatibility of the use with the properties that will be directly impacted. The area identified is then characterized to measure whether the uses proposed will be compatible with the existing character of the area.

Staff and the Applicant agree that the surrounding area for the subject property is bounded by Shaeffer Road, Kingsview Road, and MD 117 to the west; Dawson Farm Road to the north; MD 119 to the east; and Richter Farm Road to the south. An aerial view of the surrounding area from the Staff Report (Exhibit 44, p. 5) is on the following page.

Staff characterized the area as "primarily residential", with a variety of residential densities and building types. These include townhouses, multi-family buildings, and single-family detached homes. Although primarily residential, Staff found that the neighborhood includes a mix of



commercial and institutional uses as well as public facilities and local parks. Exhibit 44, p. 5. Mr. Foster testified that the surrounding area was somewhat large, but Staff wished to use easily

ascertainable boundaries. T.23. He characterized the larger surrounding area as “very residential”. T. 24. The area immediately surrounding the subject property, however, includes the Kingsview Village Center, multi-family apartments to the southeast, a fire station across Germantown Road to the west, a Board of Education property to the north across Clopper Road, and a park and ride, small retail strip center and gas station to the east. Elementary and middle schools, and a community center are on the northeast corner of Germantown and Clopper Road. According to Mr. Foster, this mix of uses is more varied than those commonly found in a village center, which typically has residential and commercial uses. T. 25-26.

The Hearing Examiner accepts the delineation of the surrounding area proposed by Planning Staff and the Applicant. While large, the physical barriers of roadways clearly define the direct impact of the proposed development. She agrees with the Applicant that the surrounding area is primarily residential but finds that the immediate environs are a mix of residential, commercial retail, public, and institutional uses. The residential portion of the surrounding area is a mix of multi-family, townhouse, and single-family detached units.

C. The Applicant’s Proposal

The Applicant proposes to develop 61 townhouse units and 12,000 square feet of retail in two buildings of 6,000 square feet each. Exhibit 43. The project will include 8 moderately priced dwelling units, the minimum number required (*i.e.*, 12.5%).

Mr. Foster testified that a mix of town homes and commercial were the most appropriate uses for the site due to physical and environmental constraints. The division of the property created by the stream valley buffers and the road make it difficult to place multi-family buildings because they require larger buildable plates. The townhouse design used in the FZP can be adjusted to fit irregularly shaped building areas. T. 73. The Applicant felt that commercial is best suited for the area close to the intersection of Clopper and Germantown Roads because it had high visibility and

is not suited for residences due to noise and traffic from the roads. *Id.*

1. Floating Zone Plan

Under Zoning Ordinance §59-7.2.1.B.2.g., every application for rezoning to a Floating Zone must be accompanied by a “Floating Zone Plan” (FZP) that contains required information and often a list of “binding elements” that restrict future development of the property. The Applicants have submitted the required plan. Exhibit 37(c). An excerpt of the FZP showing the proposed building layouts, drive aisles, road dedications, and forest conservation areas is reproduced on the following page. Except for “binding elements” listed on the FZP, the development layout shown is illustrative and may change in the future.

The commercial buildings are sited along the Clopper Road frontage. The commercial building (designated Building A-1) is in the southeast corner of the intersection of Clopper and Germantown Roads to create an identifiable entrance to the project. Exhibit 37(c).

The residential units are located away from Clopper Road but do abut Germantown Road on the west and a Park and Ride and service station to the east. The dwelling units will have rear entry garages and will front on open space. Exhibit 44, p. 7. Staff advises that the project will be constructed in a single phase. *Id.*

2. Binding Elements

The FZP includes three binding elements, which are self-explanatory (Exhibit 37(c)):

1. The maximum number of townhouses on the Subject Property will not exceed 61.
2. The maximum total floor area of the commercial buildings will not exceed 12,000 square feet.
3. The maximum building height for the project will not exceed 50 feet.

**PEPCO Property
(Not Part of the Application)**

**Commercial
Building A-1**

**Commercial
Building A-2**

Transmission Lines

Eastern Stream Valley

Western Stream Valley

**Through Connection of
Liberty Mill road**

**Floating Zone Plan
Exhibit 37(c)**



D. Environment

Some environmental issues arose at the public hearing. One involved the accuracy of the environmental buffers shown on the FZP. The other centered on whether Kingsview's stormwater management strategy, which required stormwater facilities to encroach into the buffers, would meet County requirements.

There are two streams in the southwest and southeast portions of the property, one of which includes a significant wetland. Staff wrote (Exhibit 44, p. 16):

A large wetland is located in the northeastern quadrant of MD 118 and Leaman Farm Road. This wetland and associated streams are connected by storm drains to a stream system that originates on the side of MD 118 and continues south of Leaman Farm Road. The 1989 Germantown Master Plan identifies this stream system as important for protection...This wetland, as well as the other sensitive areas and their buffers should be left in an undisturbed condition.

Staff further stated that the application was "generally" in compliance with all applicable requirements of environmental laws. Exhibit 44, pp. 17, 19. The preliminary stormwater strategy shows stormwater management facilities that encroach into the environmental buffer, a practice that is normally avoided unless absolutely necessary. Exhibit 66.

Testimony at the public hearing revealed that the Planning Department initially approved a Natural Resources Inventory (NRI) in 2018 that did not show the full length of a stream in the southeastern corner of the property. Exhibit 21. In July 2019, Planning Staff, after a field inspection, determined that the stream extended further north than shown on the NRI. The additional portion increased the area of the environmental buffer. Kingsview argues that the stream discovered during the field inspection need not be shown on the NRI because it is "ephemeral" (*i.e.*, created by stormwater runoff) and not "intermittent", which is fueled by groundwater. Exhibit 21, T. 42. The record doesn't explicitly reveal whether Planning Staff determined that the stream was ephemeral or intermittent, however, the environmental buffer shown on the FZP is larger than shown on the original NRI. *Compare*, Exhibit 37(c) and 21.

The Applicant testified that it asked the Planning Department to allow stormwater management facilities in the buffer as a “compromise” because the Planning Department did not identify the full length of the stream when it approved the NRI/FSD T. 132. The Planning Board approved the PFCP at a meeting on December 5, 2019, with the stormwater facilities encroaching into the environmental buffer. Exhibit 73. The approval was subject to the following conditions (*Id.*):

- v. Stormwater management and grading to be removed from the environmental buffers, to the extent practicable.

With this condition, among others, the Board found that the development would not degrade the existing wetlands and met all environmental requirements. *Id.*

While the NRI typically requires streams and buffers to be field-verified, the Planning Department did not require the Applicant to revise its NRI to field verify the larger buffers. Exhibit 69. Kingsview advises that the a revised NRI was not required because the Planning Board had already approved the PFCP showing the facilities in the buffer. Exhibit 69. When asked about the accuracy of the environmental buffer shown on the FZP, Staff responded (Exhibit 69):

During the NRI/FSD process the applicant is required to delineate wetlands and their buffers. Staff then field verifies these locations. When streams and wetlands were found in excess of the NRI/FSD, there was no revision with a field verified wetland delineation. Staff made a reasonable determination of the revised buffer based on site visits and desktop tools.

Because the Applicant’s stormwater strategy plan shows facilities within the environmental buffer, the Hearing Examiner referred the stormwater management strategy to DPS for a preliminary determination whether it could approve the stormwater management strategy shown on the FZP. DPS responded that they were unable to determine whether the strategy would be acceptable (Exhibit 66):

You asked whether DPS would be likely to allow stormwater management practices to be located within a stream valley buffer. The “Stormwater Strategy” plan does not appear to show any practices within a stream valley buffer, however there are practices shown within what is labeled as “EB” which I assume is an environmental buffer. The legend on the plan does not address this abbreviation. While DPS does not generally allow stormwater practices to be located within a stream valley buffer

or an environmental buffer, we MAY allow them in these locations if absolutely necessary and with permission from MNCPPC. MNCPPC is the lead on these buffers. DPS would prefer to see the stormwater management practices located outside these buffers.

As to the plan in general, there is too little information available at this time to allow me to say with any degree of certainty that the proposed stormwater management practices are located in areas that receive required runoff, are sized to provide required runoff treatment, or are feasible to construct.

The plan proposes a Gravel Wetland which requires certain hydrology in order to be feasible, and DPS discourages these in close proximity to proposed residential units. In addition, MDE guidance places restrictions on the use of these practices. We would need to see a geotechnical study in order to determine whether the practice would be feasible where shown.

The plan shows proposed permeable paving, presumably as a stormwater management practice. A geotechnical evaluation is needed in order to determine whether or not this would be feasible.

Without additional information I am unable to say whether or not the proposed stormwater strategy would be acceptable to DPS or whether or not it would be adequate to meet the full stormwater runoff treatment requirements. Since it appears that the project would not meet the definition of a “redevelopment” project, DPS would require full stormwater compliance to be demonstrated at the time of stormwater management concept review. DPS would not support the subdivision if full stormwater runoff treatment compliance could not be demonstrated and a waiver of stormwater management treatment requirements was requested.

The Hearing Examiner requested the Applicant to provide a supplemental statement to address DPS’ comments. The Applicant’s statement advised the stormwater facilities were of enough quantity and size to meet current requirements. Mr. Timothy Longfellow, the Applicant’s civil engineer, stated that preliminary information on infiltration rates and groundwater levels for the micro bioretention and permeable pavement sections showed that they would be adequate to treat runoff. According to him, a “submerged gravel wetland facility is proposed in an area where high ground water elevations were observed.” Exhibit 77. Therefore, Mr. Longfellow concluded, the size of the drainage area and ground water table create enough hydrology to support the wetland. *Id.* As to encroachment of stormwater facilities into the environmental buffer, Mr. Longfellow stated that the project would not need environmental or stormwater management waivers because the Planning Board had already approved the encroachments in the PFCP (Exhibit 72):

With MNCPPC approval, as the lead agency on these matters, MCDPS will be in a position

to accept the placement of the facilities in those areas. While this is not the typical approach, MNCPPC and MCDPS have approved this condition on other projects in Montgomery County and it will certainly not be created a new precedent.

The Hearing Examiner conclusions regarding the environment and adequacy of stormwater management are in Parts IV.A.3.c and IV.B.2 of this Report, below.

E. Community Concerns

There is no comment from the community, either for or against, in the record of this case.

IV. FINDINGS AND CONCLUSIONS

A floating zone is a flexible device that allows a legislative body to establish development standards and uses for a zoning district before “attaching” it to properties. The zone may be applied to properties with the approval of a Local Map Amendment.

For approval, the District Council must find that the proposal will meet the standards required by the Zoning Ordinance and that it will be consistent with the coordinated and systematic development of the Regional District. *See, Md. Land Use Art.*, §21-101(a) and (b). While many of the site specific requirements for development are addressed by later approvals, the Zoning Ordinance contains various standards that the Council must decide. Section 59.7.2.1.E. establishes a set of “Necessary Findings” the Council must make for any Floating Zone application. These standards incorporate the requirements of other sections of the Zoning Ordinance, as set forth below.

A. The “Necessary Findings” Required by Zoning Ordinance §59.7.2.1.E.2.

1. Substantial Conformance with the Master Plan

Several sections of the Zoning Ordinance require an applicant to demonstrate that the proposed rezoning conforms to the applicable Master Plan:

Section 7.2.1.E.1.a. For a Floating zone application the District Council must find that the floating zone plan will:

a. substantially conform with the recommendations of the applicable

master plan, general plan, and other applicable County plans;

* * *

Section 59-7.2.1.E.1.b: ...further the public interest...

* * *

Section 59-7.2.1.c: ...satisfy the intent and standards of the proposed zone...

* * *

Section 59-5.1.2.A.1. (Intent of Floating Zones): Implement comprehensive planning policies by... furthering the goals of the general plan, applicable master plan, and functional master plan...

Conclusion: The subject site lies within the area covered by the *1989 Germantown Master Plan* (Master Plan or Plan). The Plan's central goal is to provide a "greater sense of community" within Germantown, in part by providing an "appropriate mix" of housing choices. *Master Plan*, p. 1. The Plan recommended increasing the number of single-family detached units and decreasing the number of single-family attached units or townhouses. *Id.*, p. 3. When the Plan was adopted, 18% of the single-family dwellings in the relevant analysis area were detached and 54% were townhouses. The Plan recommended altering the percentage to 29% single-family detached and 31% townhouses. *Id.* The Master Plan sought to provide a greater sense of community not only by balancing the mix of housing types. It recommended "townscape design" guidelines that focused on creating linkages between village centers and neighboring areas and using wider roads to create visual and acoustical buffers between land uses. *Plan*, p. 17.

The subject property falls primarily within the eastern portion Analysis Area CL-6 of the Master Plan. *Id.* For that analysis area, the Plan recommended development of 170,000 square feet of retail for the Kingsview Village Center and multi-family residential at 11 dwelling units per acre for this area. *Id.*, p. 64-65. It also recommended 2 acres for local commercial uses. *Id.* The southwestern corner of the subject property was recommended for the R-200/TDR Zone. The

“townscape design” recommendations provided that residential and road improvements adjacent to the Kingsview Village Center should support pedestrian access to the Center. *Plan*, p. 17.

Staff concluded that the FZP met the goals of the Master Plan because the total number of units proposed falls below the number of residential units recommended by the Plan. Staff concluded that, “[w]hile the proposal does not include garden apartments, as originally recommended, the attached units proposed will contribute to an overall mix of attached and garden apartment units in the analysis area, which is consistent with the Master Plan recommendation and desirable.” Exhibit 44, p. 11.

In Mr. Foster’s opinion, development of the subject property fills in the “hole in the donut” of the Kingsview Village Center by extending retail along Clopper Road and fulfilling the residential recommended for the balance of the property. The Master Plan recommended 170,000 square feet for the retail. Currently, the Center consists of 110,000 square feet; the additional 12,000 square feet proposed in the FZP will increase the amount of retail closer to the Plan’s goal. T. 87.

Mr. Foster testified that the residential portion also fulfills the goals of the Master Plan. As now developed, the housing mix in Analysis Area CL-6 is 7% townhouses, 11% single-family detached homes, and 82% multi-family units. T. 37. A higher percentage of multi-family would be expected near a village center. The FZP adds 60 townhouse units into the mix, bringing the percentage of single-family attached units to 15 percent, closer to the mix recommended by the Master Plan. *Id.*

In his opinion, the evolving design of townhouse units better contributes to the sense of community sought by the Plan. Older townhouses had garages and parking areas in front of the units. As planning has evolved, townhouses have been used as a tool to build communities by loading garages in the rear and creating a significant streetscape and open space. T. 37. The newer

design permits a pedestrian scale to the street and a generates a “neighborhood feel.” T. 38.

In his opinion, the FZP furthers the townscape design goals of the Plan by placing residential units next to a park and ride, facilitating access to transit. T. 38. Consistent with the Plan’s recommendation, sidewalks will provide pedestrian access to the Kingsview Village Center. It fulfills the townscape design goals also by connecting Liberty Mill Road between Clopper Road and Leaman Farm Road. Finally, it dedicates land to the full 150-foot right of way to Clopper Road, and there will be some right-of-way dedication on Md. Rte. 118. T. 68

Conclusion: The Hearing Examiner agrees with Staff and the Applicant that the proposed development conforms with the Master Plan. As Mr. Foster phrased it, this mixed use development will fill in the “hole in the donut” of the Kingsview Village Center with a use mix that approximates the vision of the Plan, as the actual mix has evolved and given the site constraints. While not multi-family as the Plan recommended, the percentage of multi-family in the analysis area is already high. This balances the mix with unit types that more closely conform to the overall goals sought by the Plan.

The development also fulfills the townscape design goals of the Plan. It provides a pedestrian linkage to the existing park and ride, thus enabling residents to travel without getting in their cars. It also will have pedestrian linkages to the Kingsview Village Center, another recommendation of the Plan, and completes an unfinished road linkage by connecting Liberty Mill Road to Clopper and Leaman Farm Roads.

2. Compatibility

Several sections of the Zoning Ordinance require the District Council to analyze the compatibility of the proposed FZP with adjacent uses and the surrounding area. The application must:

Section 7.2.1.E.1.c.: satisfy the intent and standards of the proposed zone and, to the extent the Hearing Examiner finds it necessary to ensure compatibility, meet

other applicable requirements of this Chapter;

* * *

Section 5.1.2.C. (Intent of Floating Zones). Ensure protection of established neighborhoods by:

- 1. establishing compatible relationships between new development and existing neighborhoods through limits on applicability, density, and uses;***
- 2. providing development standards and general compatibility standards to protect the character of adjacent neighborhoods; and***
- 3. allowing design flexibility to provide mitigation of any negative impacts found to be caused by the new use.***

* * *

Section 5.3.2.C. (Purpose of Commercial/Residential Zones). The purpose of the Commercial/Residential Zones is to ... provide mixed-use development that is compatible with adjacent development.

Section 7.2.1.E.1.d. be compatible with existing and approved adjacent development...

* * *

Section 7.2.1.E.1.f: when applying a non-Residential Floating zone to a property previously under a Residential Detached zone, not adversely affect the character of the surrounding neighborhood.

Staff found that the FZP would be compatible with existing and approved adjacent development and the surrounding area because the unit types complement the existing housing mix in the surrounding area, and are similar in design, height and massing with surrounding developments. Exhibit 44, pp. 20, 21, 23. Mr. Foster opined that the project would complement the scale and architecture of adjacent developments. The building height and setbacks will be like those of the existing buildings in the area. T. 87. The development will contribute to the diversity of housing in the village center by providing townhomes where the majority of residential is multifamily and will provide additional residents to support the existing commercial. T. 96-97. The commercial portion acts as an extension of the Kingsview Village Center. It is located near the busiest intersection and will buffer the activity and noise of the roads from the residents. T. 73-

74.

Mr. Foster noted the townhouse units are flexible enough to make the different uses internally compatible and protect existing environmental resources. The floating zones allow the flexibility in design to integrate development with the road network, create open space, and preserve environmental areas in a way that is internally and externally compatible with other uses. T. 84.

The Staff Report noted that “the electric transmission lines traversing the Property from north to south should be addressed for potential esthetic and safety impacts on the development and in particular, on the dwellings that would be in close proximity to the power lines.” Mr. Foster testified that PEPCO requires the building faces to be setback at least 10 feet horizontally from any wires. Under the FZP, the building faces are setback 20 from the wires, more than meeting this requirement. T. 80.

Conclusion: The Hearing Examiner finds that the proposed development will be compatible with adjacent properties and the surrounding area. She further finds that the FZP utilizes the design flexibility provided by the Floating Zones to integrate development compatibly with environmental and physical constraints within the development. The commercial area is appropriately located near the busiest intersection and will buffer the residential from noise and activity from the Clopper and Germantown Roads. Staff found that the size, height, and scale of the development is compatible with the surrounding area. The proposed commercial will complement the existing commercial in the Kingsview Village Center. At the same time, the residential units balance the mix of housing in the area at an appropriate scale with surrounding uses.

3. Adequate Public Facilities/Public Interest

Several sections of the Zoning Ordinance require an applicant for a Floating Zone to demonstrate that public facilities will be adequate to serve the property. The Council must find that the application meets the following standards:

Section 7.2.1.E.1.e: generate traffic that does not exceed the critical lane volume or volume/capacity ratio standard as applicable under the Planning Board's LATR Guidelines, or, if traffic exceeds the applicable standard, that the applicant demonstrate an ability to mitigate such adverse impacts; and...

* * *

Section 7.2.1.E.1.b: further the public interest...

* * *

Section 7.2.1.E.1.c.: satisfy the intent and standards of the proposed zone and, to the extent the Hearing Examiner finds it necessary to ensure compatibility, meet other applicable requirements of this Chapter;

* * *

Section 5.1.2.A.2: (Intent of the Floating Zones). ...“implement comprehensive planning objectives by...ensuring that the proposed uses are in balance with and supported by the existing and planned infrastructure...”

Conclusion: The Hearing Examiner finds the Applicant has provided enough evidence at the rezoning stage that public facilities will be adequate to serve the use.

a. Traffic

Under the above criteria, the District Council must find that the application either meets the criteria in the Planning Board's Local Area Transportation Review (LATR) Guidelines or be able to mitigate traffic impacts where they do not meet the required levels.

The Applicant in this case submitted a traffic study under the LATR Guidelines. Exhibit 62. Critical Lane Volumes (CLVs) of all intersections fall below the maximum threshold of 1350 for that policy area (Exhibit 44, p. 13, shown on the following page). Having no evidence to contravene the Traffic Study submitted by the Applicant, the Hearing Examiner concludes that there is adequate traffic and transit capacity to serve the proposed development.

b. Other Public Facilities

Staff determined that water and sewer, public school, and fire and police facilities are

Table 2: CLV Intersection Analysis

Intersection	CLV Standard	AM Peak Hour Delay			PM Peak Hour Delay		
		Existing	Back-ground	Total	Existing	Back-ground	Total
1. MD 118 (Germantown Rd) / MD 117 (Clopper Road)	1350	1026	1029	1031	1131	1141	1146
2. MD 117 / Liberty Mill Road (Site Access)	1350	620	663	644	550	567	586
3. MD 117 / Kingsview Village Avenue / Village Fountain Drive	1350	717	729	736	783	797	805
4. MD 119 (Great Seneca Highway) / MD 117	1350	1104	1109	1110	1076	1102	1116
5. MD 118 / Proposed Site Access	1350	N/A	N/A	519	N/A		351
6. MD 118 / Leaman Farm Road	1350	900	906	907	646	660	662
7. Leaman Farm Road / Proposed Site Access / Driveway	1350	219	219	223	292	292	306
8. Leaman Farm Road / Kingsview Village Avenue	1350	219	219	223	394	394	399

**CLV Volumes from Staff
Report
Exhibit 44, p. 13**

adequate to serve the use. Exhibit 44, p. 14. Mr. Longfellow testified that the site is already adequately served by other public facilities, including public water, gas, electric, telephone, and cable. T. 59. Staff advises that fire service is located at 13900 Old Columbia Pike in Burtonsville, and the 3rd District Police Station is located approximately 6 miles from the site. Exhibit 40(b), p. 9. Mr. Foster testified that there is adequate school capacity for the residential portion of the project. T. 93. Nothing in this record contradicts this testimony and evidence. The Hearing Examiner finds that these public facilities are adequate to serve the use.

c. Stormwater Management

Conclusion: At the rezoning stage, a detailed stormwater management plan is not required. Instead, the Applicant must submit a preliminary stormwater management strategy to demonstrate that development under the FZP can be supported in compliance with existing regulations.

Kingsview addressed some of DPS' comments in its Supplemental Statement (Exhibit 72). According to Kingsview, their preliminary review showed "good" infiltration rates in micro bioretention and permeable pavement areas. It also advised that the hydrology will support the submerged gravel wetland due to high ground water levels and the size of the drainage area. They further point out that the Planning Board is the lead agency on disposition within the environmental buffers, as confirmed by DPS. While the strategy may not be typical or preferred, there is nothing in this record to indicate that it cannot be approved. DPS also reassures that it will not support approval of a subdivision or site development plan without full compliance with stormwater management regulations. Based on this record, the Hearing Examiner finds that the Applicant has submitted enough evidence at the rezoning stage to find that stormwater management facilities meeting current regulations may be approved on the site.

B. The Intent and Standards of the Zone (Section 59-7.2.1.E.2.c)

Section 59-7.2.1.E.2.c of the Zoning Ordinance requires the District Council to find that the FZP "satisfy the intent and standards of the proposed zone." The Zoning Ordinance includes an "intent" clause for all Floating Zones and a "purpose" clause for particular the zone requested. The balance of the intent findings for Floating Zone and the purposes of the CRTF Zone, are discussed below.

1. Intent of Floating Zones (Section 59-5.1.2)

The intent of Floating Zones is to ensure (1) the FZP complies with the Master Plan, (2) is supported by adequate public facilities, and achieve the following goals:

Section 59-5.1.2.A.3 ... The intent of the Floating zones is to:

A. Implement comprehensive planning objectives by...

** * **

3. allowing design flexibility to integrate development into circulation networks, land use patterns, and natural features within and connected to

the property...

Conclusion: Staff concluded that the FZP meets this goal because it will provide “safe and convenient roadway, and internal circulation systems including sidewalks and pathways.” Exhibit 44, p. 17. Mr. Foster testified that the FZP uses the flexibility of the floating zones to integrate development with the existing site constraints. T. 84. The Hearing Examiner finds that the FZP meets this intent of the Floating Zones.

B. *Encourage the appropriate use of land by:*

- 1. providing flexible applicability to respond to changing economic, demographic, and planning trends that occur between comprehensive District or Sectional Map Amendments;*
- 2. allowing various uses, building types, and densities as determined by a property’s size and base zone to serve a diverse and evolving population; and*
- 3. ensuring that development satisfies basic sustainability requirements including:*
 - a. locational criteria,*
 - b. connections to circulation networks,*
 - c. density and use limitations,*
 - d. open space standards,*
 - e. environmental protection and mitigation; and*

Conclusion: Staff determined that the FZP met this objective by introducing a use mix that responds to the changing character of the area in terms of economics, demography and planning trends. Exhibit 44, p. 18. Mr. Foster testified that the Master Plan analysis area has developed with a very high percentage of multi-family; this application brings the mix closer to the Master Plan goals. He also testified that the evolving design of townhouses is now used to create a community-oriented development and provides flexibility to address site constraints in a compatible manner. He opined that the proposed development is sustainable because it will occur where infrastructure already exists and offers pedestrian connections to transit available at the park and ride. T. 85-86.

The Hearing Examiner agrees with Staff and the Applicant that the FZP will fulfill this intent of the Floating Zones. As Mr. Foster pointed out, the housing mix in Germantown has

changed since adoption of the Master Plan in 1989. The FZP will bring that proportion of units mixes closer to the Master Plan goals. The evolution of townhouse design has cured some of the ills that the Master Plan sought to avoid and will generate communities connected both by pedestrian walkways, transit, and road networks. The townhouse unit type uses a smaller building pad, conserving environmental areas and providing roads, sidewalks, and open space. The location of the property also furthers the goals for sustainable communities by developing residences close to a transit connection.

While there were some questions regarding the measure of environmental mitigation and protection, rezoning is an early stage of the development process. The environmental buffer shown on the PFCP treats the full extent of the stream as intermittent, while the boundaries of the buffer are “reasonably” accurate. The Planning Board conditioned its approval on reducing the encroachment into the buffers to the extent practicable, and Staff advises that this will be further refined during the development process. Exhibit 70. Without further evidence that the FZP does not adequately protect the environment, the Hearing Examiner finds that this purpose of the Commercial/Residential Floating Zones has been sufficiently met at the rezoning stage.

2. Purpose of the Commercial/Residential Floating Zones (Section 59-5.3.2)

Section 59-5.3.2 of the Zoning Ordinance describes the purpose of the Commercial Residential Floating Zones.

Section 5.3.2. Purpose

The purpose of the Commercial/Residential Floating zones is to:

- A. allow development of mixed-use centers and communities at a range of densities and heights flexible enough to respond to various settings;***
- B. allow flexibility in uses for a site; and***
- C. provide mixed-use development that is compatible with adjacent development.***

Conclusion: The Hearing Examiner already found that the FZP is compatible with adjacent development, utilizes the design flexibility allowed to accommodate site constraints, and provide mixed use development that is compatible with adjacent development. The commercial portion

extends and complements the existing Village Center and buffers the residences to the south from noise and activity at the intersection of Germantown and Clopper Roads. The FZP fulfills this purpose.

C. The Applicability of the Zone (Section 59-5.1.3)

Section 59.5.1.3. of the Zoning Ordinance sets up a series of threshold tests to determine whether a site may apply for a Floating Zone. Relevant subsections are listed below, followed by the Hearing Examiner's finding on each:²

Section 59.5.1.3. B. If a Floating zone is recommended in a master plan, there are no prerequisites for an application. For properties with a master plan recommendation for a Floating zone for which an application can no longer be made as of October 30, 2014, the following table identifies the equivalent Floating zones for which an applicant may apply:³

* * *

Conclusion: Staff advises that no prerequisites for the application are required because the property was recommended for the PD-11 Zone in the Master Plan. *Id.*, p. 20. The 2014 Zoning Ordinance designates the CRNF Zone as the equivalent of the PD-11 Zone, and the FZP proposes under 11 dwelling units per acres. T. 27-28. The Hearing Examiner agrees with Staff that there are no prerequisites required for this FZP.

D. Development Standards and Uses Permitted in the CRTF Zone (Division 59-5.3)

1. Uses Permitted (Section 59-5.3.3)

The CRNF Zone permits only those uses allowed by the CRN Zone. *Zoning Ordinance*, §59.3.3.3.A.1.

Conclusion: The CRN Zone permits townhouse living and a variety of commercial retail uses. The FZP meets this standard.

² The applicability requirements distinguish between floating zone applications that have been recommended by a Master Plan and those that have not. As the floating zone in this case was recommended by the Master Plan, this Report does not address the remaining applicability requirements in Section 59.5.1.3.C.

³ Section 59.5.1.3.A prohibits the Council from approving a floating zone on property in the AR or Rural Residential Zone. As the existing zone here is Residential, that section does not apply.

2. Development Standards of the CRTF Zone

Section 5.3.4. Building Types Allowed

A. Any building type is allowed in the Commercial/Residential Floating zones.

Conclusion: As “any” building type is permitted, the buildings proposed clearly meet this standard.

Section 5.3.5. Development Standards

Staff found that the FZP meets the development standards of the CRNF-1.0, C-0.25, R-0.75, H-55 Zone, (Zoning Ordinance, §59.5.3.5), as demonstrated in the table from the Staff Report (Exhibit 44, p. 22, below):

Table 3: Development Standards-CRNF Zone			
	Section	Required	Proposed
Maximum Residential Density	5.3.5.A.1	11 d.u./acre based on Master Plan recommendation 170000 SF maximum/ Master Plan Village Center	1.0 FAR Residential (or 447,800 square feet)
Maximum Commercial Density	5.3.5.A.1		0.25 Commercial FAR (or 111,950 square feet)
Setback and Height from site Boundary		Per Master Plan Village Center	50 feet (binding element)
• Minimum Setback			
• Maximum Height	4.1.8.B.2	Established by Floating Zone Plan	
Minimum Lot Size	5.2.5.C	Established by Floating Zone Plan	10.07 Sq. ft
Minimum Open Space	5.2.5.D	10% Common open space	10 % public open space 10 % Common open space
Minimum Parking	5.3.5.D/6.2.4	Will be determined at site plan	Will be determined at site plan

A. Density

1. If a Floating zone is recommended in a master plan, density must not exceed that recommendation.

Conclusion: The Master Plan recommended a density of 11 dwelling units per acre and up to 170,000 square feet of commercial for the Kingsview Village Center. The FZP proposes a density under 11 dwelling units per acre. The additional commercial brings the total for the Kingsview Village Center well under the amount recommended by the Master Plan. This FZP meets the density permitted by the CRNF Zone.

B. Setback and Height

- 1. If a Floating zone is recommended in a master plan, height must not exceed that recommendation.***
- 2. Setbacks from the site boundary and maximum height are established by the floating zone plan. All other setbacks are established by the site plan approval process under Section 7.3.4.***
- 3. Height must satisfy the compatibility standards for the applicable building type under Section 4.1.8.B.***

Conclusion: The Master plan did not recommend a height limit for development on the property.

Mr. Foster testified that the height limit for the PD-11 Zone under the 2004 Zoning Ordinance was 50 feet. After discussions with Planning Staff, they felt that a 50-foot height would still allow four stories and a gable roof. T. 91. The 50-foot height is a binding element of the FZP. T. 92.

The Hearing Examiner agrees that using the height limits applicable when the Master Plan was adopted is a fair comparison to determine the Plan's intent. For the number of units proposed here, the 2004 Zoning Ordinance limited building height in the PD Zones to four stories. *2004 Zoning Ordinance*, §59-C-7.131. Mr. Foster testified that a 50-foot height would still allow four stories. T. 91. T. 92. While the CRNF Zone may permit a maximum height of 55 feet, the Applicant has limited the height to 50 feet by a binding element. *Id.*

Setbacks from the site perimeter are established by the FZP. Both Staff and the Applicant have submitted testimony and evidence finding that the setbacks are compatible with the surrounding area and adjacent properties, summarized above. The height compatibility requirements in Section 59.4.1.8.B may be addressed at site plan. The Hearing Examiner agrees that the FZP meets the development standards of the CRNF Zone.

V. RECOMMENDATION

For the foregoing reasons, the Hearing Examiner concludes that the proposed reclassification and Floating Zone Plan will meet the standards set forth in the Zoning Ordinance and that it will be consistent with a coordinated and systematic development of the Regional District

under State law. Therefore, I recommend that Local Map Amendment Application No. H-131, requesting reclassification from the existing R-200 and R-200/TDR 6 Zones to the CRNF-1.0, C-0.25, R-0.75, H-55 of six parcels (N210, P220, P 274, Pt. P322, Pt. P 330, P.536 and the Liberty Mill Road R.O.W (Tax Account Nos. 06-01483728, 06-02687740, 06-00396261, 06-0040561, 06-00396215, 06-03282924), be **approved** in the amount requested and subject to the specifications and requirements of the Floating Zone Plan (Exhibit 37(c)), provided that the Applicant files an executed Declaration of Covenants (Exhibit 52) reflecting the binding elements in the land records and submits to the Hearing Examiner for certification a true copy of the Floating Zone Plan approved by the District Council within 10 days of approval, in accordance with §§59.7.2.1.H.1.a. and b. of the Zoning Ordinance.

Issued: February 19, 2020.

Respectfully submitted,



Lynn Robeson Hannan
Hearing Examiner



MONTGOMERY COUNTY PLANNING BOARD
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB No. 19-130
Preliminary Forest Conservation Plan No. H-131
Kingsview Station
Date of Hearing: December 5, 2019

FFR 03 2020

RESOLUTION

WHEREAS, under Montgomery County Code Chapter 22A, the Montgomery County Planning Board is authorized to review forest conservation plan applications; and

WHEREAS, on March 6, 2019, Kingsview Station Joint Venture ("Applicant") filed an application for approval of a preliminary forest conservation plan on approximately 10.27 acres of land located at the southeast corner of the intersection of Clopper Road (MD 117) and Germantown Road (MD 118) ("Subject Property") in the Germantown Master Plan ("Master Plan") area; and

WHEREAS, Applicant's forest conservation plan application was designated Forest Conservation Plan No. H-131 Kingsview Station ("Preliminary Forest Conservation Plan" or "Application"); and

WHEREAS, following review and analysis of the Application by Planning Board Staff ("Staff"), Staff issued a memorandum to the Planning Board dated November 20, 2019, setting forth its analysis and recommendation for approval of the Application, subject to certain conditions ("Staff Report"); and

WHEREAS, on December 5, 2019, the Planning Board held a public hearing on the Application, and at the hearing the Planning Board heard testimony and received evidence submitted for the record on the Application; and

WHEREAS, at the hearing, the Planning Board approved the Application subject to certain conditions, on motion of Commissioner Fani-Gonzalez, seconded by Commissioner Cichy, with a vote of 5-0; Commissioners Anderson, Cichy, Fani-Gonzalez, Patterson and Verma voting in favor.

NOW, THEREFORE, BE IT RESOLVED that the Planning Board APPROVES Preliminary Forest Conservation Plan No. H-131 on the Subject Property, subject to the following conditions:¹

¹ For the purpose of these conditions, the term "Applicant" shall also mean the developer, the owner, or any successor in interest to the terms of this approval.

Approved as to
Legal Sufficiency:

- 1) The Applicant must comply with the conditions of the approved Preliminary Forest Conservation Plan No. H-131.
 - a) The Applicant must submit and obtain approval of a Final Forest Conservation Plan at the time of Preliminary Plan that includes the following:
 - i. Corrected areas excluded from net tract area
 - ii. Corrected areas of forest planting
 - iii. Corrected areas of existing forest
 - iv. Corrected areas of proposed Category I easement
 - v. Stormwater management and grading to be removed from environmental buffers, to the extent practicable.
 - vi. Easement encroachment mitigation may be located within corrected normal environmental buffers.
 - b) The Final Forest Conservation Plan must reference by notation the amendment to FCP No. 81997007A
 - c) The Applicant must record a Category I Conservation Easement over all areas of forest retention, forest planting and environmental buffers as specified on the approved Final Forest Conservation Plan. The Category I Conservation Easement approved by the M-NCPPC Office of the General Counsel must be recorded in the Montgomery County Land Records by deed prior to the start of any demolition, clearing, or grading on the Subject Property, and the Liber Folio for the easement must be referenced on the record plat.
 - d) The Applicant must provide financial surety to the M-NCPPC Planning Department, in a form approved by M-NCPPC Office of the General Counsel for the new forest planting as determined by the Final Forest Conservation plan prior to the start of any demolition, clearing, or grading on the Property.
 - e) The Applicant must submit a two-year Maintenance and Management Agreement approved by the M-NCPPC Office of General Counsel prior to the start of any demolition, clearing or grading on the Property.
 - f) The Applicant must install permanent Category I Conservation Easement signage along the perimeter of the conservation easements.

- g) Afforestation plantings that are located outside the limits of disturbance must occur within the first planting season following approval of the Certified Site Plan. Plantings within areas of future disturbance must occur in the first planting season following the stabilization of the applicable disturbed area.
- h) The Final Sediment Control Plan must be consistent with the limits of disturbance shown on the approved Final Forest Conservation Plan.

BE IT FURTHER RESOLVED, that having given full consideration to the recommendations and findings of its Staff as presented at the hearing and as set forth in the Staff Report, which the Board hereby adopts and incorporates by reference, and upon consideration of the entire record, the Planning Board FINDS, with the conditions of approval, that:

The Application satisfies all the applicable requirements of the Forest Conservation Law, Montgomery County Code, Chapter 22A and the protection of environmentally sensitive features.

A. Forest Conservation

The Board finds that as conditioned, the Forest Conservation Plan complies with the requirements of the Forest Conservation Law. A Natural Resource Inventory/Forest Stand Delineation (NRI/FSD) was approved for the Property on July 24, 2018. A Preliminary Forest Conservation Plan proposes 0.67 acres of forest retention. Some areas of forest are within existing and future utility corridors. These forested areas are not able to be permanently protected and must be considered forest loss. Mitigation should take place on site where possible. A wetland that is more than an acre in size has been delineated in the southwest quadrant of the site. Although the applicant proposes forest mitigation within this wetland, its saturated nature makes it unlikely that planted trees will survive. The specific afforestation/reforestation acreage will be determined in the Final Forest Conservation Plan as part of preliminary and site plan process. All environmentally sensitive areas retained forest and planted forest areas on the Property will be placed in Category I conservation easement.

B. Forest Conservation Variance

Section 22A-12(b)(3) of the Forest Conservation Law identifies certain individual trees as high priority for retention and protection ("Protected Trees"). Any impact to these Protected Trees, including removal or any

disturbance within a Protected Tree's critical root zone ("CRZ"), requires a variance under Section 22A-12(b)(3) ("Variance"). Otherwise such resources must be left in an undisturbed condition.

As discussed in the Forest Conservation Plan Staff Report, a Forest Conservation Variance (Tree Variance) was required because development of the Subject Property for the proposed use would impact vegetation (trees) afforded protection under Section 22A-12(b)(3) of the Forest Conservation Law. This Section requires that there be no impact to any protected vegetation identified in the Law. Should impacts be unavoidable, a Tree Variance must be submitted for Planning Board consideration. Because of unavoidable grading impacts to a total of three (3) trees identified as having a high priority for retention under the Law, the Applicant submitted a request for a Tree Variance. A Tree Variance may only be granted after the Planning Board determines that strict enforcement of the protection measures afforded under the Law would impose an unwarranted hardship on the property owner that would deprive the property owner of reasonable and significant use of the property. A Tree Variance may only be granted after an unwarranted hardship is demonstrated.

The Staff Report for the Preliminary Forest Conservation Plan (PFCP) detailed the necessary findings to the Planning Board to allow granting of a Tree Variance for all of the protected trees.

Unwarranted Hardship

Per Section 22A-21, a variance may only be granted if the Planning Board finds that leaving the requested trees in an undisturbed state would result in unwarranted hardship, denying the Applicant reasonable and significant use of the property. In this case, the unwarranted hardship is caused by the high-density recommendation of the 1989 Germantown Master Plan. This increase in zoning leaves very little space outside the environmentally sensitive areas for improvements. Therefore, the Applicant has a sufficient unwarranted hardship to justify a variance request.

Section 22A-21 of the County Forest Conservation Law sets forth the findings that must be made by the Planning Board or Planning Director, as appropriate for a variance to be granted.

In addition to a determination of an unwarranted hardship, the Planning Board must also consider the following in their deliberations of a Tree Variance.

Variance Findings - The following determination has been made based on the required findings that granting of the requested variance:

1. *Will not confer on the applicant a special privilege that would be denied to other applicants.*

Granting the variance will not confer a special privilege on the Applicant as the removal of the trees is necessary to build the entrance road and develop the site. Therefore, the granting of this variance is not a special privilege that would be denied to other applicants.

2. *Is not based on conditions or circumstances which are the result of the actions by the applicant.*

The requested variance is not based on conditions or circumstances that are the result of actions by the Applicant. The requested variance is based on existing site conditions and the need to build an entrance road, internal road, parking lot and townhomes.

3. *Is not based on a condition relating to land or building use, either permitted or non-conforming, on a neighboring property.*

The requested variance is a result of the existing conditions on the subject property and not as a result of land or building use on a neighboring property.

4. *Will not violate State water quality standards or cause measurable degradation in water quality.*

The variance will not violate State water quality standards or cause measurable degradation in water quality. The existing wetland will not be disturbed, and the stream valleys will be left in their natural condition. In addition, there will be a stormwater management plan for the entire site. Therefore, the Project will not violate State water quality standards or cause measurable degradation in water quality.

The Planning Board has determined the Applicant satisfied the required findings to allow a variance for the three protected trees and that the local map amendment fully complies with Chapter 22A – The Forest Conservation Law.

BE IT FURTHER RESOLVED, that this Resolution constitutes the written opinion of the Planning Board in this matter, and the date of this Resolution is FEB 03 2020 (which is the date that this Resolution is mailed to all parties of record); and

BE IT FURTHER RESOLVED, that any party authorized by law to take an administrative appeal must initiate such an appeal within thirty days of the date of this Resolution, consistent with the procedural rules for the judicial review of administrative agency decisions in Circuit Court (Rule 7-203, Maryland Rules).

* * * * *

CERTIFICATION

This is to certify that the foregoing is a true and correct copy of a resolution adopted by the Montgomery County Planning Board of the Maryland-National Capital Park and Planning Commission on motion of Commissioner Cichy, seconded by Commissioner Verma, with Chair Anderson, Vice Chair Fani-González, and Commissioners Cichy, Patterson, and Verma voting in favor at its regular meeting held on Thursday, January 9, 2020, in Silver Spring, Maryland.



Casey Anderson, Chair
Montgomery County Planning Board

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May 3, 2023

Montgomery County Park and Planning
2425 Reddie Drive
Wheaton Maryland 20902
ATTN: Jeff Server

Re: Kingsview Station "Utility Line Relocation"

Dear: Mr. Server,

As discussed via our phone conversation. In most cases when developments are being proposed there are public utility easements (PUE's) that are set (typically 10' behind the property lines) for our electrical lines and equipment that we need to provide service. These PUE's follow along the public ROW, just behind the property lines.

Kingsview Station is slightly different since there is an existing overhead power line that runs through the proposed subdivision. The issue with the existing overhead pole line at the Kingsview Station site for Pepco, would be the location of the pole line (behind the proposed homes) and Pepco's need to access this pole line when restoring power. The current location of the electrical line is fine today, but once the homes are built, it may make restoring power more difficult, due to the access restrictions. This would cause Pepco to access the poles by climbing (instead of buckets) and delay our restoration process.

With all the above being said. Pepco's preference for the underground facilities would be to install our manhole and conduit system under the roadbed of Liberty Mill Drive. This would help with Pepco's reliability initiative, and any restoration efforts in the future.

Please let me know if you have any further questions.

Sincerely,

Kevin P. Wilson

Kevin P. Wilson | Distribution Designer

Pepco-MD | Design Engineering

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Local Area Transportation Review FOR KINGSVIEW STATION

Prepared by:

LENHART TRAFFIC CONSULTING, INC.

TRAFFIC ENGINEERING & TRANSPORTATION PLANNING

May 26, 2021



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Section 1 Introduction & Scope of Work

Section 1.1 – Project Description

This Local Area Transportation Review (LATR) is being prepared for the proposed mixed-use development of Kingsview Station. The proposed development will consist of 61 townhouses and 12,000 square feet of retail space. The site is located on the southeast corner of MD 118 (Germantown Road) & MD 117 (Clopper Road) in Germantown.

The site is located within the Germantown West Policy Area as shown on **Exhibit 1a**. This Area is designated as a Yellow Policy Area per the current 2020 – 2024 Growth and Infrastructure Policy as shown on **Exhibit 1b**. A detailed overall trip generation sheet is provided on **Exhibit 2**. As shown, the site will generate more than 50 peak hour person trips and therefore the development is subject to the LATR system adequacy tests.

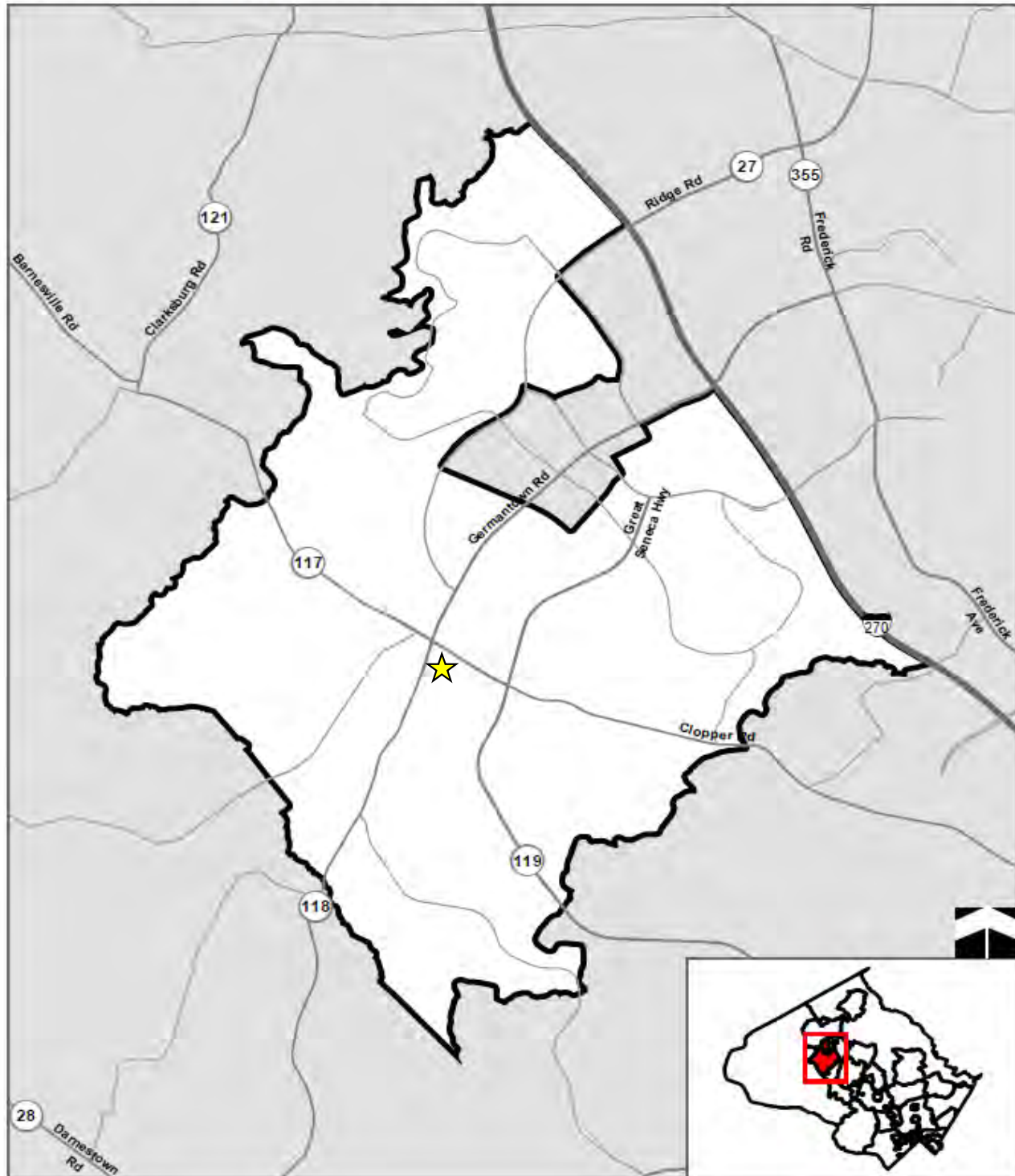
The site is currently undeveloped. There are three proposed site access points: a full movement access along MD 117 at the existing Liberty Mill Road intersection, a full movement driveway along Leaman Farm Road at the existing Ale House Circle intersection, and a new right-in/right-out along northbound MD 118. A concept plan is provided in Appendix A.

Section 1.2 – Scope of Study

The study was conducted to satisfy LATR requirements in accordance with the Maryland-National Capital Park and Planning Commission's (M-NCPPC) 2020 – 2024 Growth and Infrastructure Policy (GIP). Per the GIP guidelines, the following adequacy tests are required for the site: a Motor Vehicle System, Pedestrian System, Bicycle System, and Bus Transit System. In addition, a Vision Zero Statement must be provided. The scope of this study was established in coordination with M-NCPPC and all relevant scoping documentation is provided in Appendix A.

Germantown West Policy Area

MAP T18



Transportation Facilities Analysis

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Growth and Infrastructure Policy Area Map

★ - Site Location

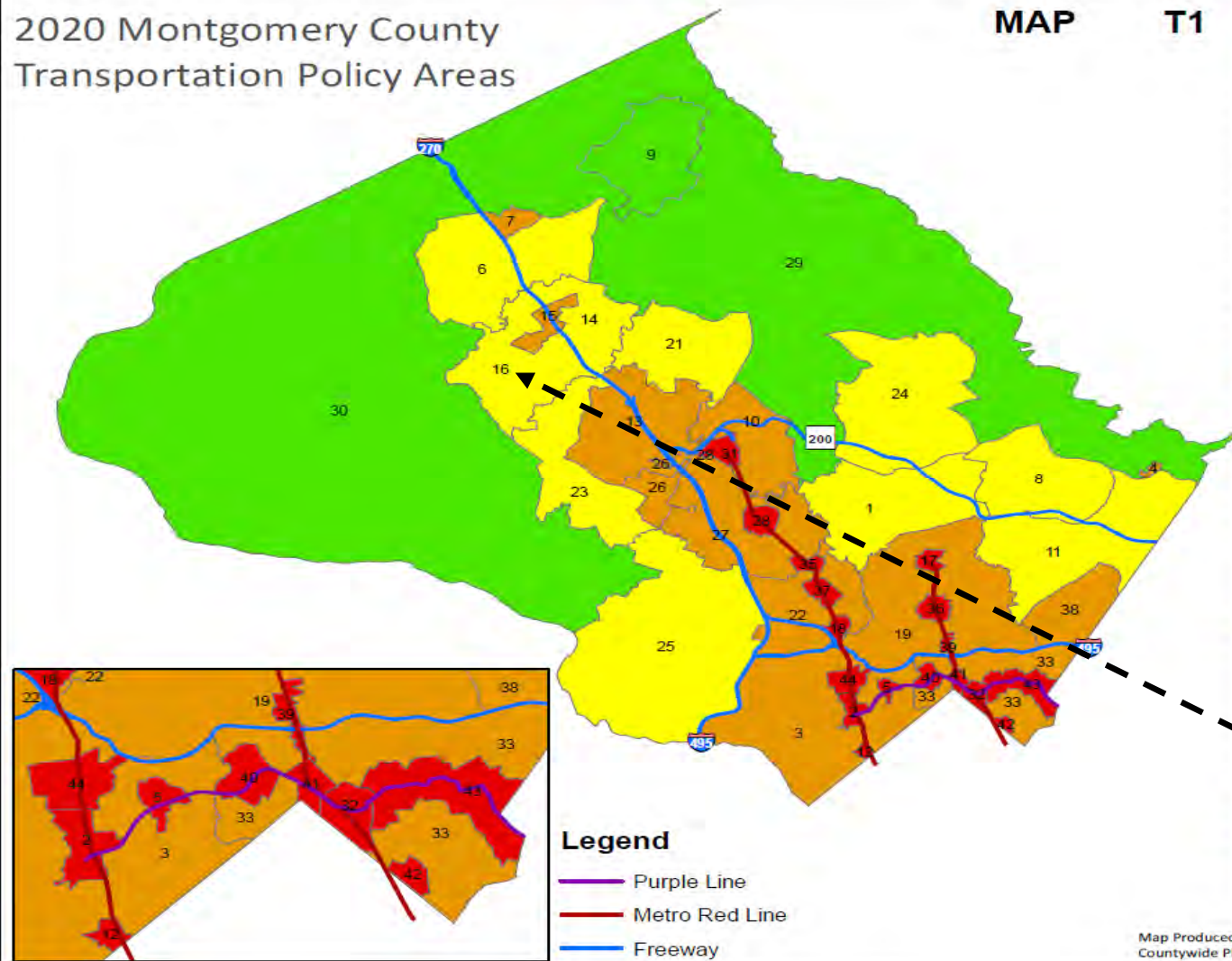
**Exhibit
1a**

2020 Montgomery County Transportation Policy Areas

MAP

T1

Red	
2	Bethesda CBD
5	Chevy Chase Lake
12	Friendship Heights
17	Glenmont
18	Grosvenor
28	Rockville Town Center
31	Shady Grove
32	Silver Spring CBD
35	Twinbrook
36	Wheaton CBD
37	White Flint
39	Forest Glen
40	Lyttonsville
41	Woodside
42	Takoma
43	Purple Line East
44	Medical Center
Orange	
3	Bethesda/Chevy Chase
4	Burtonsville Town Center
7	Clarksburg Town Center
10	Derwood
13	Gaithersburg City
15	Germantown Town Center
19	Kensington/Wheaton
22	North Bethesda
26	R&D Village
27	Rockville City
33	Silver Spring/Takoma Park
38	White Oak
Yellow	
1	Aspen Hill
6	Clarksburg
8	Cloverly
11	Fairland/Colesville
14	Germantown East
16	Germantown West
21	Montgomery Village/Airpark
23	North Potomac
24	Olney
25	Potomac
Green	
9	Damascus
29	Rural East
30	Rural West



Legend

- Purple Line
- Metro Red Line
- Freeway

Map Produced by the Montgomery County Planning Department
Countywide Planning and Policy Division (CPP) November 11, 2020

Transportation Facilities Analysis

Lenhart Traffic Consulting, Inc.

Traffic Engineering & Transportation Planning

Transportation Policy
Area Map

**Exhibit
1b**

Trip Generation Rates - Residential

Multifamily Housing, Low-Rise (ITE-220, Units)

Trip Distribution (In/Out)

$\text{Ln}(\text{Morning Trips}) = 0.95 \times \text{Ln}(\text{Units}) - 0.51$

23/77

$\text{Ln}(\text{Evening Trips}) = 0.89 \times \text{Ln}(\text{Units}) - 0.02$

63/37

Trip Generation Totals - Residential

			AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Multifamily Housing, Low-Rise (ITE-220, Units)	61	units	7	23	30	24	14	38
Total Vehicular Trips per ITE Trip Generation Manual, 10th Edition:			7	23	30	24	14	38
LATR Vehicle Trip Generation Rate Adjustment Factor (Germantown West - Residential):			93%					
Total LATR Adjusted Vehicular Trips per ITE Trip Generation Manual, 10th Edition (Auto Driver at 60.4%):			7	21	28	22	13	35
Total Person Trips:			11	35	46	36	22	58
Auto Driver:	60.4%		7	21	28	22	13	35
Auto Passenger:	26.9%		3	9	12	10	6	16
Transit:	4.1%		1	1	2	1	1	2
Non-Motorized:	8.6%		1	3	4	3	2	5

Trip Generation Rates - Retail

Shopping Center (General Urban/Suburban, ksf, ITE-820)

Trip Distribution (In/Out)

$\text{Morning Trips} = 0.94 \times \text{ksf}$

62/38

$\text{Ln}(\text{Evening Trips}) = 0.74 \times \text{Ln}(\text{ksf}) + 2.89$

48/52

Trip Generation - Retail

			AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Shopping Center (ksf, ITE-820)	12,000	sq.ft.	7	4	11	54	59	113
Total New Vehicular Trips per ITE Trip Generation Manual, 10th Edition:			7	4	11	54	59	113
LATR Vehicle Trip Generation Rate Adjustment Factor (Germantown West - Retail):			92%					
Total LATR Adjusted Vehicular Trips per ITE Trip Generation Manual, 10th Edition (Auto Driver at 66.4%):			6	4	10	50	54	104
Total Person Trips:			9	6	15	76	81	157
Auto Driver:	66.4%		6	4	10	50	54	104
Auto Passenger:	27.6%		2	2	4	21	22	43
Transit:	1.2%		0	0	0	1	1	2
Non-Motorized:	4.8%		1	0	1	4	4	8
Primary Trips - Shopping Center			6	4	10	50	54	104
Pass-by Percentages (AM PM)			29% 35%			-2 -18	-1 -19	-3 -36
Net Primary Trips - Retail			4	3	7	32	35	68

Trip Generation - Retail Totals

	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Sum of Net Primary Trips for Retail Development	4	3	7	32	35	68
Sum of Pass-by Trips for Retail Development	2	1	3	18	19	36

Trip Generation - Site Totals

	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Auto Driver - Primary Trips:	11	24	35	54	48	103
Auto Driver - Pass-by Trips	2	1	3	18	19	36
Auto Passenger:	5	11	16	31	28	59
Transit:	1	1	2	2	2	4
Non-Motorized:	2	3	5	7	6	13
Totals:	21	40	61	112	103	215

NOTES:

1. The Montgomery County Growth and Infrastructure Policy states that projects with more than 50 peak hour person trips require a transportation facilities analysis.
2. Trip Generation Rates obtained from the ITE Trip Generation Manual, 10th Edition.
3. The site plan shows two separate areas for retail use (6,000 SF each for a total of 12,000 SF). The current plan is to divide these two areas into smaller retail uses. Therefore, the retail component of the site plan was analyzed as a shopping center as opposed to two pad sites with individual land uses.

Transportation Facilities Analysis	Overall Trip Generation for Site	Exhibit 2
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

Section 2 Motor Vehicle System Adequacy

Section 2.1 – Adequacy Requirements & Study Area

Adequacy Requirements

Based on the requirements of the LATR for the Germantown West Transportation Policy Area, a ‘Yellow’ Policy Area, each study intersection must be evaluated using the Critical Lane Volume (CLV) analysis methodology. The Highway Capacity Manual (HCM) method is required for any intersection that has a CLV of greater than 1,350. Under the Guidelines, intersections with a CLV less than 1,350 or with delays less than 51 seconds are considered adequate.

Study Area

The study intersections were determined as part of the scoping process with M-NCPPC and are shown on **Exhibit 3**.

Section 2.2 – Existing Conditions

Description of Roadway Network

The key roads in the study area are:

- MD 117 (Clopper Road) is generally a four-lane road throughout the study area with a posted speed limit of 30 MPH. It is designated as a principal arterial and has additional turn lanes at key intersections along the roadway.
- MD 118 (Germantown Road) is generally a six-lane road with a posted speed limit of 40 MPH. It is designated as a minor/principal arterial and has additional turn lanes at key intersections along the roadway.
- MD 119 (Great Seneca Highway) is a four-lane road with a posted speed limit of 45 MPH. It is designated as a principal arterial and has additional turn lanes at key intersections along the roadway.
- Leaman Farm Road is a two-lane road that is designated as a local roadway. The posted speed limit is 30 MPH.

Existing Lane Configurations

The Lane Use & Traffic Control Devices are shown on **Exhibit 4**.

Existing Traffic Counts

Peak hour turning movement counts were conducted on October 7, 2020. The counts were increased by 1.07 in compliance with Montgomery County's COVID-19 traffic count policy. The results of the turning movement counts are shown on **Exhibit 5a** and represent the Existing (Unadjusted) Peak Hour Volumes. The adjusted (7% increase) volumes are shown on **Exhibit 5b** and represent the Existing (Adjusted) Peak Hour Volumes. The volumes from Exhibit 5b serve as the existing volumes for the purposes of this study. The Existing (Adjusted) Peak Hour Volumes were evaluated and the results are shown on Exhibit 11.

Section 2.3 – Background Conditions

Approved Background Developments

Appendix C details the background developments considered in this study. The following background developments were considered and are mapped on Exhibit C-1:

- Germantown Estates
- Chestnut Ridge/Arden Courts of Germantown
- Qiagen-Germantown Business Park
- Chestnut Ridge
- Mateny Hill Road

The trip generation of the background developments is shown on Appendix C-2a through C-2c, while the trip assignments are shown on Appendix C-3 through C-8. Trip generation was conducted using the ITE 10th edition. The combined trips generated by all background developments can be found on **Exhibit 6**.

Background Traffic Volumes

The Background Peak Hour Volumes (Exhibit 5b + Exhibit 6) shown on **Exhibit 7** were evaluated, and the results are shown on Exhibit 11.

Section 2.4 – Total Conditions

Site Trip Generation

The proposed development will consist of 61 townhomes and 12,000 square feet of retail. Trip generation for the site was conducted using the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 10th Edition, based on the proposed land uses. The Site Trip Generation for the site is shown on **Exhibit 8a** and **Exhibit 8b**. As noted on Exhibit 8b, the retail component of the site was analyzed as 12,000 SF of shopping center since it is anticipated that the two retail areas will be divided into multiple smaller retail uses as opposed to two pad sites with individual land uses.

Site Trip Distribution & Trip Assignment

Exhibit 9a shows the residential trip distribution according to the LATR Guidelines. **Exhibits 9b & 9c** show primary trip assignments for the trips associated with development. **Exhibit 9d** shows trip assignment for the pass-by trips generated by the retail land use of the development.

Total Traffic Volumes

The Total Peak Hour Volumes are shown on **Exhibit 10**.

Projected Traffic Operations

Based on the requirements of the LATR for the Germantown West Transportation Policy Area, a 'yellow' policy area, each intersection must be evaluated using the Critical Lane Volume (CLV) analysis method. The Highway Capacity Manual (HCM) methodology is required for any intersection that has a CLV of greater than 1,350. Under the Guidelines, intersections with a CLV less than 1,350 or with delays less than 51 seconds are considered adequate.

Exhibit 11 presents the results of the CLV analysis. The CLV analysis worksheets are included in Appendix B.

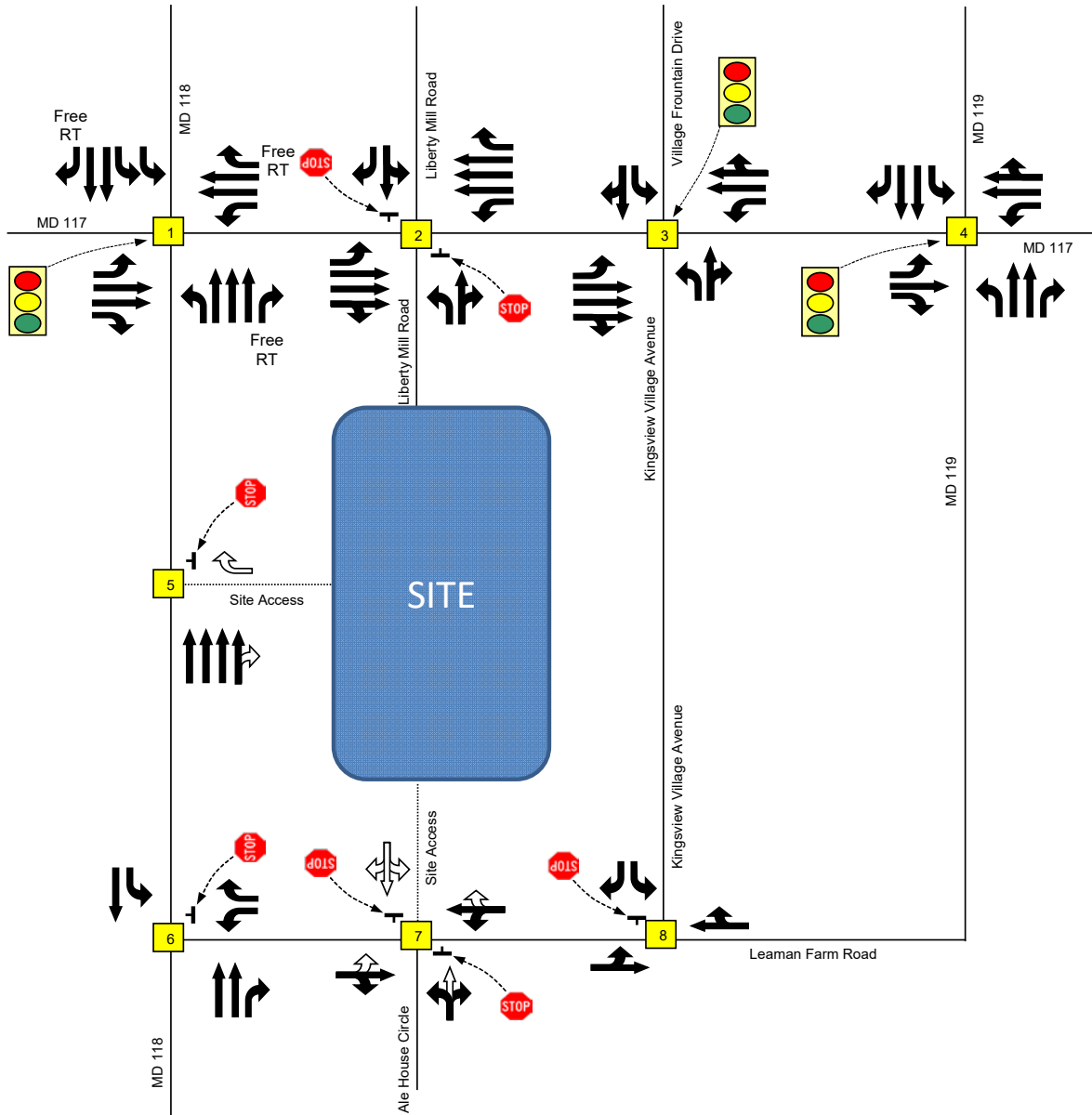
Section 2.5 – Results of Analysis

Results of Analysis

Analyses using the CLV methodology show all intersections operate at a LOS "A" or better with CLVs less than 1,350 under Total Traffic Conditions. Hence, all intersections meet the M-NCPPC and MDOT SHA requirements for adequacy.



Motor Vehicle Adequacy Test	Site Location Map & Study Intersections	Exhibit 3
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		



Motor Vehicle Adequacy Test

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Lane Use & Traffic Control Devices



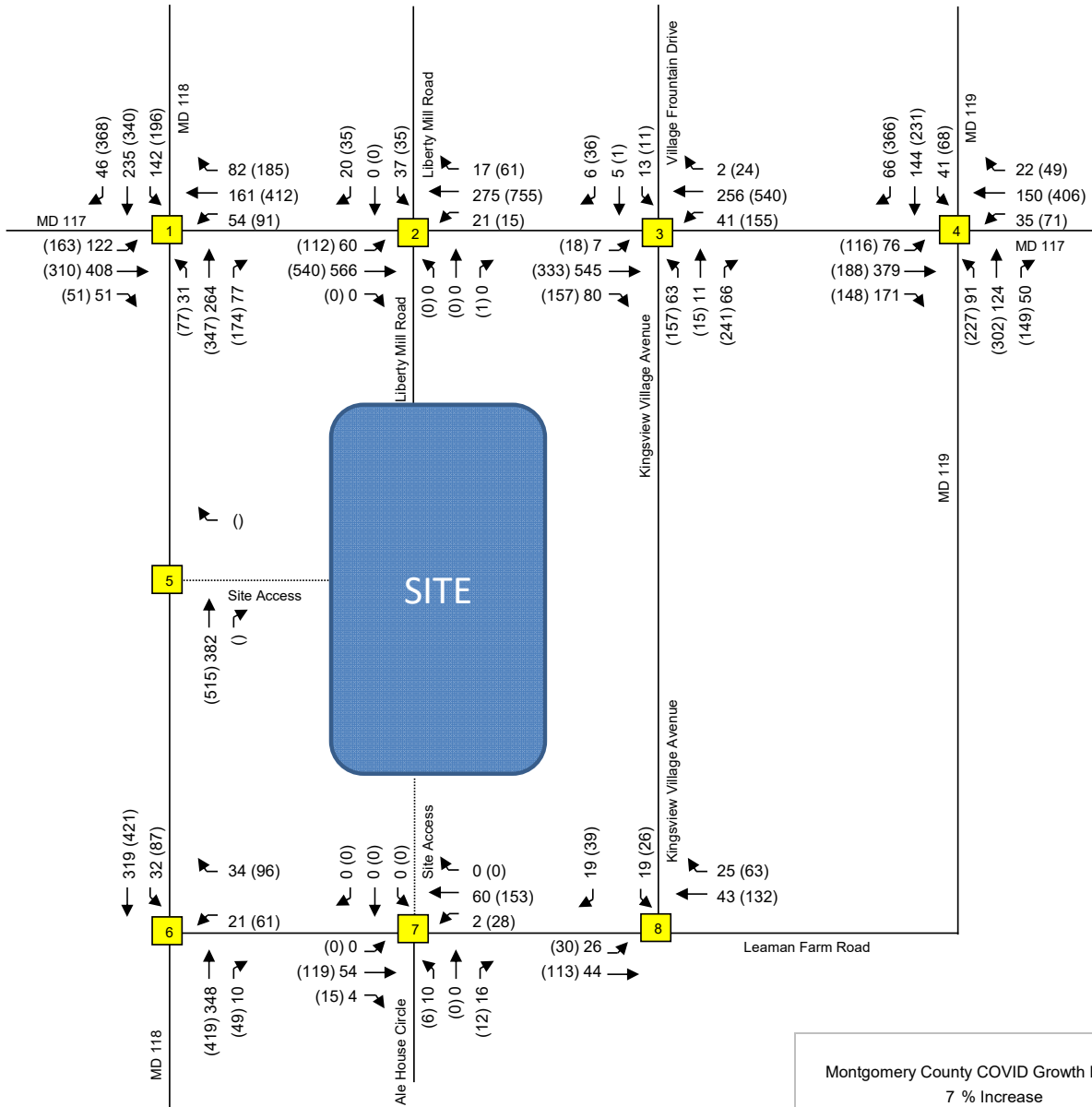
Key:  Existing Lane Use  Proposed Lane Use

Exhibit
4



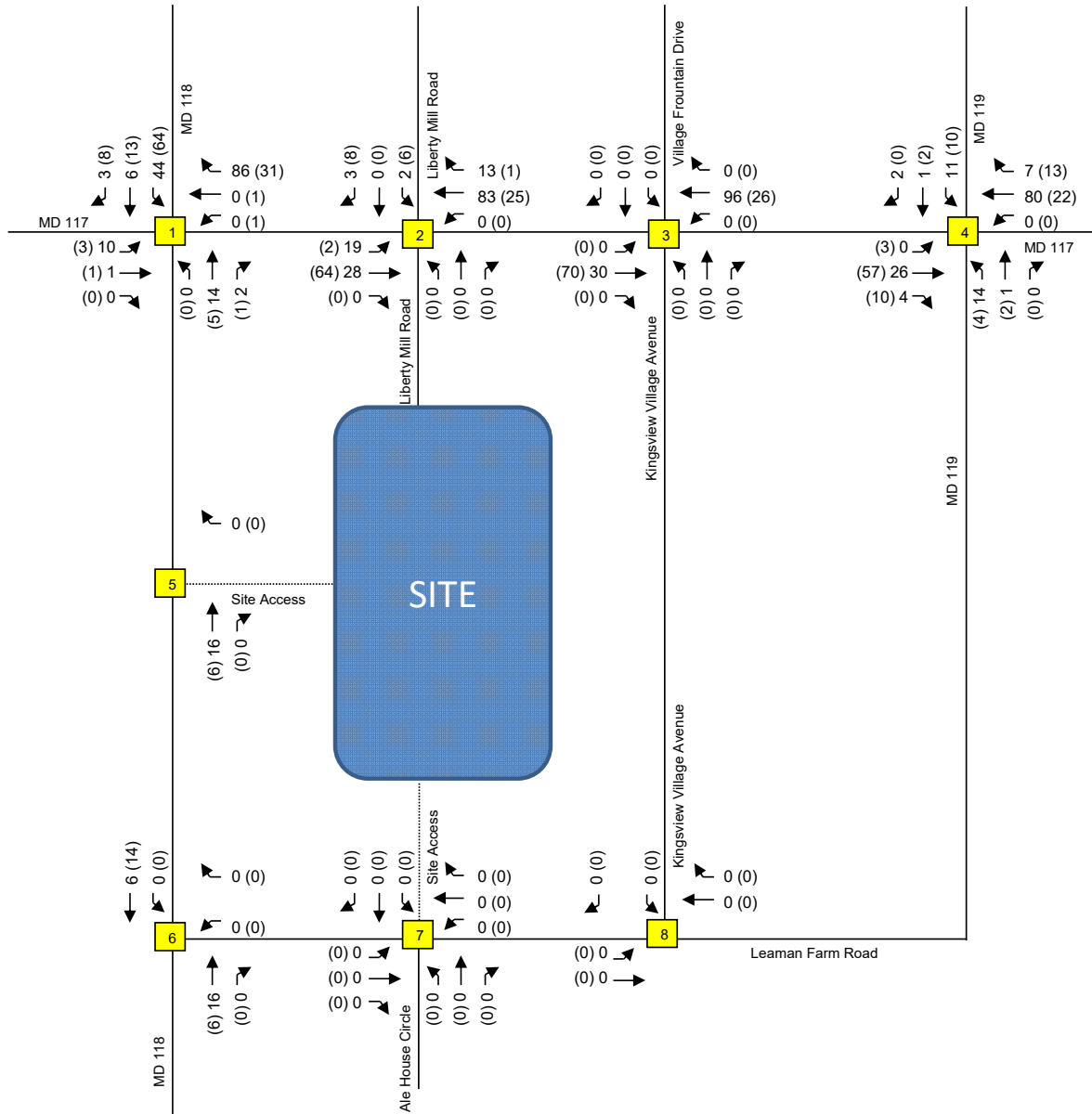
Motor Vehicle Adequacy Test

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Existing (Adjusted) Peak Hour Volumes

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

**Exhibit
5b**



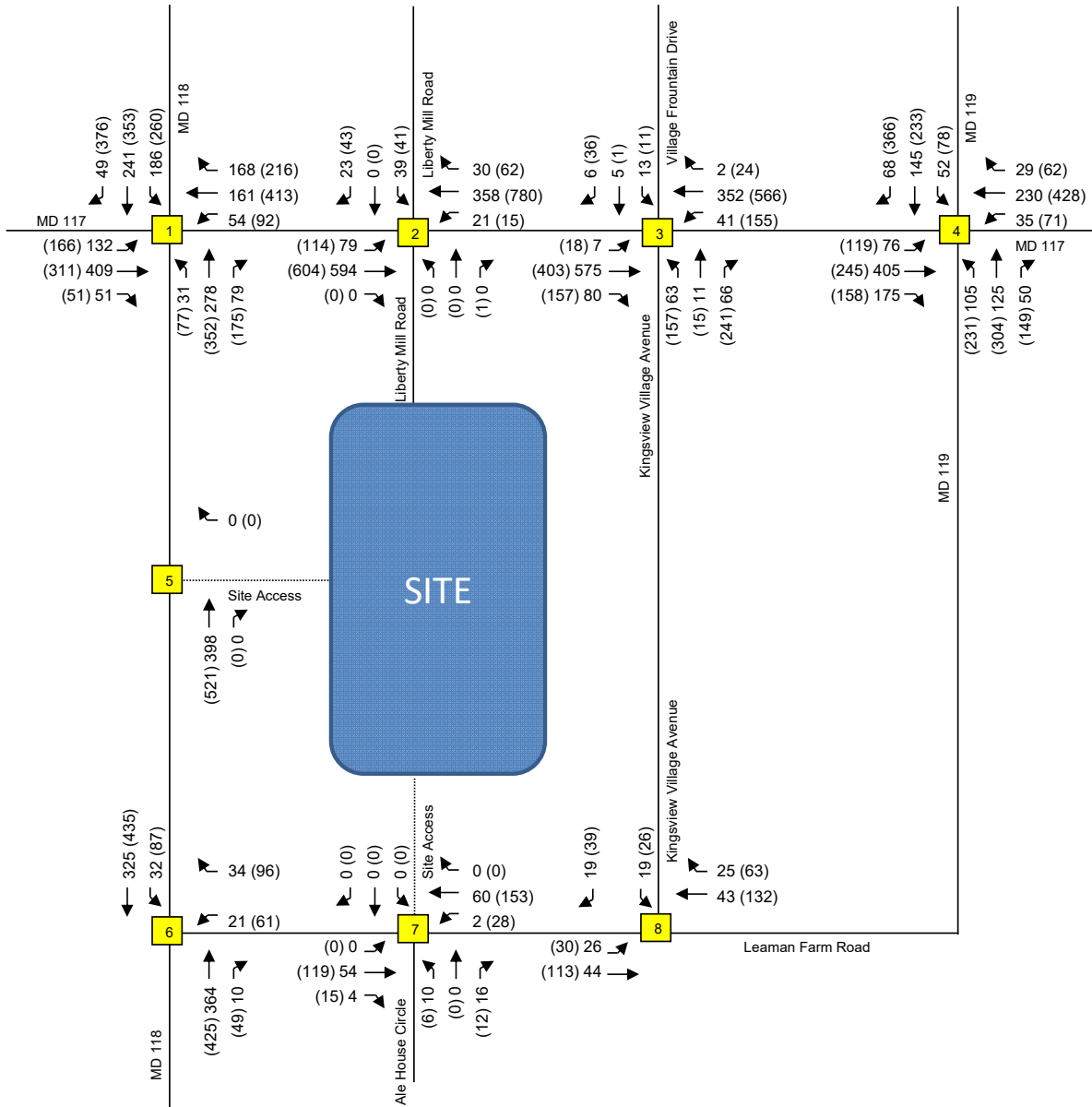
Motor Vehicle Adequacy Test

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Combined Background Dev. Volumes

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

**Exhibit
6**



Motor Vehicle Adequacy Test

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Background Peak Hour Volumes

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

Exhibit
7

Trip Generation Rates

Multifamily Housing, Low-Rise (ITE-220, Units)

$\text{Ln}(\text{Morning Trips}) = 0.95 \times \text{Ln}(\text{Units}) - 0.51$

$\text{Ln}(\text{Evening Trips}) = 0.89 \times \text{Ln}(\text{Units}) - 0.02$

Trip Distribution (In/Out)

23/77

63/37

Trip Generation Totals

			AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Multifamily Housing, Low-Rise (ITE-220, Units)	61	units	7	23	30	24	14	38
Total Vehicular Trips per ITE Trip Generation Manual, 10th Edition:			7	23	30	24	14	38
LATR Vehicle Trip Generation Rate Adjustment Factor (Germantown West - Residential):			93%					
Total LATR Adjusted Vehicular Trips per ITE Trip Generation Manual, 10th Edition (Auto Driver at 60.4%):			7	21	28	22	13	35
Total Person Trips:			11	35	46	36	22	58
Auto Driver:	60.4%		7	21	28	22	13	35
Auto Passenger:	26.9%		3	9	12	10	6	16
Transit:	4.1%		1	1	2	1	1	2
Non-Motorized:	8.6%		1	3	4	3	2	5

NOTES:

1. The Montgomery County Subdivision Staging Policy states that projects with more than 50 peak hour person trips require a transportation facilities analysis based on GIP Requirements.
2. Trip Generation Rates obtained from the ITE Trip Generation Manual, 10th Edition.

Traffic Impact Analysis	Trip Generation for Site - Residential	Exhibit 8a
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

Trip Generation Rates - Shopping Center

Shopping Center (General Urban/Suburban, ksf, ITE-820)

Morning Trips = 0.94 x ksf

Ln(Evening Trips) = 0.74 x Ln(ksf) + 2.89

Trip Distribution (In/Out)

62/38

48/52

Trip Generation

			AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Shopping Center (ksf, ITE-820)	12,000	sq.ft.	7	4	11	54	59	113
Total New Vehicular Trips per ITE Trip Generation Manual, 10th Edition:			7	4	11	54	59	113
LATR Vehicle Trip Generation Rate Adjustment Factor (Germantown West - Retail):			92%					
Total LATR Adjusted Vehicular Trips per ITE Trip Generation Manual, 10th Edition (Auto Driver at 66.4%):			6	4	10	50	54	104
Total Person Trips:			9	6	15	76	81	157
Auto Driver:	66.4%		6	4	10	50	54	104
Auto Passenger:	27.6%		2	2	4	21	22	43
Transit:	1.2%		0	0	0	1	1	2
Non-Motorized:	4.8%		1	0	1	4	4	8
Primary Trips - Shopping Center			6	4	10	50	54	104
Pass-by Percentages (AM PM)	29%	35%	-2	-1	-3	-18	-19	-36
Net Primary Trips - Shopping Center			4	3	7	32	35	68

Trip Generation - Totals

			AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Sum of Net Primary Trips for Retail Development			4	3	7	32	35	68
Sum of Pass-by Trips for Retail Development			2	1	3	18	19	36

NOTES:

1. The Montgomery County Subdivision Staging Policy states that projects with more than 50 peak hour person trips require a transportation facilities analysis based on GIP Requirements.
2. Trip Generation Rates obtained from the ITE Trip Generation Manual, 10th Edition.
3. The site plan shows two separate areas for retail use (6,000 SF each for a total of 12,000 SF). The current plan is to divide these two areas into smaller retail uses. Therefore, the retail component of the site plan was analyzed as a shopping center as opposed to two pad sites with individual land uses.

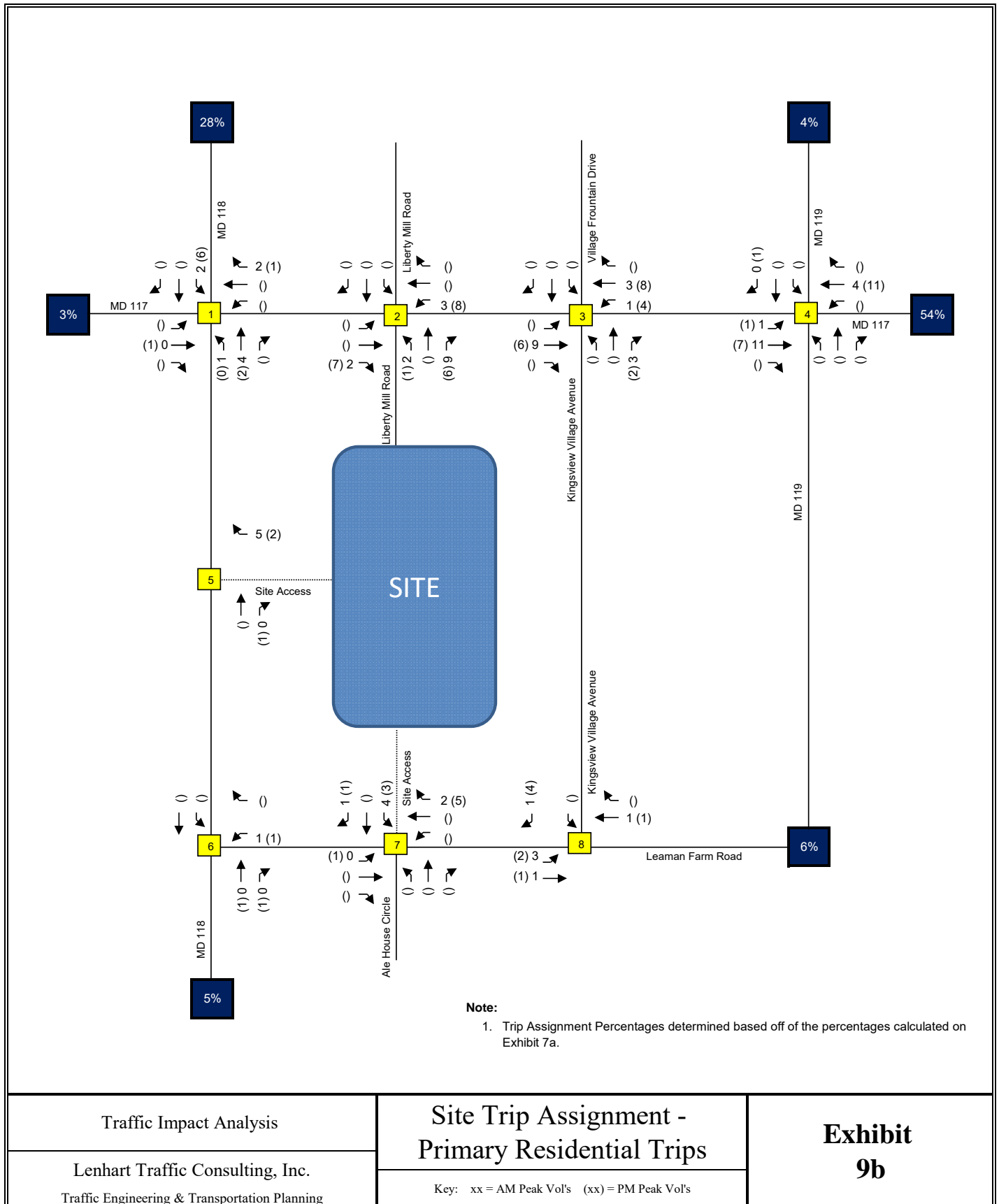
Traffic Impact Analysis	Trip Generation for Site - Retail	Exhibit 8b
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

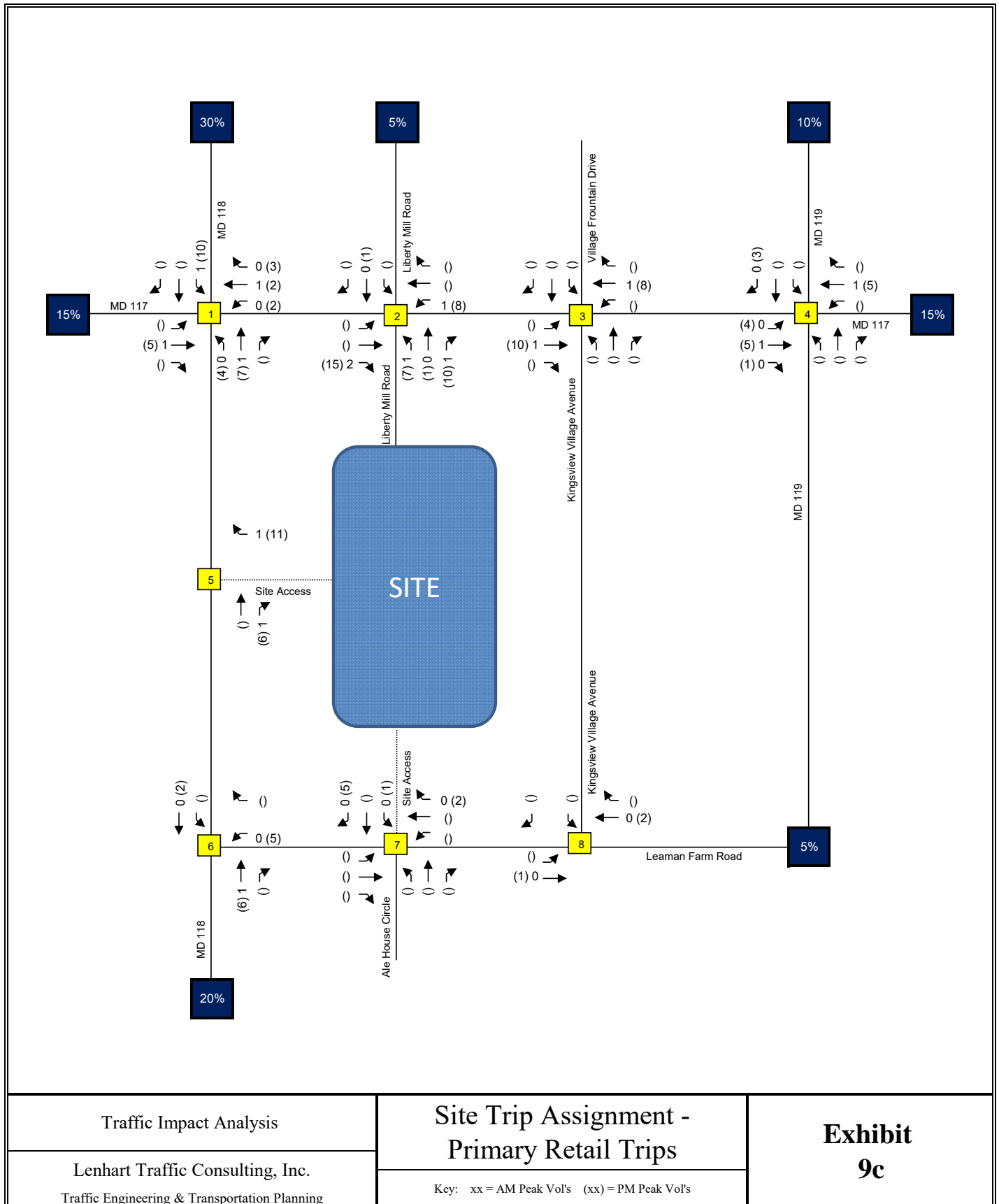
Table 2-11 from LATR Guidelines: Germantown/Clarksburg

Trip Distribution Report

Trip Dist. By Super district		Trip Ass for Origin by super-district													
Residential Development		Via MD 117 West	Via MD 117 East	Via MD 118 North	Via MD 118 South	Via MD 119 South/East	Via MD 119 North	TOTAL	Via MD 117 West	Via MD 117 East	Via MD 118 North	Via MD 118 South	Via MD 119 South/East	Via MD 119 North	TOTAL
1 Bethesda / Chevy Chase	2.9%	0%	100%	0%	0%	0%	0%	100%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	2.90%
2 Silver Spring / Takoma Park	0.9%	0%	100%	0%	0%	0%	0%	100%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.90%
3 Potomac / Darnestown / Travilah	3.1%	0%	20%	0%	80%	0%	0%	100%	0.0%	0.6%	0.0%	2.5%	0.0%	0.0%	3.10%
4 Rockville / North Bethesda	10.5%	0%	100%	0%	0%	0%	0%	100%	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%	10.50%
5 Kensington / Wheaton	0.8%	0%	100%	0%	0%	0%	0%	100%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.80%
6 White Oak / Fairland / Cloverly	0.6%	0%	100%	0%	0%	0%	0%	100%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.60%
7 Gaithersburg / Shady Grove	22.7%	0%	80%	0%	0%	20%	0%	100%	0.0%	18.2%	0.0%	0.0%	4.5400%	0.0%	22.70%
8 Aspen Hill / Olney	1.0%	0%	100%	0%	0%	0%	0%	100%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	1.00%
9 Germantown / Clarksburg	35.0%	5%	5%	70%	5%	5%	10%	100%	1.8%	1.8%	24.5%	1.8%	1.8%	3.5%	35.00%
10 Rural: West of I-270	0.6%	85%	0%	15%	0%	0%	0%	100%	0.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.60%
11 Rural: East of I-270	1.6%	0%	10%	70%	0%	0%	5%	85%	0.0%	0.2%	1.1%	0.0%	0.0%	0.1%	1.36%
12 Washington, DC	9.2%	0%	100%	0%	0%	0%	0%	100%	0.0%	9.2%	0.0%	0.0%	0.0%	0.0%	9.20%
13 Prince George's County	2.7%	0%	100%	0%	0%	0%	0%	100%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	2.70%
14 Virginia	5.9%	10%	80%	0%	10%	0%	0%	100%	0.6%	4.7%	0.0%	0.6%	0.0%	0.0%	5.90%
15 Frederick County	1.8%	0%	0%	100%	0%	0%	0%	100%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	1.80%
16 Howard County	0.7%	0%	50%	50%	0%	0%	0%	100%	0.0%	0.4%	0.4%	0.0%	0.0%	0.0%	0.70%
Total 100.00%															
Trip Distribution ==>>									2.9%	54.4%	27.9%	4.8%	6.3%	3.6%	99.8%
Use ==>>									3.0%	54.0%	28.0%	5.0%	6.0%	4.0%	100.0%

Traffic Impact Analysis	Residential Trip Distribution Report in Super District 9 Germantown/Clarksburg Key: xx = AM Peak Vol's (xx) = PM Peak Vol's	Exhibit 9a
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		





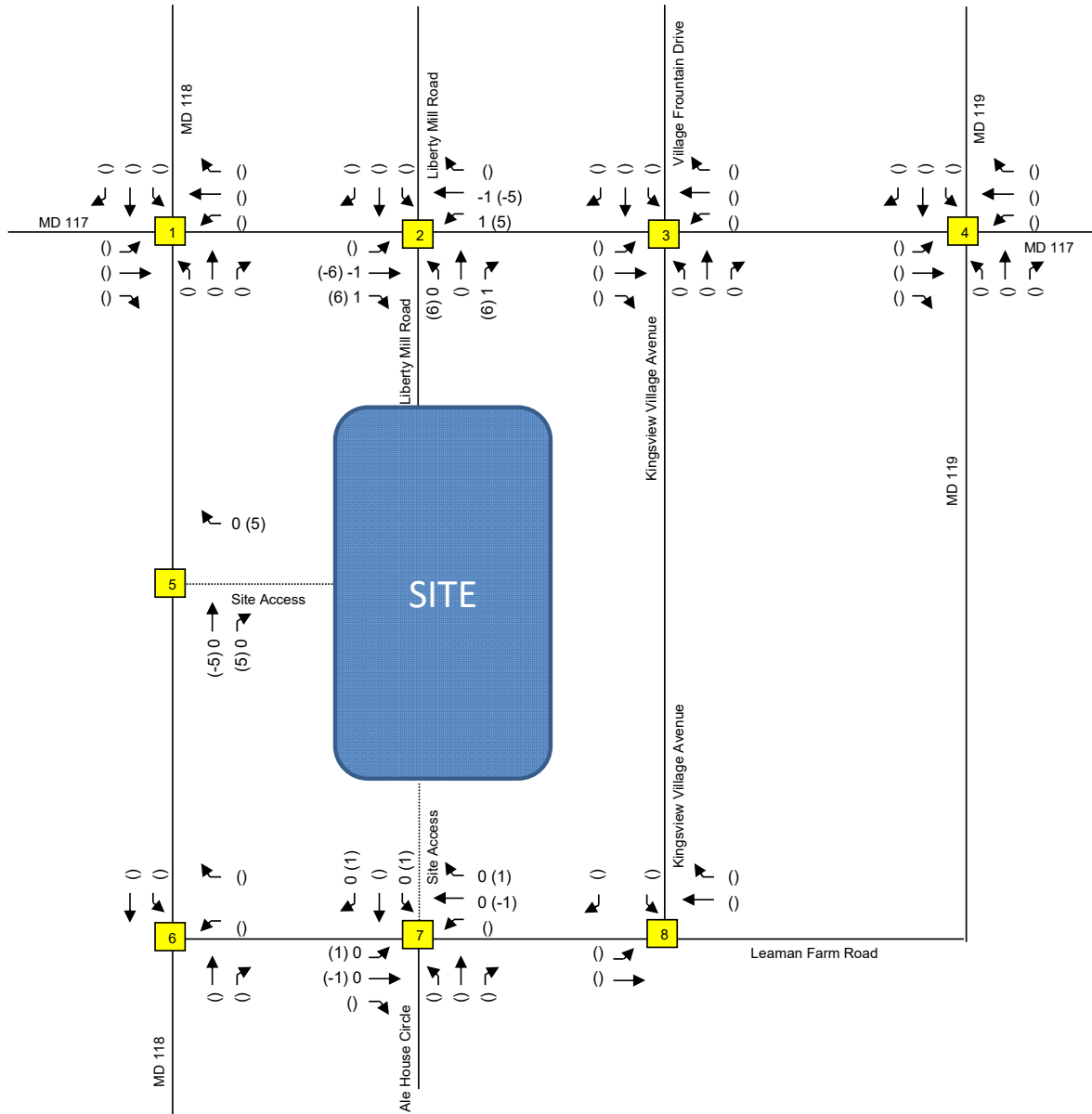
Traffic Impact Analysis

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Site Trip Assignment - Primary Retail Trips

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

**Exhibit
9c**

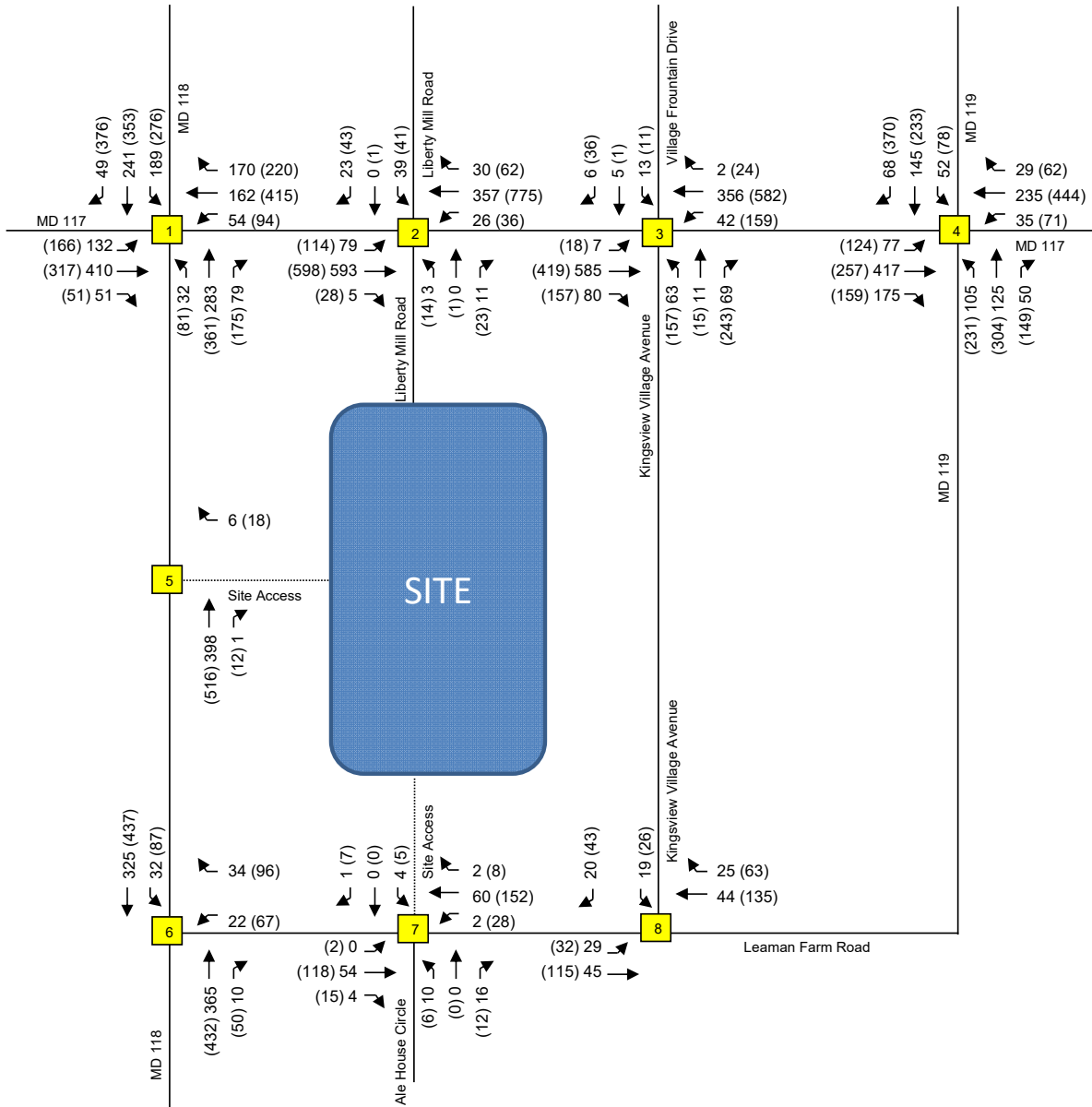


Note:

1. It was assumed that 60% of all pass-by trips would occur along MD 117, 30% would occur along northbound MD 118, and the remaining 10% would occur along Leaman Farm Road.

Traffic Impact Analysis	Site Trip Assignment - Pass-by Retail Trips	Exhibit 9d
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's



Traffic Impact Analysis

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Total Peak Hour Volumes

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

Exhibit 10


Level-of-Service Results

(CLV Analysis)

Morning Peak Hour	Existing CLV	Background CLV	Total CLV	CLV < 1,350?
1). MD 118 & MD 117	A / 443	A / 473	A / 476	Y
2). MD 117 & Liberty Mill Road (Site Access)	A / 271	A / 284	A / 297	Y
3). MD 117 & Kingsview Village Ave / Village Fountain Drive	A / 362	A / 373	A / 381	Y
4). MD 119 & MD 117	A / 581	A / 622	A / 634	Y
5). MD 118 & Prop. Site Access	N/A	N/A	A / 195	Y
6). MD 118 & Leaman Farm Road	A / 340	A / 346	A / 347	Y
7). Leaman Farm Road & Prop. Site Access / Ale House Circle	A / 88	A / 88	A / 94	Y
8). Leaman Farm Road & Kingsview Village Avenue	A / 113	A / 113	A / 117	Y
Evening Peak Hour	Existing CLV	Background CLV	Total CLV	CLV < 1,350?
1). MD 118 & MD 117	A / 638	A / 653	A / 666	Y
2). MD 117 & Liberty Mill Road (Site Access)	A / 430	A / 448	A / 466	Y
3). MD 117 & Kingsview Village Ave / Village Fountain Drive	A / 603	A / 629	A / 641	Y
4). MD 119 & MD 117	A / 834	A / 857	A / 869	Y
5). MD 118 & Prop. Site Access	N/A	N/A	A / 295	Y
6). MD 118 & Leaman Farm Road	A / 482	A / 496	A / 504	Y
7). Leaman Farm Road & Prop. Site Access / Ale House Circle	A / 199	A / 199	A / 213	Y
8). Leaman Farm Road & Kingsview Village Avenue	A / 251	A / 251	A / 256	Y

NOTES:

- Intersections within the Germantown West Policy Area must have a CLV analysis less than 1,350 to be considered adequate. Additional HCM analysis is required for any intersection with a CLV > 1,350.

Traffic Impact Analysis	Results of Level of Service Analyses - CLV	Exhibit 11
 LENHART TRAFFIC CONSULTING, INC. 545 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com		

Section 3 Pedestrian System Adequacy

Section 3.1 – Adequacy Requirements & Study Area

Per the GIP, a pedestrian system adequacy analysis is required as the site will generate more than 50 peak hour person trips. Specifically, as detailed on Exhibit 2, the site will generate 215 peak hour person trips during the PM peak hour. Table T4 of the GIP provides the required study area from the site frontage that is to be analyzed for pedestrian system adequacy based on the peak hour person trips and is provided below. As shown, a 500 foot study area from the site frontage must be analyzed.

Table T4. Pedestrian Adequacy Test Scoping

Peak-Hour Person Trips Generated	Red and Orange Policy Area Walkshed*	Yellow and Green Policy Area Walkshed*
50 – 99	400'	250'
100 – 199	750'	400'
200 – 349	900'	500'
350 or more	1,000'	600'

* The maximum required length of sidewalk and streetlighting improvements beyond the frontage is 4 times the appropriate value in this column. The maximum span required for ADA improvements beyond the frontage is equal to the appropriate value in this column.

As detailed in the GIP, there are three components for the Pedestrian System Adequacy Test that must be analyzed within this 500 foot study area. They are as follows:

- Pedestrian Level of Comfort (PLOC)
- Street Lighting
- ADA Compliance

The analysis of these components are detailed in the sections below.

Section 3.2 – Pedestrian Level of Comfort (PLOC)

Per the GIP, “Pedestrian system adequacy is defined as providing a “Somewhat Comfortable” or “Very Comfortable” PLOC score on streets and intersections for roads classified as Primary Residential or higher (excluding Controlled Major Highways and Freeways, and their ramps), within a certain walkshed from the site frontage, specified in Table T4. The table also identifies the maximum span of improvement that the applicant must provide beyond the frontage. Specific improvements to be constructed should be identified in consultation with the Montgomery County Planning Department and MCDOT.

The Montgomery County Planning Department publishes a map detailing the PLOC for roadways within Montgomery County. A copy of the PLOC map for the area in the vicinity of the site is provided on **Exhibit 12a**. As shown, there are several segments of pedestrian facilities that have not been catalogued by Montgomery County and there are no official PLOC ratings for these segments. For these segments, assessments of the anticipated PLOC rating were conducted and the results are contained in Appendix D.

Exhibit 12b provides a table detailing the various PLOC ratings based on the segment numbering shown on Exhibit 12a. This table details the locations that the developer will upgrade to improve the PLOC in conjunction with the findings detailed in the ADA Compliance findings and recommendations (Section 3.4).

It should be noted that several segments along MD 117 and MD 118 have existing 8-foot wide paths with buffers ranging from 2-5 feet or more from the vehicular travel way, yet still have below adequate PLOC ratings. Per the PLOC methodology, based on the speed limits of the adjacent roadways the only way to achieve a ‘Somewhat Comfortable’ or better PLOC rating for these sections would be to either: A) provide a separated bike lane or designated parking lane, or B) increase the buffer width between the pathway and travel way. Option A would be unlikely to be recommended or approved in this area given that there are no abutting uses to which on-street parking would connect. Option B is infeasible along the subject segments due to environmental constraints including foliage/trees, steep grades, utility poles and other environmentally sensitive features. Given these environmental constraints, the impacts and associated costs that would be required to construct the additional buffer widths are prohibitive and are not reasonable for the minimal benefit that would be achieved.

Section 3.3 – Street Lighting

Exhibit 13 details the streetlighting in the vicinity of the site within the 500 foot study area. As shown, there is street lighting along all of the roadway segments within the study area. The field observations yielded the findings shown on Exhibit 13 and detailed below.

- Streetlight not working along the west side of MD 118
- Streetlight not shown in the Montgomery County database along the north side of MD 117
- Streetlight not working along the north side of Leaman Farm Road
- Streetlight appeared to be dim (in comparison to others along the same segment) along the southside of MD 117.

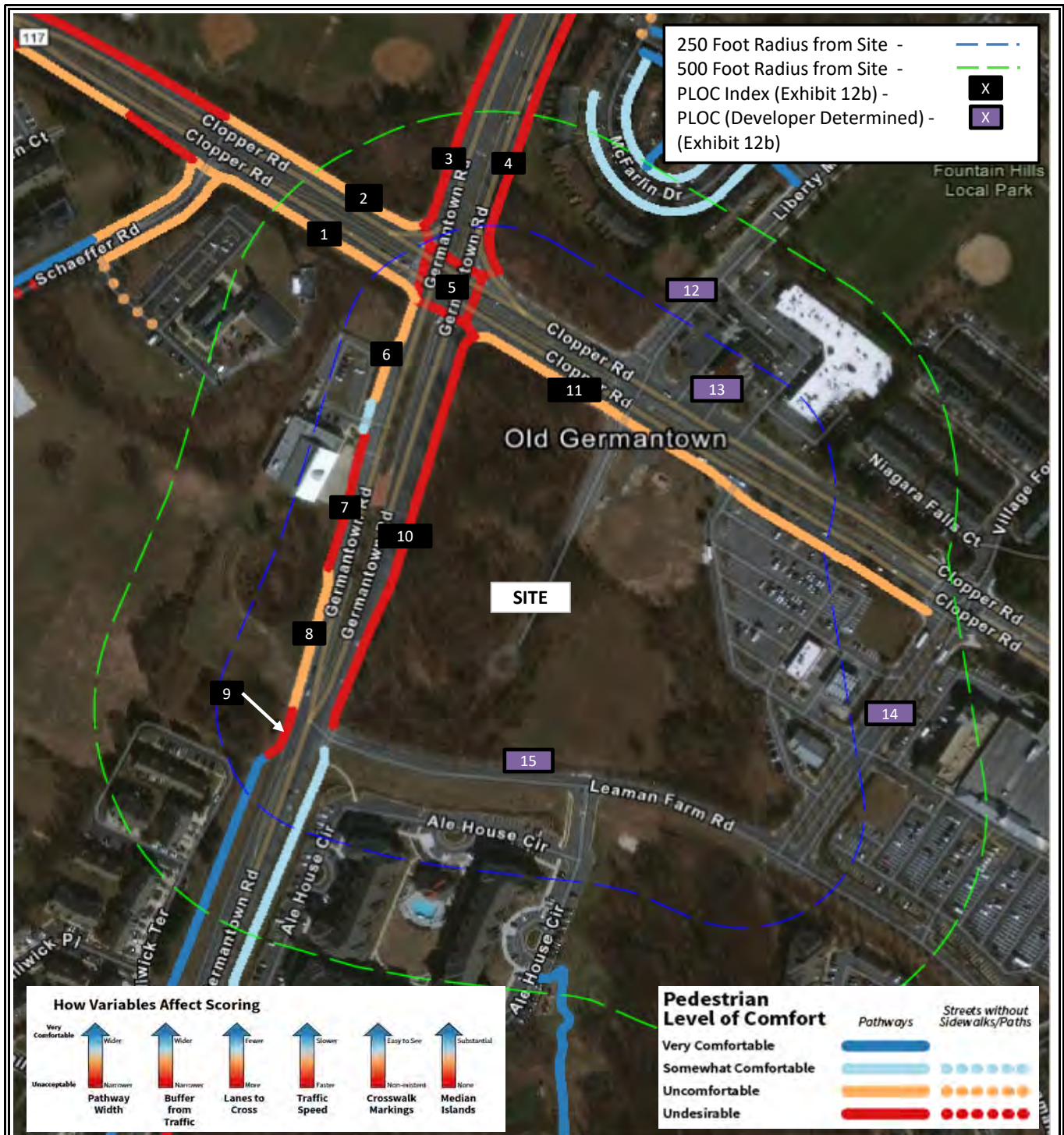
Section 3.4 – ADA Compliance

Exhibit 14 provides a location map for the findings of the ADA compliance observations

in the vicinity of the site. Note that Section TL2.3 – Item 3 which discusses the ADA compliance portion of the Pedestrian System Adequacy states that, “The applicant must fix Americans with Disabilities Act (ADA) noncompliance issues within a certain walkshed from the site frontage equivalent to half the walkshed specified in Table T4. Therefore, the required walkshed for which the developer must address ADA noncompliance is 250 feet. **Exhibits 14a – 14g** detail the specific ADA compliance issues and the recommended mitigation to be coordinated with M-NCPPC.

Section 3.5 – Pedestrian System Adequacy Evaluation

With the recommended improvements to PLOC and addressing non-compliant ADA infrastructure in the vicinity of the site and given the presence of street lighting throughout the study area, the Pedestrian System Adequacy test is passed.



Transportation Facilities Analysis

Lenhart Traffic Consulting, Inc.

Traffic Engineering & Transportation Planning

Pedestrian Level of Comfort

Source: <https://mcatlas.org/pedplan/>

**Exhibit
12a**

Segment Number	Segment	PLOC Rating	Notes	Developer Improvements?
1	South side of MD 117 from Schaeffer Road to MD 118	Uncomfortable	8 foot pathway with 2-5 foot buffer. 30 MPH posted speed limit along MD 117.	See Discussion in Section 3.2
2	North side of MD 117 from Schaeffer Road to MD 118	Uncomfortable	8 foot pathway with 2-5 foot buffer. 30 MPH posted speed limit along MD 117.	See Discussion in Section 3.2
3	West side of MD 118 north of Clopper Road	Undesirable	8 foot pathway with 5 foot tree buffer. 40 MPH posted speed limit along MD 117.	See Discussion in Section 3.2
4	East side of MD 118 north of Clopper Road	Undesirable	5 foot pathway with 5 foot tree buffer. 40 MPH posted speed limit along MD 117.	See Discussion in Section 3.2
5	Intersection of MD 118 and MD 117	Undesirable	Full APS/CPS Compliance for crosswalks. Pedestrian warning signs for channelized right turns. All median cut throughs are adequate width.	N - An intersection with this number of lanes + speed limit cannot achieve Somewhat Comfortable PLOC, per PLOC guidelines. Existing infrastructure is otherwise compliant.
6	West side of MD 118 from Clopper Road to Fire Station entrance	Uncomfortable	8 foot pathway with 2-5 foot buffer. 40 MPH posted speed limit along MD 118.	See Discussion in Section 3.2
7	West side of MD 118 along Fire Station frontage	Undesirable	Long crossing of fire station frontage with stretch of pathway with no buffer area. Retaining wall along west side of pathway restricts potential improvements.	N - No feasible improvements given fire station driveway needs
8	West side of MD 118 north of Leaman Farm Road	Uncomfortable	8 foot pathway with 2-5 foot buffer. 40 MPH posted speed limit along MD 118.	See Discussion in Section 3.2
9	West side of MD 118 at Leaman Farm Road intersection	Undesirable	8 foot pathway with 2-5 foot buffer. 40 MPH posted speed limit along MD 118.	See Discussion in Section 3.2
10	East side of MD 118 north of Leaman Farm Road	Undesirable	Along Site Frontage. Will be improved as shown on development plans.	Y
11	South side of MD 117 from MD 118 to Kingsview Village Avenue	Uncomfortable	Along Site Frontage. Will be improved as shown on development plans.	Y
12	West side of Liberty Mill Road	Somewhat Comfortable (1.75)*	Within the study area, there is 5 foot pathway with 2-5 foot buffer and 30 MPH speed limit.	N/A - Adequate PLOC
13	North side of MD 117 from Md 118 to Kingsview Village Avenue	Uncomfortable (3.0)*	8 foot pathway with 2-5 foot buffer. 30 MPH posted speed limit along MD 117.	See Discussion in Section 3.2
14	Kingsview Village Avenue (both sides)	Somewhat Comfortable (2.0)*	5 foot pathway with 5 foot and tree buffer. 30 MPH speed limit along Kingsview Village Avenue	N/A - Adequate PLOC
15	N Side of Leaman Farm Road	Somewhat Comfortable (2.0)*	8 foot pathway with 5 foot and tree buffer. 30 MPH speed limit along Leaman Farm Road	N/A - Adequate PLOC

* - Developer calculated PLOC. Refer to worksheets in Appendix F

Transportation Facilities Analysis	Pedestrian Level of Comfort Analysis	Exhibit 12b
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		















Transportation Facilities Analysis	Streetlight Inventory	Exhibit 13
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Source: https://www2.montgomerycountymd.gov/dot-streetlight/index.aspx	













Transportation Facilities Analysis	ADA Compliance Location Map	Exhibit 14
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		







Location	Description	Recommendations	Location	Description	Recommendations
A	Crack in asphalt path	Repair (along site frontage)	B	Ramps at Fire Station Parking Lot Entrance	Along County owned land - no proposed improvements
					
Location	Description	Recommendations	Location	Description	Recommendations
C	Ramp on South Side of Fire Station Driveway	Along County owned land - no proposed improvements	D	Crack in asphalt path	Repair (along site frontage)
					
Location	Description	Recommendations	Location	Description	Recommendations
E	Guy Wire restricts sidewalk path. ~5 ft clearance	Adjust guywire outside of sidewalk path	F	Ramp on S Side of Leaman Farm Road	Install DWS
 					
Transportation Facilities Analysis		ADA Compliance Sheet 1		Exhibit 14a	
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning					





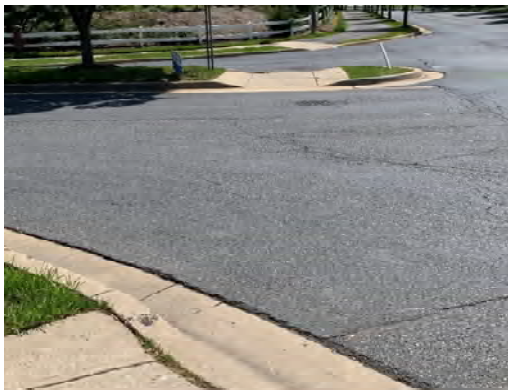
Location	Description	Recommendations	Location	Description	Recommendations
G	Ramp on N Side of Leaman Farm Road	Improve to standard perpendicular ramp (along site frontage)	H	Crack in Sidewalk Joints - Tripping Hazard	Repair Sidewalk (along site frontage)
					
Location	Description	Recommendations	Location	Description	Recommendations
I	Missing Sidewalk	Replace Sidewalk Section (along site frontage)	J	Crack / Sidewalk Disrepair	Replace Sidewalk Sections (along site frontage)
					
Location	Description	Recommendations	Location	Description	Recommendations
K	Sidewalk in Disrepair	Replace Sidewalk Section (along site frontage)	L	Sidewalk in Disrepair	Replace Sidewalk Section (along site frontage)
					
Transportation Facilities Analysis		ADA Compliance Sheet 2		Exhibit 14b	
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning					

Location	Description	Recommendations	Location	Description	Recommendations
M	Sidewalk in Disrepair	Replace Sidewalk Section (along site frontage)	N	Ramp in Disrepair and no DWS	Replace Ramp (along site frontage)
					
Location	Description	Recommendations	Location	Description	Recommendations
O	No crosswalk across Leaman Farm Road	Install crosswalk across Leaman Farm Road and pedestrian warning signs (Unsignalized)	P	No crosswalk across Site Access Roadway	Provide crosswalk (along site frontage)
					
Location	Description	Recommendations	Location	Description	Recommendations
Q	Ramp in Disrepair and no DWS	Replace to standard ramp (along site frontage)	R	Sidewalk in Disrepair	Replace section of sidewalk
					
Transportation Facilities Analysis		ADA Compliance Sheet 3		Exhibit 14c	
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning					

Location	Description	Recommendations	Location	Description	Recommendations
S	Sidewalk in Disrepair	Replace sidewalk section (along site frontage)	T	Ramp non standard and no DWS	Along County owned land - no proposed improvements
					
Location	Description	Recommendations	Location	Description	Recommendations
U	No crosswalks across Park-N-Ride entrance	Along County owned land - no proposed improvements	V	No DWS / Formal Ramp	Along County owned land - no proposed improvements
					
Location	Description	Recommendations	Location	Description	Recommendations
W	Crack in Sidewalk - Tripping Hazard	Replace sidewalk section			
					
Transportation Facilities Analysis		ADA Compliance Sheet 4		Exhibit 14d	
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning					

Location	Description	Recommendations
X	Multiple Nonstandard Ramps and no crosswalks (Ramps pictures shown from east to west)	Replace ramps and sidewalk along 7-Eleven frontage and provide crosswalks
      		
Transportation Facilities Analysis	<div>ADA Compliance</div> <div>Sheet 5</div>	
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		
		<div>Exhibit</div> <div>14e</div>

Location	Description	Recommendations	Location	Description	Recommendations
Y	No crosswalk across Liberty Mill Road	Install crosswalk	Z	No crosswalk across Leaman Farm Road and no DWS for southern ramp	Install crosswalk with pedestrian signage and upgrade to standard ramp on south side
					
Location	Description	Recommendations	Location	Description	Recommendations
AA	No DWS and non standard ramp (10.3% slope)	Replace with standard ramp	BB	Cracking in Sidewalk	Replace section of sidewalk
					
Location	Description	Recommendations	Location	Description	Recommendations
CC	Crack in sidewalk joint - Tripping Hazard	Replace section	DD	No DWS for Ramp	Install DWS
					
Transportation Facilities Analysis		ADA Compliance Sheet 6		Exhibit 14f	
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning					

Location	Description	Recommendations	Location	Description	Recommendations
EE	No DWS for Ramp	Install DWS	FF	No DWS for Ramp	Install DWS
					
Location	Description	Recommendations	Location	Description	Recommendations
GG	No DWS for Ramp	Install DWS	HH	No DWS for Ramp	Install DWS
					
Location	Description	Recommendations	Location	Description	Recommendations
II	No crosswalk across Kingsview Village Avenue	Install crosswalk			
					
Transportation Facilities Analysis		ADA Compliance Sheet 7		Exhibit 14g	
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning					

Section 4 Bicycle System Adequacy

Section 4.1 – Adequacy Requirements & Study Area

Per the GIP, a bicycle system adequacy analysis is required as the site will generate more than 50 peak hour person trips. Specifically, as detailed on Exhibit 2, the site will generate 215 peak hour person trips during the PM peak hour. Table T5 of the GIP provides the required study area from the site frontage that is to be analyzed for bicycle system adequacy based on the peak hour person trips and is provided below. As shown, a 500 foot study area from the site frontage must be analyzed.

Table T5. Bicycle Adequacy Test Scoping

Peak-Hour Person Trips Generated	Red and Orange Policy Areas	Yellow and Green Policy Areas
50 – 99	400'	250'
100 – 199	750'	400'
200 – 349	900'	500'
350 or more	1,000'	600'

As detailed in the GIP, bicycle system adequacy is defined as providing a low Level of Traffic Stress (LTS-2) for bicyclists. Per the above table, this LTS-2 must be maintained within the 500-foot radius of the site with the consideration of both current or programmed bicycle infrastructure. If the existing and programmed bicycle infrastructure is not expected to ensure LTS-2, the developer must improve bicycle facilities in accordance with the Montgomery County Bicycle Master Plan within the study area.

Section 4.2 – Bicycle Master Plan

Exhibit 15 details the current Montgomery County Bicycle Master Plan in the vicinity of the site and individual segments have been numbered for reference to Exhibit 17. As shown, separated bikeways are existing or proposed for the majority of roadways in the vicinity of the site. The developer will be responsible for upgrading the bicycle facilities in accordance with the Bicycle Master Plan along the site frontage.

Section 4.3 Bicycle Level of Stress

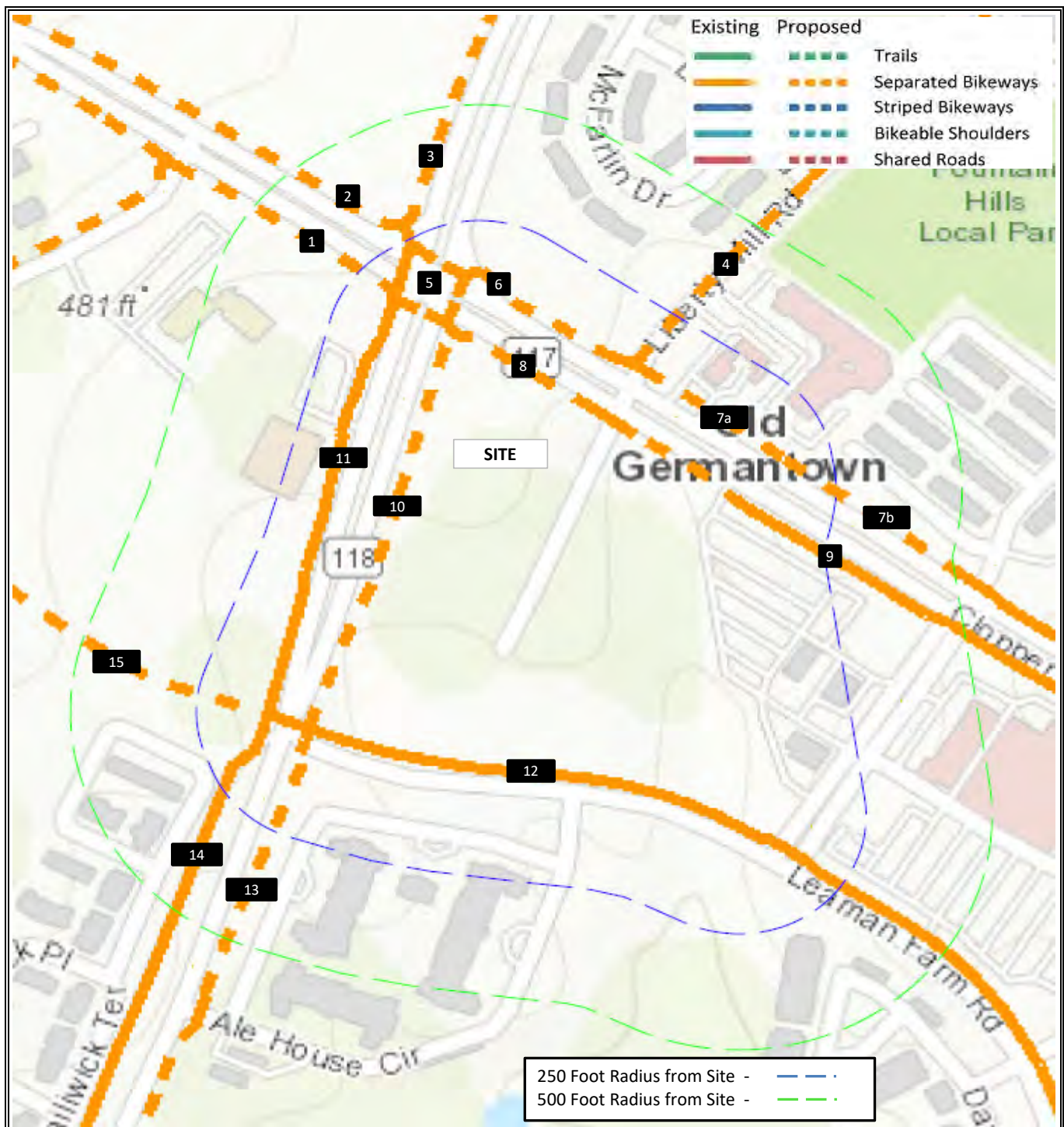
Exhibit 16 details the Bicycle Level of Stress for the roadways in the vicinity of the site. As shown, there are some segments within the vicinity of the site with High & Moderate Bicycle Stress Levels and are therefore considered unacceptable. However, some of these

segments do not have any recommended infrastructure per the Bicycle Master Plan and therefore no mitigation is required. It is worth noting that some roadways in the vicinity of the site are detailed with two Bicycle Stress Levels along either side of the roadway while others have only one qualification through the centerline of the roadway. For clarity, the same numbering detailed on Exhibit 14 for the Bicycle Master Plan has been indicated on the Bicycle Level of Stress.

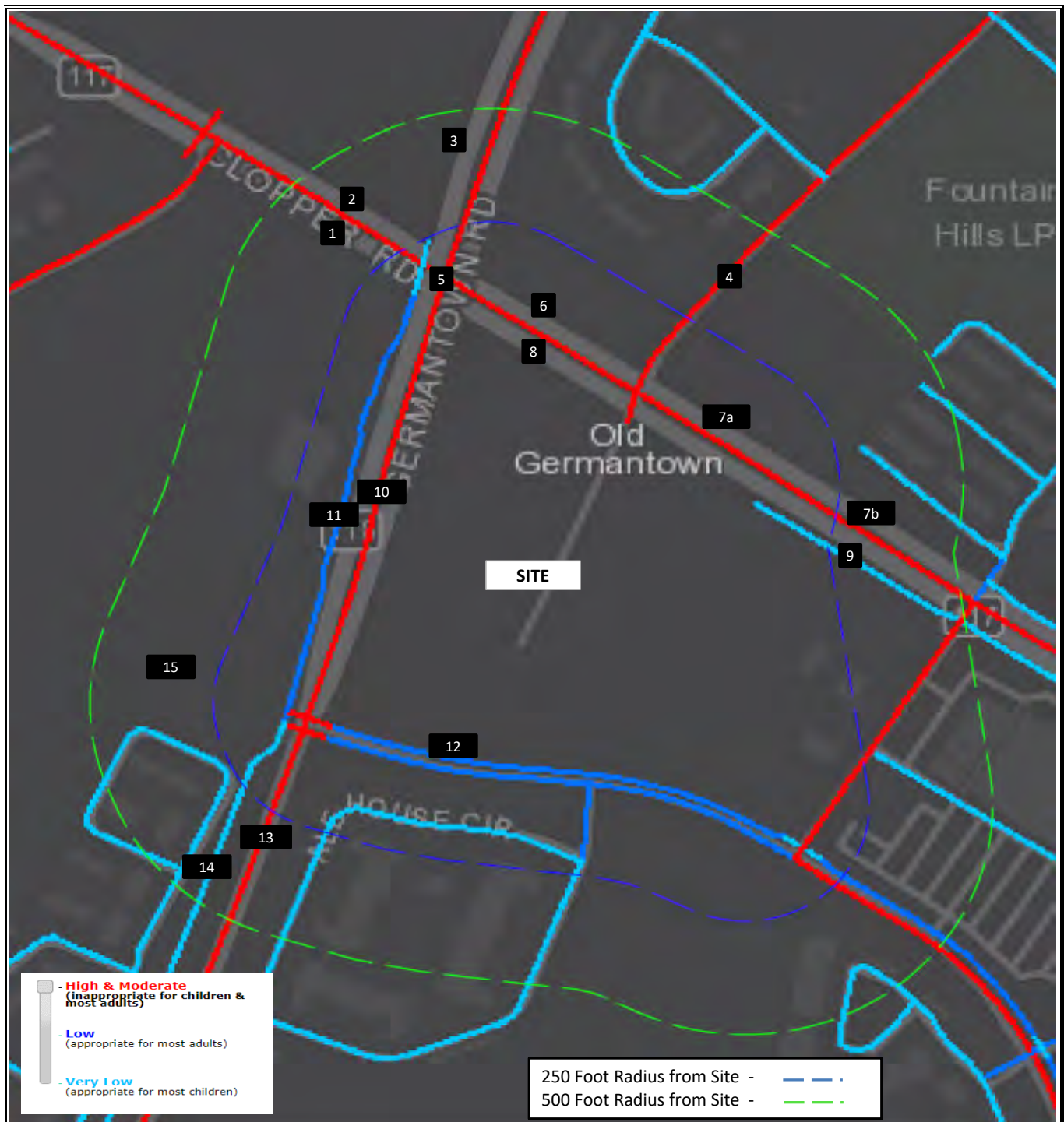
Section 4.4 - Bicycle System Adequacy Analysis & Discussion

An analysis of the bicycle infrastructure is provided on **Exhibit 17** broken down by the numbering detailed on Exhibits 14 and 15. With the improvements detailed on this exhibit and the supplemental discussion below, the Bicycle System Adequacy test is met.

Similar to the discussion regarding the Pedestrian Level of Comfort in Section 3.2, several segments, particularly along MD 117 and MD 118, have 8-foot-wide paths with buffer from the vehicular travel way, yet still are shown as being ‘planned shared use bikeways’. The Bicycle Master Plan indicates that the minimum width for sidepaths is 8 feet in areas with an environmental or historic constraint, with a preferred minimum width of 10 feet. In this case, there are a number of environmental constraints that make it infeasible to widen the existing shared use paths from the 8-foot minimum to the preferred 10-foot width. These environmental constraints include trees/foliage, steep adjacent slopes, impacts to utility poles, and impacts to other environmentally sensitive features. Given these environmental constraints, the impacts and associated costs that would be required to widen the existing sidepaths are prohibitive and are not reasonable for the minimal benefit that would be achieved by widening from 8-feet to 10-feet. These issues classify as environmental and/or historical constraints and therefore these 8-foot-wide sections should be considered sidepaths in their existing configuration and should not be required to be widened.



Transportation Facilities Analysis	Montgomery County Bicycle Master Plan	Exhibit 15
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		



Transportation Facilities Analysis	Bicycle Level of Stress	Exhibit 16
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

Segment Number	Segment	Bicycle Stress Level	Notes	Developer Improvements?
1	South side of MD 117 from Schaeffer Road to MD 118	High / Moderate	There is an existing 8 foot wide path with 2-5 feet of separation from MD 117. No improvement necessary.	See Section 4.4
2	North side of MD 117 from Schaeffer Road to MD 118	High / Moderate	There is an existing 8 foot wide path with 2-5 feet of separation from MD 117. No improvement necessary.	See Section 4.4
3	West side of MD 118 north of Clopper Road	High / Moderate	There is an existing 8 foot wide path with > 5 feet of separation from MD 117 including trees. No improvement necessary.	See Section 4.4
4	West side of Liberty Mill Road north of MD 117	High / Moderate	Utilities and grading on the west side of Liberty Mill Road resulting in design constraints. Pathway in this area just reconstructed in ~2016	N - no feasible improvements. See Notes
5	Intersection of MD 118 and MD 117	High / Moderate	This intersection meets ADA requirements with full APS/CPS and minimum 5 foot sidewalks. There are marked crossings of MD 117 and MD 118. Any improvements to increase to 8 foot wide paths would require significant impacts to traffic signal equipment and are not recommended.	N - no feasible improvements. See Notes
6	North side of MD 117 from MD 118 to Liberty Mill Road	High / Moderate	There is an existing 8 foot wide path with 2-5 feet of separation from MD 117. No improvement necessary.	See Section 4.4
7a	North side of MD 117 Liberty Mill Road to Kingsview Village Avenue	High / Moderate	There is an existing 8 foot wide path with 2-5 feet of separation from MD 117. No improvement necessary.	See Section 4.4
7b	North side of MD 117 Liberty Mill Road to Kingsview Village Avenue	High / Moderate	This portion is a 5 foot wide path with significant separation from MD 117. There are large trees and fencing, as well as grades, that make widening infeasible.	N - no feasible improvements. See Notes
8	South side of MD 117 from MD 118 to Park-N-Ride	High / Moderate	Along site frontage. Will be upgraded as shown on the development plans.	Y
9	South side of MD 117 from Park-N-Ride to Kingsview Village Avenue	Very Low	There is an existing 8 foot wide path with significant separation from MD 117.	N/A - Acceptable bicycle stress level
10	East side of MD 118 north of Leaman Farm Road	High / Moderate	Along site frontage. Will be upgraded as shown on the development plans.	Y
11	West side of MD 118 north of Leaman Farm Road	Low	There is an existing 8 foot wide path with variable separation from MD 118.	N/A - Acceptable bicycle stress level
12	Leaman Farm Road east of MD 118	Low	There is an existing 8 foot wide path with significant separation from Leaman Farm Road. A portion of this segment is along the site frontage.	N/A - Acceptable bicycle stress level
13	East side of MD 118 south of Leaman Farm Road	High / Moderate	There is an existing 5 foot wide path with significant separation from MD 118. This portion of pathway should be upgraded to 8 foot wide.	Y
14	West side of MD 118 south of Leaman Farm Road	Very Low	There is an existing 8 foot wide path with significant separation from MD 118.	N/A - Acceptable bicycle stress level
15	Leaman Farm Road west of MD 118 (not constructed)	N/A	Leaman Farm Road has not been constructed west of MD 118. No responsibility for developer to install new bicycle facilities.	N - See Notes

Transportation Facilities Analysis	Bicycle Infrastructure Analysis	Exhibit 17
Lenhart Traffic Consulting, Inc.		
Traffic Engineering & Transportation Planning		

Section 5 Bus Transit System Adequacy

Section 5.1 – Adequacy Requirements & Study Area

Per the GIP, a Bus Transit System Adequacy analysis is required as the site will generate more than 50 peak hour person trips. Specifically, as detailed on Exhibit 2, the site will generate 215 peak hour person trips during the PM peak hour. Table T6 of the GIP provides the required study area from the site frontage that is to be analyzed for bus transit system adequacy based on the peak hour person trips and is provided below. As shown, a 1,300 foot study area from the site frontage must be analyzed and up to two (2) shelters / amenities must be constructed.

Table T6. Transit Adequacy Test Scoping

Peak-Hour Person Trips Generated	Red and Orange Policy Areas	Yellow Policy Areas
50 – 99	2 shelters within 500'	1 shelters within 500'
100 – 199	2 shelters within 1,000'	2 shelters within 1,000'
200 – 349	3 shelters within 1,300'	2 shelters within 1,300'
350 or more	4 shelters within 1,500'	3 shelters within 1,500'

As detailed in the GIP, a bus stop is considered adequate if it includes a shelter outfitted with realtime travel information displays and other standard amenities.

Section 5.2 – Bus Transit System Inventory

An inventory of the bus stops in the 1300 foot study area is detailed on **Exhibit 18**. As shown, there are several bus stop locations in the study area. However, only two have bus shelters and none of the bus stops include realtime travel information displays.

Section 5.3 – Bus Transit System Recommendations

Given the inventory detailed on Exhibit 17 and per the requirements per Table T6, two bus stops must be upgraded to provide adequate accommodations for bus patrons. Therefore, it is recommended that funding be provided to M-NCPPC for realtime travel information to be installed at the two existing stops with shelters as a means to satisfy the Bus Transit System Adequacy test.



Transportation Facilities Analysis	Bus Transit System Stops and Infrastructure	Exhibit 18
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

Section 6 Vision Zero Statement

Section 6.1 – Overview

Per the GIP, a Vision Zero Statement must be provided for the site since it generates more than 50 peak hour person trips. A Vision Zero Statement must assess and propose solutions to high injury networks and safety issues, review traffic speeds, and describe in detail how safe site access will be provided.

A review of the current High Injury Networks (HIN) per the Montgomery County Vision Zero website indicated that there are no HINs within the vicinity of the site. Therefore, this section will detail any safety issues, provide speed study analyses, and discuss the proposed site access operations in the vicinity of the site.

Section 6.2 – Safety Issues

Crash data has not been obtained from Montgomery County Staff for crashes within the vicinity of the site in recent years. This study will be updated upon receipt of this crash data if necessary. In the interim, the 2012 – 2016 Montgomery County Vision Zero Data Explorer tool was utilized to identify any severe or fatal and bicycle or pedestrian crashes in the general vicinity of the site. The results are shown on **Exhibit 19** and show that there were seven (7) total severe crashes in that timespan (6 Motor Vehicle and 1 Pedestrian) and zero fatal crashes in the five year span. The motor vehicle severe crashes were concentrated at the MD 117 and MD 118 intersection and the sole pedestrian incident occurred along MD 117 at Little Star Lane. It can be safely assumed that crash data in recent years is similar to the 2012-2016 timespan and no significant safety concerns exist.

Site Access Safety Consideration

As discussed in Section 2, the vehicular access to the site will be via three locations (full movement driveway across from Liberty Mill Road (existing), right-in/right-out along northbound MD 118, and full movement driveway along Leaman Farm Road. These intersections are all projected to operate at LOS “A” with full build out of the site.

Given the layout of the site and as shown on the trip assignment figures (Exhibits 9b-9d) the majority of egress traffic from the site will be via right turns at the MD 117 and MD 118 site access driveways which is a safer maneuver compared to left turns. In addition, it can be reasonably assumed that a good portion of the residential traffic will utilize Leaman Farm Road to access the site which is a roadway with low ADT that parallels MD 117 and connects to MD 118 and MD 119.

Site Circulation

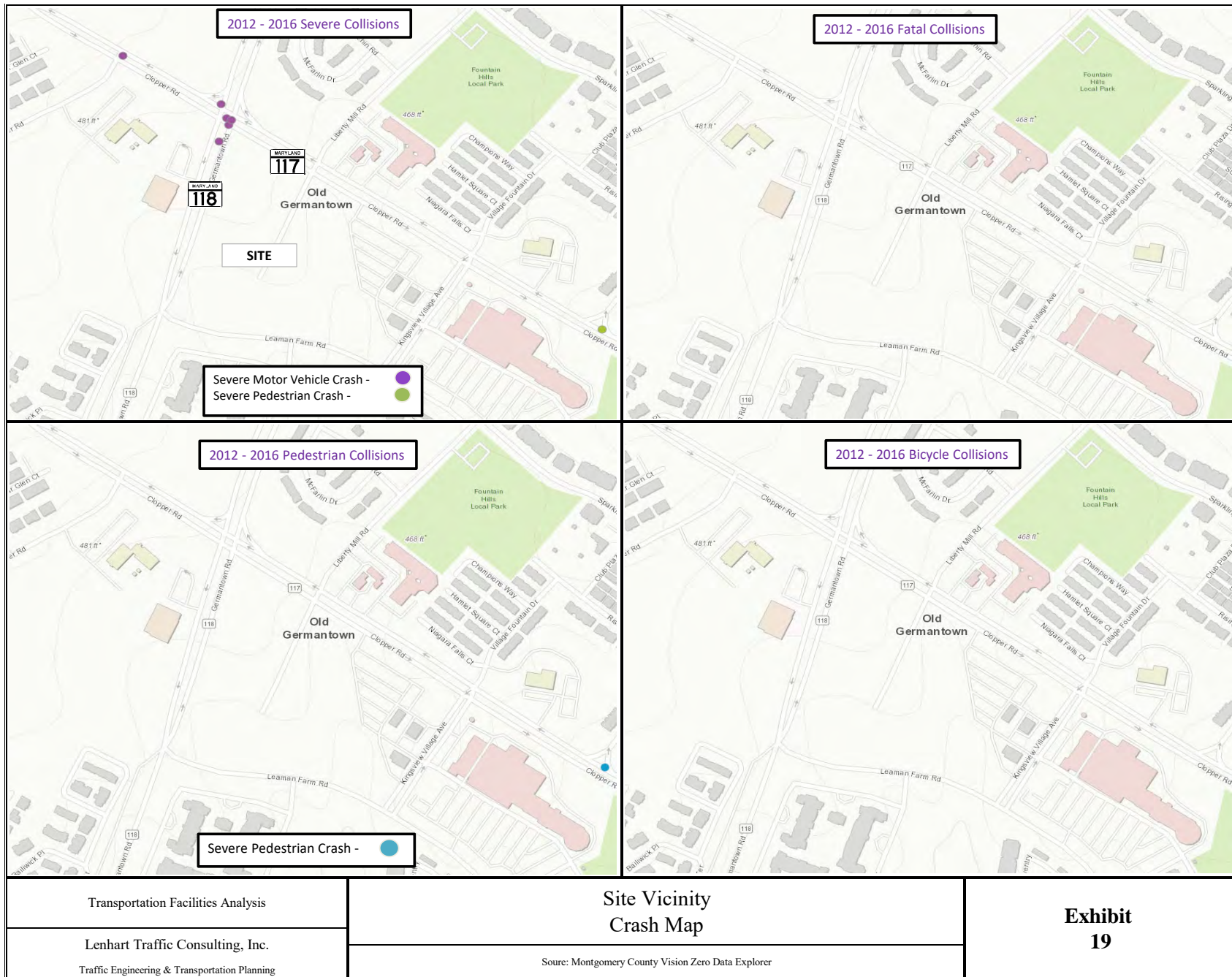
Internal site circulation is not anticipated to present any significant safety concerns. Internal pathways and crosswalks will provide adequate PLOC and low levels of Bicycle Levels of Stress for the residential portion of the development. The retail sites are located along the northern edge of the site and are accessed via one internal driveway for each pad site. This limits the number of potential conflict points for the internal site traffic operations.

Section 6.3 – Speed Studies

The traffic speed studies are contained in Appendix E. Included on the worksheets are calculations of the 85th percentile speeds. If the 85th percentile speeds exceed the posted speed by 20%, the developer must submit speed management improvements that could reduce speeds along the specific segment of roadway. Speed studies were conducted at the following locations:

- MD 118 – near Leaman Farm Road
- MD 117 – east of Liberty Mill Road
- Leaman Farm Road – east of MD 118

As shown in the worksheets in Appendix E, the 85th percentile speed along MD 117 exceeds the 20% above posted speed limit threshold. It should be noted that MD 117 is a straight three-lane roadway with a posted speed limit of only 30 MPH and therefore the most appropriate measure to reduce speeds would be to increase speed limit enforcement along the corridor. Coordination between M-NCPPC and the developer will determine any practical and feasible speed management improvements that can be safely implemented to reduce the speeds along this segment of roadway.



Section 7 Conclusions

As detailed in this report, the conclusions and findings of this study yielded the following results:

- The site will generate 215 PM peak hour person trips based on the ITE Trip Generation Manual, 10th Edition and applicable Montgomery County adjustment factors.
 - Given the number of peak hour person trips and given that the site is located within a Yellow Policy Area (Germantown West), all of the transportation adequacy tests are required for the site (Motor Vehicle, Pedestrian, Bicycle and Bus Transit). In addition, a Vision Zero Statement is required.
- The results of the Motor Vehicle Adequacy Test (Section 3) found that all of the study intersections will operate well within adequacy thresholds for Montgomery County's Yellow Policy Area thresholds.
- The results of the Pedestrian Adequacy Test (Section 4) identified improvements the developer will provide to improve overall Pedestrian Level of Comfort as well as meet ADA requirements in the vicinity of the site. In addition, the study identified two streetlights that are not operational in the vicinity of the site. With the mitigation identified in this section and coordination with M-NCPPC, the Pedestrian System Adequacy Test is passed.
- The results of the Bicycle System Adequacy Test identified areas in the vicinity of the site where the bicycle infrastructure can be improved to improved Bicycle Stress Levels. With these improvements, the Bicycle System Adequacy Test is passed.
- The Bus Transit System Adequacy Test identified two bus stops in the vicinity of the site where funds can be provided to install realtime travel information. With this fee-in lieu, the Bus Transit System Adequacy Test is passed.
- The Vision Zero Statement indicated that crash data has not yet been received from Montgomery County for recent years. The 2012-2016 data obtained from the 2012 – 2016 Montgomery County Vision Zero Data Explorer which indicated there were a minimal number (seven) of severe (non-fatal) crashes in the vicinity of the site and zero fatal crashes. In addition, the site access and internal site circulation is not anticipated to negatively impact safety in the vicinity of the site.
 - Speed studies conducted along MD 117 indicated that 85th percentile speeds exceed the posted speed limit by more than 20%. Enhanced speed enforcement should be considered along this section of roadway.

Appendix A

Supplemental Information
Condition Diagrams
Turning Movement Counts

Dylan McAndrew

From: Nick Driban
Sent: Tuesday, May 4, 2021 7:32 PM
To: Dylan McAndrew
Subject: FW: Kingsview Station Scoping - Final Edits
Attachments: Kingsview Station Scoping 20180907.pdf

From: ndriban@lenharttraffic.com <ndriban@lenharttraffic.com>
Sent: Wednesday, April 21, 2021 11:03 AM
To: 'Van Alstyne, Chris' <chris.vanalstyne@montgomeryplanning.org>
Cc: 'Campbell, Lauren' <lauren.campbell@montgomeryplanning.org>; 'mlenhart' <mlenhart@LENHARTTRAFFIC.COM>
Subject: RE: Kingsview Station Scoping - Final Edits

Hi Chris,

The Kingsview Station project, located in the Germantown West Policy Area, is moving forward again, with a Preliminary Plan and Site Plan submission planned for next month. As such, I need to confirm the scope with you as soon as possible. A couple notes/questions to that end:

1. The attached scope was finalized with Laura Hodgson in 2018. Obviously it's a bit older, but there was *a lot* of back and forth to confirm the parameters (see below), so I think this should still be applicable for the TIS portion of the GIP requirements. Please confirm.
2. With the GIP now in effect, I understand we'll be required to perform Ped/Bike/Transit/Vision Zero evaluations. I'm very familiar with the 67 page GIP document that was initially published, which lays out the high-level overview of what's required, but I haven't been able to find any updates since. Do you have any more detailed guidance, or, better yet, a sample study that's been completed under the GIP that you could share so we can get a better understanding of the procedures for the non-vehicular-modal evaluations + Vision Zero requirement?
3. This site generates just over 200 peak hour person trips, so, per the GIP, we'll need to evaluate Ped/Bicycle adequacy within 500' of the site frontage. The transit requirement includes up to 2 shelters within 1,300 feet of the site. We'll also need a Vision Zero statement. Please confirm.

Please let me know if there's a new GIP Scoping Form that we should be using (I wasn't able to find anything on the website) or if the attached + this email correspondence can be considered adequate at this point for scoping. In the event a new Scoping Form is required, could you please at least confirm the general details outlined above or let me know if there are any changes, so that we can get out and get started on our field evaluations and studies as soon as possible.

If you'd like to touch base about any of the above, my cell phone number is the best place to reach me: 410.294.7195.

Thank you!

-Nick

Nick Driban, P.E., PTOE
Associate Vice President

Cell Phone: [\(410\) 294-7195](tel:4102947195)
Direct Dial: [\(410\) 777-9253](tel:4107779253)
Office Directory: [\(410\) 216-3333](tel:4102163333)



From: Nick Driban

Sent: Friday, September 7, 2018 11:35 AM

To: Hodgson, Laura <laura.hodgson@montgomeryplanning.org>

Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Van Alstyne, Chris <chris.vanalstyne@montgomeryplanning.org>

Subject: RE: Kingsview Station Scoping - Final Edits

Hi Laura,

The revised scoping checklist is attached for your review. The commercial portion no longer includes a drive-in bank, it's now all proposed to be general shopping center (2 retail areas x 6,000 SF which would be split up into approx. 1,500 SF retail stores, according to the owner).

Please let me know if you have any questions or need any additional information.

Thanks,
Nick

Nick Driban, P.E., PTOE
Associate Vice President

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Mobile: [\(410\) 294-7195](tel:(410)294-7195)



From: Hodgson, Laura <laura.hodgson@montgomeryplanning.org>

Sent: Friday, August 31, 2018 5:28 PM

To: Nick Driban <ndriban@LENHARTTRAFFIC.COM>

Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Van Alstyne, Chris <chris.vanalstyne@montgomeryplanning.org>;

Nicole Wilson <nwilson.lenharttraffic@gmail.com>

Subject: RE: Kingsview Station Scoping - Final Edits

Nick,
Following up on this. Did you ever send a final revised scoping form? I don't see one in the project folder or in my email.

Thanks,
Laura

From: Nick Driban <ndriban@LENHARTTRAFFIC.COM>

Sent: Wednesday, July 04, 2018 3:40 PM

To: Hodgson, Laura <laura.hodgson@montgomeryplanning.org>

Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Van Alstyne, Chris <chris.vanalstyne@montgomeryplanning.org>;

Nicole Wilson <nwilson.lenharttraffic@gmail.com>

Subject: RE: Kingsview Station Scoping - Final Edits

Hi Laura,

Thanks for reviewing the scoping agreement. We'll provide a revised scoping agreement asap, as we're already underway on the study. We concur with your comments, so it looks like the only outstanding question you'd need to review on the scoping agreement is the Trip Distribution in comment #4.

Thanks,
Nick

Nick Driban, P.E., PTOE
Associate Vice President

Office: [\(410\) 216-3333](tel:4102163333) (Ext. 105)
Mobile: [\(410\) 294-7195](tel:4102947195)



From: Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Sent: Tuesday, July 3, 2018 6:42 PM
To: Nick Driban <ndriban@LENHARTTRAFFIC.COM>
Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Van Alstyne, Chris <chris.vanalstyne@montgomeryplanning.org>;
Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Subject: Kingsview Station Scoping - Final Edits

Nick,

I have finished reviewing the Kingsview Station scoping form (sorry for the delay!), and request that you make the following final edits before I approve it. I'll get back to you shortly with the confirmation for 23250 Stringtown Road scoping form, but expect some minor edits on that scoping form as well, as I only reviewed intersections and trip generation before.

- 1) On #6, Study Years/Phases - please update the Build-Out Year for the project. Although the traffic study will not be using an annual growth rate on any of the roads, a reasonable timeframe for build out should be used (not 2018).
- 2) On #8, Study Intersections – please update the study intersections as agreed to in your email on May 11, 2018. (Change MD 117 & Kingsview Village Ave to MD 117 & MD 119. Add Leaman Farm Road & Ale House Circle.) Please also update the intersection map (Exhibit 1).
- 3) On #9, Trip Generation – Trip generation is correct. However, on the worksheet with trip rates (Exhibit 2), please update the trip gen rate for the Shopping Center evening rates (currently shows average rate, but you calculated with fitted curve).
- 4) On #11, Trip Distribution - Please provide residential trip distribution. While the LATR Super Districts should be used as a guide, the trip distribution percentages should also be reasonable based on the local area conditions. To avoid drawing things out during review of the study, it is best to agree on these now (or at least begin the conversation before you do the trip distribution) for the study.
- 5) On #12, Pipeline Developments – Please make the following edits:
 - a. If projects 2 and 3 (3 single family homes) do not generate 5 or more peak hour vehicle trips, they can be removed from background projects.
 - b. #5 Qiagen has a lot more development remaining than noted: 84,000 SF office, 158,600 SF Industrial, 60,000 SF of manufacturing or R&D. Please use the trip generation rates approved with the amendment that increased the square footage for this original approval; I believe the transportation staff memo for

this approval that is attached will help. (I was not able to find the traffic study online and would have to dig in our hard copies. If you need that – let me know.)

- c. #7 Mateny Hill – only 30 units remain unbuilt, so you only need to include trip gen for 30 units (instead of 44 units).

Please let me know if you have any questions.

Thank you, and wishing you and your families a Happy 4th of July!
Laura

From: Nick Driban <ndriban@LENHARTTRAFFIC.COM>
Sent: Tuesday, June 26, 2018 9:41 AM
To: Hodgson, Laura <Laura.Hodgson@montgomeryplanning.org>
Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>
Subject: RE: 23250 Stringtown Road

Hi Laura,

Not sure if I responded to this previously, but we're in agreement on the requirements you laid out below. We're at a point where we're ready to move forward with both this study and the Kingsview Station study. Do you have any other questions or comments on either of those scoping documents?

Thanks,
Nick

Nick Driban, P.E., PTOE
Associate Vice President

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From: Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Sent: Thursday, May 24, 2018 5:49 PM
To: Nick Driban <ndriban@LENHARTTRAFFIC.COM>
Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Subject: RE: 23250 Stringtown Road

Nick,
Please see my responses in blue below.

From: Nick Driban <ndriban@LENHARTTRAFFIC.COM>
Sent: Thursday, May 24, 2018 10:40 AM

Hi Laura,
I appreciate you looking at the trip gen and intersections in advance of the rest of the scoping form! I've provided responses to your comments/questions in red, below. Let me know what you think.
Thanks,
Nick

From: Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Sent: Wednesday, May 23, 2018 8:59 PM
To: Nick Driban <ndriban@LENHARTTRAFFIC.COM>
Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Subject: RE: 23250 Stringtown Road

Nick,

I took a quick look at the trip generation and the intersections so that you could get the intersections scoped ASAP (there will be a delay in reviewing the full scoping form, as there are a few ahead of yours). My concern so far is that your recommended ITE land use does not include the car wash use trips that will also be generated on the site. Why did you not include separate trips for the car wash? Trips for car washes have always been considered to be already included as part of the trip generation for ITE-945, since many Gas w/Convenience Markets have these facilities. Specifically, from ITE-945's description: "These service stations may also have ancillary facilities for servicing and repairing motor vehicles and may have a car wash." The description for the new ITE-960 use doesn't specifically mention car washes, but it points to ITE-945 as a related use and, as you note below, you consider this use to be most closely related to ITE-945. As such, it is our opinion that the car wash trips are included in the trip generation for the overall site. I understand trips for car washes have always been considered to be a part of ITE-945, but they are not expressly called out in ITE-960. And just because ITE-945 is the closest land use to determine pass-by trips for ITE-960, that does not mean it is the same land use code or represents the same land uses. Therefore, please use ITE-960 for the gas station & convenience store and the appropriate car wash code for the car wash OR use ITE-945 for the project. Either way, the total vehicle trips should be under the 250 threshold that would require a second tier of intersections, so it should not impact your intersections.

Please note that I have the following additional two comments:

- 1) For pass-by trips, please use the average pass-by rates for ITE Land Use 945, not 853. We'll use the pass-by rates for ITE-945. Those rates are 62% AM/56% PM [as opposed to the 63% AM/66% PM we had from ITE-853]. An updated trip generation exhibit is attached reflecting the change in pass-by rates. Thank you. With 12 gas pumps, I assume the gas will be the more primary function of the facility than the convenience store. If you can say for certain that the convenience store will be the primary use over the gas station, please do so and use 853 pass-by rates. (However, then I will wonder why you are not using ITE 853 rates for trip generation over ITE 960 rates.) We've made the change to ITE-945 for pass-by. For what it's worth as far as selection of the correct use for the overall trip generation, the recent update to the 10th Edition of the Trip Gen Manual provides guidance for selecting between 853, 945, and 960 based on square footage and number of pumps:

- 853 (Convenience w/ Gas) is >2ksf floor, <10 pumps;
- 945 (Gas w/ Convenience) is 2-3ksf, >10 pumps; and
- 960 (Super Convenience w/ Gas) is >3ksf, >10 pumps.

Since our site is 3.5ksf, 12 pumps we used 960, it just happens that ITE hasn't published pass-by rates for this new use. Understood.

- 2) I am considering asking you to change one of your study intersections from Stringtown Road at St. Clair Road to Stringtown Road at Clarks Crossing Drive/Granite Rock Road. If you have concerns with that, please let me know.

No need to rehash the Kingsview discussion, but for the sake of documentation I'll note our general concerns with having standard expectations for studies and our opinion regarding LATR guidelines lacking flexibility in making these kinds of changes. That said, if you feel strongly about this change, we are fine with it as long as you're willing to allow a count at the new intersection next week knowing that seniors will not be in school (their last day is tomorrow). Based on your question on the Cabin John TIA from around this time last year, we proactively set cameras last week at the study intersections we were anticipating for this project just to be sure we had counts while seniors were still in school. The count for the new intersection would be post seniors' last

day. Thank you for taking the school calendar into consideration with the traffic counts. With regards to study intersections, the LATR Guidelines state that “the number of signalized intersections and significant non-signalized intersections in each direction is based on the maximum number of new weekday peak -hour vehicle trips.” It also states that “Planning Department staff, in cooperation with the applicant, will use judgement and experience in deciding the **significant** intersections to be studied.” Since Stringtown Road at St. Clair Road is not an intersection of two master planned streets and the intersection is not complete (re: Clarksburg Town Center commercial portion, and therefore not yet significant), I wanted to consider whether the next nearby intersection (which IS a master planned street) would be more appropriate since we do not know if/when the approved General Store Road (opposite St. Clair Road) will end up getting built. After coordinating with Matt Folden, I will accept Stringtown Road at St. Clair Road as a study intersection IF you include the trips expected by the approved Clarksburg Town Center to be coming from General Store Road (St. Clair Road) in the future build condition. This will require some work on your end since the Clarksburg Town Center project did not do a full traffic analysis and all we have is the trip generation numbers from the latest Preliminary Plan amendment (see attached).

- 3) Please explain the note on #10: “Internal capture for Clarksburg Town Center background development, per ITE guidelines.” Does this come in with your project’s trip generation, or does it only apply with the background projects?

This would just apply to the Clarksburg Town Center background development, which includes residential, retail, and office uses. Does not apply to our site. Thank you for the clarification. (That’s what I thought, I just wanted to make sure I wasn’t missing something.)

In summary –the four proposed intersections as noted in the scoping form you submitted this week are acceptable given the notes in Item 2 above. Please note for the future, however, it is not generally advisable to do traffic counts before a scoping form is fully approved.

Thanks,
Laura

From: Nick Driban <ndriban@LENHARTTRAFFIC.COM>
Sent: Wednesday, May 23, 2018 2:11 PM
To: Hodgson, Laura <Laura.Hodgson@montgomeryplanning.org>
Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>
Subject: RE: 23250 Stringtown Road

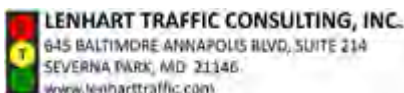
Hi Laura,

Have you had a chance to look at the attached/info below? Our window to get counts is closing, so if you could provide any feedback on intersections it’d be much appreciated.

Thanks,
Nick

Nick Driban, P.E., PTOE
Associate Vice President

Office: [\(410\) 216-3333](tel:(410)216-3333) (Ext. 105)
Mobile: [\(410\) 294-7195](tel:(410)294-7195)



From: Nick Driban
Sent: Thursday, May 17, 2018 3:28 PM
To: Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>
Subject: RE: 23250 Stringtown Road

Hi Laura,

This project is moving forward again and we'd like to get the counts conducted prior to the end of school this year. I've attached an updated scoping document which addresses all of your comments (also attached). If you could provide initial feedback on study intersections as soon as you're able it would be much appreciated.

A couple of notes on things that have changed since the original scoping form was submitted last year:

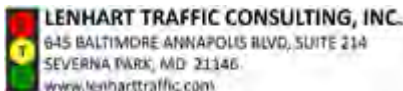
- It is my understanding from the client (based on their discussions with the County since last year) that the through road connection that was referenced in your comments is not being provided at this time, but rather is being set aside as a 'future potential interparcel connection'. Because this road would not be constructed prior to site opening (if ever), modifications to the original scope that were predicated on the through road connection were not included. A current site concept is included on Page 19 of the Scoping Form PDF.
- The 10th Edition of the ITE Trip Generation manual came out between when the previous form was submitted and this iteration. We've updated the form to reflect the newer manual, which now classifies the site as ITE-960, Super Convenience Market/Gas Station (based on number of fueling positions and square footage for the site). [Please note: I'm trying to get clarification on the square footage of the convenience portion, which I believe is around 3,250 sf, but I've assumed to be 3,500 sf for the purposes of the scoping form in order to be conservative]. The Super Convenience w/Gas land use includes a multi-variable regression equation which factors both variables (fueling positions and square footage) into the trip generation and is based on ITE's most recent available data. As such, we've used this for our trip gen. I'll note, however, that because this is a new use in ITE there's no pass-by trip data, so we used the pass-by trip percentages from ITE-853, Convenience Market with Gasoline Pumps. Page 7 of the PDF includes the ITE sheet for Super Convenience Market/Gas Station and Page 8 (Exhibit 2) includes a detailed breakdown of our trip generation assumptions.

Please let me know if you have any questions or need any additional information.

Thanks,
Nick

Nick Driban, P.E., PTOE
Associate Vice President

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From: Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Sent: Tuesday, July 18, 2017 12:29 PM
To: Nick Driban <ndriban@LENHARTTRAFFIC.COM>
Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Subject: RE: 23250 Stringtown Road

Nick,

Thank you for completing the scoping form for the property at 23250 Stringtown Road. Attached please find the edits or changes I would like you to make to the scoping form before it is approved. Please let me know if you have any questions or want to discuss any of the comments on the form.

Thank you,
Laura

From: Nick Driban [<mailto:ndriban@LENHARTTRAFFIC.COM>]
Sent: Thursday, June 22, 2017 2:27 PM
To: Hodgson, Laura <laura.hodgson@montgomeryplanning.org>
Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>
Subject: 23250 Stringtown Road

Hi Laura,

I've attached a completed scoping form for the property at 23250 Stringtown Road, that you, Mike, and others met to discuss last week. Please let me know if you have any questions or need any additional information.

Thanks,
Nick

Nick Driban, P.E., PTOE
Associate Vice President

Office: [\(410\) 216-3333](tel:(410)216-3333) (Ext. 105)
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Local Area Transportation Review

TRANSPORTATION IMPACT STUDY SCOPE OF WORK AGREEMENT

Contact Information				
Transportation Consultant (company, contact name, email, and phone number)	Lenhart Traffic Consulting, Mike Lenhart Mlenhart@LenhartTraffic.com , (410) 216-3333			
Name of Applicant / Developer	'Kingsview Station – a Joint Venture' Attn: Mr. Clark Wagner (Pleasants Development, LLC)			
Project Information <i>Include Tables/Graphics, As Needed</i>				
Project Name (include plan no. if known)	Kingsview Station			
Project Location (include address if known)	Southeast corner of MD 118 & MD 117 Intersection (Germantown)			
Policy Area(s) (subdivision staging policy map)	16. Germantown West	Master Plan(s) / Sector Plan Area(s)		Germantown Master Plan (1989)
Application Type(s)	<input type="checkbox"/> Preliminary Plan	<input type="checkbox"/> Site Plan	<input type="checkbox"/> Sketch/Concept/Pre-Preliminary (Optional)	<input type="checkbox"/> Amendment
	<input type="checkbox"/> Conditional Use (formerly special exception)	<input type="checkbox"/> Local Map Amendment	<input type="checkbox"/> APF at Building Permit	<input checked="" type="checkbox"/> Other: Rezoning
Project Description & Previous Approvals (proposed land uses, zoning, no. of units, square footage, construction phasing, prior approvals and proposals, existing uses, site operations, year built, status of Adequate Public Facilities [APF], other relevant info)	<p>The property is 10.30 Acres +/- . The following land uses are proposed:</p> <ul style="list-style-type: none"> Residential development is proposed on 8.7 Acres, which would consist of 60 Townhomes. The remaining acreage would be split between two commercial areas within the development. Each area would consist of 6,000 SF of general retail space, currently proposed to be divided into smaller retail establishments of approximately 1,500 SF each. As such, this will be analyzed as 12,000 SF of Shopping Center space. <p>The land is currently vacant.</p>			
1.Site Access (proposed access location(s), existing/adjacent/opposite curb cuts, interparcel connections, access configurations and restrictions, internal circulation, private roads, parking/loading areas, other relevant info)	<p>Three access points are proposed to the site:</p> <ul style="list-style-type: none"> There is one existing access point, the south leg of Liberty Mill Road at MD 117. The north leg of this intersection is existing Liberty Mill Road. A new access point is proposed along MD 118 on the west side of the site. This access point is proposed to be right-in/right-out only. A new access point is proposed along Leaman Farm Road on the south side of the site. The proposed access is opposite the existing Millstone at Kingsview driveway. <p>The three access points are proposed to provide distinct connections to different uses within the site, including the two retail pads and the residential portion of the site, although all uses can be accessed from any of the driveways via internal circulation roads. A preliminary site plan is attached showing the proposed access and site configuration.</p>			

2. Transportation Analysis Requirement	<input checked="" type="checkbox"/> Transportation Impact Study Generates <u>50 or more</u> total weekday peak hour person trips (vehicular, transit, bicycle, and/or pedestrian) with no reductions other than a credit for existing developments over 12 years old, <u>AND</u> is outside of the White Flint and White Oak Policy Areas. Fill out remainder of this form and include in transportation impact study appendix.		<input type="checkbox"/> Transportation Study Exemption Statement Generates <u>49 or fewer</u> total weekday peak hour person trips (vehicular, transit, bicycle, and/or pedestrian) with no reductions other than a credit for existing developments over 12 years old, <u>OR</u> within White Flint and White Oak Policy Areas. Fill out PAR and trip generation sections below, and include with exemption statement.		
3. Policy Area Review (PAR) Only for projects filed before 1/1/17	<input type="checkbox"/> TPAR (1/1/13 – 12/31/16) 0, 25, 50%: _____ (TPAR = Transportation Policy Area Review)	<input type="checkbox"/> PAMR (11/15/07 - 12/31/12) 0-50%: _____ (PAMR = Policy Area Mobility Review)	<input type="checkbox"/> Exempt (no square footage increase or fewer than 3 new trips) or 1/1/17 or later) <input type="checkbox"/> No PAR (7/1/03 – 11/14/07) <input type="checkbox"/> PATR (before 6/30/03) (PATR = Policy Area Transportation Review)		
4. Transportation Mitigation Agreement (TMAg) Required?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (25+ Employees and in Transportation Management District [TMD])		<input type="checkbox"/> Amend Existing TMAg	
5. Established Transportation Management District (TMD)?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes TMD Name: _____			
Transportation Impact Study Assumptions <i>Include Tables/Graphics, As Needed</i>					
6. Study Years / Phases	Existing Year: 2018		Phases / Build-out Year(s): 2020		
7. Study Periods	<input checked="" type="checkbox"/> AM <input checked="" type="checkbox"/> PM <input type="checkbox"/> Mid-day <input type="checkbox"/> Saturday <input type="checkbox"/> Sunday <input type="checkbox"/> Other: _____				
8. Study Intersections (For projects generating 50 or more person trips, list all signalized & significant unsignalized intersections, and site driveways traffic counts must be collected within 12-months of completed and accepted application)	# of tiers of intersections to study (refer current LATR Guidelines): <u>1</u> <i>For the purpose of determining the number of tiers of study intersections, trip calculation for the subject site should also include nearby unbuilt properties in common ownership. No trip reductions should be taken in this calculation other than a credit for existing developments over 12 years old.</i>				
	1) MD 118 & MD 117		8) Leaman Farm Rd & Kingsview Village Ave Notes: Please see attached Exhibit 1 for map of study intersections. Leaman Farm Road is a master planned roadway (Master Plan excerpt attached) which will ultimately connect across MD 118. As such, intersections along Leaman Farm Road (including at MD 118 and Kingsview Village) are 'significant non-signalized intersections' for the purposes of the LATR tiers.		
	2) MD 117 & Liberty Mill Rd (Site Access)				
	3) MD 117 & Kingsview Village Ave				
	4) MD 119 and MD 117				
	5) MD 118 & Site Access (Prop.) [RIRO]				
	6) MD 118 & Leaman Farm Rd				
	7) Leaman Farm Rd & Site Access (Prop.)				
9. Trip Generation (clearly cite sources and methodology including use of average rates vs. equation; include trip generation for existing site, current approvals, proposed uses, and net changes)	Total Person Trips 213	Vehicle Trips* (Auto Driver) 138	Transit Trips* 4	Walking Trips* (non-motorized + transit) 17	Bicycling Trips* (non-motorized) 13
<i>* Only required if total peak hour person trips are 50 or more in either the AM or PM peak hour. Sum of all vehicle, transit, and non-motorized trips shall be the equivalent of total person trips. Use table at the end of the form to show all calculations and assumptions for mode breakout.</i>					

<p>10.Trip Reductions</p> <p>(include justification and supporting documentation for internal capture, pass-by, diverted, Transportation Demand Management)</p>	<p>Pass-by trips will be assumed in accordance with ITE 10th Edition rates, as follows:</p> <ul style="list-style-type: none"> • Shopping Center: 0%, 34% PM,
<p>11.Trip Distribution %</p> <p>(include a map of the proposed project in addition to a list or table)</p>	<p>See Exhibit 1 (attached) for Retail distribution. Residential distribution will utilize Super Districts guidelines (LATR Appendix 2).</p>
<p>12.Pipeline Developments to be considered as background traffic</p> <p>(include name, plan #, land uses, and sizes for approved but unbuilt developments or concurrently pending applications; info can be obtained from the M-NCPPC Pipeline website: - website is updated quarterly)</p>	<p>See Exhibit 3 (attached).</p>
<p>13.Pipeline Transportation Projects to be considered as background condition</p> <p>(fully funded for construction in County Capital Improvement Program, State Consolidated Transportation Program, developer projects, etc. within the next 6 years)</p>	<p>None identified – please advise if any should be included.</p>

Preliminary Mitigation Analysis		<i>*Refer to the LATR Guidelines for details on how to mitigate</i>	
14.Vehicular Analysis	<input checked="" type="checkbox"/> Vehicular Analysis Anticipated (Vehicular mitigation to be determined after study)	<ul style="list-style-type: none">• TEST: HCM Analysis is required to be provided for all intersections analyzed in studies for: 1) "Red & Orange" policy areas, and 2) intersections with a CLV of more than 1,350 in "Yellow & Green" policy areas. 3) CLV analysis required for all intersections regardless of policy area. CLV assessment and signal timing worksheets are to be included in the study appendix.• MITIGATION: Required if HCM delay analyses exceed policy area standard	
15.Pedestrian Analysis	<input type="checkbox"/> Pedestrian Mitigation Anticipated	<ul style="list-style-type: none">• TEST: If the plan generates 50 or more pedestrian peak hour trips, mitigation of surrounding pedestrian conditions is required• MITIGATION: Required if ADA non-compliance issues within 500 foot radius of site boundary and if pedestrian crosswalk delay at LATR intersections within 500 feet of site boundary is lower than Level of Service (LOS) D	
16.Bicycle Analysis	<input type="checkbox"/> Bicycle Mitigation Anticipated	<ul style="list-style-type: none">• TEST: If the plan generates 50 or more bicycle peak hour trips and is within 0.25 miles of an existing educational institution or existing/planned bikeshare station, mitigation of surrounding bicycle conditions is required• MITIGATION: Required to make improvements to provide a low Level of Traffic Stress to any existing similar facility within 750 feet of the site boundary; Alternatively, project may provide a master planned improvement that provides an equivalent improvement in the level of traffic stress for cyclists	
17.Transit Analysis	<input type="checkbox"/> Transit Mitigation Anticipated	<ul style="list-style-type: none">• TEST: If the plan generates 50 or more transit peak hour trips and the peak load of bus routes at bus stops within 1,000 feet of site boundary exceeds (or is worse than) peak load of LOS D (1.25 transit riders per seat during the peak period in the peak direction), mitigation of transit conditions is required• MITIGATION: Required to provide or fund improvements that would mitigate the trips exceeding the standard that are attributable to the development	
Additional Analysis or Software Required	<input type="checkbox"/> Queuing Analysis <input type="checkbox"/> Signal Warrant Analysis <input type="checkbox"/> Weaving/Merge Analysis	<input type="checkbox"/> Accident Analysis <input type="checkbox"/> Synchro <input type="checkbox"/> SIDRA	<input type="checkbox"/> VISSIM <input type="checkbox"/> CORSIM <input type="checkbox"/> Other _____

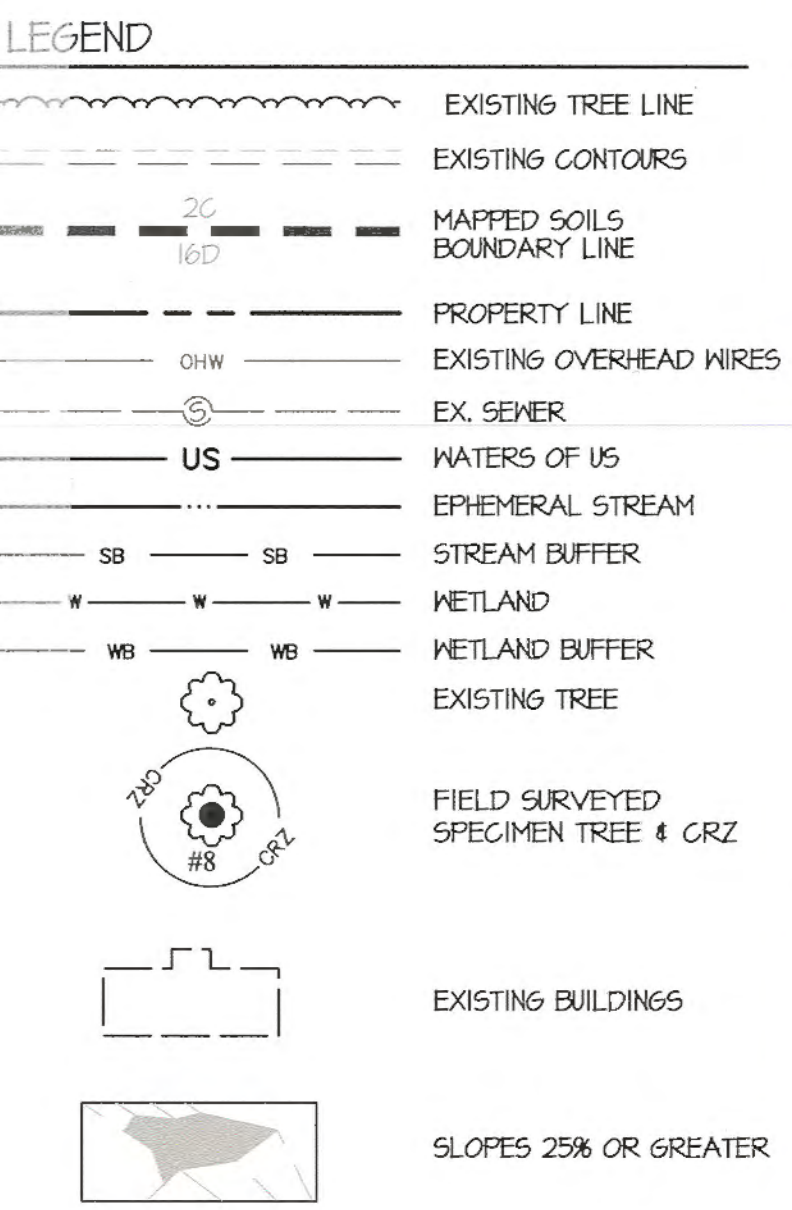
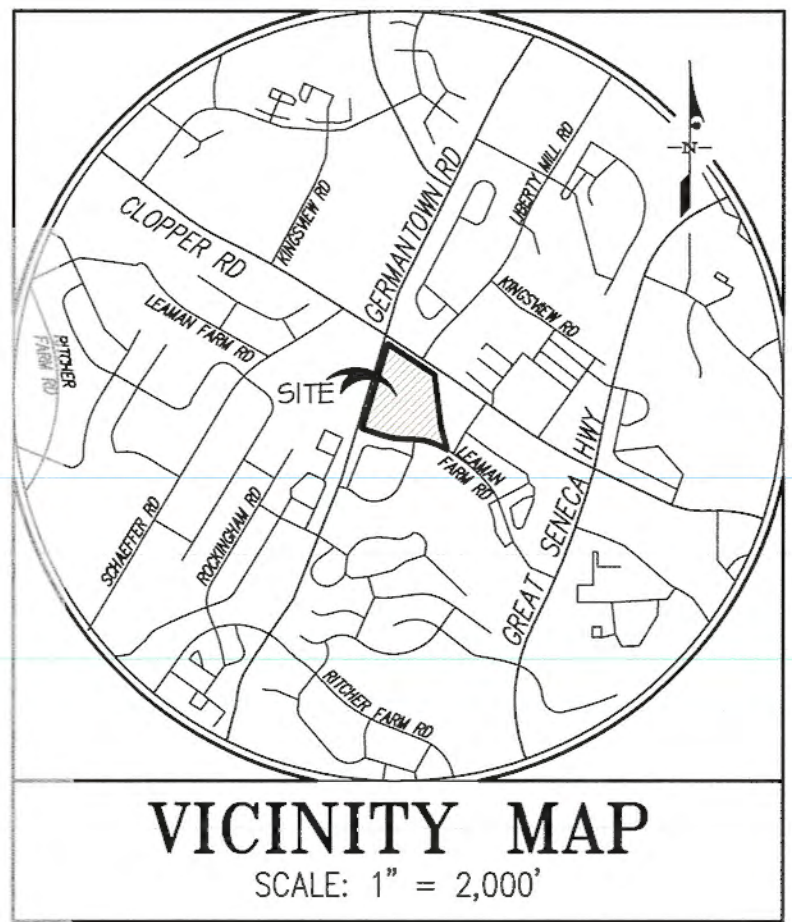
M-NCPPC Clarifications

- Transportation impact study will comply with all other requirements of the LATR Guidelines not listed on this form.
- If physical improvements are proposed as mitigation, the transportation impact study will demonstrate feasibility with regards to right-of-way and utility relocation (at a minimum).
- In the event that the development proposal significantly changes after this transportation impact study scope has been agreed to, the Applicant will work with M-NCPPC staff to amend the scope to accurately reflect the new proposal.
- A receipt from MCDOT showing that the transportation impact study review fee has been paid will be provided to M-NCPPC DARC at the time the development application is submitted.
- Minimum of seven paper copies (more if near the County line or an incorporated City) and two PDF copies of the transportation impact study and appendices will be provided.

Additional Assumptions / Special Circumstances for Discussion

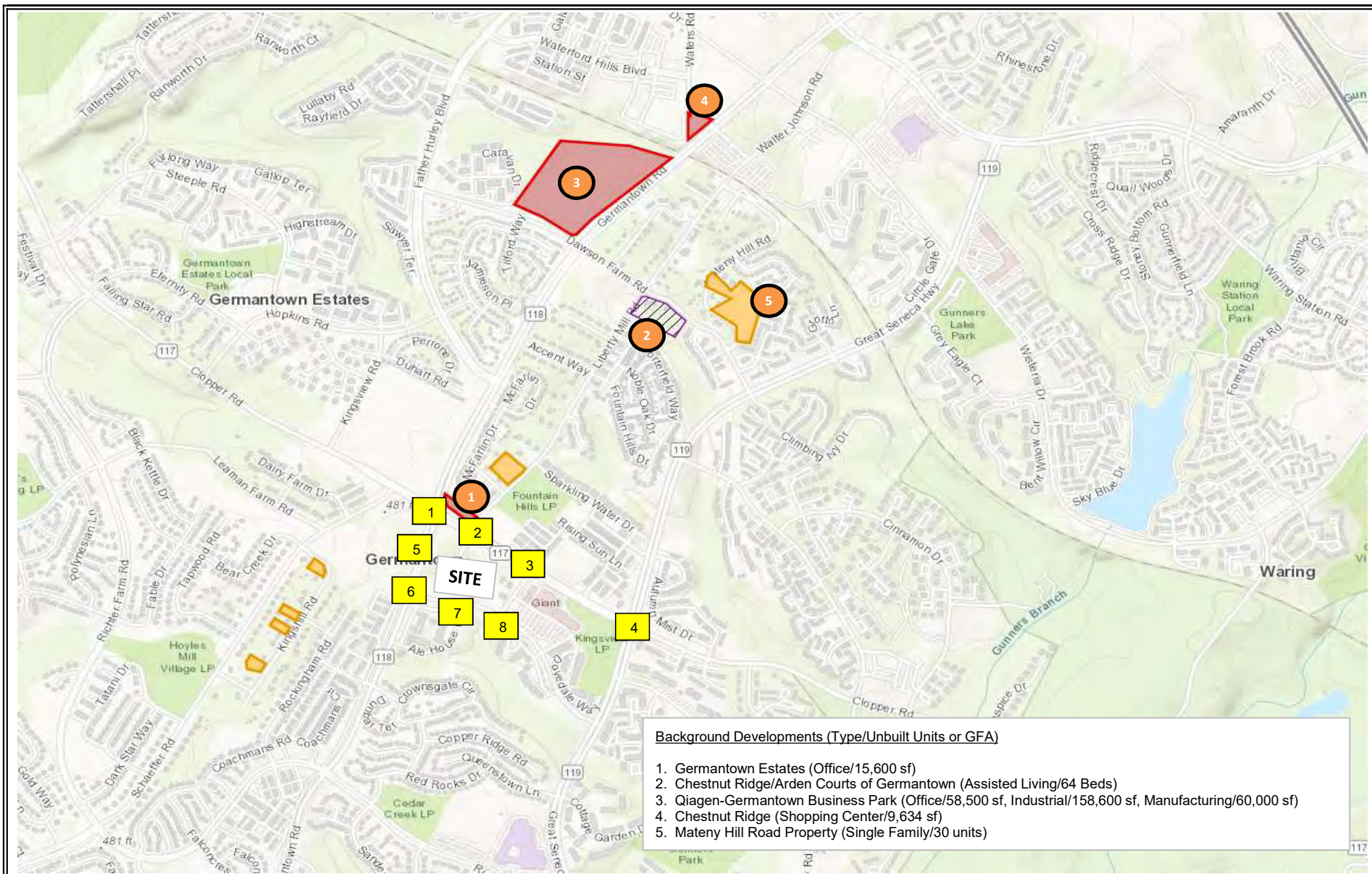
Site Trip Generation Estimate Worksheet – SEE EXHIBIT 2 (ATTACHED)				
Step 1: Vehicle Trips				
ITE Land use Code				
Development Size				
ITE trip generation estimate formula/rate* AM		Total AM Vehicle Trips		
ITE Trip generation estimate formula/rate* PM		Total PM Vehicle Trips		
Step 2: Policy Area Conversion				
Policy Area # & Name		Trip Adjustment Factor	_____ %	
Applied Policy Area Adjusted Value AM				
Applied Policy Area Adjusted Value PM				
Step 3: Mode Split				
			AM	PM
Auto Driver	_____ %	Results		
Auto Passenger	_____ %	Results		
Transit	_____ %	Results		
Walking (transit + non-motorized)	_____ %	Results		
Bicycling (non-motorized)	_____ %	Results		

Complete one of these tables for EACH use included in the application. Enter results into "Transportation Impacts Analysis" section of the form.



8.16.18





Traffic Impact Analysis

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Background Developments
Proposed Trip Distribution



= Background Development

**Exhibit
3**

Trip Generation Rates - Residential

Multifamily Housing, Low-Rise (ITE-220, Units)

$$\text{Ln}(\text{Morning Trips}) = 0.95 \times \text{Ln}(\text{Units}) - 0.51$$

$$\text{Ln}(\text{Evening Trips}) = 0.89 \times \text{Ln}(\text{Units}) - 0.02$$

Trip Distribution (In/Out)

23/77

63/37

Trip Generation - Residential

		AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Multifamily Housing, Low-Rise (ITE-220, Units)	60 units	7	22	29	23	14	37
Total Vehicular Trips per ITE Trip Generation Manual, 10th Edition:		7	22	29	23	14	37
LATR Vehicle Trip Generation Rate Adjustment Factor (Germantown West - Residential):		93%					
Total LATR Adjusted Vehicular Trips per ITE Trip Generation Manual, 10th Edition (Auto Driver at 60.4%):		7	20	27	21	13	34
Total Person Trips:		12	33	45	34	22	56
Auto Driver:	60.4%	7	20	27	21	13	34
Auto Passenger:	26.9%	3	9	12	9	6	15
Transit:	4.1%	1	1	2	1	1	2
Non-Motorized:	8.6%	1	3	4	3	2	5

Trip Generation Rates - Retail

Drive-in Bank (ksf, ITE-912)

$$\text{Morning Trips} = 9.50 \times \text{ksf}$$

$$\text{Evening Trips} = 20.45 \times \text{ksf}$$

Trip Distribution (In/Out)

58/42

50/50

Shopping Center (General Urban/Suburban, ksf, ITE-820)

$$\text{Morning Trips} = 0.94 \times \text{ksf}$$

$$\text{Evening Trips} = 3.81 \times \text{ksf}$$

Trip Distribution (In/Out)

62/38

48/52

Trip Generation - Retail

		AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Shopping Center (ksf, ITE-820)	12,000 sq.ft.	7	4	11	54	59	113
Total Vehicular Trips per ITE Trip Generation Manual, 10th Edition:		7	4	11	54	59	113
LATR Vehicle Trip Generation Rate Adjustment Factor (Germantown West - Retail):		92%					
Total LATR Adjusted Vehicular Trips per ITE Trip Generation Manual, 10th Edition (Auto Driver at 66.4%):		6	4	10	50	54	104
Total Person Trips:		9	6	15	76	81	157
Auto Driver:	66.4%	6	4	10	50	54	104
Auto Passenger:	27.6%	2	2	4	21	22	43
Transit:	1.2%	0	0	0	1	1	2
Non-Motorized:	4.8%	1	0	1	4	4	8

Trip Generation Total - Combined Residential/Retail

	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Total Person Trips:	21	39	60	110	103	213
Auto Driver:	13	24	37	71	67	138
Auto Passenger:	5	11	16	30	28	58
Transit:	1	1	2	2	2	4
Non-Motorized:	2	3	5	7	6	13

NOTES:

The Montgomery County Subdivision Staging Policy states that projects with more than 50 peak hour person trips require a quantitative auto analysis based on LATR Requirements.

Projects with less than 50 transit and/or non-motorized trips do not require quantitative analyses for those modes.

Traffic Impact Analysis

Lenhart Traffic Consulting, Inc.

Traffic Engineering & Transportation Planning

Trip Generation
For SiteExhibit
2

Table 2-11 from LATR Guidelines: Germantown/Clarksburg

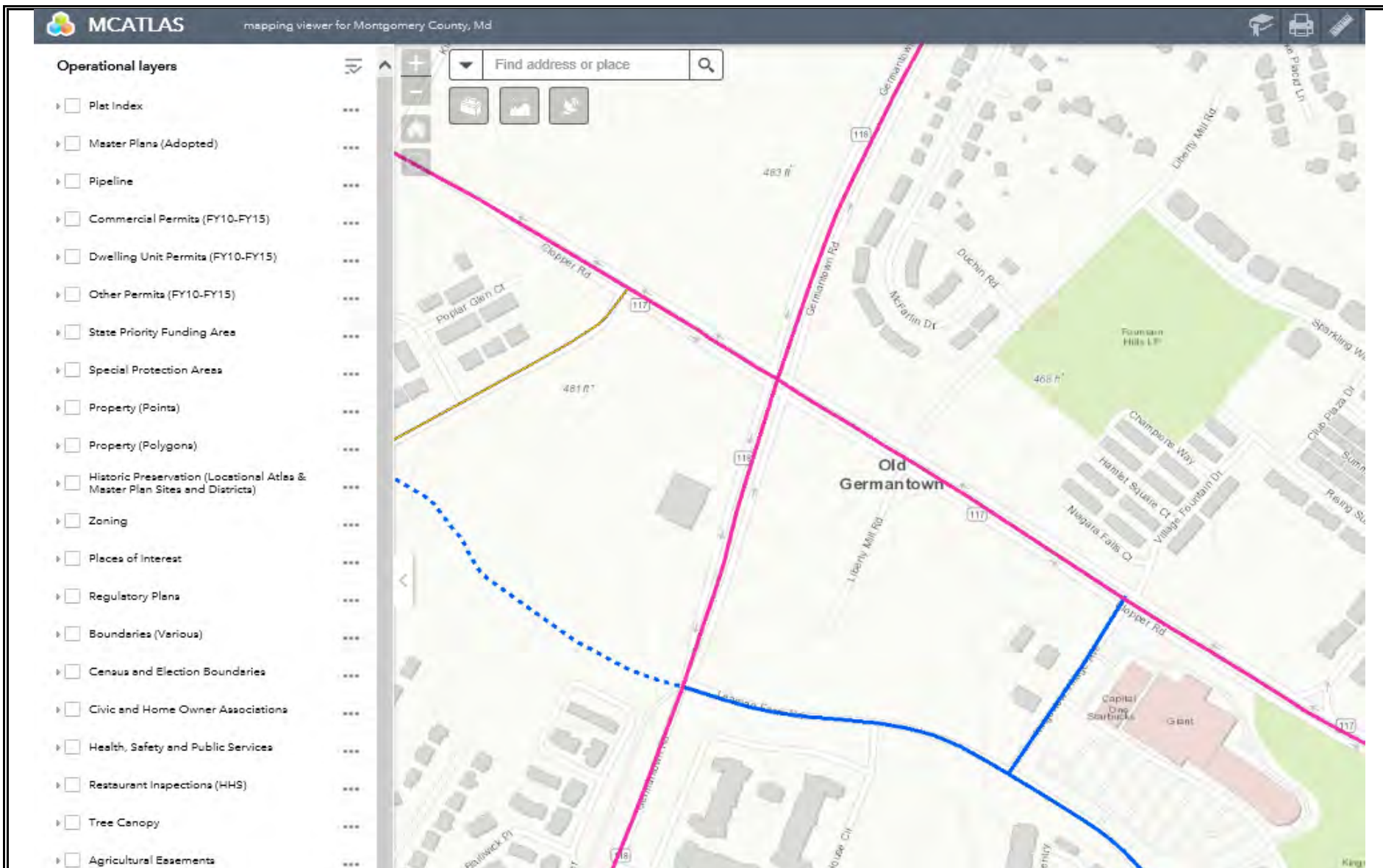
Trip Distribution Report

Trip Dist. By Super district		Trip Ass for Origin by super-district													
Residential Development		Via MD 117 West	Via MD 117 East	Via MD 118 North	Via MD 118 South	Via MD 119 South/East	Via MD 119 North	TOTAL	Via MD 117 West	Via MD 117 East	Via MD 118 North	Via MD 118 South	Via MD 119 South/East	Via MD 119 North	TOTAL
1	Bethesda / Chevy Chase	2.9%	0%	100%	0%	0%	0%	100%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	2.90%
2	Silver Spring / Takoma Park	0.9%	0%	100%	0%	0%	0%	100%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.90%
3	Potomac / Darnestown / Travilah	3.1%	0%	20%	0%	80%	0%	100%	0.0%	0.6%	0.0%	2.5%	0.0%	0.0%	3.10%
4	Rockville / North Bethesda	10.5%	0%	100%	0%	0%	0%	100%	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%	10.50%
5	Kensington / Wheaton	0.8%	0%	100%	0%	0%	0%	100%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.80%
6	White Oak / Fairland / Cloverly	0.6%	0%	100%	0%	0%	0%	100%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.60%
7	Gaithersburg / Shady Grove	22.7%	0%	80%	0%	20%	0%	100%	0.0%	18.2%	0.0%	0.0%	4.5400%	0.0%	22.70%
8	Aspen Hill / Olney	1.0%	0%	100%	0%	0%	0%	100%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	1.00%
9	Germantown / Clarksburg	35.0%	5%	5%	70%	5%	10%	100%	1.8%	1.8%	24.5%	1.8%	1.8%	3.5%	35.00%
10	Rural: West of I-270	0.6%	85%	0%	15%	0%	0%	100%	0.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.60%
11	Rural: East of I-270	1.6%	0%	10%	70%	0%	0%	85%	0.0%	0.2%	1.1%	0.0%	0.0%	0.1%	1.36%
12	Washington, DC	9.2%	0%	100%	0%	0%	0%	100%	0.0%	9.2%	0.0%	0.0%	0.0%	0.0%	9.20%
13	Prince George's County	2.7%	0%	100%	0%	0%	0%	100%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	2.70%
14	Virginia	5.9%	10%	80%	0%	10%	0%	100%	0.6%	4.7%	0.0%	0.6%	0.0%	0.0%	5.90%
15	Frederick County	1.8%	0%	0%	100%	0%	0%	100%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	1.80%
16	Howard County	0.7%	0%	50%	50%	0%	0%	100%	0.0%	0.4%	0.4%	0.0%	0.0%	0.0%	0.70%
Total 100.00%															
Trip Distribution ==>									2.9%	54.4%	27.9%	4.8%	6.3%	3.6%	99.8%
Use ==>									3.0%	54.0%	28.0%	5.0%	6.0%	4.0%	100.0%

Traffic Impact Analysis	Residential Trip Distribution Report in Super District 9 Germantown/Clarksburg	Exhibit 4
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's





Traffic Impact Analysis

Lenhart Traffic Consulting, Inc.

Traffic Engineering & Transportation Planning

Master Planned Roadways From MCAtlas

XX% = Proposed Retail Trip Distribution

**Attachment
A-1**

Master Plan Highways:		Master Plan Highways:		Master Plan Highways:		Master Plan Highways:	
LOCALROADNAME	Clopper Rd	LOCALROADNAME	Lesman Farm Rd	LOCALROADNAME	Kingsview Village Ave	LOCALROADNAME	Germantown Rd
SEGMENTSEQUENCE	1.00	SEGMENTSEQUENCE		SEGMENTSEQUENCE	1.00	SEGMENTSEQUENCE	3.00
FROMLOCATION	Germantown Road	FROMLOCATION	Germantown Rd	FROMLOCATION	Clopper Rd	FROMLOCATION	Richter Farm Rd
TOLOCATION	Greet Seneca Hwy	TOLOCATION	Kingsview Village Ave	TOLOCATION	Lesman Farm Rd	TOLOCATION	Clopper Rd
CLASSIFICATION	Major Highway	CLASSIFICATION	Arterial	CLASSIFICATION	Arterial	CLASSIFICATION	Major Highway
CLASSIFICATIONLABELCODE	Mtrue	CLASSIFICATIONLABELCODE	Atrue	CLASSIFICATIONLABELCODE	Atrue	CLASSIFICATIONLABELCODE	Mtrue
CLASSIFICATIONCODE	M	CLASSIFICATIONCODE	A	CLASSIFICATIONCODE	A	CLASSIFICATIONCODE	M
MOSTRECENTMASTERPLAN	Boyd's / Germantown	MOSTRECENTMASTERPLAN	Germantown (1989)	MOSTRECENTMASTERPLAN	Germantown (1989)	MOSTRECENTMASTERPLAN	Germantown (1989)
CURRENTCLASSID	M-26	CURRENTCLASSID	A-298	CURRENTCLASSID	A-270	CURRENTCLASSID	M-61
EXISTINGLANES	2	EXISTINGLANES	4D	EXISTINGLANES	4	EXISTINGLANES	2D
EXISTINGLANEWIDTH		EXISTINGLANEWIDTH		EXISTINGLANEWIDTH		EXISTINGLANEWIDTH	
PLANNEDLANES	6	PLANNEDLANES	4D	PLANNEDLANES	4	PLANNEDLANES	6D
PLANNEDLANEWIDTH		PLANNEDLANEWIDTH		PLANNEDLANEWIDTH		PLANNEDLANEWIDTH	
MASTERPLANROW	150	MASTERPLANROW	100	MASTERPLANROW	100	MASTERPLANROW	120
TRANSITWAY		TRANSITWAY		TRANSITWAY		TRANSITWAY	
RELOCATION		RELOCATION		RELOCATION		RELOCATION	
DESIGNSTANDARD		DESIGNSTANDARD		DESIGNSTANDARD		DESIGNSTANDARD	
ADOPTED		ADOPTED		ADOPTED		ADOPTED	
BUILT	Mtrue	BUILT	Atrue	BUILT	Atrue	BUILT	Mtrue
HOV		HOV		HOV		HOV	
MEDIAN		MEDIAN		MEDIAN		MEDIAN	
TRUCKRESTRICTION		TRUCKRESTRICTION		TRUCKRESTRICTION		TRUCKRESTRICTION	
TARGETSPEED		TARGETSPEED		TARGETSPEED		TARGETSPEED	
ROUTENUMBER	MD 117	ROUTENUMBER		ROUTENUMBER		ROUTENUMBER	MD 118
MASTERPLAN1	Boyd's / Germantown	MASTERPLAN1	Germantown (1989)	MASTERPLAN1	Germantown (1989)	MASTERPLAN1	Germantown (1989)
MASTERPLAN2		MASTERPLAN2	Germantown Master Plan (1989)	MASTERPLAN2	Germantown Master Plan (1989)	MASTERPLAN2	Germantown Master Plan (1989)
MASTERPLAN3		MASTERPLAN3		MASTERPLAN3		MASTERPLAN3	
SPEEDOVERRIDE		SPEEDOVERRIDE		SPEEDOVERRIDE		SPEEDOVERRIDE	
BRTCORRIDORNAME		BRTCORRIDORNAME		BRTCORRIDORNAME		BRTCORRIDORNAME	
SHAPE.LEN	2,569.29	SHAPE.LEN	1,046.62	SHAPE.LEN	673.56	SHAPE.LEN	3,381.44
MASTERID	1,501	MASTERID	127	MASTERID	1,149	MASTERID	1,367

Traffic Impact Analysis

Lenhart Traffic Consulting, Inc.

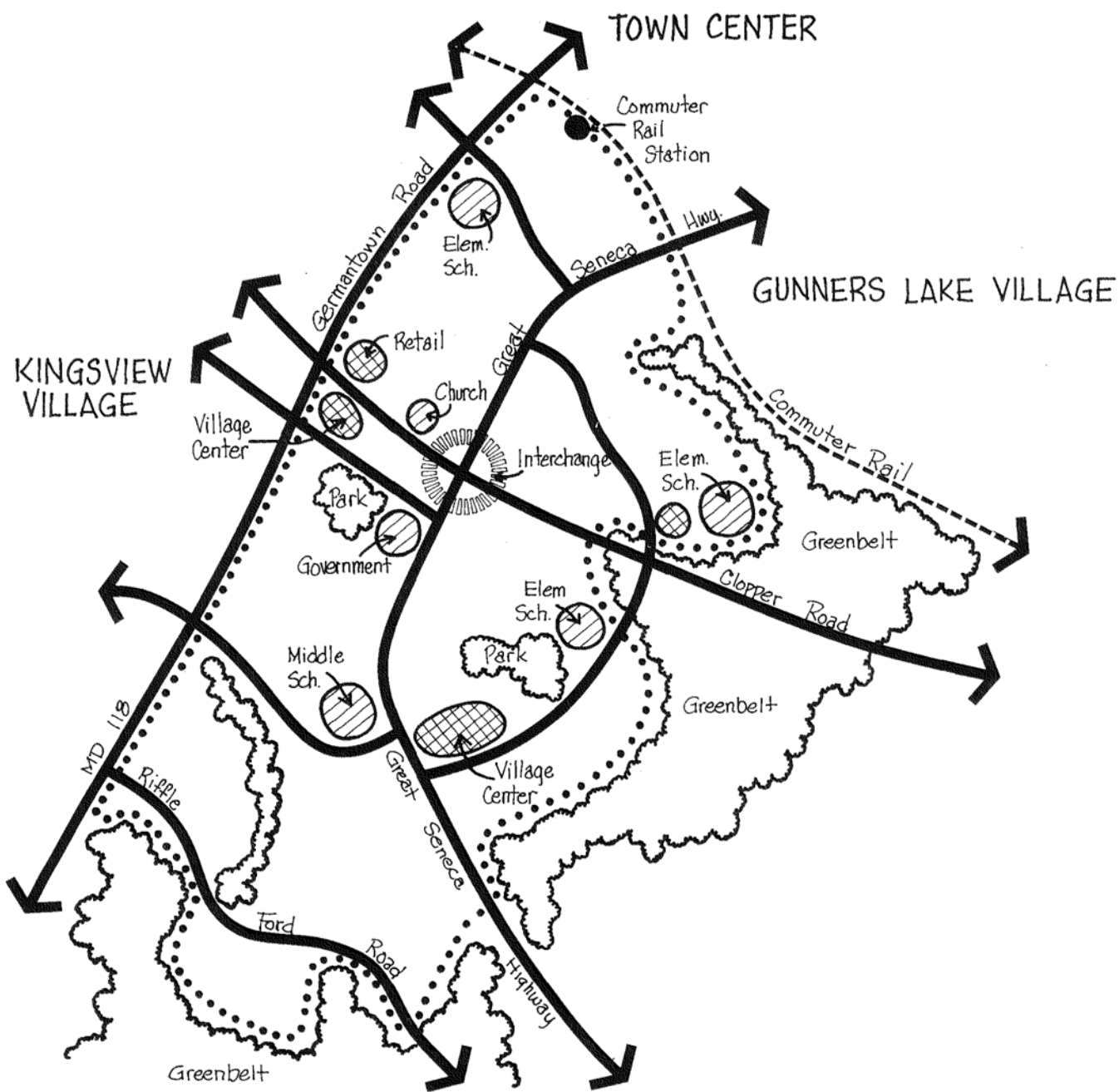
Traffic Engineering & Transportation Planning

Master Planned Roadways From MCAtlas

XX% = Proposed Retail Trip Distribution

**Attachment
A-2**

Figure 8



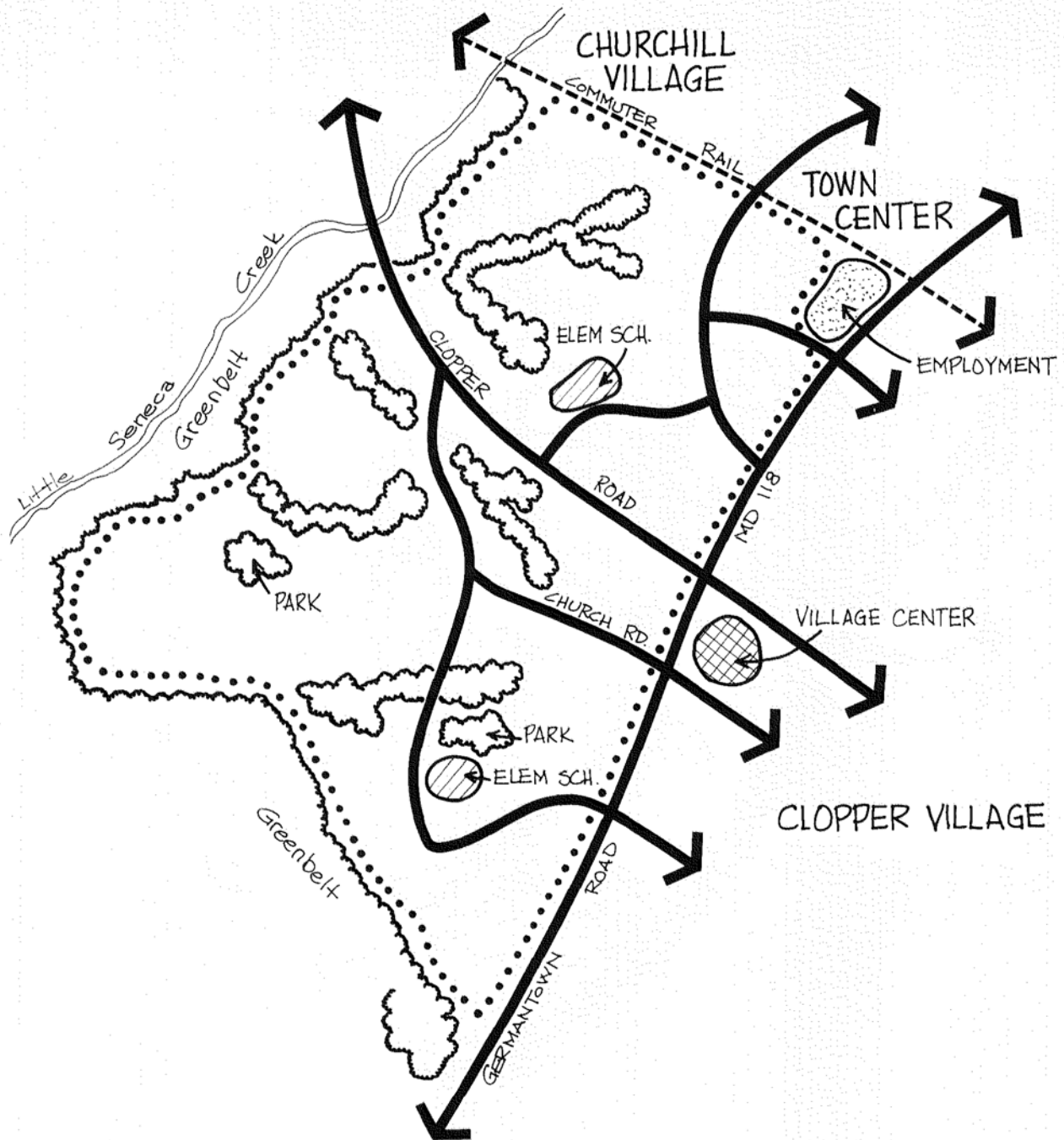
Clopper Village: Concept Diagram



Comprehensive Amendment
to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission



Kingsview Village: Concept Diagram

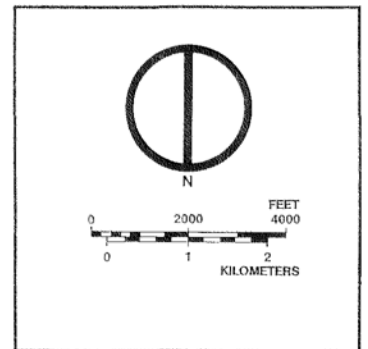
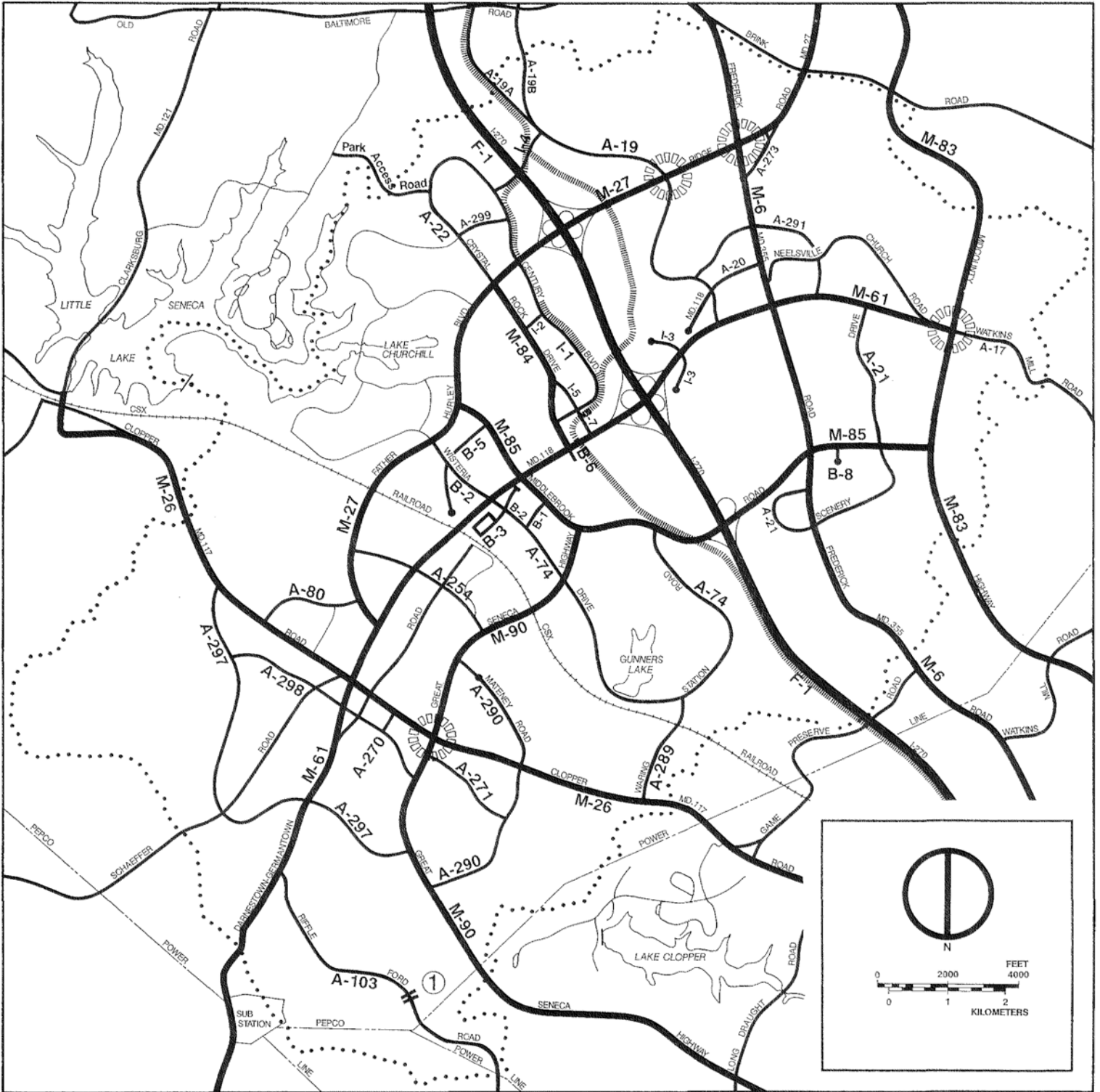


Comprehensive Amendment
to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

Figure 12



Roadway System

Grade-Separated Interchange

Freeway

Major Highway

Arterial(A), Industrial(I), and Business District Roads(B)

May be closed when Great Seneca Highway is opened to traffic through Great Seneca Park ①

G Comprehensive Amendment
to the Master Plan for Germantown
Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TRAFFIC GROWTH PROJECTION

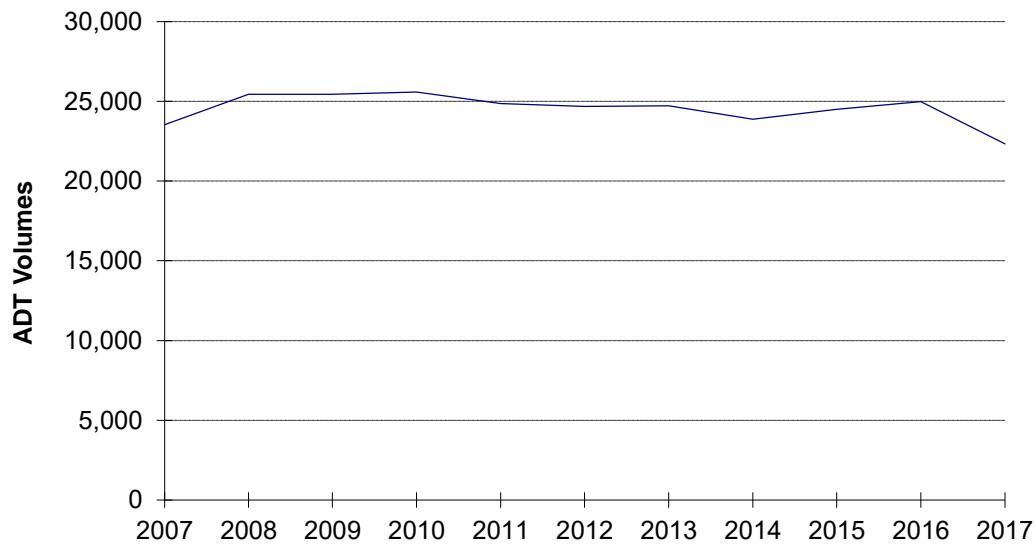
LOCATION: MD 118 - just north of study Intersection 1

REPORT DATE: 01-Jun-18

AVERAGE GROWTH: -0.42%

MATHEMATICAL GROWTH: -0.52%

Year	ADT Volume	Vol. increase	% increase	Average %
2007	23,542			
2008	25,450	1,908	8.10%	8.10%
2009	25,451	1	0.00%	4.05%
2010	25,602	151	0.59%	2.90%
2011	24,870	-732	-2.86%	1.46%
2012	24,671	-199	-0.80%	1.01%
2013	24,722	51	0.21%	0.87%
2014	23,880	-842	-3.41%	0.26%
2015	24,501	621	2.60%	0.56%
2016	24,972	471	1.92%	0.71%
2017	22,340	-2,632	-10.54%	-0.42%



TRAFFIC GROWTH
MD 118 - just north of study Intersection 1

TRAFFIC GROWTH PROJECTION

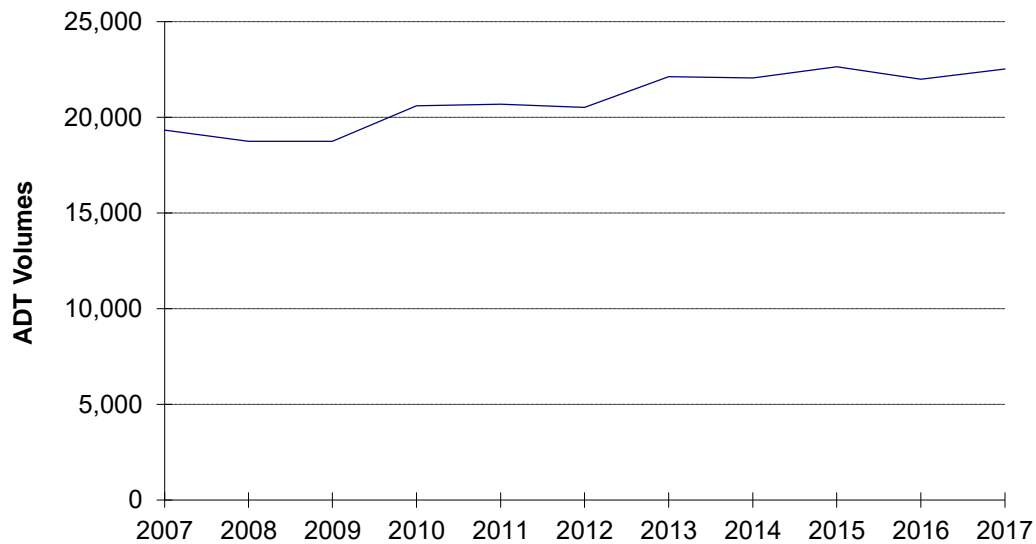
LOCATION: MD 117 - near Intersection 2 of study

REPORT DATE: 01-Jun-18

AVERAGE GROWTH: 1.62%

MATHEMATICAL GROWTH: 1.54%

Year	ADT Volume	Vol. increase	% increase	Average %
2007	19,330			
2008	18,751	-579	-3.00%	-3.00%
2009	18,752	1	0.01%	-1.50%
2010	20,600	1,848	9.85%	2.29%
2011	20,681	81	0.39%	1.81%
2012	20,522	-159	-0.77%	1.30%
2013	22,130	1,608	7.84%	2.39%
2014	22,061	-69	-0.31%	2.00%
2015	22,642	581	2.63%	2.08%
2016	21,990	-652	-2.88%	1.53%
2017	22,521	531	2.41%	1.62%



TRAFFIC GROWTH
MD 117 - near Intersection 2 of study

TRAFFIC GROWTH PROJECTION

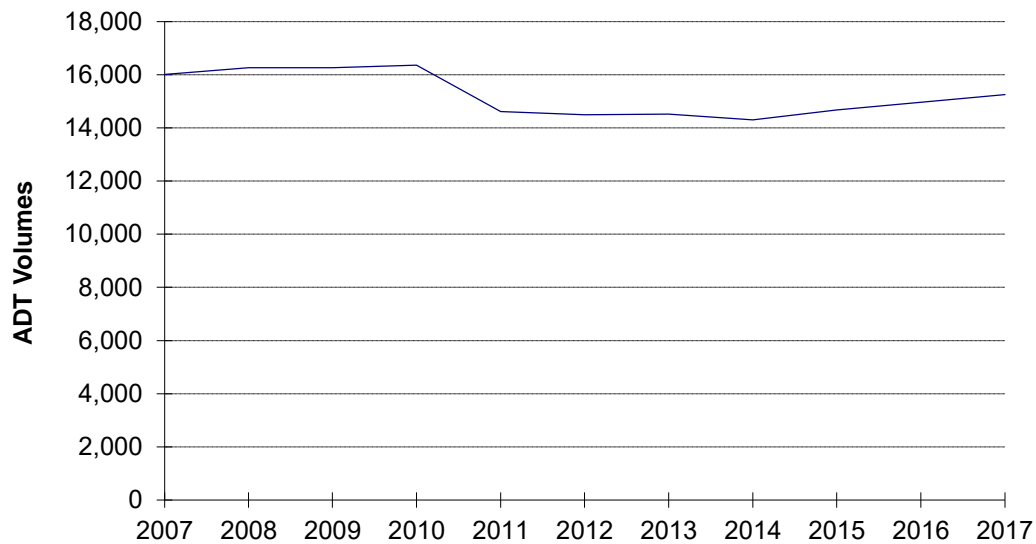
LOCATION: MD 119 - just north of intersection 4

REPORT DATE: 01-Jun-18

AVERAGE GROWTH: -0.42%

MATHEMATICAL GROWTH: -0.49%

Year	ADT Volume	Vol. increase	% increase	Average %
2007	16,012			
2008	16,260	248	1.55%	1.55%
2009	16,261	1	0.01%	0.78%
2010	16,362	101	0.62%	0.73%
2011	14,610	-1,752	-10.71%	-2.13%
2012	14,491	-119	-0.81%	-1.87%
2013	14,522	31	0.21%	-1.52%
2014	14,310	-212	-1.46%	-1.51%
2015	14,681	371	2.59%	-1.00%
2016	14,962	281	1.91%	-0.68%
2017	15,250	288	1.92%	-0.42%



TRAFFIC GROWTH
MD 119 - just north of intersection 4

Time:	Weekday Morning Peak Hour (6:30 am - 9:30 am)																				Total
	MD 118 Northbound					MD 118 Southbound					MD 117 Eastbound					MD 117 Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	0	1	23	12	2	1	28	31	9	0	0	9	70	8	0	0	10	14	11	0	227
6:45-7:00	0	4	17	17	0	0	27	43	12	0	0	18	55	11	0	0	15	22	19	0	260
7:00-7:15	0	6	26	19	2	0	26	32	13	0	0	12	67	11	1	0	9	40	13	0	274
7:15-7:30	0	1	31	13	0	0	30	40	10	0	0	30	60	11	0	0	7	17	22	0	272
7:30-7:45	0	6	34	14	0	0	41	51	12	0	0	16	82	12	0	0	16	19	19	0	322
7:45-8:00	0	7	58	21	1	0	37	52	8	0	0	26	98	10	0	0	12	38	19	0	386
8:00-8:15	0	6	73	18	0	1	39	43	12	0	0	30	91	12	0	0	11	33	18	1	387
8:15-8:30	0	4	64	17	0	0	24	69	11	0	0	28	98	16	0	0	13	38	25	0	407
8:30-8:45	0	12	52	16	0	0	32	56	12	0	0	30	94	10	0	0	14	41	15	0	384
8:45-9:00	0	5	69	13	0	0	40	62	10	0	0	30	61	7	1	0	12	31	18	0	358
9:00-9:15	1	6	44	11	1	0	26	49	9	0	0	26	75	11	0	0	5	16	28	0	307
9:15-9:30	0	2	62	9	0	0	24	51	6	0	0	31	81	6	0	0	12	27	24	0	335

Hourly Totals																					
6:30-7:30	0	12	97	61	4	1	111	146	44	0	0	69	252	41	1	0	41	93	65	0	1038
6:45-7:45	0	17	108	63	2	0	124	166	47	0	0	76	264	45	1	0	47	98	73	0	1131
7:00-8:00	0	20	149	67	3	0	134	175	43	0	0	84	307	44	1	0	44	114	73	0	1258
7:15-8:15	0	20	196	66	1	1	147	186	42	0	0	102	331	45	0	0	46	107	78	1	1369
7:30-8:30	0	23	229	70	1	1	141	215	43	0	0	100	369	50	0	0	52	128	81	1	1504
7:45-8:45	0	29	247	72	1	1	132	220	43	0	0	114	381	48	0	0	50	150	77	1	1566
8:00-9:00	0	27	258	64	0	1	135	230	45	0	0	118	344	45	1	0	50	143	76	1	1538
8:15-9:15	1	27	229	57	1	0	122	236	42	0	0	114	328	44	1	0	44	126	86	0	1458
8:30-9:30	1	25	227	49	1	0	122	218	37	0	0	117	311	34	1	0	43	115	85	0	1386

AM Peak Hour					Northbound					Southbound					Eastbound					Westbound					Total
U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
0	29	247	72	1	1	132	220	43	0	0	114	381	48	0	0	50	150	77	0	0	50	150	77	0	1566

Time:	Weekday Evening Peak Hour (4 pm - 7 pm)																				Total
	MD 118 Northbound					MD 118 Southbound					MD 117 Eastbound					MD 117 Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	0	23	69	11	2	1	39	61	23	2	0	41	76	12	0	0	15	75	50	0	496
4:15-4:30	1	11	71	9	1	1	48	83	19	4	0	27	49	15	2	0	19	113	43	2	509
4:30-4:45	0	19	96	15	1	0	53	77	27	1	1	35	62	11	0	0	32	105	31	0	564
4:45-5:00	0	18	88	13	0	0	41	97	26	0	0	48	103	10	0	0	19	92	49	0	604
5:00-5:15	1	23	76	15	3	0	39	72	34	1	1	45	77	9	0	0	27	88	45	0	552
5:15-5:30	0	12	89	21	4	1	55	77	41	0	0	43	93	12	0	0	24	122	36	0	626
5:30-5:45	0	20	84	20	1	0	52	92	35	0	0	51	84	11	0	0	23	96	56	0	624
5:45-6:00	0	15	68	16	4	0	64	69	31	0	0	34	64	30	3	0	16	138	44	0	589
6:00-6:15	0	19	71	12	2	0	47	59	28	0	0	37	81	11	3	1	25	107	51	0	549
6:15-6:30	0	17	101	8	5	0	42	63	31	2	0	38	102	9	3	0	25	79	49	0	564
6:30-6:45	0	20	60	13	3	0	41	81	23	0	0	49	85	14	0	1	22	86	35	0	530
6:45-7:00	0	11	63	10	0	0	47	75	26	0	0	45	89	9	0	1	35	83	34	0	528

Hourly Totals																					
4:00-5:00	1	71	324	163	4	2	181	318	344	7	1	151	290	48	2	0	85	385	173	2	2552
4:15-5:15	2	71	331	52	5	1	181	329	106	6	2	155	291	45	2	0	97	398	168	2	2244
4:30-5:30	1	72	349	64	8	1	188	323	128	2	2	171	335	42	0	0	102	407	161	0	2356
4:45-5:45	1	73	337	69	8	1	187	338	136	1	1	187	357	42	0	0	93	398	186	0	2415
5:00-6:00	1	70	317	72	12	1	210	310	141	1	1	173	318	62	3	0	90	444	181	0	2407
5:15-6:15	0	66	312	69	11	1	218	297	135	0	0	165	322	64	6	1	88	463	187	0	2405
5:30-6:30	0	71	324	56	12	0	205	283	125	2	0	160	331	61	9	1	89	420	200	0	2349
5:45-6:45	0	71	300	49	14	0	194	272	113	2	0	158	332	64	9	2	88	410	179	0	2257
6:00-7:00	0	67	295	43	10	0	177	278	108	2	0	169	357	43	6	3	107	355	169	0	2189

PM Peak Hour					Northbound					Southbound					Eastbound					Westbound					Total
U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
1	71	324	163	4	2	181	318	344	7	1	151	290	48	2	0	85	385	173	7	0	85	385	173	7	2552

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: MD 118 & MD 117

Weather: Clear

Count by: CountCAM - ZW

Count Day/Date: Wednesday, October 7, 2020

County: Montgomery



Aerial
Diagram

Intersection: MD 117 & Liberty Mill Road / Site Access
(Intersection 2)



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

County: Montgomery

Time:	Weekday Morning Peak Hour (6:30 am - 9:30 am)																				Total
	Liberty Mill Road Northbound					Liberty Mill Road Southbound					MD 117 Eastbound					MD 117 Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	0	0	0	0	0	0	15	0	4	0	1	9	100	0	0	5	0	30	2	0	166
6:45-7:00	0	0	0	0	0	0	10	0	2	0	0	9	90	0	0	4	0	54	0	0	169
7:00-7:15	0	0	0	0	0	0	4	0	6	0	0	6	106	0	0	4	0	56	2	0	184
7:15-7:30	0	0	0	0	0	0	8	0	5	0	0	8	95	0	0	2	0	41	3	0	162
7:30-7:45	0	0	0	0	2	0	9	0	9	0	0	10	127	0	0	5	0	45	1	0	206
7:45-8:00	0	0	0	0	0	0	6	0	5	0	1	17	138	0	0	5	0	63	2	0	237
8:00-8:15	0	0	0	0	0	0	7	0	2	0	0	14	134	0	0	3	0	60	4	0	224
8:15-8:30	0	0	0	0	0	0	11	0	5	0	0	13	126	0	0	6	0	71	6	0	238
8:30-8:45	0	0	0	0	0	0	11	0	7	0	0	11	131	0	0	6	0	63	4	0	233
8:45-9:00	0	0	0	0	0	0	12	0	6	0	1	11	102	0	0	3	0	54	4	0	193
9:00-9:15	0	0	0	0	0	0	8	0	2	1	0	12	100	0	0	3	0	47	3	0	175
9:15-9:30	0	0	0	0	0	0	10	0	3	0	0	10	104	0	0	3	0	60	3	0	193

Hourly Totals																					
6:30-7:30	0	0	0	0	0	0	37	0	17	0	1	32	391	0	0	15	0	181	7	0	681
6:45-7:45	0	0	0	0	2	0	31	0	22	0	0	33	418	0	0	15	0	196	6	0	723
7:00-8:00	0	0	0	0	2	0	27	0	25	0	1	41	466	0	0	16	0	205	8	0	791
7:15-8:15	0	0	0	0	2	0	30	0	21	0	1	49	494	0	0	15	0	209	10	0	831
7:30-8:30	0	0	0	0	2	0	33	0	21	0	1	54	525	0	0	19	0	239	13	0	907
7:45-8:45	0	0	0	0	0	0	35	0	19	0	1	55	529	0	0	20	0	257	16	0	932
8:00-9:00	0	0	0	0	0	0	41	0	20	0	1	49	493	0	0	18	0	248	18	0	888
8:15-9:15	0	0	0	0	0	0	42	0	20	1	1	47	459	0	0	18	0	235	17	0	840
8:30-9:30	0	0	0	0	0	0	41	0	18	1	1	44	437	0	0	15	0	224	14	0	795

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:45-8:45	0	0	0	0	0	0	35	0	19	0	1	55	529	0	0	20	0	257	16	0	932

Time:	Weekday Evening Peak Hour (4 pm - 7 pm)																				Total
	Liberty Mill Road Northbound					Liberty Mill Road Southbound					MD 117 Eastbound					MD 117 Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	0	0	0	0	2	0	4	0	5	0	0	12	114	0	0	4	0	135	11	0	285
4:15-4:30	0	0	0	0	2	0	9	0	11	2	1	21	84	0	2	10	0	164	9	0	309
4:30-4:45	0	0	0	0	0	0	5	0	14	1	0	29	101	0	0	4	0	154	9	0	316
4:45-5:00	0	0	0	0	0	0	14	0	12	0	1	41	115	0	0	4	0	148	10	0	345
5:00-5:15	0	0	0	0	0	0	10	0	7	0	0	23	108	0	0	5	0	153	8	0	314
5:15-5:30	0	0	0	0	0	0	9	0	15	0	1	33	135	0	0	2	0	167	12	0	374
5:30-5:45	0	0	0	0	2	0	9	0	7	0	0	28	128	0	0	3	0	168	15	0	358
5:45-6:00	0	0	0	1	2	0	8	0	5	0	0	19	125	0	0	4	1	193	17	1	373
6:00-6:15	0	0	0	0	0	0	7	0	6	0	0	24	117	0	0	4	0	178	13	0	349
6:15-6:30	0	0	0	0	1	0	6	0	12	0	0	32	120	0	0	2	0	141	14	0	327
6:30-6:45	0	0	0	0	0	0	7	0	5	0	0	32	108	0	0	8	0	139	12	0	311
6:45-7:00	0	0	0	0	1	0	22	0	23	0	2	25	120	0	0	7	0	130	6	0	335

Hourly Totals																					
4:00-5:00	0	0	0	0	4	0	32	0	42	3	2	103	414	0	2	22	0	601	39	0	1264
4:15-5:15	0	0	0	0	2	0	38	0	44	3	2	114	408	0	2	23	0	619	36	0	1291
4:30-5:30	0	0	0	0	0	0	38	0	48	1	2	126	459	0	0	15	0	622	39	0	1350
4:45-5:45	0	0	0	0	2	0	42	0	41	0	2	125	486	0	0	14	0	636	45	0	1393
5:00-6:00	0	0	0	1	4	0	36	0	34	0	1	103	496	0	0	14	1	681	52	1	1424
5:15-6:15	0	0	0	1	4	0	33	0	33	0	1	104	505	0	0	13	1	706	57	1	1459
5:30-6:30	0	0	0	1	5	0	30	0	30	0	0	103	490	0	0	13	1	680	59	1	1413
5:45-6:45	0	0	0	1	3	0	28	0	28	0	0	107	470	0	0	18	1	651	56	1	1364
6:00-7:00	0	0	0	0	2	0	42	0	46	0	2	113	465	0	0	21	0	588	45	0	1324

PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
5:15-6:15	0	0	0	1	4	0	33	0	33	0	1	104	505	0	0	13	1	706	57	0	1459

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: Liberty Mill Road & MD 117

Weather: Clear

Count by: CountCAM - ZW

Count Day/Date: Wednesday, October 7, 2020

County: Montgomery

Time:	Weekday Morning Peak Hour (6:30 am - 9:30 am)																				Total
	Kingsview Village Avenue Northbound					Village Fountain Drive Southbound					MD 117 Eastbound					MD 117 Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	0	1	0	13	0	0	0	0	0	0	0	2	101	12	0	0	3	43	0	0	175
6:45-7:00	0	5	0	16	1	0	0	0	1	0	0	1	88	9	1	0	9	52	0	0	181
7:00-7:15	0	4	1	10	0	0	3	0	4	1	0	1	108	10	0	0	3	47	1	1	192
7:15-7:30	0	7	1	9	0	0	1	0	2	0	0	1	92	16	0	0	5	39	1	0	174
7:30-7:45	0	3	0	13	1	0	6	4	0	0	0	0	124	14	0	1	8	44	1	2	218
7:45-8:00	0	18	1	15	1	0	5	2	2	1	0	4	136	15	0	0	10	56	1	0	265
8:00-8:15	0	13	1	18	0	0	1	0	1	0	0	2	118	20	0	0	6	57	0	0	237
8:15-8:30	0	14	2	13	1	0	3	3	3	1	0	1	124	25	0	1	8	69	0	0	266
8:30-8:45	0	14	6	16	0	0	3	0	0	0	0	0	131	15	0	1	12	57	1	1	256
8:45-9:00	0	12	3	9	0	0	1	0	3	0	0	0	101	12	0	0	10	42	1	0	194
9:00-9:15	0	13	1	10	1	0	0	0	0	0	0	0	103	13	0	0	11	49	1	0	201
9:15-9:30	0	12	0	14	0	0	6	0	3	0	0	2	97	10	0	0	9	43	0	0	196

Hourly Totals																					
6:30-7:30	0	17	2	48	1	0	4	0	7	1	0	5	389	47	1	0	20	181	2	1	726
6:45-7:45	0	19	2	48	2	0	10	4	7	1	0	3	412	49	1	1	25	182	3	3	772
7:00-8:00	0	32	3	47	2	0	15	6	8	2	0	6	460	55	0	1	26	186	4	3	856
7:15-8:15	0	41	3	55	2	0	13	6	5	1	0	7	470	65	0	1	29	196	3	2	899
7:30-8:30	0	48	4	59	3	0	15	9	6	2	0	7	502	74	0	2	32	226	2	2	993
7:45-8:45	0	59	10	62	2	0	12	5	6	2	0	7	509	75	0	2	36	239	2	1	1029
8:00-9:00	0	53	12	56	1	0	8	3	7	1	0	3	474	72	0	2	36	225	2	1	956
8:15-9:15	0	53	12	48	2	0	7	3	6	1	0	1	459	65	0	2	41	217	3	1	921
8:30-9:30	0	51	10	49	1	0	10	0	6	0	0	2	432	50	0	1	42	191	3	1	849

AM																	Total				
Northbound					Southbound					Eastbound					Westbound						
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:45-8:45	0	59	10	62	2	0	12	5	6	0	0	7	509	75	0	2	36	239	2	0	1029

Time:	Weekday Evening Peak Hour (4 pm - 7 pm)																				Total
	Kingsview Village Avenue Northbound					Village Fountain Drive Southbound					MD 117 Eastbound					MD 117 Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	0	47	5	31	5	0	3	0	1	1	0	4	72	44	0	0	41	109	7	0	364
4:15-4:30	0	45	4	32	2	0	2	1	9	8	0	8	63	41	0	1	52	125	6	1	389
4:30-4:45	0	30	2	17	2	0	3	0	0	1	0	1	75	31	1	0	26	138	5	0	328
4:45-5:00	0	25	3	19	2	0	2	0	1	0	0	4	101	31	0	1	24	133	4	0	348
5:00-5:15	0	26	1	9	0	0	1	0	2	3	0	3	103	19	0	0	31	143	4	0	342
5:15-5:30	0	29	2	14	1	0	3	0	4	3	0	6	110	27	0	0	28	149	1	0	373
5:30-5:45	0	31	3	15	3	0	0	1	3	1	0	2	105	30	1	0	23	156	5	0	374
5:45-6:00	1	33	7	14	1	0	2	0	3	0	0	5	98	38	0	0	38	183	2	0	424
6:00-6:15	0	34	3	13	0	0	4	0	2	0	0	4	106	16	0	2	32	164	4	0	384
6:15-6:30	0	39	2	15	1	0	1	0	3	1	0	0	97	30	0	1	23	121	5	0	337
6:30-6:45	0	20	2	20	1	0	3	0	2	1	0	2	93	24	0	1	33	132	1	1	333
6:45-7:00	0	27	0	26	1	0	3	1	4	2	0	6	116	21	0	1	29	109	1	0	344

Hourly Totals																									
4:00-5:00	0	147	14	225	11	0	10	1	34	10	0	17	311	147	1	2	143	505	22	1	1601				
4:15-5:15	0	126	10	77	6	0	8	1	12	12	0	16	342	122	1	2	133	539	19	1	1427				
4:30-5:30	0	110	8	59	5	0	9	0	7	7	0	14	389	108	1	1	109	563	14	0	1404				
4:45-5:45	0	111	9	57	6	0	6	1	10	7	0	15	419	107	1	1	106	581	14	0	1451				
5:00-6:00	1	119	13	52	5	0	6	1	12	7	0	16	416	114	1	0	120	631	12	0	1526				
5:15-6:15	1	127	15	56	5	0	9	1	12	4	0	17	419	111	1	2	121	652	12	0	1565				
5:30-6:30	1	137	15	57	5	0	7	1	11	2	0	11	406	114	1	3	116	624	16	0	1527				
5:45-6:45	1	126	14	62	3	0	10	0	10	2	0	11	394	108	0	4	126	600	12	1	1484				
6:00-7:00	0	120	7	74	3	0	11	1	11	4	0	12	412	91	0	5	117	526	11	1	1406				

PM		Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds		
4:00-5:00	0	147	14	225	11	0	10	1	34	10	0	17	311	147	1	2	143	505	22	10	1601	

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: Kingsview Village Avenue & MD 117

Weather: Clear

Count by: CountCAM - ZW

Count Day/Date: Wednesday, October 7, 2020

County: Montgomery

		Weekday Morning Peak Hour (6:30 am - 9:30 am)																			Total	
		MD 119 Northbound					MD 119 Southbound					MD 117 Eastbound					MD 117 Westbound					
		U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right		Peds
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total	
6:30-6:45	0	12	12	9	0	0	4	21	10	0	0	9	84	21	1	0	7	26	5	0	220	
6:45-7:00	0	11	12	14	0	0	5	27	12	0	0	12	56	36	0	0	3	41	4	0	233	
7:00-7:15	0	20	15	15	0	0	7	29	9	0	0	9	85	27	1	0	4	21	2	0	243	
7:15-7:30	0	15	21	7	0	0	14	21	11	0	0	10	63	29	1	0	3	24	1	0	219	
7:30-7:45	0	16	11	18	0	0	13	16	15	0	0	17	68	59	1	0	7	22	5	0	267	
7:45-8:00	0	21	27	13	0	1	8	33	21	0	0	20	91	45	1	0	12	24	6	0	322	
8:00-8:15	0	20	26	6	1	0	8	41	17	0	0	16	89	32	1	0	7	31	3	0	296	
8:15-8:30	0	16	25	9	0	3	4	28	12	0	0	14	88	39	0	0	7	53	9	0	307	
8:30-8:45	0	28	38	19	0	0	14	33	12	0	0	21	86	44	0	0	7	32	3	0	337	
8:45-9:00	0	23	31	15	0	2	16	41	11	1	0	17	50	44	1	0	6	21	6	2	283	
9:00-9:15	0	26	43	4	0	0	9	42	14	2	1	17	64	31	0	0	7	22	3	0	283	
9:15-9:30	0	19	29	14	0	2	8	42	10	0	0	18	69	30	0	0	8	25	4	0	278	

Hourly Totals																					
6:30-7:30	0	58	60	45	0	0	30	98	42	0	0	40	288	113	3	0	17	112	12	0	918
6:45-7:45	0	62	59	54	0	0	39	93	47	0	0	48	272	151	3	0	17	108	12	0	965
7:00-8:00	0	72	74	53	0	1	42	99	56	0	0	56	307	160	4	0	26	91	14	0	1055
7:15-8:15	0	72	85	44	1	1	43	111	64	0	0	63	311	165	4	0	29	101	15	0	1109
7:30-8:30	0	73	89	46	1	4	33	118	65	0	0	67	336	175	3	0	33	130	23	0	1196
7:45-8:45	0	85	116	47	1	4	34	135	62	0	0	71	354	160	2	0	33	140	21	0	1265
8:00-9:00	0	87	120	49	1	5	42	143	52	1	0	68	313	159	2	0	27	137	21	2	1229
8:15-9:15	0	93	137	47	0	5	43	144	49	3	1	69	288	158	1	0	27	128	21	2	1216
8:30-9:30	0	96	141	52	0	4	47	158	47	3	1	73	269	149	1	0	28	100	16	2	1187

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:45-8:45	0	85	116	47	1	4	34	135	62	2	0	71	354	160	2	0	33	140	21	2	1265

Time:	Weekday Evening Peak Hour (4 pm - 7 pm)																				Total
	MD 119 Northbound					MD 119 Southbound					MD 117 Eastbound					MD 117 Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
4:00-4:15	0	47	64	11	0	1	17	49	23	0	0	20	50	36	0	0	12	93	9	0	432
4:15-4:30	0	47	81	7	0	2	16	49	19	0	0	29	39	30	0	0	21	113	16	2	469
4:30-4:45	0	44	67	17	0	1	12	55	26	2	0	24	40	31	0	0	13	105	12	2	447
4:45-5:00	0	74	70	10	0	1	14	63	31	2	0	35	47	41	6	0	20	68	9	0	483
5:00-5:15	0	56	79	11	0	2	16	51	27	0	2	27	52	34	0	0	21	86	7	0	471
5:15-5:30	0	68	81	11	0	1	15	55	33	0	0	45	45	37	2	0	13	81	15	0	500
5:30-5:45	1	65	64	11	0	0	23	57	39	0	0	39	31	50	0	0	16	83	3	0	482
5:45-6:00	0	58	76	10	0	0	13	60	43	0	2	29	44	41	4	0	15	118	9	0	518
6:00-6:15	0	57	83	12	2	2	13	55	31	1	1	24	60	41	2	0	20	114	8	3	521
6:15-6:30	0	43	74	10	0	1	10	62	26	0	0	21	59	34	2	0	29	86	3	0	458
6:30-6:45	0	50	61	16	0	1	18	71	24	0	1	23	57	37	2	0	19	97	6	4	481
6:45-7:00	1	36	41	13	0	2	18	50	20	3	0	29	67	50	4	0	19	87	13	4	446

Hourly Totals																					
4:00-5:00	0	212	282	139	0	5	59	216	342	4	0	108	176	138	6	0	66	379	46	4	2182
4:15-5:15	0	221	297	45	0	6	58	218	103	4	2	115	178	136	6	0	75	372	44	4	1884
4:30-5:30	0	242	297	49	0	5	57	224	117	4	2	131	184	143	8	0	67	340	43	2	1915
4:45-5:45	1	263	294	43	0	4	68	226	130	2	2	146	175	162	8	0	70	318	34	0	1946
5:00-6:00	1	247	300	43	0	3	67	223	142	0	4	140	172	162	6	0	65	368	34	0	1977
5:15-6:15	1	248	304	44	2	3	64	227	146	1	3	137	180	169	8	0	64	396	35	3	2035
5:30-6:30	1	223	297	43	2	3	59	234	139	1	3	113	194	166	8	0	80	401	23	3	1993
5:45-6:45	0	208	294	48	2	4	54	248	124	1	4	97	220	153	10	0	83	415	26	7	1998
6:00-7:00	1	186	259	51	2	6	59	238	101	4	2	97	243	162	10	0	87	384	30	11	1933

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00	0	212	282	139	0	5	59	216	342	4	0	108	176	138	6	0	66	379	46	4	2182

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: MD 119 & MD 117

Weather: Clear

Count by: CountCAM - ZW

Count Day/Date: Wednesday, October 7, 2020

County: Montgomery



Aerial
Diagram

Intersection: MD 118 & Prop. Site Access
(Intersection 5)



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

County: Montgomery



Aerial
Diagram

Intersection: MD 118 & Leaman Farm Road
(Intersection 6)



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

County: Montgomery

Time:	Weekday Morning Peak Hour (6:30 am - 9:30 am)																				Total
	MD 118 Northbound					MD 118 Southbound					N/A Eastbound					Leaman Farm Road Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45	0		32	2	0	0	4	42		0					0	0	2		6	0	88
6:45-7:00	0		30	3	0	0	4	65		0					0	0	2		7	0	111
7:00-7:15	0		47	2	1	0	5	46		0					0	0	2		2	0	104
7:15-7:30	0		44	4	0	0	5	57		2					0	0	1		3	0	114
7:30-7:45	0		55	2	0	0	3	78		0					0	0	5		2	0	145
7:45-8:00	0		82	1	0	0	4	70		0					0	0	3		3	0	163
8:00-8:15	0		93	0	0	0	6	65		0					0	0	4		2	0	170
8:15-8:30	0		79	0	0	0	8	88		0					0	0	5		10	0	190
8:30-8:45	0		69	3	0	0	6	77		0					0	0	3		16	0	174
8:45-9:00	0		84	6	0	0	10	68		0				1	0	0	8		4	0	180
9:00-9:15	0		58	4	0	0	9	61		0				0	0	0	12		10	1	154
9:15-9:30	0		62	6	2	0	10	56		1				0	0	0	6		6	0	146

Hourly Totals																					
6:30-7:30	0		153	11	1	0	18	210		2				0		0	7		18	0	420
6:45-7:45	0		176	11	1	0	17	246		2				0		0	10		14	0	477
7:00-8:00	0		228	9	1	0	17	251		2				0		0	11		10	0	529
7:15-8:15	0		274	7	0	0	18	270		2				0		0	13		10	0	594
7:30-8:30	0		309	3	0	0	21	301		0				0		0	17		17	0	668
7:45-8:45	0		323	4	0	0	24	300		0				0		0	15		31	0	697
8:00-9:00	0		325	9	0	0	30	298		0				1		0	20		32	0	715
8:15-9:15	0		290	13	0	0	33	294		0				1		0	28		40	1	700
8:30-9:30	0		273	19	2	0	35	262		1				1		0	29		36	1	659

AM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
8:00-9:00	0		325	9	0	0	30	298		1				1		0	20		32	1	715

	Weekday Evening Peak Hour (4 pm - 7 pm)																					
	MD 118 Northbound					MD 118 Southbound					N/A Eastbound					Leaman Farm Road Westbound					Total	
	Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right		Peds
4:00-4:15	0			81	9	0	1	7		85		0				0	0	4		18		0
4:15-4:30	0			76	11	0	0	10		104		0				0	0	14		20	2	235
4:30-4:45	0			111	15	0	1	9		106		0				0	0	10		15	0	267
4:45-5:00	0			94	12	0	1	21		102		0				0	0	17		21	0	268
5:00-5:15	0			99	12	0	0	17		93		1				0	0	20		20	0	261
5:15-5:30	0			93	9	0	0	21		96		0				2	0	11		27	0	257
5:30-5:45	0			106	13	0	0	21		102		1				0	0	9		22	2	273
5:45-6:00	0			78	10	0	0	17		97		1				0	0	16		17	3	235
6:00-6:15	0			76	19	0	0	15		85		0				0	0	19		28	0	242
6:15-6:30	0			101	17	0	0	21		82		0				0	0	10		21	0	252
6:30-6:45	0			75	4	0	1	28		95		0				0	0	10		20	0	233
6:45-7:00	1			65	9	0	1	11		102		0				0	0	15		24	0	228

Hourly Totals																					
4:00-5:00	0		362	47	0	3	47	397		0				0		0	45		74	2	977
4:15-5:15	0		380	50	0	2	57	405		1				0		0	61		76	2	1034
4:30-5:30	0		397	48	0	2	68	397		1				2		0	58		83	0	1056
4:45-5:45	0		392	46	0	1	80	393		2				2		0	57		90	2	1065
5:00-6:00	0		376	44	0	0	76	388		3				2		0	56		86	5	1036
5:15-6:15	0		353	51	0	0	74	380		2				2		0	55		94	5	1016
5:30-6:30	0		361	59	0	0	74	366		2				0		0	54		88	5	1009
5:45-6:45	0		330	50	0	1	81	359		1				0		0	55		86	3	966
6:00-7:00	1		317	49	0	2	75	364		0				0		0	54		93	0	955

PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:45-5:45	0		392	46	0	1	80	393		2				2		0	57		90	2	1065

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: MD 118 & Leaman Farm Road

Weather: Clear

Count by: CountCAM - ZW

Count Day/Date: Wednesday, October 7, 2020

County: Montgomery



Aerial
Diagram

Intersection: Leaman Farm Road & Prop. Site Access / Ale House Circle
(Intersection 7)

 **LENHART TRAFFIC CONSULTING, INC.**
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

County: Montgomery

Time:	Weekday Morning Peak Hour (6:30 am - 9:30 am)																				Total	
	Ale House Circle Northbound					N/A Southbound					Leaman Farm Road Eastbound					Leaman Farm Road Westbound						
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds		
6:30-6:45	0	2		5	0					0	0		6	0	0	0	0	1	6		0	20
6:45-7:00	0	4		1	0					0	0		6	1	0	0	0	4	5		0	21
7:00-7:15	0	1		6	0					0	0		6	1	0	0	0	1	3		0	18
7:15-7:30	0	0		5	0					0	0		9	0	0	0	0	0	4		0	18
7:30-7:45	0	0		3	0					0	0		5	0	0	0	0	2	7		0	17
7:45-8:00	0	0		6	0					0	0		4	1	0	0	0	0	6		0	17
8:00-8:15	0	0		3	0					0	0		6	0	0	0	0	0	6		0	15
8:15-8:30	0	3		4	1					0	0		7	1	0	0	0	2	12		0	29
8:30-8:45	0	3		5	1					0	0		9	0	0	0	0	0	16		0	33
8:45-9:00	0	2		4	0					0	0		14	2	0	0	0	1	10		0	33
9:00-9:15	0	1		2	0					0	0		12	1	0	0	0	0	21		0	37
9:15-9:30	0	3		4	0					0	0		15	1	0	0	0	1	9		0	33

Hourly Totals																				
6:30-7:30	0	7	17	0	0	0	27	2	0	0	6	18	0	77						
6:45-7:45	0	5	15	0	0	0	26	2	0	0	7	19	0	74						
7:00-8:00	0	1	20	0	0	0	24	2	0	0	3	20	0	70						
7:15-8:15	0	0	17	0	0	0	24	1	0	0	2	23	0	67						
7:30-8:30	0	3	16	1	0	0	22	2	0	0	4	31	0	79						
7:45-8:45	0	6	18	2	0	0	26	2	0	0	2	40	0	96						
8:00-9:00	0	8	16	2	0	0	36	3	0	0	3	44	0	112						
8:15-9:15	0	9	15	2	0	0	42	4	0	0	3	59	0	134						
8:30-9:30	0	9	15	1	0	0	50	4	0	0	2	56	0	137						

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
8:30-9:30	0	9		15	1					0	0		50	4	0	0	2	56		0	137

Time:	Weekday Evening Peak Hour (4 pm - 7 pm)																			Total	
	Ale House Circle Northbound					N/A Southbound					Leaman Farm Road Eastbound					Leaman Farm Road Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right		Peds
4:00-4:15	0	2		3	0					0	0		15	1	0	0	3	20		0	44
4:15-4:30	0	3		2	3					3	0		21	0	0	0	1	31		0	58
4:30-4:45	0	0		1	1					0	0		24	0	1	0	6	25		0	56
4:45-5:00	0	1		5	0					2	0		29	4	0	0	7	37		0	83
5:00-5:15	0	2		4	0					0	0		28	1	0	0	4	38		0	77
5:15-5:30	0	1		1	2					1	0		26	4	0	0	6	37		0	75
5:30-5:45	0	1		3	4					0	0		31	3	0	0	6	30		0	74
5:45-6:00	0	1		4	1					0	0		24	3	0	0	7	32		0	71
6:00-6:15	0	3		3	0					0	0		30	4	0	0	7	44		0	91
6:15-6:30	0	1		3	0					0	0		36	2	0	0	3	30		0	75
6:30-6:45	0	1		1	1					0	0		27	5	1	0	6	29		0	69
6:45-7:00	0	5		3	0					0	0		20	0	0	0	12	34		0	74

Hourly Totals																															
4:00-5:00	0	6	11	4	5	0	89	5	1	0	17	113	0	251																	
4:15-5:15	0	6	12	4	5	0	102	5	1	0	18	131	0	284																	
4:30-5:30	0	4	11	3	3	0	107	9	1	0	23	137	0	298																	
4:45-5:45	0	5	13	6	3	0	114	12	0	0	23	142	0	318																	
5:00-6:00	0	5	12	7	1	0	109	11	0	0	23	137	0	305																	
5:15-6:15	0	6	11	7	1	0	111	14	0	0	26	143	0	319																	
5:30-6:30	0	6	13	5	0	0	121	12	0	0	23	136	0	316																	
5:45-6:45	0	6	11	2	0	0	117	14	1	0	23	135	0	309																	
6:00-7:00	0	10	10	1	0	0	113	11	1	0	28	137	0	311																	

PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
5:15-6:15	0	6		11	7					1	0		111	14	0	0	26	143		1	319

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: Ale House Circle & Leaman Farm Road

Weather: Clear

Count by: CountCAM - ZW

Count Day/Date: Wednesday, October 7, 2020

County: Montgomery



Aerial
Diagram

Intersection: Leaman Farm Road & Kingsview Village Avenue
(Intersection 8)



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

County: Montgomery

Time:	Weekday Morning Peak Hour (6:30 am - 9:30 am)																				Total
	N/A Northbound					Kingsview Village Avenue Southbound					Leaman Farm Road Eastbound					Leaman Farm Road Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:30-6:45					0	0	4		1	0	0	2	9		0	0		6	5	0	27
6:45-7:00					0	0	3		4	0	0	2	5		0	0		5	4	0	23
7:00-7:15					0	0	6		1	1	0	4	8		0	0		3	3	0	25
7:15-7:30					0	0	4		1	0	0	4	10		0	0		3	2	0	24
7:30-7:45					0	0	7		4	0	0	5	3		0	0		5	2	0	26
7:45-8:00					0	0	6		2	3	0	7	3		0	0		4	7	0	29
8:00-8:15					0	0	3		4	2	0	6	3		0	0		2	5	0	23
8:15-8:30					0	0	9		3	0	0	4	7		2	0		11	3	0	37
8:30-8:45					0	0	4		5	1	0	8	6		1	0		11	8	0	42
8:45-9:00					0	0	4		6	0	0	3	15		0	0		5	7	0	40
9:00-9:15					0	0	3		6	1	0	7	7		0	0		15	3	1	41
9:15-9:30					0	0	7		1	2	0	6	13		2	0		9	5	0	41

Hourly Totals																					
6:30-7:30					0	0	17		7	1	0	12	32		0	0		17	14	0	100
6:45-7:45					0	0	20		10	1	0	15	26		0	0		16	11	0	99
7:00-8:00					0	0	23		8	4	0	20	24		0	0		15	14	0	108
7:15-8:15					0	0	20		11	5	0	22	19		0	0		14	16	0	107
7:30-8:30					0	0	25		13	5	0	22	16		2	0		22	17	0	122
7:45-8:45					0	0	22		14	6	0	25	19		3	0		28	23	0	140
8:00-9:00					0	0	20		18	3	0	21	31		3	0		29	23	0	148
8:15-9:15					0	0	20		20	2	0	22	35		3	0		42	21	1	166
8:30-9:30					0	0	18		18	4	0	24	41		3	0		40	23	1	172

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
8:30-9:30					0	0	18		18	3	0	24	41		3	0		40	23	3	172

Time:	Weekday Evening Peak Hour (4 pm - 7 pm)																			Total	
	N/A Northbound					Kingsview Village Avenue Southbound					Leaman Farm Road Eastbound					Leaman Farm Road Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right		Peds
4:00-4:15					0	0	5		7	0	0	5	13		0	0		16	11	0	57
4:15-4:30					0	0	6		3	8	0	3	20		1	0		29	6	0	67
4:30-4:45					0	0	6		8	0	0	4	21		1	0		23	12	0	74
4:45-5:00					0	0	5		7	3	0	8	26		0	0		37	8	0	91
5:00-5:15					0	0	9		5	2	0	5	27		0	0		37	7	0	90
5:15-5:30					0	0	0		5	0	0	6	21		0	0		38	9	0	79
5:30-5:45					0	0	9		6	7	0	8	26		0	0		30	11	0	90
5:45-6:00					0	0	4		11	4	0	6	22		0	0		28	19	0	90
6:00-6:15					0	0	5		13	0	0	8	25		0	0		38	13	0	102
6:15-6:30					0	0	6		6	6	0	6	33		1	0		27	16	0	94
6:30-6:45					0	0	8		7	4	0	10	18		0	0		28	7	0	78
6:45-7:00					0	0	6		4	2	0	5	18		0	0		42	7	0	82

Hourly Totals																					
4:00-5:00					0	0	22		25	11	0	20	80		2	0		105	37	0	302
4:15-5:15					0	0	26		23	13	0	20	94		2	0		126	33	0	337
4:30-5:30					0	0	20		25	5	0	23	95		1	0		135	36	0	340
4:45-5:45					0	0	23		23	12	0	27	100		0	0		142	35	0	362
5:00-6:00					0	0	22		27	13	0	25	96		0	0		133	46	0	362
5:15-6:15					0	0	18		35	11	0	28	94		0	0		134	52	0	372
5:30-6:30					0	0	24		36	17	0	28	106		1	0		123	59	0	394
5:45-6:45					0	0	23		37	14	0	30	98		1	0		121	55	0	379
6:00-7:00					0	0	25		30	12	0	29	94		1	0		135	43	0	369

PM																								
Northbound						Southbound						Eastbound						Westbound						Total
U-Turn	Left	Thru	Right	Peds		U-Turn	Left	Thru	Right	Peds		U-Turn	Left	Thru	Right	Peds		U-Turn	Left	Thru	Right	Peds		
Peak Hour																								
5:30-6:30					0		0	24		36	17		0	28	106		1		0		123	59	17	394

Peak Hour
Turning Movement Count



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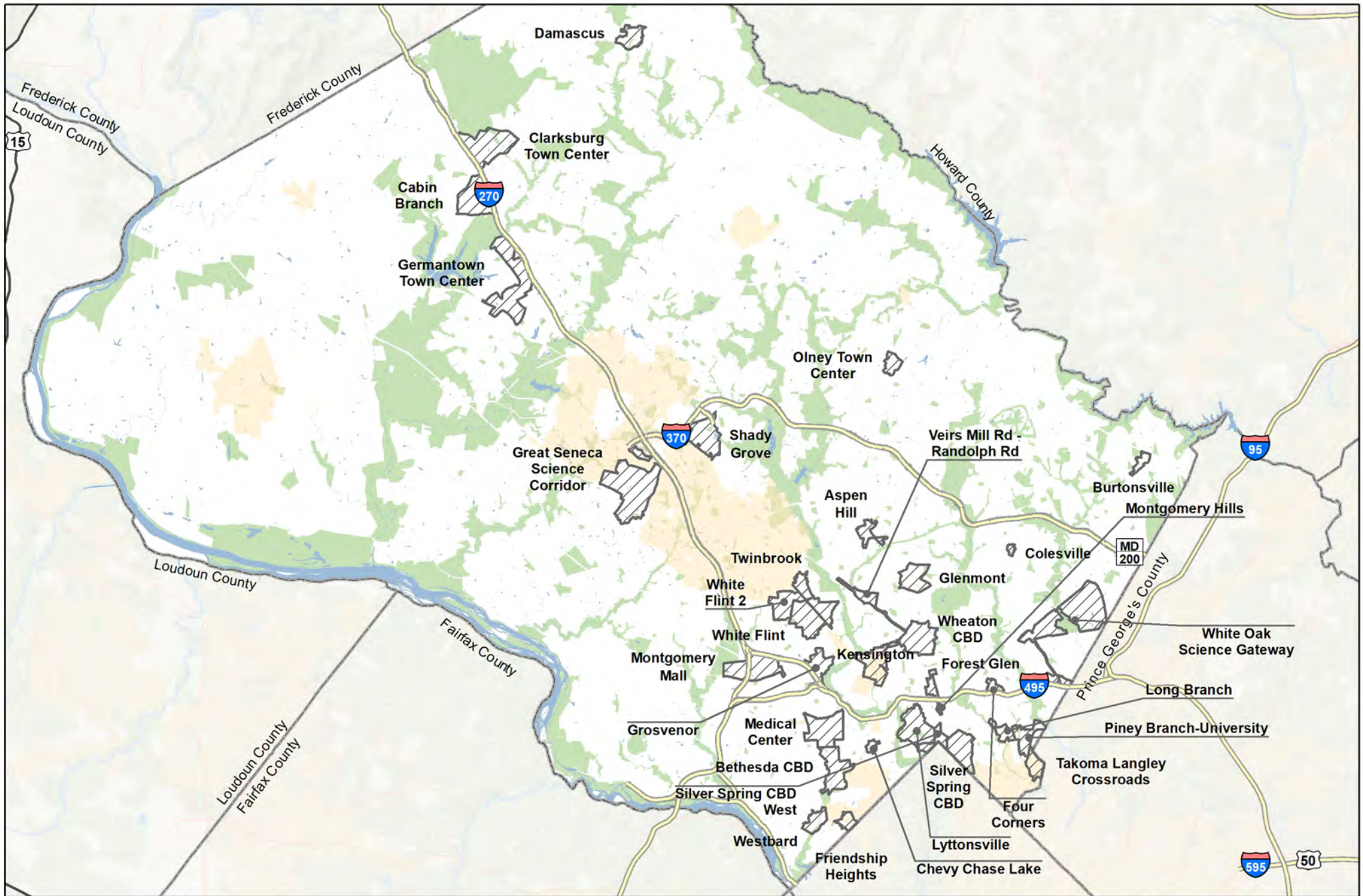
Intersection: Kingsview Village Avenue & Leaman Farm Road

Weather: Clear

Count by: CountCAM - ZW

Count Day/Date: Wednesday, October 7, 2020

County: Montgomery



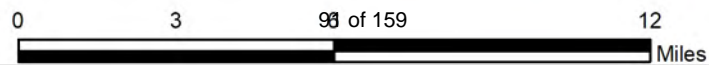
BICYCLE PEDESTRIAN PRIORITY AREAS



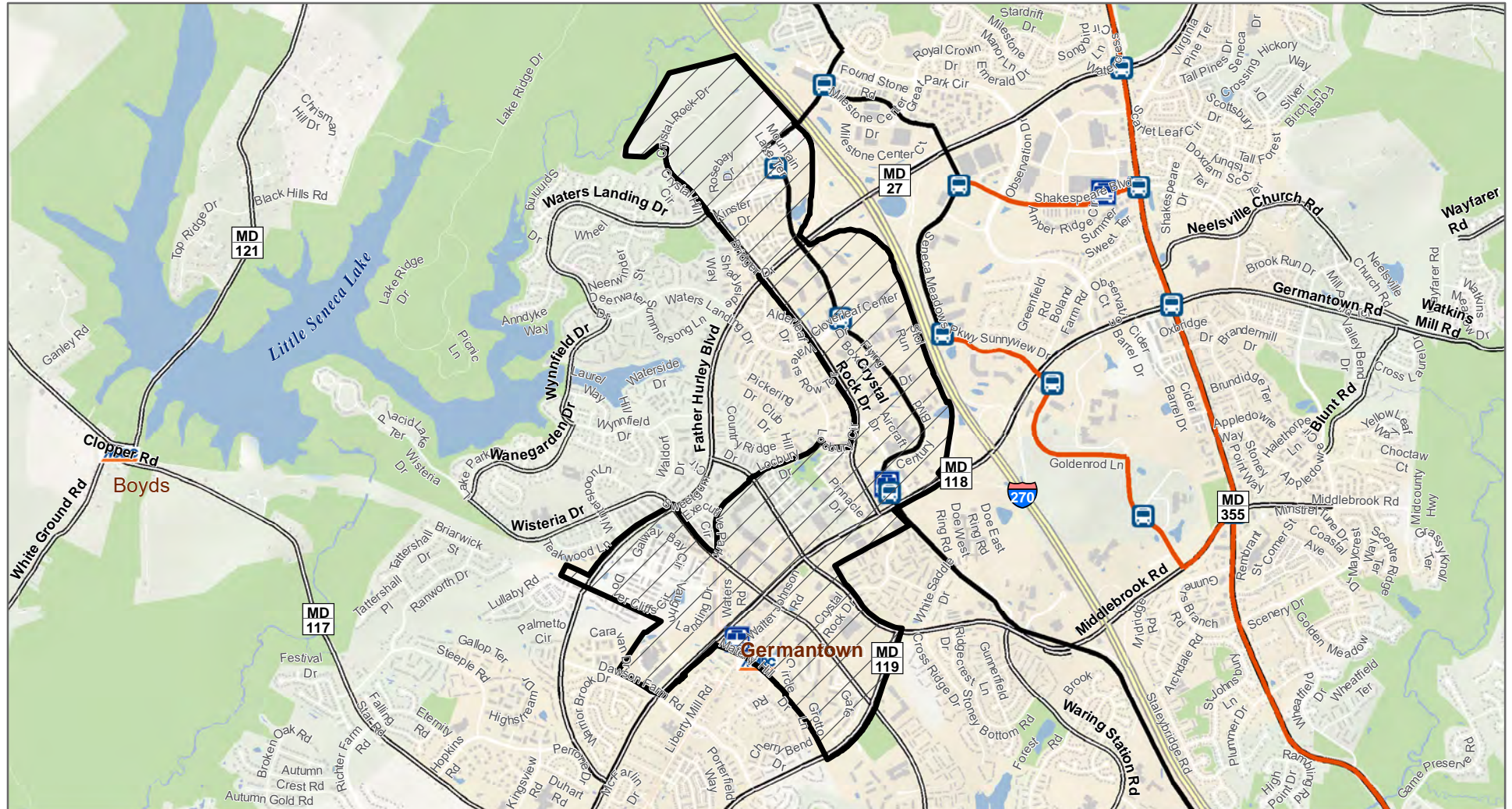
MUNICIPALITIES



PARKS



Germantown Town Center



Bicycle Pedestrian Priority Areas

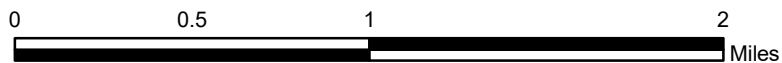
Planned Transit Corridor

- Corridor 3 (MD 355 North)
- Corridor Cities Transitway

Transit Station Services

- Bus Rapid Transit
- MARC
- Park and Ride Lots

1 inch = 2,863 feet



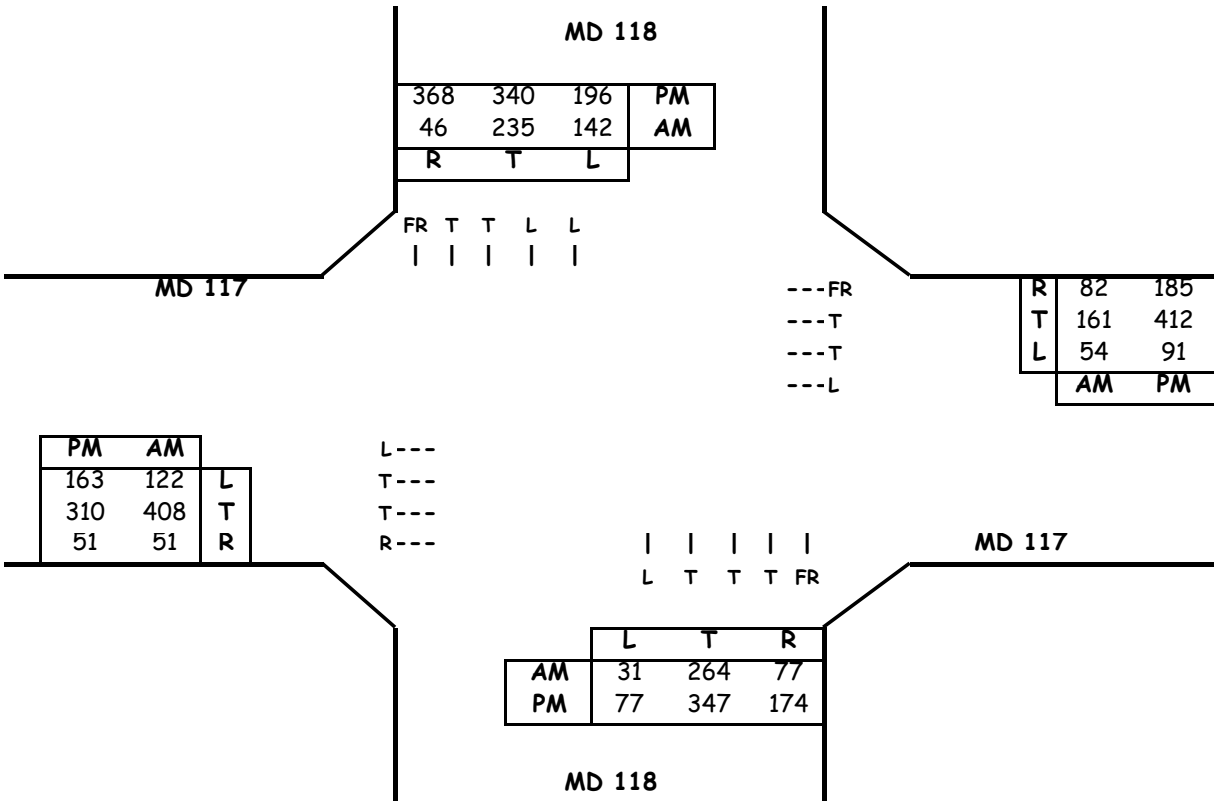
Appendix B

Motor Vehicle Adequacy Test
Critical Lane Volume (LOS) Worksheets

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: MD 118
Minor Street: MD 117
Study Period: EXISTING TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	264	0.37	98	142	0.53	75
SB	235	0.53	125	31	1	31
EB	408	0.53	216	54	1	54
WB	161	0.53	85	122	1	122
CLV TOTAL=						443
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	347	0.37	128	196	0.53	104
SB	340	0.53	180	77	1	77
EB	310	0.53	164	91	1	91
WB	412	0.53	218	163	1	163
CLV TOTAL=						638
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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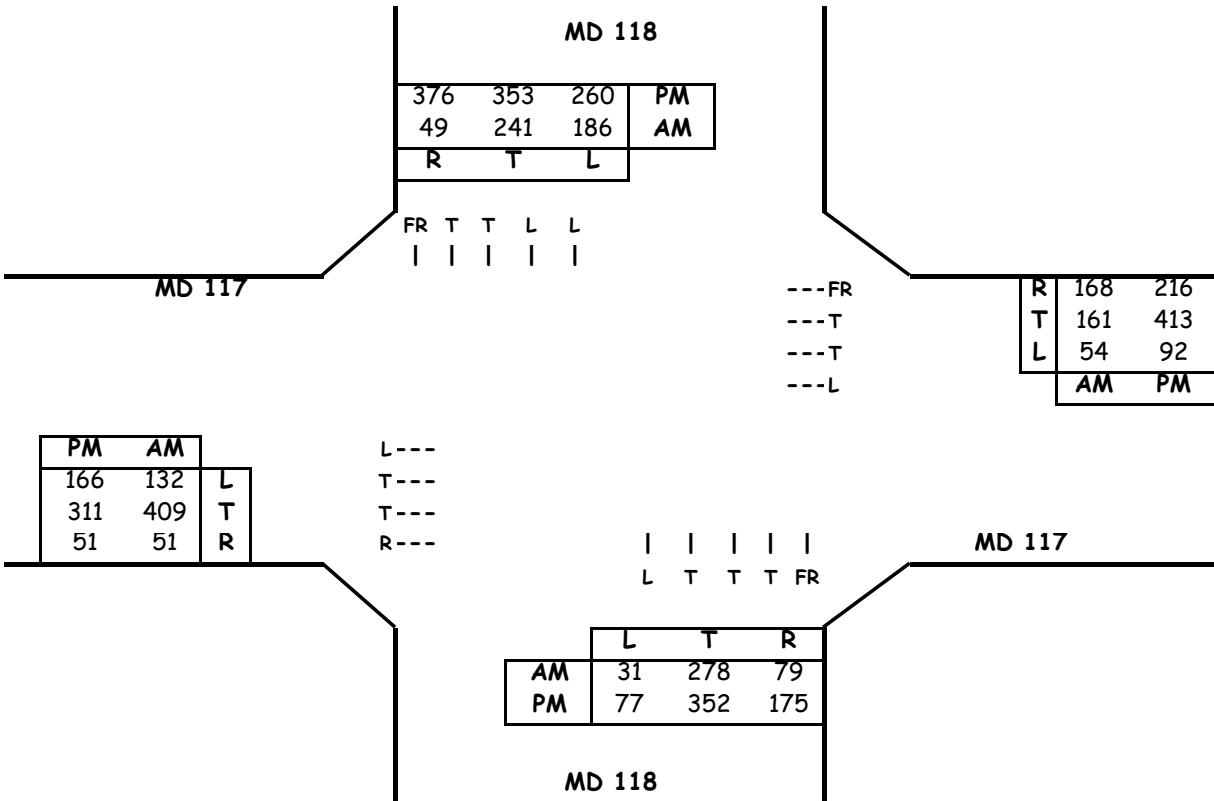
**MD 118 &
MD 117**
(EXISTING TRAFFIC)

**Intersection
1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: MD 118
Minor Street: MD 117
Study Period: BACKGROUND TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	278	0.37	103	186	0.53	99
SB	241	0.53	128	31	1	31
EB	409	0.53	217	54	1	54
WB	161	0.53	85	132	1	132
CLV TOTAL=						473
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	352	0.37	130	260	0.53	138
SB	353	0.53	187	77	1	77
EB	311	0.53	165	92	1	92
WB	413	0.53	219	166	1	166
CLV TOTAL=						653
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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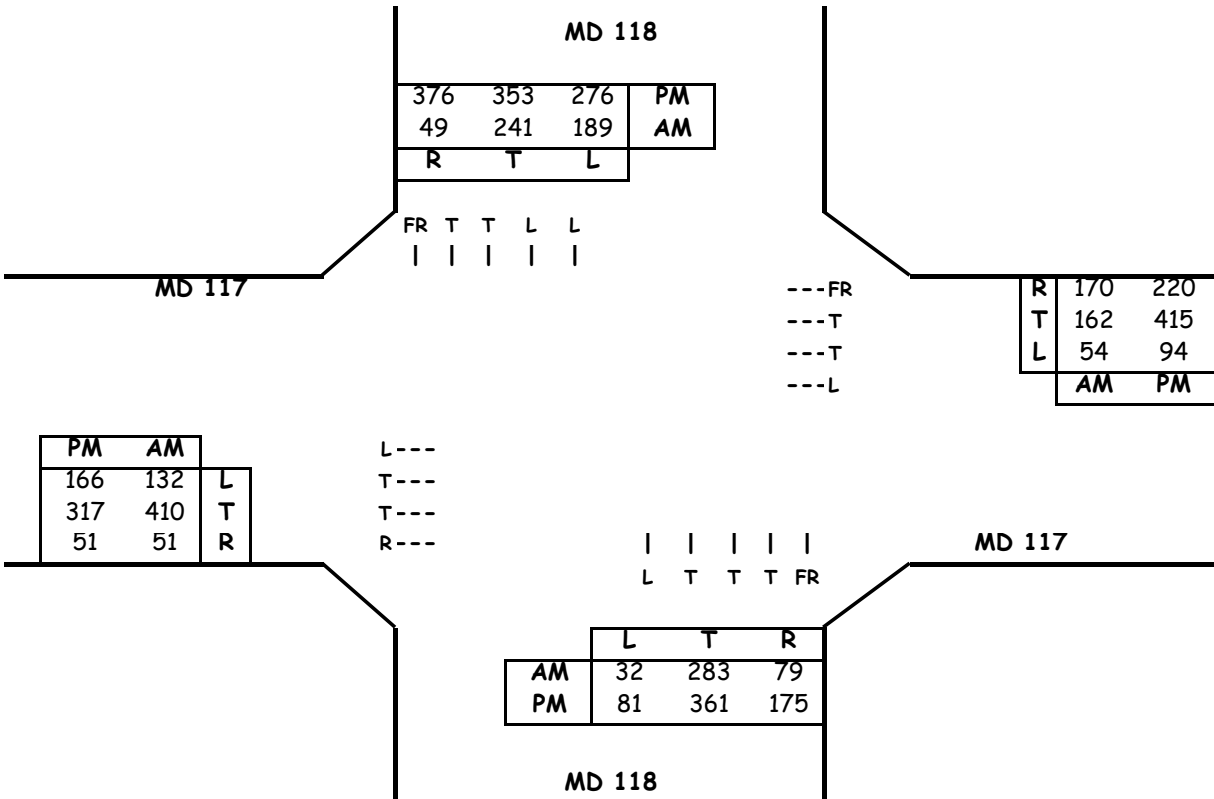
**MD 118 &
MD 117**
(BACKGROUND TRAFFIC)

**Intersection
1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: MD 118
Minor Street: MD 117
Study Period: TOTAL TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	283	0.37	105	189	0.53	100
SB	241	0.53	128	32	1	32
EB	410	0.53	217	54	1	54
WB	162	0.53	86	132	1	132
CLV TOTAL=						476
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	361	0.37	134	276	0.53	146
SB	353	0.53	187	81	1	81
EB	317	0.53	168	94	1	94
WB	415	0.53	220	166	1	166
CLV TOTAL=						666
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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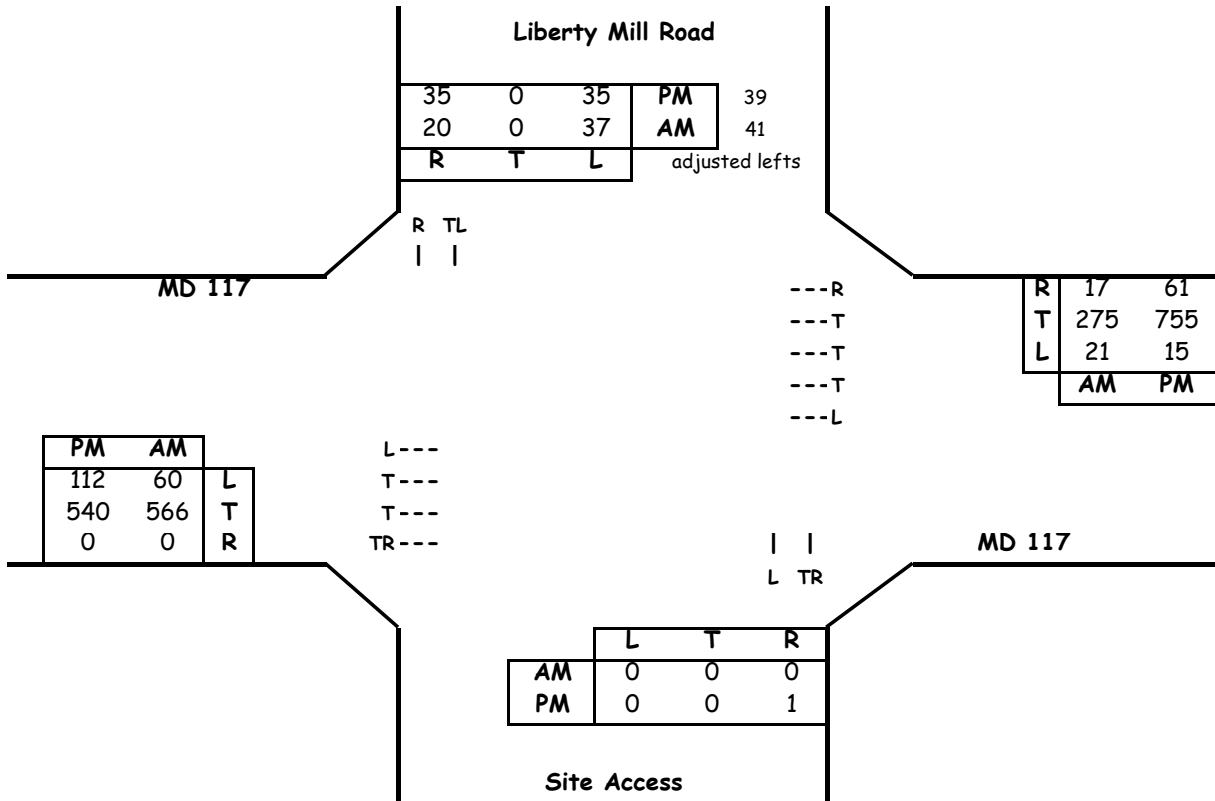
**MD 118 &
MD 117
(TOTAL TRAFFIC)**

**Intersection
1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: MD 117
Minor Street: Site Access
Study Period: EXISTING TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	0	1.00	0	37	1	37
SB	41	1.00	41	0	1	0
EB	566	0.37	209	21	1	21
WB	275	0.37	102	60	1	60
CLV TOTAL=						271
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	1	1.00	1	35	1	35
SB	39	1.00	39	0	1	0
EB	540	0.37	200	15	1	15
WB	755	0.37	279	112	1	112
CLV TOTAL=						430
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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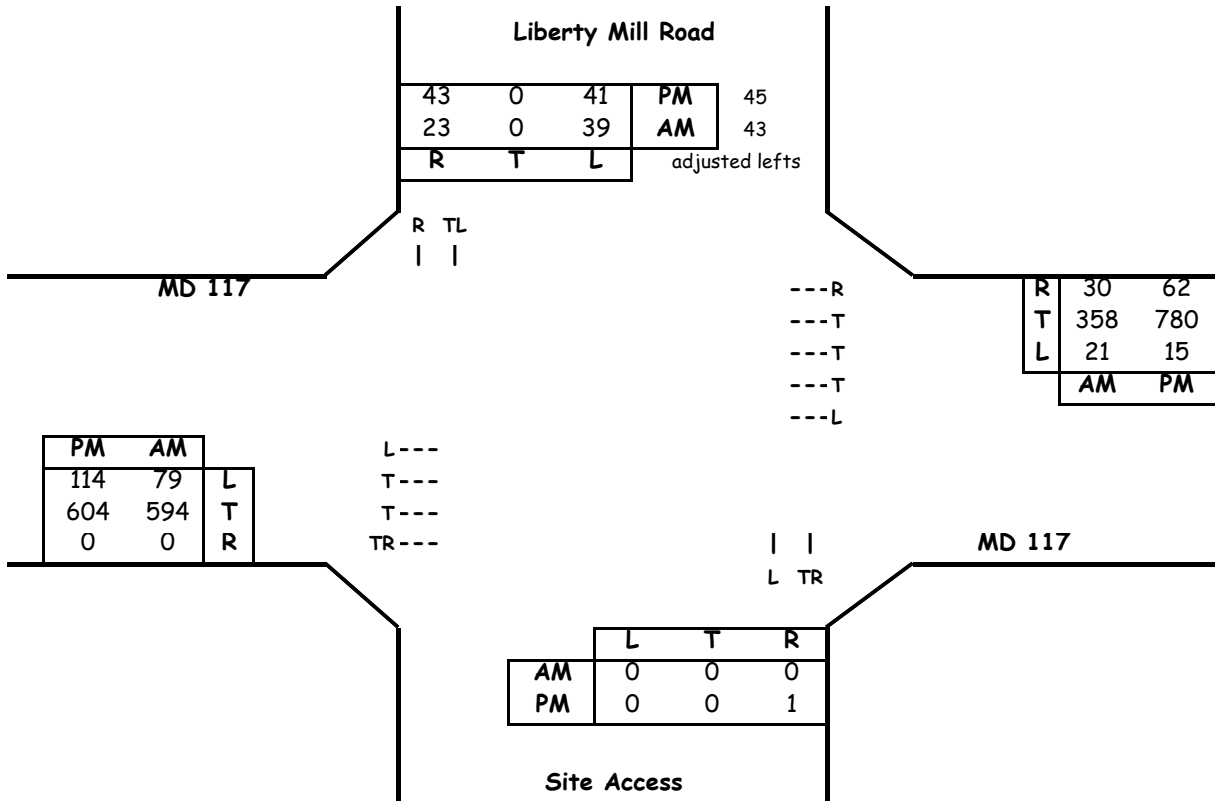
**MD 117 &
Site Access**
(EXISTING TRAFFIC)

**Intersection
2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: MD 117
Minor Street: Site Access
Study Period: BACKGROUND TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	0	1.00	0	39	1	39
SB	43	1.00	43	0	1	0
EB	594	0.37	220	21	1	21
WB	358	0.37	132	79	1	79
CLV TOTAL=						284
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	1	1.00	1	41	1	41
SB	45	1.00	45	0	1	0
EB	604	0.37	223	15	1	15
WB	780	0.37	289	114	1	114
CLV TOTAL=						448
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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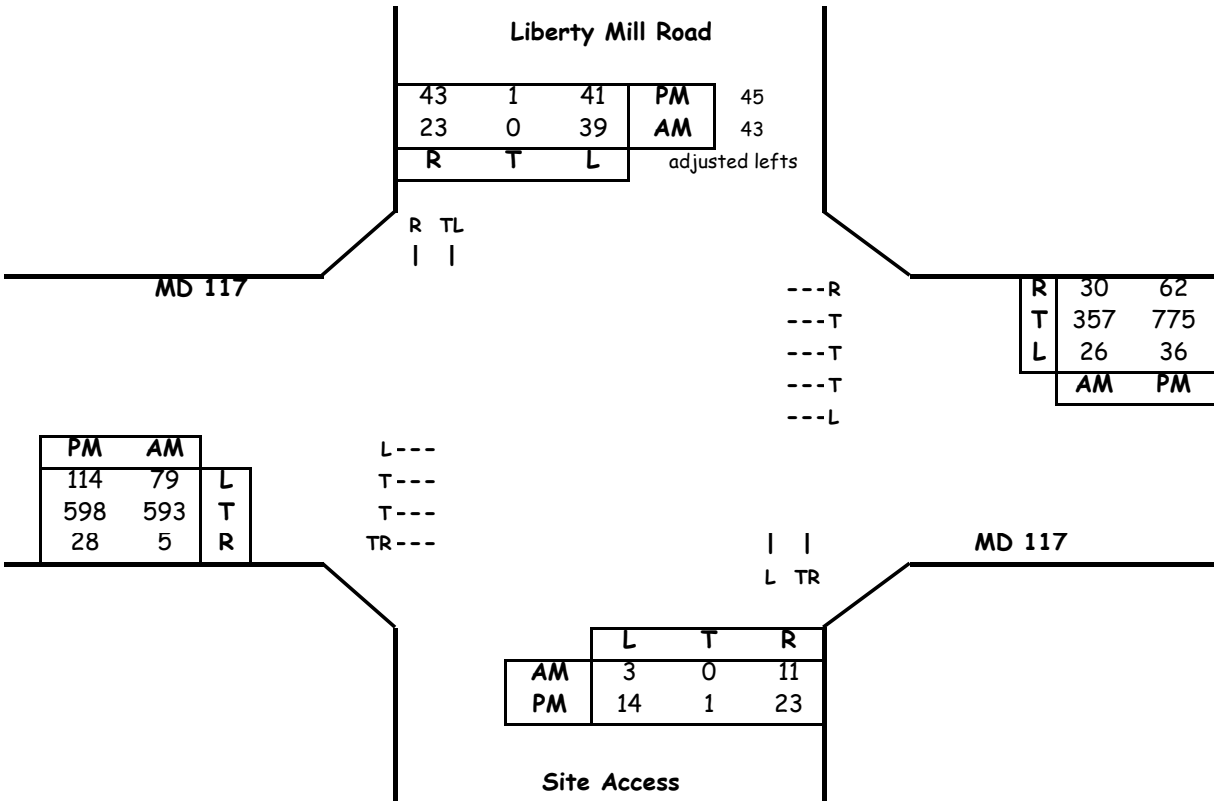
**MD 117 &
Site Access**
(BACKGROUND TRAFFIC)

**Intersection
2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: MD 117
Minor Street: Site Access
Study Period: TOTAL TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	11	1.00	11	39	1	39
SB	43	1.00	43	3	1	3
EB	598	0.37	221	26	1	26
WB	357	0.37	132	79	1	79
CLV TOTAL=						297
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	24	1.00	24	41	1	41
SB	46	1.00	46	14	1	14
EB	626	0.37	232	36	1	36
WB	775	0.37	287	114	1	114
CLV TOTAL=						466
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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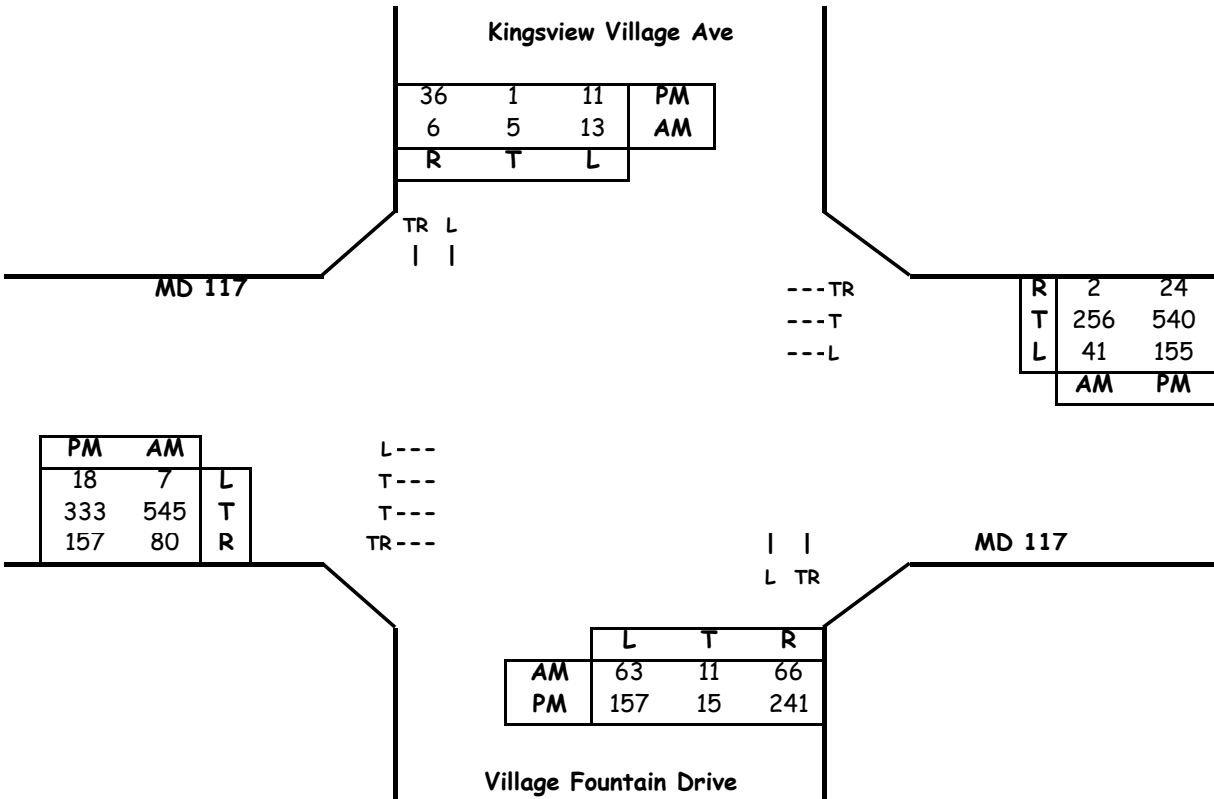
**MD 117 &
 Site Access
 (TOTAL TRAFFIC)**

**Intersection
 2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: Kingsview Village Ave
Minor Street: MD 117
Study Period: EXISTING TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	77	1.00	77	13	1	13
SB	11	1.00	11	63	1	63
EB	625	0.37	231	41	1	41
WB	258	0.53	137	7	1	7
CLV TOTAL=						362
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	256	1.00	256	11	1	11
SB	37	1.00	37	157	1	157
EB	490	0.37	181	155	1	155
WB	564	0.53	299	18	1	18
CLV TOTAL=						603
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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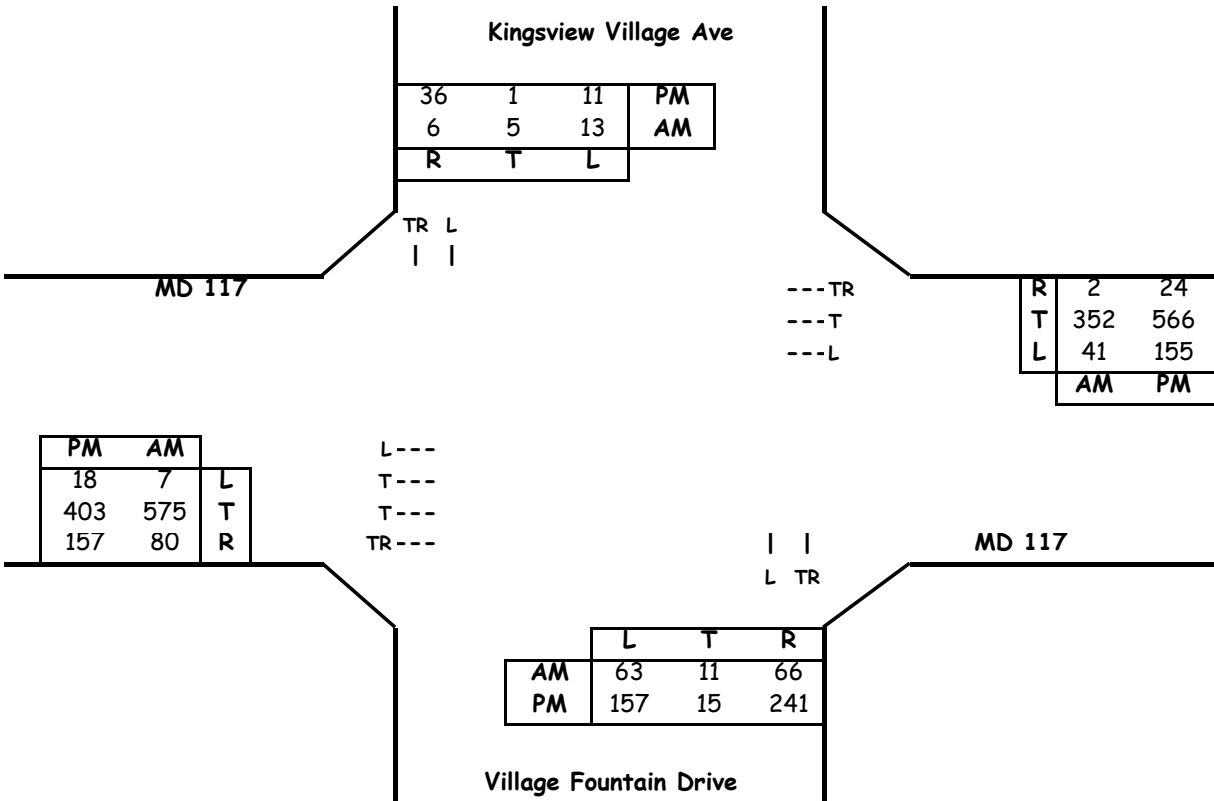
Kingsview Village Ave &
MD 117
(EXISTING TRAFFIC)

**Intersection
3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: Kingsview Village Ave
Minor Street: MD 117
Study Period: BACKGROUND TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	77	1.00	77	13	1	13
SB	11	1.00	11	63	1	63
EB	655	0.37	242	41	1	41
WB	354	0.53	188	7	1	7
CLV TOTAL=						373
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	256	1.00	256	11	1	11
SB	37	1.00	37	157	1	157
EB	560	0.37	207	155	1	155
WB	590	0.53	313	18	1	18
CLV TOTAL=						629
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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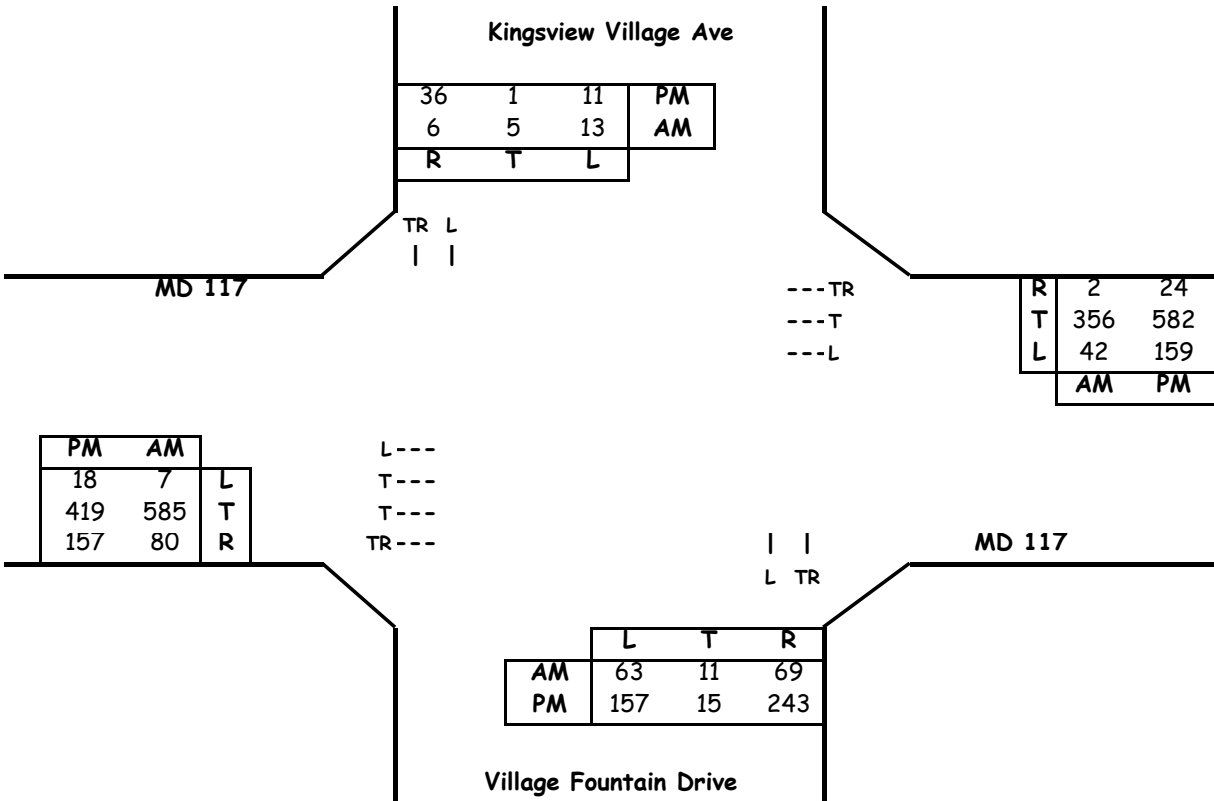
**Kingsview Village Ave &
MD 117**
 (BACKGROUND TRAFFIC)

**Intersection
3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: Kingsview Village Ave
Minor Street: MD 117
Study Period: TOTAL TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	80	1.00	80	13	1	13
SB	11	1.00	11	63	1	63
EB	665	0.37	246	42	1	42
WB	358	0.53	190	7	1	7
CLV TOTAL=						381
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	258	1.00	258	11	1	11
SB	37	1.00	37	157	1	157
EB	576	0.37	213	159	1	159
WB	606	0.53	321	18	1	18
CLV TOTAL=						641
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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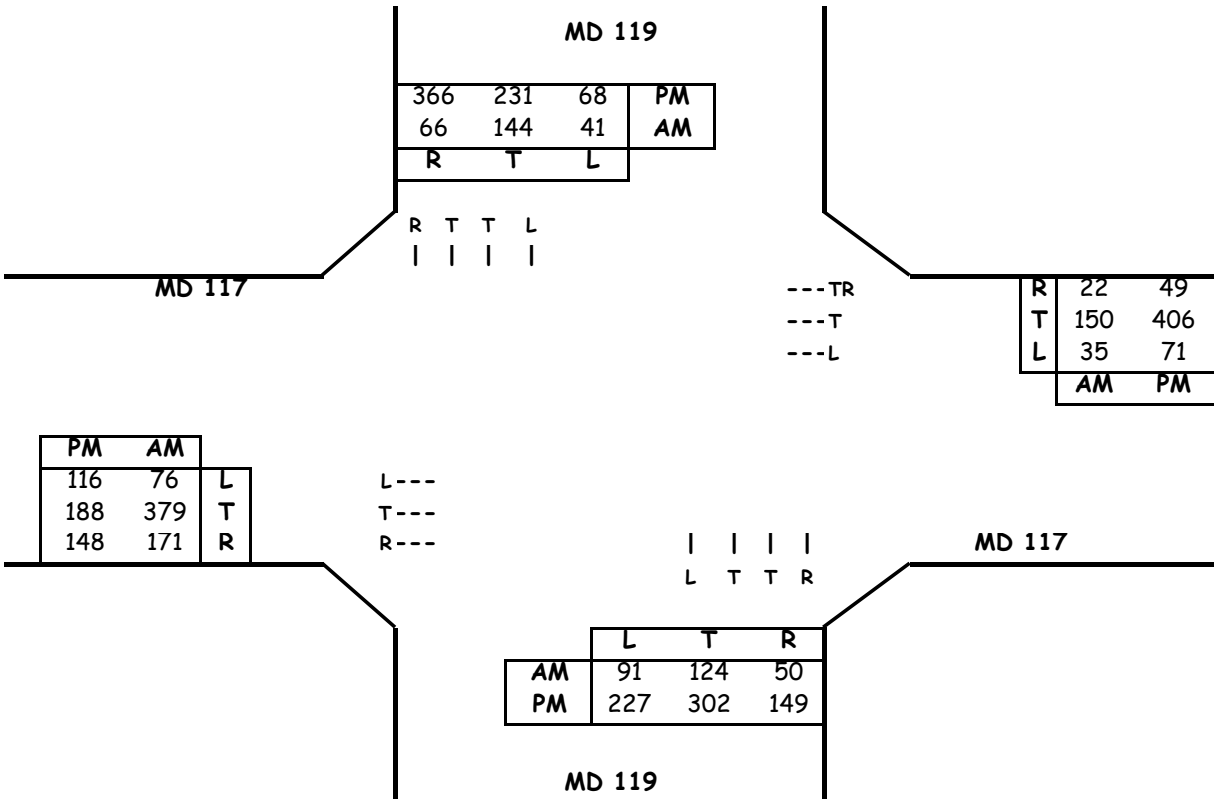
**Kingsview Village Ave &
MD 117
(TOTAL TRAFFIC)**

**Intersection
3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: MD 119
Minor Street: MD 117
Study Period: EXISTING TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	124	0.53	66	41	1	41
SB	144	0.53	76	91	1	91
EB	379	1	379	35	1	35
WB	172	0.53	91	76	1	76
CLV TOTAL=						581
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	302	0.53	160	68	1	68
SB	250	1.00	250	227	1	227
EB	188	1	188	71	1	71
WB	455	0.53	241	116	1	116
CLV TOTAL=						834
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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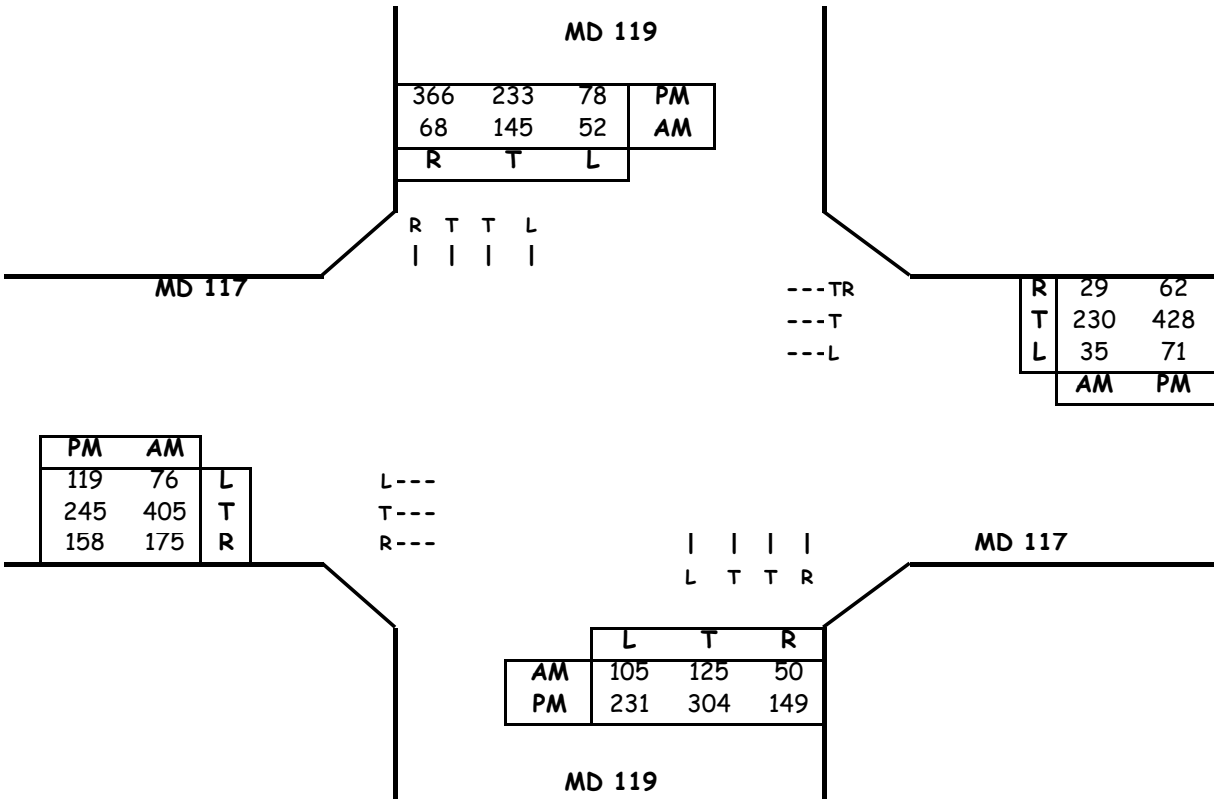
**MD 119 &
MD 117**
(EXISTING TRAFFIC)

**Intersection
4**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: MD 119
Minor Street: MD 117
Study Period: BACKGROUND TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	125	0.53	66	52	1	52
SB	145	0.53	77	105	1	105
EB	405	1	405	35	1	35
WB	259	0.53	137	76	1	76
CLV TOTAL=						622
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	304	0.53	161	78	1	78
SB	247	1.00	247	231	1	231
EB	245	1	245	71	1	71
WB	490	0.53	260	119	1	119
CLV TOTAL=						857
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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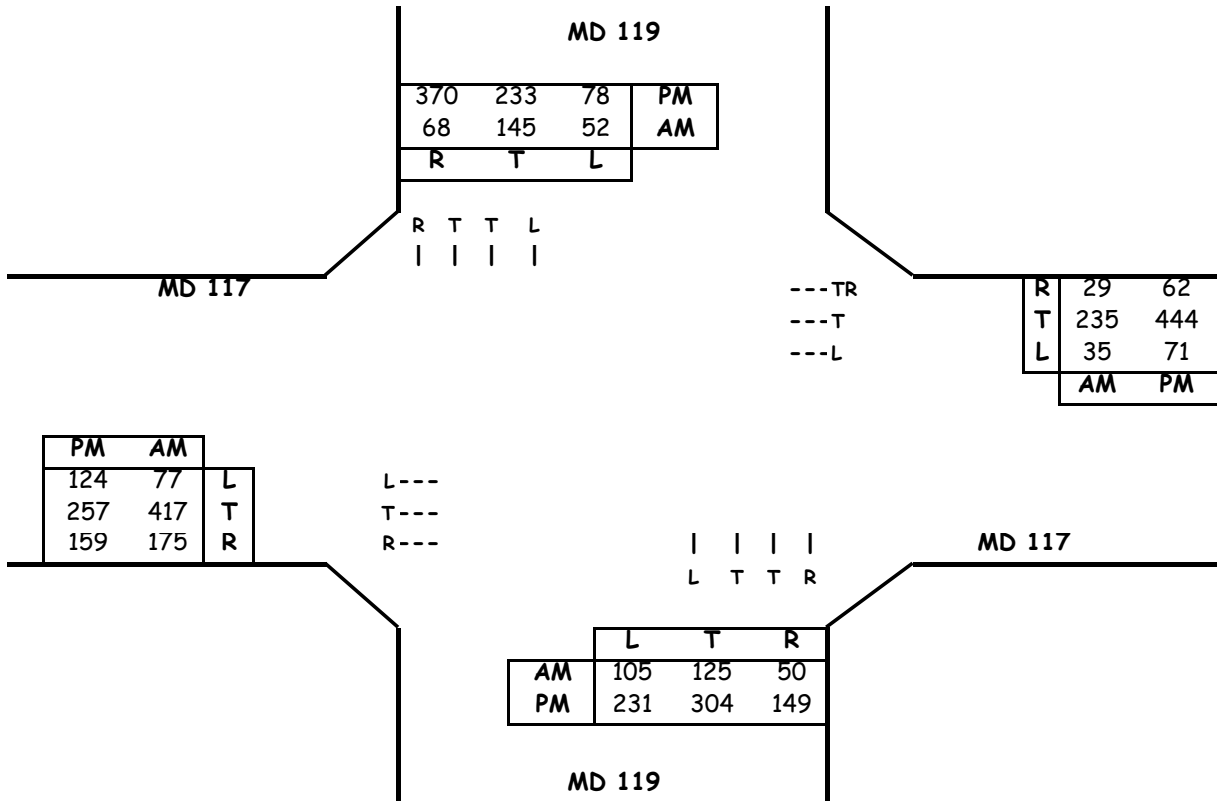
**MD 119 &
MD 117**
(BACKGROUND TRAFFIC)

**Intersection
4**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: MD 119
Minor Street: MD 117
Study Period: TOTAL TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	125	0.53	66	52	1	52
SB	145	0.53	77	105	1	105
EB	417	1	417	35	1	35
WB	264	0.53	140	77	1	77
CLV TOTAL=						634
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	304	0.53	161	78	1	78
SB	246	1.00	246	231	1	231
EB	257	1	257	71	1	71
WB	506	0.53	268	124	1	124
CLV TOTAL=						869
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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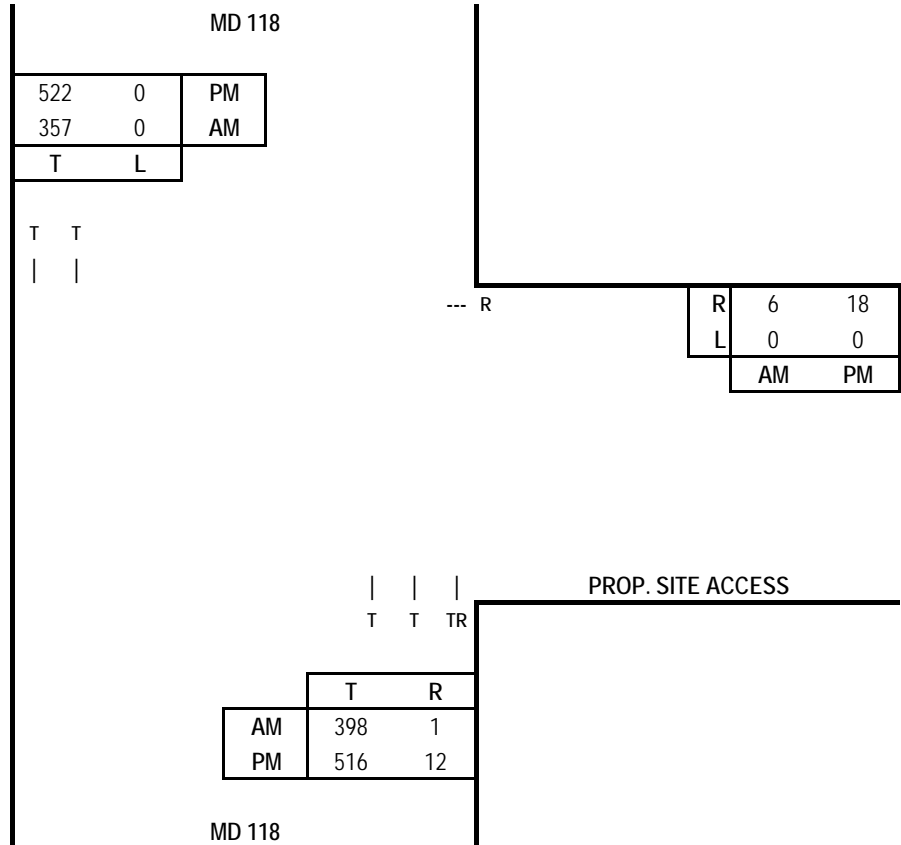
MD 119 &
MD 117
(TOTAL TRAFFIC)

Intersection
4

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 118
and: Prop. Site Access
Conditions: Total Traffic

Lane Use + Traffic Volumes



Capacity Analysis

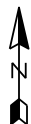
Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	6	1.00	6				6
NB	399	0.37	148	0	0.00	0	189
SB	357	0.53	189				
CLV TOTAL=							195
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	18	1.00	18				18
NB	528	0.37	195	0	0.00	0	277
SB	522	0.53	277				
CLV TOTAL=							295
Level of Service (LOS)=							A

Critical Lane Volume Analysis



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MD 118 &
Prop. Site Access
(Total Traffic)

**Intersection
5**

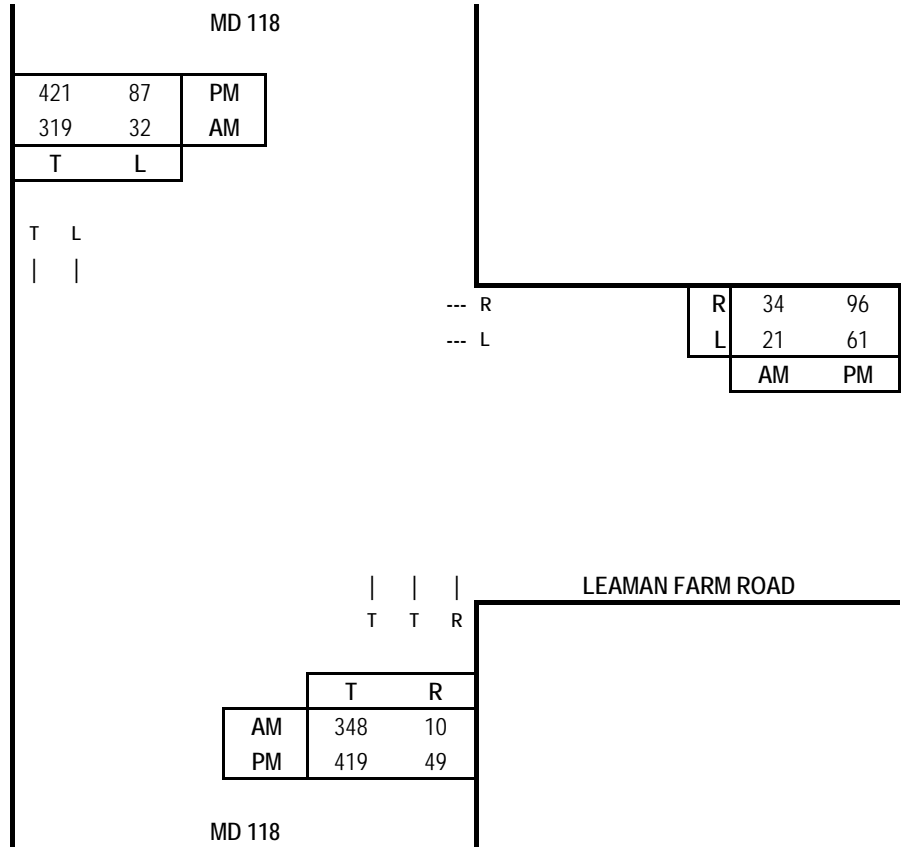
CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 118

and: Leaman Farm Road

Conditions: Existing Traffic

Lane Use + Traffic Volumes



Capacity Analysis

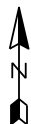
Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	21	1.00	21				21
NB	348	0.53	184	32	1.00	32	319
SB	319	1.00	319				
CLV TOTAL=							340
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	61	1.00	61				61
NB	419	0.53	222	87	1.00	87	421
SB	421	1.00	421				
CLV TOTAL=							482
Level of Service (LOS)=							A

Critical Lane Volume Analysis



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MD 118 &
Leaman Farm Road
(Existing Traffic)

**Intersection
6**

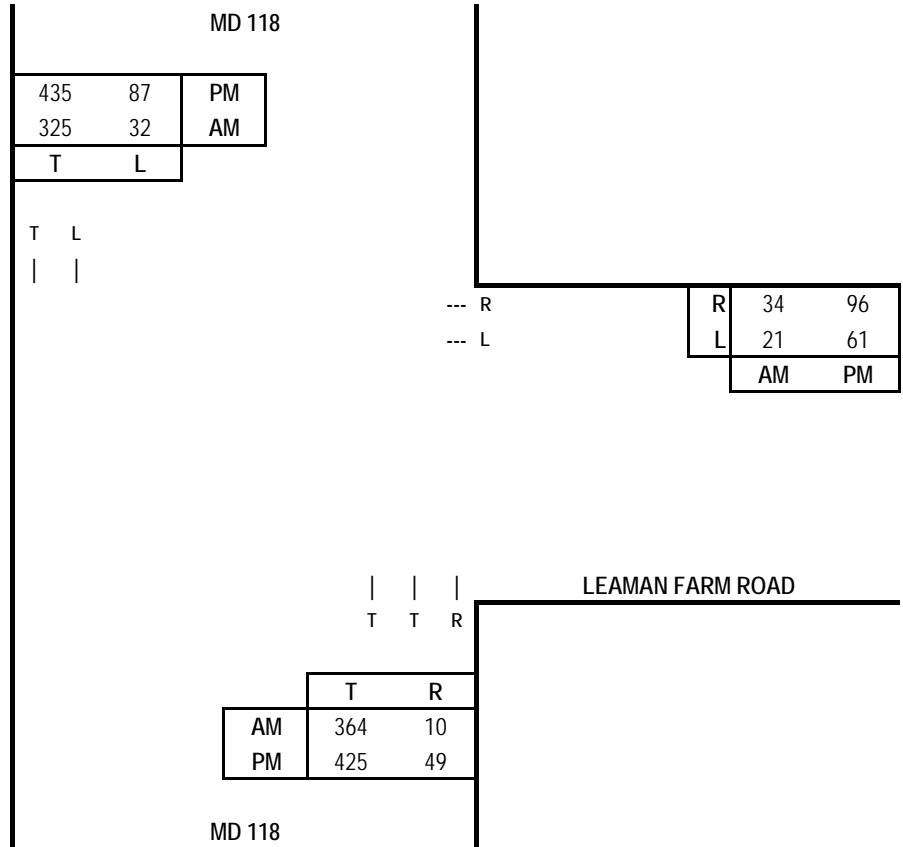
CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 118

and: Leaman Farm Road

Conditions: Background Traffic

Lane Use + Traffic Volumes



Capacity Analysis

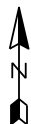
Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	21	1.00	21			
NB	364	0.53	193	32	1.00	32
SB	325	1.00	325			
CLV TOTAL=						346
Level of Service (LOS)=						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	61	1.00	61			
NB	425	0.53	225	87	1.00	87
SB	435	1.00	435			
CLV TOTAL=						496
Level of Service (LOS)=						A

Critical Lane Volume Analysis



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**MD 118 &
Leaman Farm Road
(Background Traffic)**

**Intersection
6**

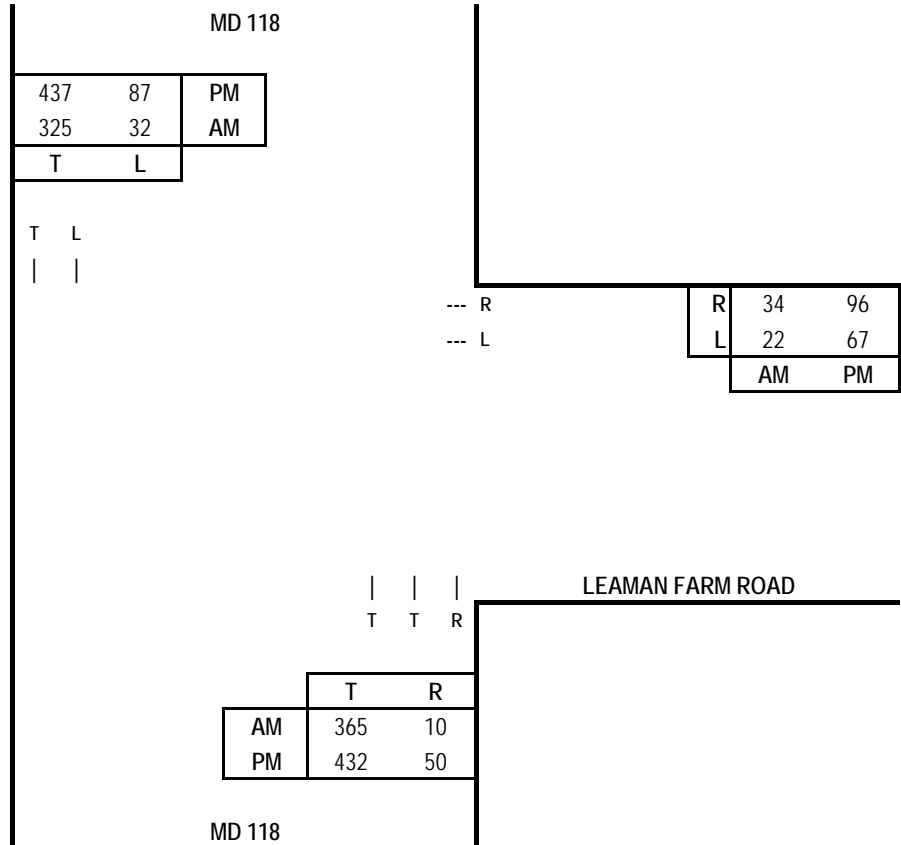
CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: MD 118

and: Leaman Farm Road

Conditions: Total Traffic

Lane Use + Traffic Volumes



Capacity Analysis

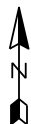
Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	22	1.00	22				22
NB	365	0.53	193	32	1.00	32	325
SB	325	1.00	325				
CLV TOTAL=							347
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	67	1.00	67				67
NB	432	0.53	229	87	1.00	87	437
SB	437	1.00	437				
CLV TOTAL=							504
Level of Service (LOS)=							A

Critical Lane Volume Analysis



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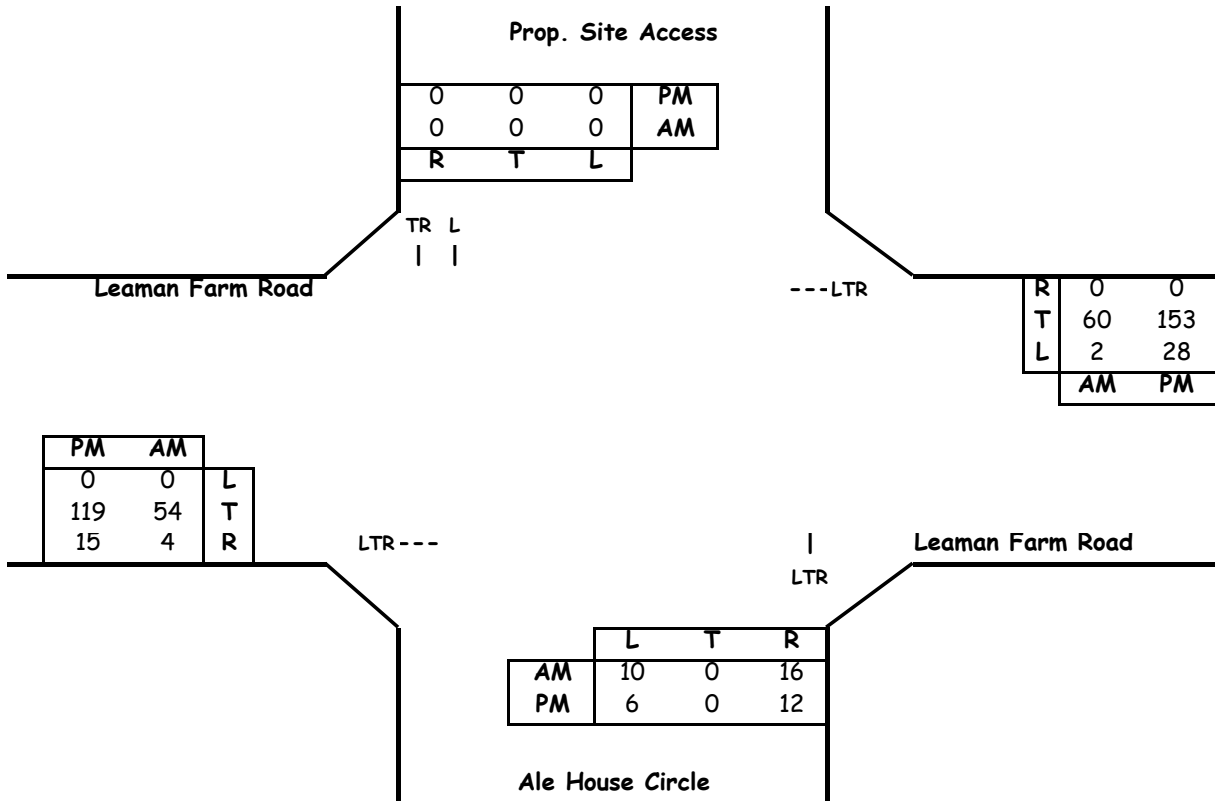
MD 118 &
Leaman Farm Road
(Total Traffic)

**Intersection
6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: Prop. Site Access
Minor Street: Leaman Farm Road
Study Period: EXISTING TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	26	1.00	26	0	1	0
SB	0	1.00	0	10	1	10
EB	58	1	58	2	1	2
WB	62	1	62	0	1	0
CLV TOTAL=						88
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	18	1.00	18	0	1	0
SB	0	1.00	0	6	1	6
EB	134	1	134	28	1	28
WB	181	1	181	0	1	0
CLV TOTAL=						199
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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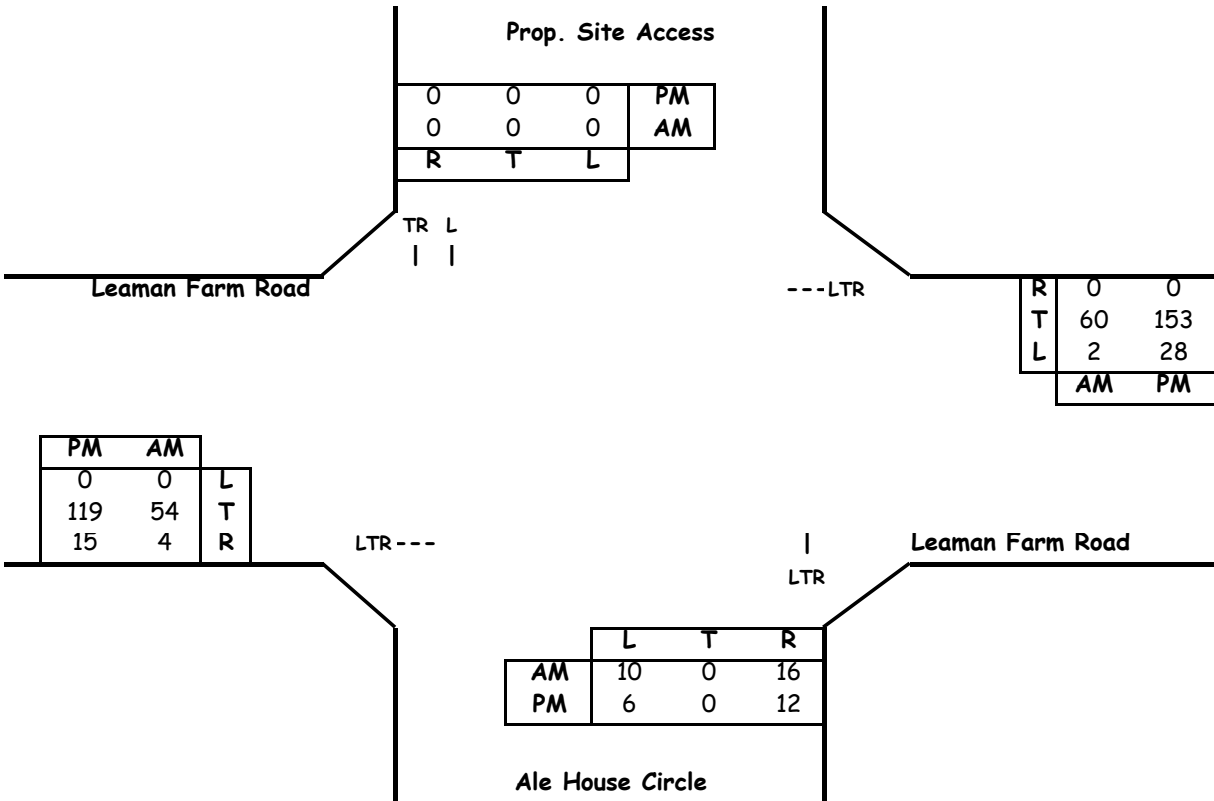
Prop. Site Access &
 Leaman Farm Road
 (EXISTING TRAFFIC)

**Intersection
7**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: Prop. Site Access
Minor Street: Leaman Farm Road
Study Period: BACKGROUND TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	26	1.00	26	0	1	0	26
SB	0	1.00	0	10	1	10	
EB	58	1	58	2	1	2	62
WB	62	1	62	0	1	0	
CLV TOTAL=							88
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF = Total		VOL	x LUF = Total		CLV
NB	18	1.00	18	0	1	0	18
SB	0	1.00	0	6	1	6	
EB	134	1	134	28	1	28	181
WB	181	1	181	0	1	0	
CLV TOTAL=							199
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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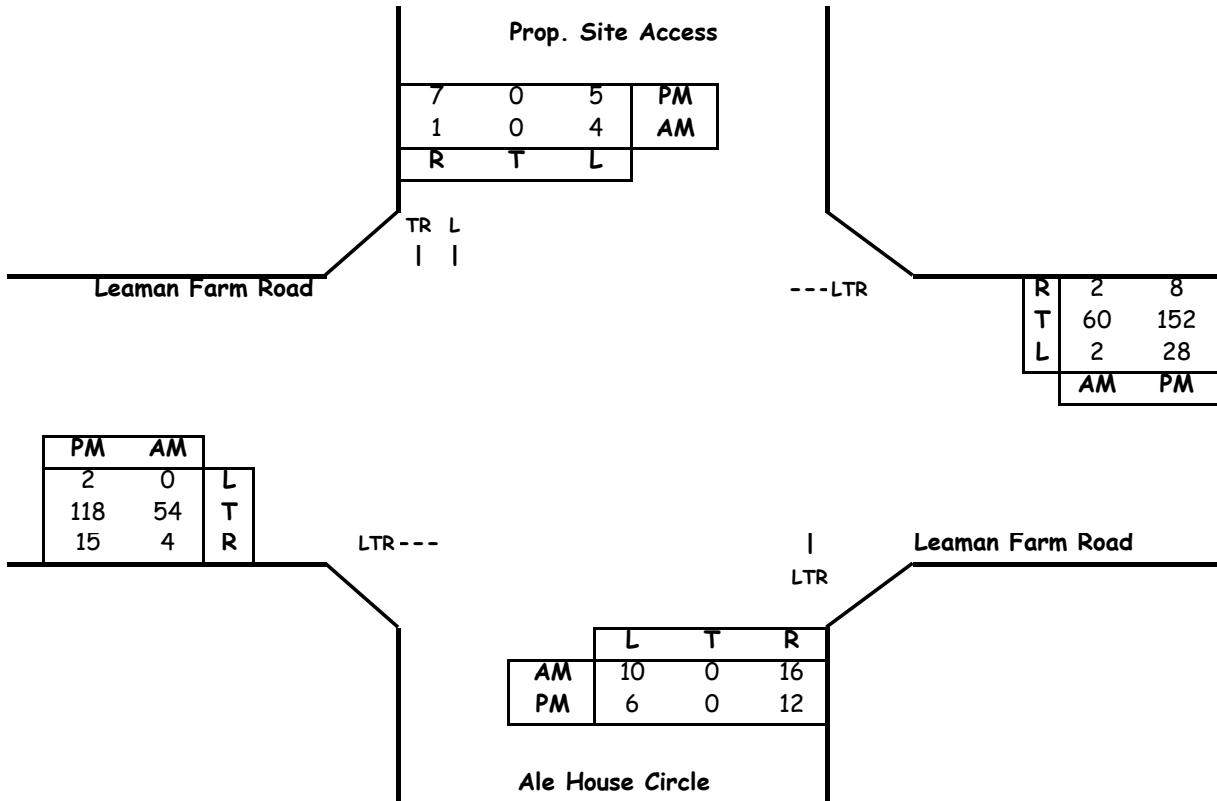
Prop. Site Access &
 Leaman Farm Road
 (BACKGROUND TRAFFIC)

**Intersection
7**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Main Line: Prop. Site Access
Minor Street: Leaman Farm Road
Study Period: TOTAL TRAFFIC

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	26	1.00	26	4	1	4	30
SB	1	1.00	1	10	1	10	
EB	58	1	58	2	1	2	64
WB	64	1	64	0	1	0	
CLV TOTAL=							94
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF = Total		VOL	x LUF = Total		CLV
NB	18	1.00	18	5	1	5	23
SB	7	1.00	7	6	1	6	
EB	135	1	135	28	1	28	190
WB	188	1	188	2	1	2	
CLV TOTAL=							213
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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Prop. Site Access &
 Leaman Farm Road
 (TOTAL TRAFFIC)

**Intersection
7**

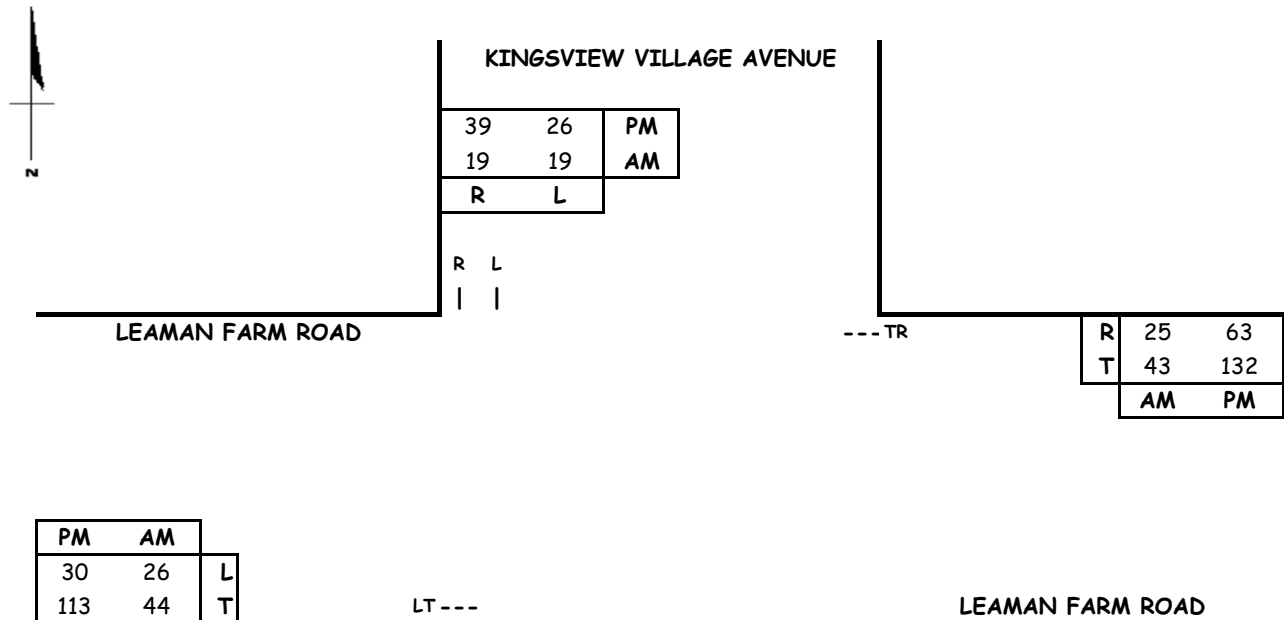
CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: Kingsview Village Avenue

and: Leaman Farm Road

Conditions: Existing Traffic

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	19	1.00	19			
EB	70	1.00	70			
WB	68	1.00	68	26	1.00	26
CLV TOTAL=						113
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	26	1.00	26			
EB	143	1.00	143			
WB	195	1.00	195	30	1.00	30
CLV TOTAL=						251
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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Kingsview Village Avenue &
Leaman Farm Road
(Existing Traffic)

**Intersection
8**

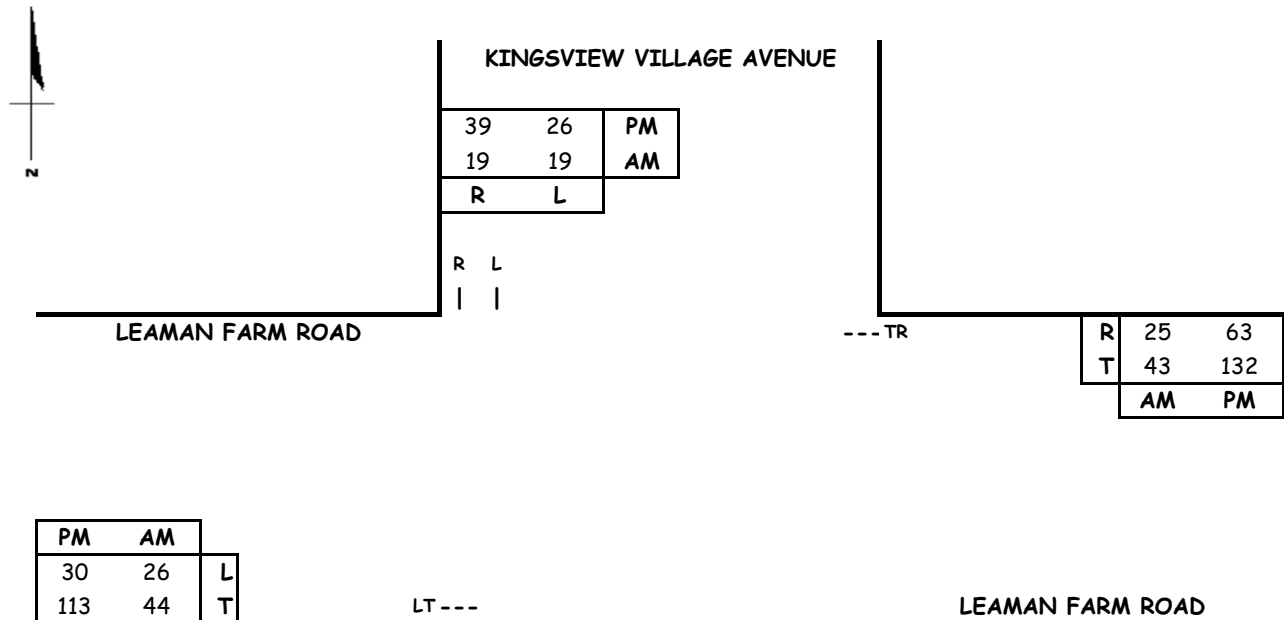
CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: Kingsview Village Avenue

and: Leaman Farm Road

Conditions: Background Traffic

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	19	1.00	19			
EB	70	1.00	70			
WB	68	1.00	68	26	1.00	26
CLV TOTAL=						113
Level of Service (LOS)=						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	26	1.00	26			
EB	143	1.00	143			
WB	195	1.00	195	30	1.00	30
CLV TOTAL=						251
Level of Service (LOS)=						A

Critical Lane Volume Analysis



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Kingsview Village Avenue &
Leaman Farm Road
(Background Traffic)

**Intersection
8**

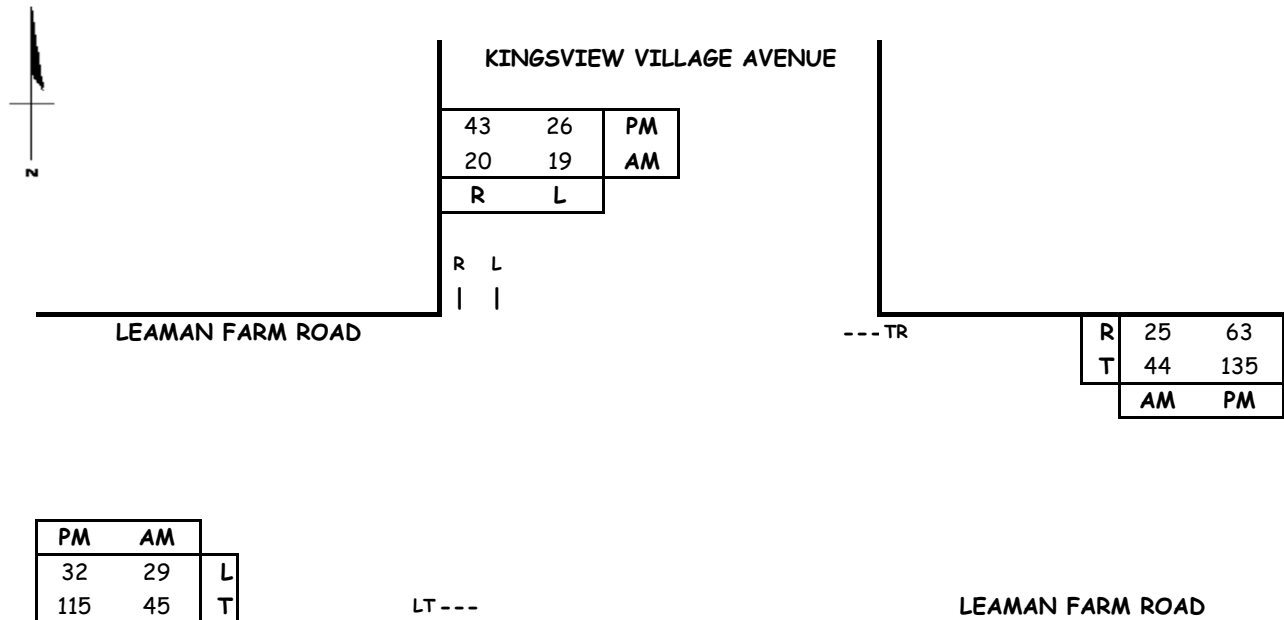
CRITICAL LANE VOLUME (CLV) METHODOLOGY for Montgomery County

Intersection of: Kingsview Village Avenue

and: Leaman Farm Road

Conditions: Total Traffic

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	19	1.00	19			
EB	74	1.00	74			
WB	69	1.00	69	29	1.00	29
CLV TOTAL=						117
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	26	1.00	26			
EB	147	1.00	147			
WB	198	1.00	198	32	1.00	32
CLV TOTAL=						256
Level of Service (LOS) =						A

Critical Lane Volume Analysis



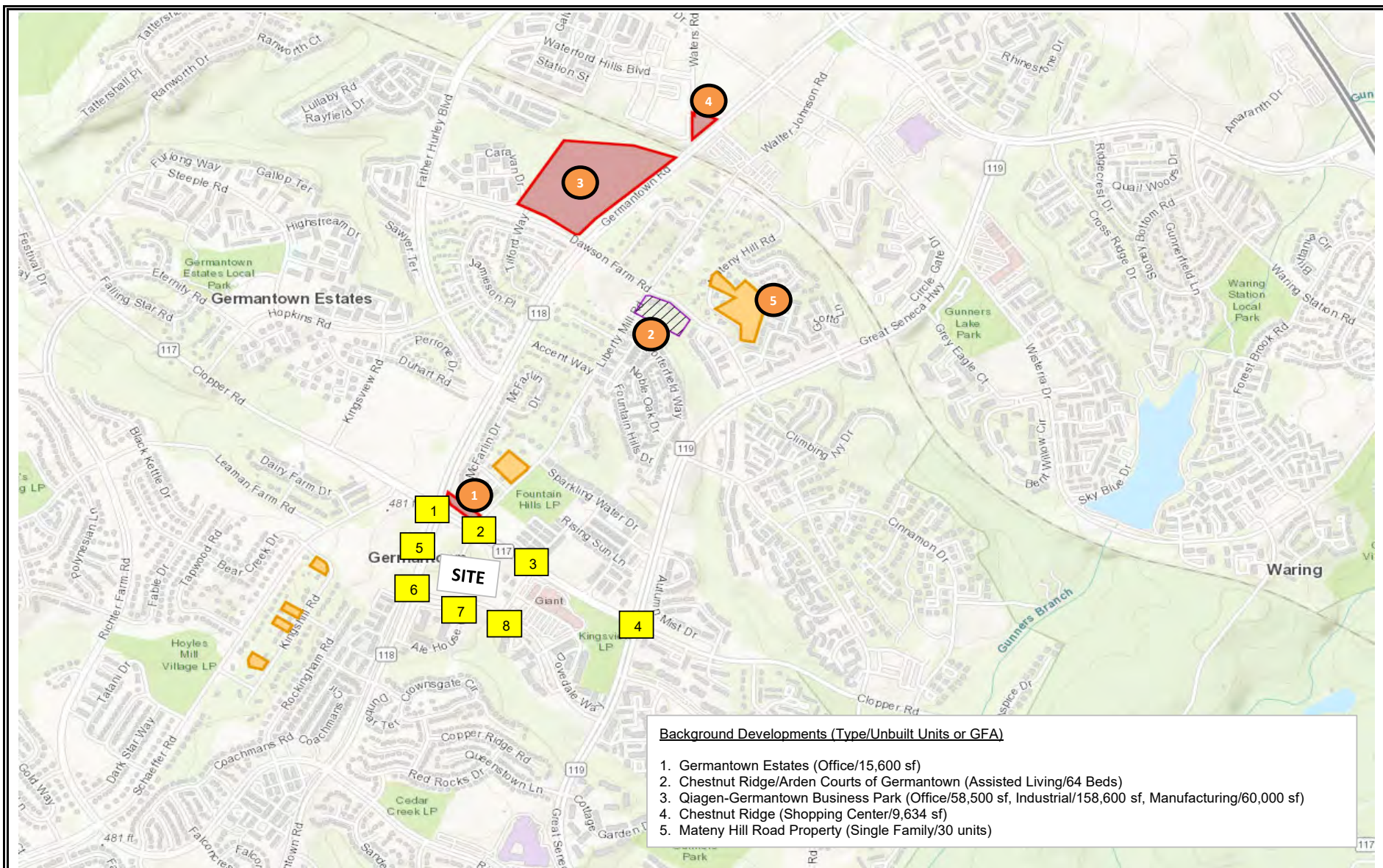
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Kingsview Village Avenue &
Leaman Farm Road
(Total Traffic)

**Intersection
8**

Appendix C

Motor Vehicle Adequacy Test
Background Developments



Traffic Impact Analysis

Lenhart Traffic Consulting, Inc.

Traffic Engineering & Transportation Planning

Background Developments Proposed Trip Distribution



= Background Development

**Exhibit
3**

Trip Generation Rates

Single-Family Detached (ITE-210, Units)

Morning Trips = 0.74 x Units

Evening Trips = 0.99 x Units

Assisted Living (ITE-254, beds)

Morning Trips = 0.19 x beds

Evening Trips = 0.26 x beds

Trip Distribution (In/Out)

25/75

63/37

Trip Distribution (In/Out)

63/37

38/62

Trip Generation Totals

				AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
Chestnut Ridge/Arden Courts of Germantown	Assisted Living (ITE-254, beds)	64	beds	8	4	12	6	11	17
Mateny Hill Road Property	Single-Family Detached (ITE-210, Units)	30	units	5	17	22	19	11	30
Total Vehicular Trips per ITE Trip Generation Manual, 10th Edition:				13	21	34	25	22	47
LATR Vehicle Trip Generation Rate Adjustment Factor (Germantown West):				93%					
Total LATR Adjusted Vehicular Trips per ITE Trip Generation Manual, 10th Edition (Auto Driver at 60.4%):				12	20	32	24	20	44
Total Person Trips:				20	33	53	39	33	73
Auto Driver:				60.4%	12	20	32	24	44
Auto Passenger:				26.9%	5	8	13	9	19
Transit:				4.1%	1	2	0	3	0
Non-Motorized:				8.6%	2	3	6	3	7

NOTES:

1. The Montgomery County Subdivision Staging Policy states that projects with more than 50 peak hour person trips require a quantitative auto analysis based on LATR Requirements. Projects with less than 50 transit and/or non-motorized trips do not require quantitative analyses for those modes.
- 2.

Traffic Impact Analysis	Residential Trip Generation for Background Developments	Exhibit C-2a
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

Trip Generation Rates

Shopping Center (General Urban/Suburban, ksf, ITE-820)

Morning Trips = $0.5 \times \text{ksf} + 151.78$

Ln(Evening Trips) = $0.74 \times \text{Ln}(\text{ksf}) + 2.89$

Trip Distribution (In/Out)

62/38

48/52

Trip Generation Totals

				AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
Chestnut Ridge	Shopping Center (ksf, ITE-820)	9,634	sq.ft.	97	60	157	46	50	96
Total Vehicular Trips per ITE Trip Generation Manual, 10th Edition:				97	60	157	46	50	96
LATR Vehicle Trip Generation Rate Adjustment Factor (Germantown West): 92%									
Total LATR Adjusted Vehicular Trips per ITE Trip Generation Manual, 10th Edition (Auto Driver at 66.4%):				89	55	144	42	46	88
Total Person Trips:				134	83	217	62	69	133
Auto Driver: 66.4%				89	55	144	42	46	88
Auto Passenger: 27.6%				37	22	59	16	19	36
Transit: 1.2%				2	2	0	1	1	0
Non-Motorized: 4.8%				6	4	11	3	3	7

NOTES:

1. The Montgomery County Subdivision Staging Policy states that projects with more than 50 peak hour person trips require a quantitative auto analysis based on LATR Requirements.
Projects with less than 50 transit and/or non-motorized trips do not require quantitative analyses for those modes.
- 2.

Traffic Impact Analysis	Retail Trip Generation for Background Developments	Exhibit C-2b
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

Trip Generation Rates

General Office (ITE-710, ksf)	<u>Trip Distribution (In/Out)</u>
Morning Trips = $0.94 \times \text{ksf} + 26.49$	86/14
$\text{Ln}(\text{Evening Trips}) = 0.95 \times \text{Ln}(\text{ksf}) + 0.36$	16/84
General Light Industrial (ITE-110, ksf)	<u>Trip Distribution (In/Out)</u>
$\text{Ln}(\text{Morning Trips}) = 0.74 \times \text{Ln}(\text{ksf}) + 0.39$	88/12
$\text{Ln}(\text{Evening Trips}) = 0.69 \times \text{Ln}(\text{ksf}) + 0.43$	13/87
Manufacturing (ITE-140, ksf)	<u>Trip Distribution (In/Out)</u>
Morning Trips = $0.62 \times \text{ksf}$	77/23
Evening Trips = $0.67 \times \text{ksf}$	31/69

Trip Generation Totals

				AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
Germantown Estates	General Office (ksf, ITE-710)	15,600	sq. ft.	35	6	41	3	16	19
	General Office (ksf, ITE-710)	84,000	sq. ft.	90	15	105	15	81	96
Qiagen-Germantown Business Park	General Light Industrial (ksf, ITE - 110)	158,600	sq.ft.	55	8	63	7	44	51
	Manufacturing (ksf, ITE - 140)	60,000	sq.ft.	28	9	37	12	28	40
Total Vehicular Trips per ITE Trip Generation Manual, 10th Edition:				208	38	246	37	169	206
LATR Vehicle Trip Generation Rate Adjustment Factor (Germantown West): 90%									
Total LATR Adjusted Vehicular Trips per ITE Trip Generation Manual, 10th Edition (Auto Driver at 68.2%):				187	34	221	33	152	185
Total Person Trips:				274	50	324	47	223	271
Auto Driver: 68.2%				187	34	221	33	152	185
Auto Passenger: 22.9%				63	10	73	10	51	61
Transit: 3.2%				8	3	0	1	7	0
Non-Motorized: 5.8%				16	3	20	3	13	16

NOTES:

1. The Montgomery County Subdivision Staging Policy states that projects with more than 50 peak hour person trips require a quantitative auto analysis based on LATR Requirements.
Projects with less than 50 transit and/or non-motorized trips do not require quantitative analyses for those modes.
- 2.

Traffic Impact Analysis	Office Trip Generation for Background Developments	Exhibit C-2c
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

Table 2-11 from LATR Guidelines: Germantown/Clarksburg

Trip Distribution Report

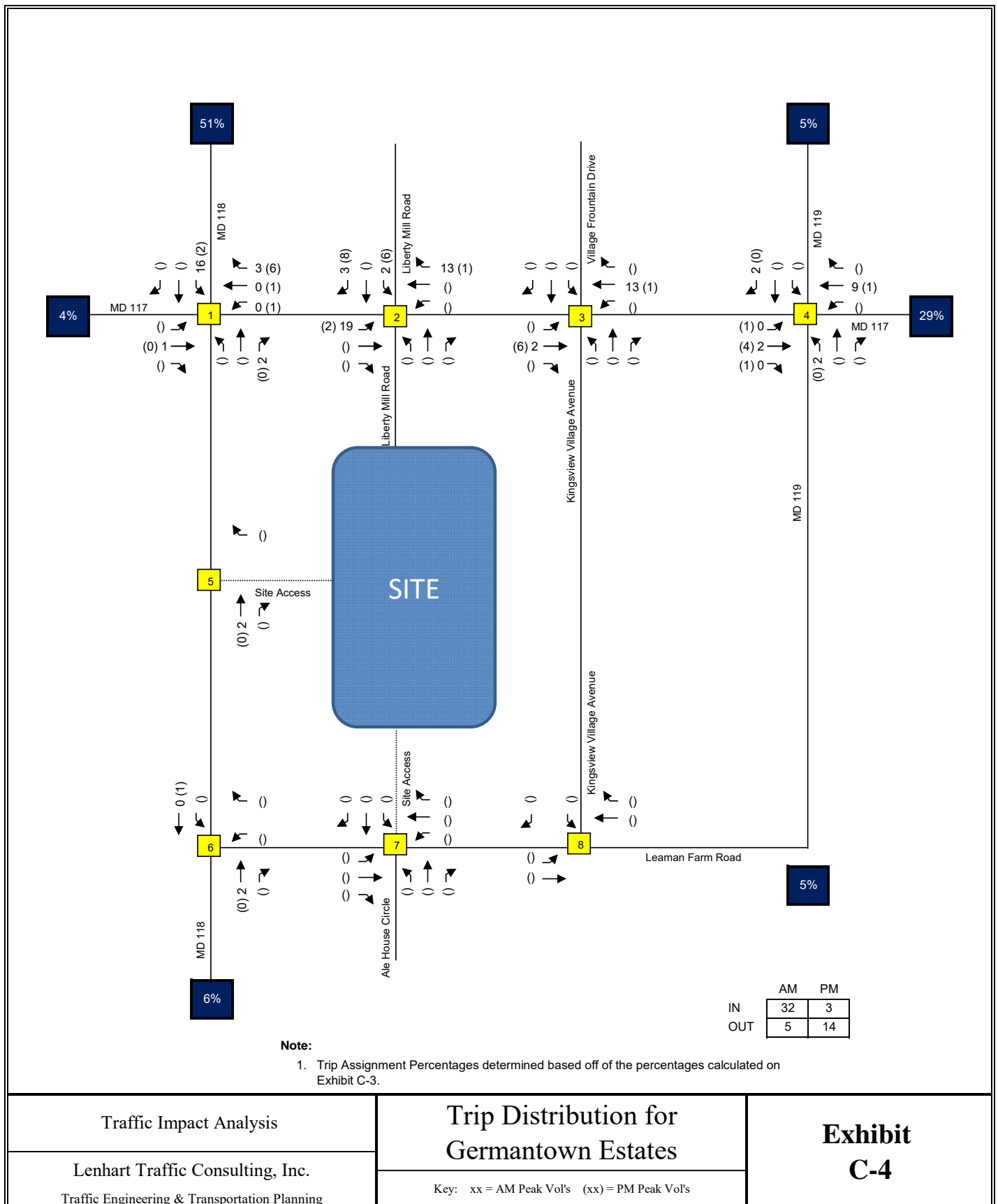
Trip Dist. By Super district		Trip Ass for Origin by super-district													
Office Development		Via MD 117 West	Via MD 117 East	Via MD 118 North	Via MD 118 South	Via MD 119 South/East	Via MD 119 North	TOTAL	Via MD 117 West	Via MD 117 East	Via MD 118 North	Via MD 118 South	Via MD 119 South/East	Via MD 119 North	TOTAL
1 Bethesda / Chevy Chase	0.7%	0%	100%	0%	0%	0%	0%	100%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.70%
2 Silver Spring / Takoma Park	0.3%	0%	100%	0%	0%	0%	0%	100%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.30%
3 Potomac / Darnestown / Travilah	3.6%	0%	20%	0%	80%	0%	0%	100%	0.0%	0.7%	0.0%	2.9%	0.0%	0.0%	3.60%
4 Rockville / North Bethesda	2.8%	0%	100%	0%	0%	0%	0%	100%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	2.80%
5 Kensington / Wheaton	0.7%	0%	100%	0%	0%	0%	0%	100%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.70%
6 White Oak / Fairland / Cloverly	0.5%	0%	100%	0%	0%	0%	0%	100%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.50%
7 Gaithersburg / Shady Grove	13.7%	0%	80%	0%	0%	20%	0%	100%	0.0%	11.0%	0.0%	0.0%	2.7400%	0.0%	13.70%
8 Aspen Hill / Olney	1.6%	0%	100%	0%	0%	0%	0%	100%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	1.60%
9 Germantown / Clarksburg	50.2%	5%	5%	70%	5%	5%	10%	100%	2.5%	2.5%	35.1%	2.5%	2.5%	5.0%	50.20%
10 Rural: West of I-270	1.2%	85%	0%	15%	0%	0%	0%	100%	1.0%	0.0%	0.2%	0.0%	0.0%	0.0%	1.20%
11 Rural: East of I-270	4.2%	0%	10%	70%	0%	0%	5%	85%	0.0%	0.4%	2.9%	0.0%	0.0%	0.2%	3.57%
12 Washington, DC	0.5%	0%	100%	0%	0%	0%	0%	100%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.50%
13 Prince George's County	2.3%	0%	100%	0%	0%	0%	0%	100%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	2.30%
14 Virginia	2.7%	10%	80%	0%	10%	0%	0%	100%	0.3%	2.2%	0.0%	0.3%	0.0%	0.0%	2.70%
15 Frederick County	10.3%	0%	0%	100%	0%	0%	0%	100%	0.0%	0.0%	10.3%	0.0%	0.0%	0.0%	10.30%
16 Howard County	4.7%	0%	50%	50%	0%	0%	0%	100%	0.0%	2.4%	2.4%	0.0%	0.0%	0.0%	4.70%
Total 100.00%															
Trip Distribution ==>>									3.8%	28.5%	50.9%	5.7%	5.3%	5.2%	99.8%
Use ==>>									4.0%	29.0%	51.0%	6.0%	5.0%	5.0%	100.0%

Traffic Impact Analysis

Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation PlanningResidential Trip Distribution Report in Super District 9
Germantown/Clarksburg

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

**Exhibit
C-3**



Traffic Impact Analysis

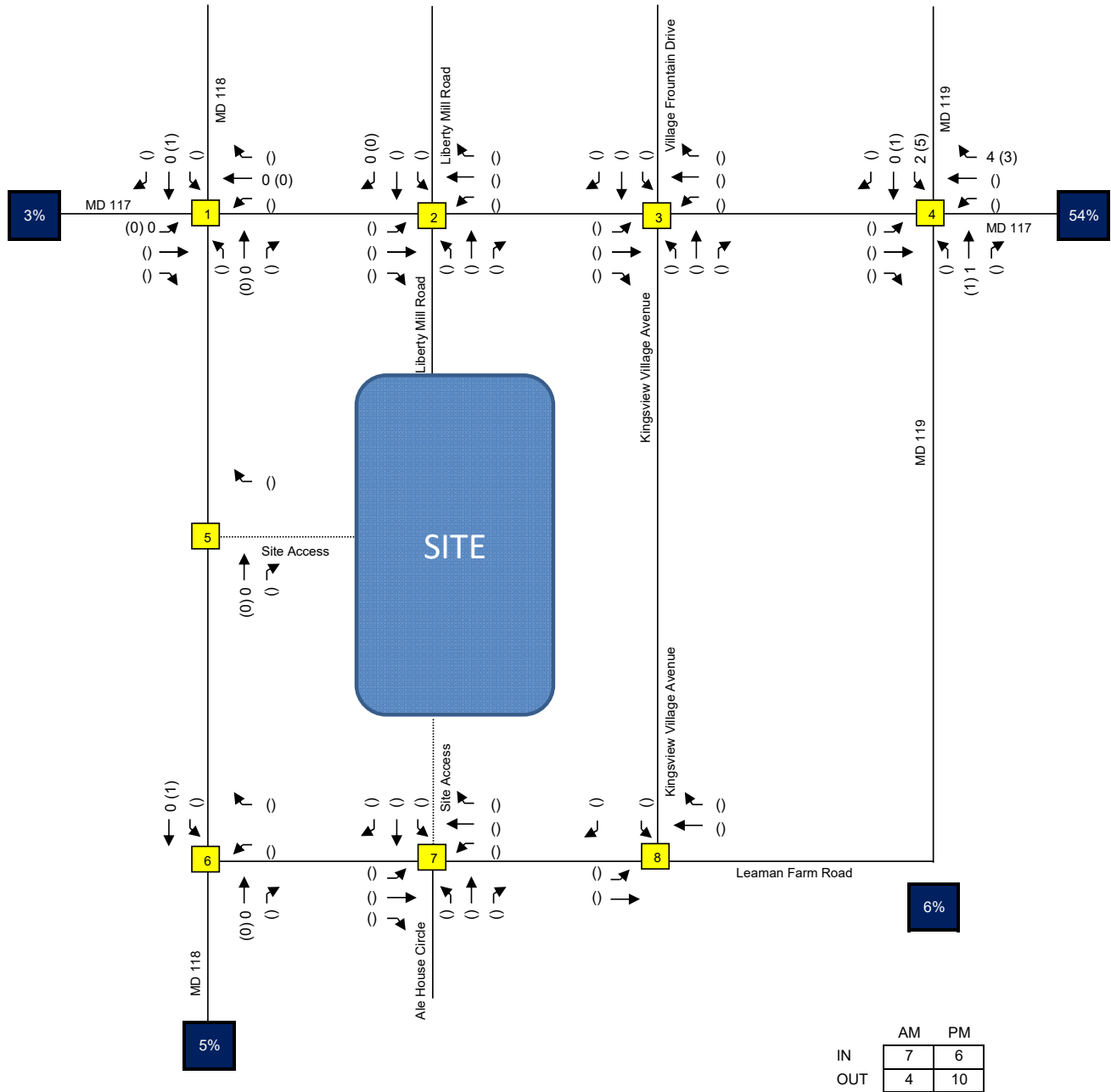
Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Trip Distribution for Germantown Estates

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

**Exhibit
C-4**

Note: 32% of trips do not pass through study intersections



Note:

1. Trip Assignment Percentages determined based off of the percentages calculated on Exhibit 3.

Traffic Impact Analysis

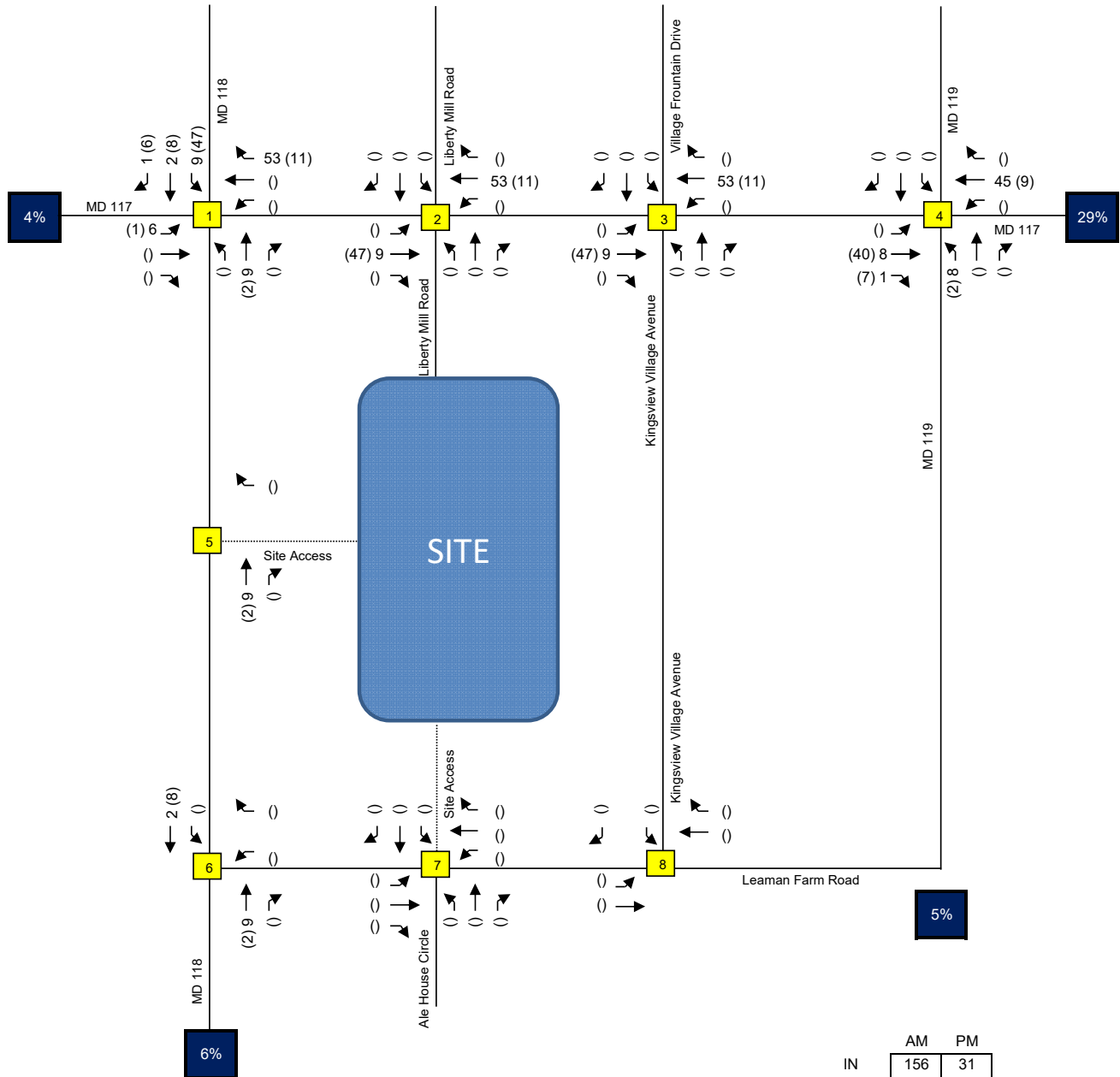
Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Trip Distribution for Chestnut Ridge/Arden Courts

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

**Exhibit
C-5**

Note: 56% of trips do not pass through study intersections



Note:

1. Trip Assignment Percentages determined based off of the percentages calculated on Exhibit C-3.

Traffic Impact Analysis

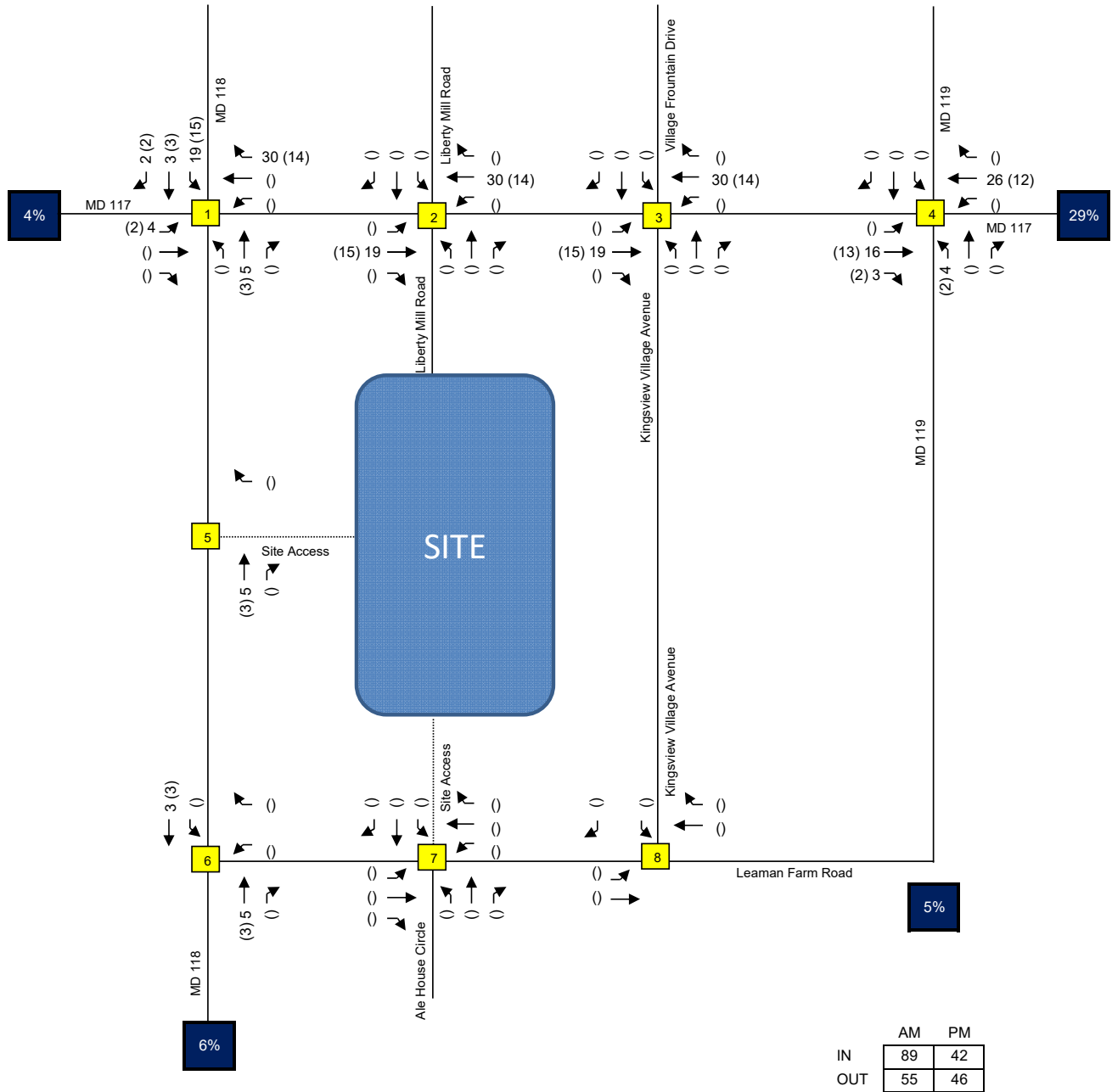
Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Trip Distribution for
Qiagen-Germantown Business Park

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

**Exhibit
C-6**

Note: 56% of trips do not pass through study intersections



Traffic Impact Analysis

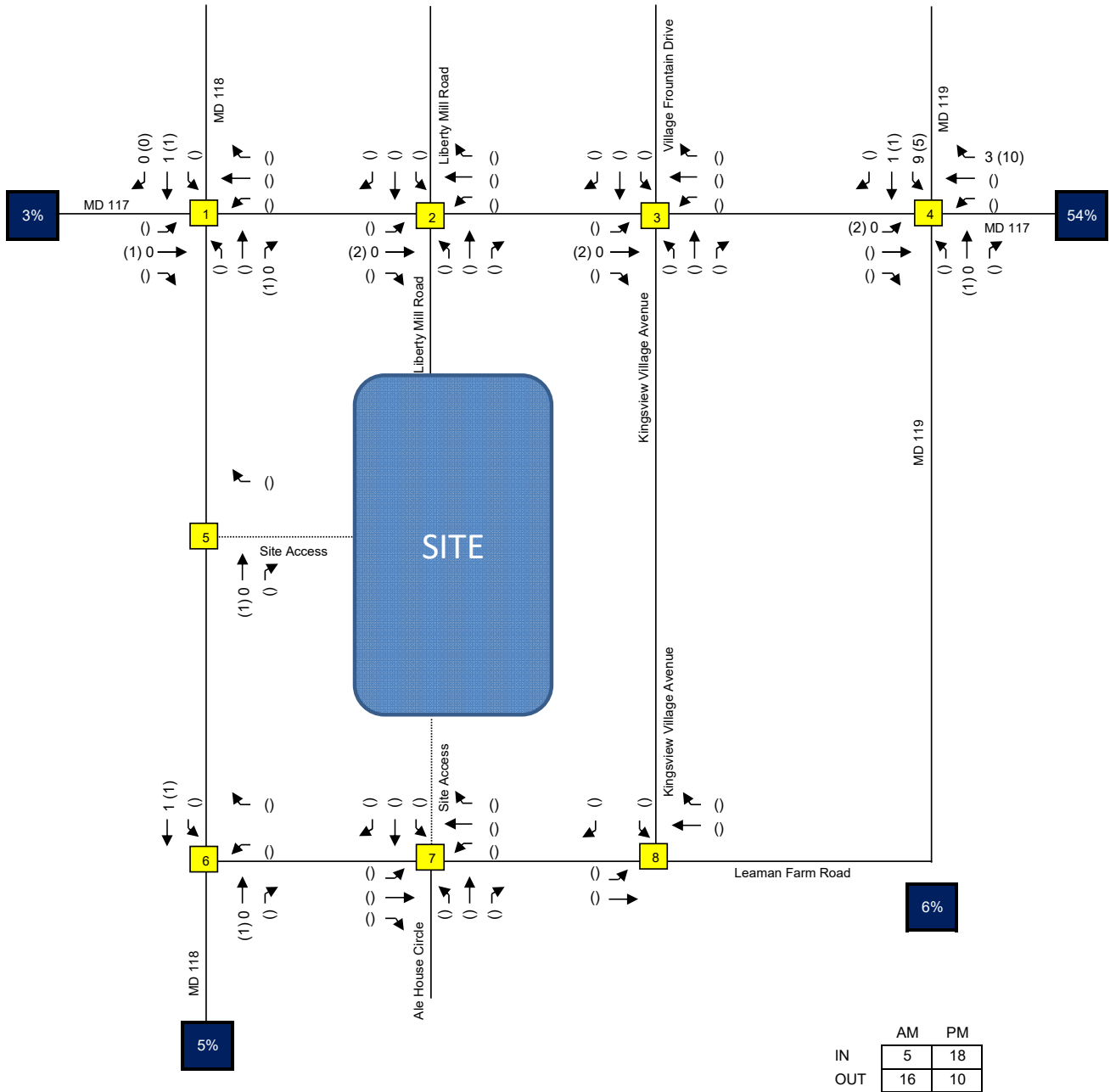
Lenhart Traffic Consulting, Inc.
Traffic Engineering & Transportation Planning

Trip Distribution for Chestnut Ridge

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

**Exhibit
C-7**

Note: 32% of trips do not pass through study intersections



Note:
1. Trip Assignment Percentages determined based off of the percentages calculated on Exhibit 3.

Traffic Impact Analysis	<p style="text-align: center;">Trip Distribution for Mateny Hill Road Property</p> <p>Key: xx = AM Peak Vol's (xx) = PM Peak Vol's</p>	<p>Exhibit C-8</p>
<p style="text-align: center;">Lenhart Traffic Consulting, Inc.</p> <p style="text-align: center;">Traffic Engineering & Transportation Planning</p>		

Appendix D

Pedestrian System Adequacy Test

Pedestrian Level of Comfort Worksheets

V. Pathway Evaluation

Kingsview Village Avenue (both sides of street)

Pedestrian pathways will be scored using the following table. A separate scoring table for roadways with no pedestrian pathway follows.

Pedestrian Pathway Table

This table is categorized along the vertical axis by land use (urban, non-urban) and compares pathway width (broken down into speed categories) to total buffer width, further classified by on-street buffer type. On-street buffers are abbreviated as DPL (designated parking lane), SBL (separated bike lane) and 2SBL (two-way separated bike lane). These variables were considered because a pathway's relative distance from a roadway (i.e. the buffer plus on-street separation), its width, and the speed of that roadway have interrelated effects on pedestrian comfort. *The scores in this table assume the pathway is in good condition. If the pathway is in fair condition, 0.5 will be added to the score. For poor condition, 1 will be added to the score (with a maximum score of 4).*

	PATHWAY WIDTH	POSTED SPEED LIMIT	PATHWAY BUFFER WIDTH / ON-STREET SEPARATION											
			0 ft to <2 ft			2 to <5 ft			5 to <8 ft			≥8 ft		
			No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL
URBAN	No walkway		Use "No Pathway" Table											
	< 5ft	< 25 mph	4	3	1	4	3	1	3	2	1	2	1	1
		25 mph	4	3	1	4	3	1	3	2	1	2	1	1
		30 mph	4	3	1	4	3	1	3	2	1	2	1	1
		35 mph	4	3	2	4	3	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥5 to 8 ft	< 25 mph	2	2	1	2	2	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2/3*	2	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥8 to 10 ft	< 25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥10 ft	< 25 mph	2	1	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	3	2	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	1/2^	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	1/2^	1	1

	PATHWAY WIDTH	POSTED SPEED LIMIT	PATHWAY BUFFER WIDTH / ON-STREET SEPARATION											
			0 ft to <2 ft			2 to <5 ft			5 to <8 ft			≥8 ft		
			No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL
NON-URBAN	No walkway		Use “No Pathway” Table											
	Less than 5ft	< 25 mph	2	2	1	2	1	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2	1	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥5 to 8 ft	< 25 mph	2	2	1	2	1	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2	1	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥8 ft	< 25 mph	2	1	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	1/2^	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	1/2^	1	1

* If the road category is less than Primary Residential in the Master Plan of Highways and Transitway, it will score as a 2, otherwise it will score a 3.

^If the pathway buffer width is 15' or greater, it will score as a 1, otherwise it will score as a 2.

No Pedestrian Pathway Table

Streets with no pathway receive special consideration because they cannot be scored based on path width or buffer. The most important considerations on these streets are posted speed, amount of vehicle traffic, land use and parking presence. In this table, functional class is used as a substitute for vehicle traffic volumes, since traffic volume data are not available on all roads. No road without a pathway can receive a perfect score of 1 using the available variables.²⁶ Parking on Less than Primary Residential streets may decrease pedestrian comfort by forcing pedestrians to share a narrower right of way with vehicular traffic, thereby contributing to potential conflicts.

CONTEXT	MASTER PLAN OF HIGHWAYS AND TRANSITWAYS (MPOHT) FUNCTIONAL CLASSIFICATION	PARKING ALLOWED	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	≥ 40 mph
URBAN	Any	No / Yes	4	4	4	4	4
NON-URBAN	Less than Primary Residential	No	2	3	4	4	4
		Yes	2	3	4	4	4
	Primary Residential or Greater	No	2	4	4	4	4
		Yes	3	4	4	4	4

²⁶ In the future, M-NCPPC may collect data on traffic calming measures, neighborhood slow zones with traffic calming, neighborhood shared streets or commercial shared streets, all of which would receive a score of 1 with speeds of less than 25 mph. All other scores for these contexts would remain the same.

VI. Crossings Evaluation

Crossings are scored using two main tables and an overlay table for factors that, if evaluated, can affect the base score. The two primary crossing tables are mutually exclusive (controlled or uncontrolled crossings). After crossings are scored, the overlay bonus can be assessed, as described in the crossing overlays section.

Controlled Crossings (Signalized or Stop-Controlled) Table

The following variables are considered for signalized crossings or stop-controlled crossings: number of lanes, median type, crosswalk type and posted speed limit. The highest posted speed limit of the segments that comprise the crossing is the speed limit used for scoring. These variables interact to produce the scores below.

# OF LANES	MEDIAN TYPE	CROSSWALK TYPE	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	>= 40
1 to 3	Raised Refuge Island	High Visibility	1	1	1	2	2
		Marked	1	1	2	2	2
		Unmarked	1	1	3	3	4
	Raised/Hardened Centerline	High Visibility	1	1	2	2	3
		Marked	1	1	2	2	3
		Unmarked	1	2	3	4	4
	Painted/None	High Visibility	1	1	2	3	3
		Marked	1	1	2	3	3
		Unmarked	1	2	3	4	4
4 to 5	Raised Refuge Island	High Visibility	1	1	2	3	3
		Marked	1	1	2	3	3
		Unmarked	1	3	3	4	4
	Raised/Hardened Centerline	High Visibility	2	2	2	3	3
		Marked	2	2	3	3	4
		Unmarked	2	3	4	4	4
	Painted/None	High Visibility	2	2	2	3	3
		Marked	3	3	3	3	4
		Unmarked	4	4	4	4	4
6 +	Raised Refuge Island	High Visibility	2	2	2	3	3
		Marked	3	3	3	3	3
		Unmarked	4	4	4	4	4
	Raised/Hardened Centerline	High Visibility	2	2	2	3	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	2	3	3	3	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4

Uncontrolled Crossings Table

The same primary variables are considered for uncontrolled crossings as signalized crossings or stop controlled crossings, however, the scoring is specific to uncontrolled crossings.

# OF LANES	MEDIAN TYPE	CROSSWALK TYPE	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	>= 40
1 to 3*	Raised Refuge Island	High Visibility	1	1	2	3	4
		Marked	1	1	3	3	4
		Unmarked	2	2	4	4	4
	Raised/Hardened Centerline	High Visibility	1	1	2	3	4
		Marked	1	2	3	3	4
		Unmarked	2	2	4	4	4
	Painted/None	High Visibility	1	2	2	3	4
		Marked	1	2	3	3	4
		Unmarked	2	3	4	4	4
4 to 5	Raised Refuge Island	High Visibility	1	2	2	3	4
		Marked	1	2	2	3	4
		Unmarked	2	3	4	4	4
	Raised/Hardened Centerline	High Visibility	2	2	3	4	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	4	4	4	4	4
		Marked	4	4	4	4	4
		Unmarked	4	4	4	4	4
6+	Raised Refuge Island	High Visibility	3	3	3	4	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Raised/Hardened Centerline	High Visibility	3	3	4	4	4
		Marked	3	3	4	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	4	4	4	4	4
		Marked	4	4	4	4	4
		Unmarked	4	4	4	4	4

*In locations where a 3-lane road does not include a turn lane, the crossing should be scored as if it has 4 travel lanes.

VII. Crossing Overlays

Overlays are used for crossings that have additional safety and comfort features present as follows:

Lighting

All crossings should be evaluated for lighting where data are available. If lit to MCDOT standards, a crossing's score is improved by a half point.

Protected Pedestrian Phase or Leading Pedestrian Interval (LPI)

Scores for controlled crossings are improved by the presence of either a protected pedestrian phase (fully protected or protected/permissive) or an LPI that allows the pedestrian a head start into an intersection before vehicle traffic signals turn green.

Rectangular Rapid Flashing Beacon (RRFB)

The presence of an RRFB, a traffic control device that improves motorist yielding compliance at uncontrolled crossing locations, improves a crossing's score by a half-point.

No Right Turn on Red Signage (No RTOR)

At signalized intersections, the presence of a "No Right Turn on Red" sign improves the final crossing score by a half point.

Traffic Calming

At all crossing locations, treatments that slow traffic speeds, improve visibility, and increase yield compliance improve the crossing score by a half point. Such treatments can include raised centerlines, raised intersections, raised crossings, or turn wedges.

Overlay Scoring

The total maximum scoring adjustment for the crossing overlays is 0.5, with the exception of any combination including traffic calming, where the maximum scoring adjustment is 1.0. An overlay category can be ignored if data for that feature are not yet available.

CROSSING TYPE	CROSSING OVERLAY FEATURE	PRESENT	BONUS POINTS	ADDITIVE
Controlled Crossings	Protected Pedestrian Phase or Leading Pedestrian Interval	Yes	0.5	No
		No	0	
	No Right Turn on Red Signage Present (Signalized)	Yes	0.5	No
		No	0	
Uncontrolled Crossings	Rectangular Rapid Flashing Beacon	Yes	0.5	No
		No	0	
All Crossings	Lighting to MCDOT Standards	Yes	0.5	No
		No	0	
	Traffic Calming	Yes	0.5	Yes
		No	0	

VIII. Accessibility Evaluation

In addition to the PLOC evaluation, an accessibility evaluation is recommended for both street blocks and crossings. If a street block or crossing has a score of greater than zero, it may have accessibility issues that need to be addressed.

	ADA CONDITION	YES/NO	SCORE	NOTES
Street Block (Score each segment)	Pathway is under 5' wide	Yes	1	Sum = number of ADA issue categories. Score of 0 = No known accessibility issues from available data.
		No	0	
	Trip hazards of 1/4" or greater	Yes	1	
		No	0	
	Cross slope less than 0% or greater than 2%	Yes	1	
		No	0	
	Obstruction(s) creating a less than 36"* pedestrian access route (PAR)	Yes	1	
		No	0	
	Missing pathway section(s) within segment	Yes	1	
		No	0	
Crossings (Score each crossing direction or crosswalk)	Lacking detectable warning surface (DWS)	Yes	1	Sum = number of ADA issue categories. Score of 0 = No known accessibility issues from available data.
		No	0	
	Ratio of DWS width / Ramp width is less than 1	Yes	1	
		No	0	
	Ramp width is less than 36"***	Yes	1	
		No	0	
	Ramp slope is less than 0% or greater than 8.33%	Yes	1	
		No	0	
	Ramp landing area slope is less than 0% or greater than 2%	Yes	1	
		No	0	
	Ramp landing area is less than 5' x 5'	Yes	1	
		No	0	
	Accessible pushbutton not present (when pedestrian signal is present)	Yes	1	
		No	0	

Total 2

*Current ADA Standards from the U.S. Department of Justice/Federal Highway Administration (USDOT)/FHWA require 36" minimum width for segments (with 60" passing space every 200' minimum for segments). When adopted, Public Right of Way Accessibility Guidelines (PROWAG) will require a 48" minimum and recommend a 60" width for segments. Obstructions include any fixed object, such as signs, planters, utility poles, tree trunks/pits, etc.

**Current ADA Standards (USDOT/FHWA) recommend a 48" minimum curb ramp with a minimum of 36" required in locations where space is restricted. PROWAG recommends 48" minimum width for curb ramps at all locations.

V. Pathway Evaluation

Leaman Farm Road (N side)

Pedestrian pathways will be scored using the following table. A separate scoring table for roadways with no pedestrian pathway follows.

Pedestrian Pathway Table

This table is categorized along the vertical axis by land use (urban, non-urban) and compares pathway width (broken down into speed categories) to total buffer width, further classified by on-street buffer type. On-street buffers are abbreviated as DPL (designated parking lane), SBL (separated bike lane) and 2SBL (two-way separated bike lane). These variables were considered because a pathway's relative distance from a roadway (i.e. the buffer plus on-street separation), its width, and the speed of that roadway have interrelated effects on pedestrian comfort. *The scores in this table assume the pathway is in good condition. If the pathway is in fair condition, 0.5 will be added to the score. For poor condition, 1 will be added to the score (with a maximum score of 4).*

PATHWAY WIDTH	POSTED SPEED LIMIT	PATHWAY BUFFER WIDTH / ON-STREET SEPARATION												
		0 ft to <2 ft			2 to <5 ft			5 to <8 ft			≥8 ft			
		No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	
URBAN	No walkway		Use "No Pathway" Table											
	< 5ft	< 25 mph	4	3	1	4	3	1	3	2	1	2	1	1
		25 mph	4	3	1	4	3	1	3	2	1	2	1	1
		30 mph	4	3	1	4	3	1	3	2	1	2	1	1
		35 mph	4	3	2	4	3	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥5 to 8 ft	< 25 mph	2	2	1	2	2	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2/3*	2	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥8 to 10 ft	< 25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥10 ft	< 25 mph	2	1	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	3	2	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	1/2^	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	1/2^	1	1

	PATHWAY WIDTH	POSTED SPEED LIMIT	PATHWAY BUFFER WIDTH / ON-STREET SEPARATION											
			0 ft to <2 ft			2 to <5 ft			5 to <8 ft			≥8 ft		
			No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL
NON-URBAN	No walkway		Use "No Pathway" Table											
	Less than 5ft	< 25 mph	2	2	1	2	1	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2	1	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥5 to 8 ft	< 25 mph	2	2	1	2	1	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2	1	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥8 ft	< 25 mph	2	1	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	1/2^	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	1/2^	1	1

* If the road category is less than Primary Residential in the Master Plan of Highways and Transitway, it will score as a 2, otherwise it will score as a 3.

^If the pathway buffer width is 15' or greater, it will score as a 1, otherwise it will score as a 2.

No Pedestrian Pathway Table

Streets with no pathway receive special consideration because they cannot be scored based on path width or buffer. The most important considerations on these streets are posted speed, amount of vehicle traffic, land use and parking presence. In this table, functional class is used as a substitute for vehicle traffic volumes, since traffic volume data are not available on all roads. No road without a pathway can receive a perfect score of 1 using the available variables.²⁶ Parking on Less than Primary Residential streets may decrease pedestrian comfort by forcing pedestrians to share a narrower right of way with vehicular traffic, thereby contributing to potential conflicts.

CONTEXT	MASTER PLAN OF HIGHWAYS AND TRANSITWAYS (MPOHT) FUNCTIONAL CLASSIFICATION	PARKING ALLOWED	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	≥ 40 mph
URBAN	Any	No / Yes	4	4	4	4	4
NON-URBAN	Less than Primary Residential	No	2	3	4	4	4
		Yes	2	3	4	4	4
	Primary Residential or Greater	No	2	4	4	4	4
		Yes	3	4	4	4	4

²⁶ In the future, M-NCPPC may collect data on traffic calming measures, neighborhood slow zones with traffic calming, neighborhood shared streets or commercial shared streets, all of which would receive a score of 1 with speeds of less than 25 mph. All other scores for these contexts would remain the same.

VI. Crossings Evaluation

Crossings are scored using two main tables and an overlay table for factors that, if evaluated, can affect the base score. The two primary crossing tables are mutually exclusive (controlled or uncontrolled crossings). After crossings are scored, the overlay bonus can be assessed, as described in the crossing overlays section.

Controlled Crossings (Signalized or Stop-Controlled) Table

The following variables are considered for signalized crossings or stop-controlled crossings: number of lanes, median type, crosswalk type and posted speed limit. The highest posted speed limit of the segments that comprise the crossing is the speed limit used for scoring. These variables interact to produce the scores below.

# OF LANES	MEDIAN TYPE	CROSSWALK TYPE	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	>= 40
1 to 3	Raised Refuge Island	High Visibility	1	1	1	2	2
		Marked	1	1	2	2	2
		Unmarked	1	1	3	3	4
	Raised/Hardened Centerline	High Visibility	1	1	2	2	3
		Marked	1	1	2	2	3
		Unmarked	1	2	3	4	4
	Painted/None	High Visibility	1	1	2	3	3
		Marked	1	1	2	3	3
		Unmarked	1	2	3	4	4
4 to 5	Raised Refuge Island	High Visibility	1	1	2	3	3
		Marked	1	1	2	3	3
		Unmarked	1	3	3	4	4
	Raised/Hardened Centerline	High Visibility	2	2	2	3	3
		Marked	2	2	3	3	4
		Unmarked	2	3	4	4	4
	Painted/None	High Visibility	2	2	2	3	3
		Marked	3	3	3	3	4
		Unmarked	4	4	4	4	4
6 +	Raised Refuge Island	High Visibility	2	2	2	3	3
		Marked	3	3	3	3	3
		Unmarked	4	4	4	4	4
	Raised/Hardened Centerline	High Visibility	2	2	2	3	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	2	3	3	3	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4

Uncontrolled Crossings Table

The same primary variables are considered for uncontrolled crossings as signalized crossings or stop controlled crossings, however, the scoring is specific to uncontrolled crossings.

# OF LANES	MEDIAN TYPE	CROSSWALK TYPE	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	>= 40
1 to 3*	Raised Refuge Island	High Visibility	1	1	2	3	4
		Marked	1	1	3	3	4
		Unmarked	2	2	4	4	4
	Raised/Hardened Centerline	High Visibility	1	1	2	3	4
		Marked	1	2	3	3	4
		Unmarked	2	2	4	4	4
	Painted/None	High Visibility	1	2	2	3	4
		Marked	1	2	3	3	4
		Unmarked	2	3	4	4	4
4 to 5	Raised Refuge Island	High Visibility	1	2	2	3	4
		Marked	1	2	2	3	4
		Unmarked	2	3	4	4	4
	Raised/Hardened Centerline	High Visibility	2	2	3	4	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	4	4	4	4	4
		Marked	4	4	4	4	4
		Unmarked	4	4	4	4	4
6+	Raised Refuge Island	High Visibility	3	3	3	4	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Raised/Hardened Centerline	High Visibility	3	3	4	4	4
		Marked	3	3	4	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	4	4	4	4	4
		Marked	4	4	4	4	4
		Unmarked	4	4	4	4	4

*In locations where a 3-lane road does not include a turn lane, the crossing should be scored as if it has 4 travel lanes.

VII. Crossing Overlays

Overlays are used for crossings that have additional safety and comfort features present as follows:

Lighting

All crossings should be evaluated for lighting where data are available. If lit to MCDOT standards, a crossing's score is improved by a half point.

Protected Pedestrian Phase or Leading Pedestrian Interval (LPI)

Scores for controlled crossings are improved by the presence of either a protected pedestrian phase (fully protected or protected/permissive) or an LPI that allows the pedestrian a head start into an intersection before vehicle traffic signals turn green.

Rectangular Rapid Flashing Beacon (RRFB)

The presence of an RRFB, a traffic control device that improves motorist yielding compliance at uncontrolled crossing locations, improves a crossing's score by a half-point.

No Right Turn on Red Signage (No RTOR)

At signalized intersections, the presence of a "No Right Turn on Red" sign improves the final crossing score by a half point.

Traffic Calming

At all crossing locations, treatments that slow traffic speeds, improve visibility, and increase yield compliance improve the crossing score by a half point. Such treatments can include raised centerlines, raised intersections, raised crossings, or turn wedges.

Overlay Scoring

The total maximum scoring adjustment for the crossing overlays is 0.5, with the exception of any combination including traffic calming, where the maximum scoring adjustment is 1.0. An overlay category can be ignored if data for that feature are not yet available.

CROSSING TYPE	CROSSING OVERLAY FEATURE	PRESENT	BONUS POINTS	ADDITIVE
Controlled Crossings	Protected Pedestrian Phase or Leading Pedestrian Interval	Yes	0.5	No
		No	0	
	No Right Turn on Red Signage Present (Signalized)	Yes	0.5	No
		No	0	
Uncontrolled Crossings	Rectangular Rapid Flashing Beacon	Yes	0.5	No
		No	0	
All Crossings	Lighting to MCDOT Standards	Yes	0.5	No
		No	0	
	Traffic Calming	Yes	0.5	Yes
		No	0	

VIII. Accessibility Evaluation

In addition to the PLOC evaluation, an accessibility evaluation is recommended for both street blocks and crossings. If a street block or crossing has a score of greater than zero, it may have accessibility issues that need to be addressed.

	ADA CONDITION	YES/NO	SCORE	NOTES
Street Block (Score each segment)	Pathway is under 5' wide	Yes	1	Sum = number of ADA issue categories. Score of 0 = No known accessibility issues from available data.
		No	0	
	Trip hazards of 1/4" or greater	Yes	1	
		No	0	
	Cross slope less than 0% or greater than 2%	Yes	1	
		No	0	
	Obstruction(s) creating a less than 36"* pedestrian access route (PAR)	Yes	1	
		No	0	
	Missing pathway section(s) within segment	Yes	1	
		No	0	
Crossings (Score each crossing direction or crosswalk)	Lacking detectable warning surface (DWS)	Yes	1	Sum = number of ADA issue categories. Score of 0 = No known accessibility issues from available data.
		No	0	
	Ratio of DWS width / Ramp width is less than 1	Yes	1	
		No	0	
	Ramp width is less than 36"***	Yes	1	
		No	0	
	Ramp slope is less than 0% or greater than 8.33%	Yes	1	
		No	0	
	Ramp landing area slope is less than 0% or greater than 2%	Yes	1	
		No	0	
	Ramp landing area is less than 5' x 5'	Yes	1	
		No	0	
	Accessible pushbutton not present (when pedestrian signal is present)	Yes	1	
		No	0	

Total 2

*Current ADA Standards from the U.S. Department of Justice/Federal Highway Administration (USDOJ)/FHWA) require 36" minimum width for segments (with 60" passing space every 200' minimum for segments). When adopted, Public Right of Way Accessibility Guidelines (PROWAG) will require a 48" minimum and recommend a 60" width for segments. Obstructions include any fixed object, such as signs, planters, utility poles, tree trunks/pits, etc.

**Current ADA Standards (USDOJ/FHWA) recommend a 48" minimum curb ramp with a minimum of 36" required in locations where space is restricted. PROWAG recommends 48" minimum width for curb ramps at all locations.

V. Pathway Evaluation

Liberty Mill Road

Pedestrian pathways will be scored using the following table. A separate scoring table for roadways with no pedestrian pathway follows.

Pedestrian Pathway Table

This table is categorized along the vertical axis by land use (urban, non-urban) and compares pathway width (broken down into speed categories) to total buffer width, further classified by on-street buffer type. On-street buffers are abbreviated as DPL (designated parking lane), SBL (separated bike lane) and 2SBL (two-way separated bike lane). These variables were considered because a pathway's relative distance from a roadway (i.e. the buffer plus on-street separation), its width, and the speed of that roadway have interrelated effects on pedestrian comfort. *The scores in this table assume the pathway is in good condition. If the pathway is in fair condition, 0.5 will be added to the score. For poor condition, 1 will be added to the score (with a maximum score of 4).*

	PATHWAY WIDTH	POSTED SPEED LIMIT	PATHWAY BUFFER WIDTH / ON-STREET SEPARATION											
			0 ft to <2 ft			2 to <5 ft			5 to <8 ft			≥8 ft		
			No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL
URBAN	No walkway		Use "No Pathway" Table											
	< 5ft	< 25 mph	4	3	1	4	3	1	3	2	1	2	1	1
		25 mph	4	3	1	4	3	1	3	2	1	2	1	1
		30 mph	4	3	1	4	3	1	3	2	1	2	1	1
		35 mph	4	3	2	4	3	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥5 to 8 ft	< 25 mph	2	2	1	2	2	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2/3*	2	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥8 to 10 ft	< 25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥10 ft	< 25 mph	2	1	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	3	2	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	1/2^	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	1/2^	1	1

	PATHWAY WIDTH	POSTED SPEED LIMIT	PATHWAY BUFFER WIDTH / ON-STREET SEPARATION											
			0 ft to <2 ft			2 to <5 ft			5 to <8 ft			≥8 ft		
			No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL
NON-URBAN	No walkway		Use "No Pathway" Table											
	Less than 5ft	< 25 mph	2	2	1	2	1	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2	1	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥5 to 8 ft	< 25 mph	2	2	1	2	1	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2	1	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥8 ft	< 25 mph	2	1	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	1/2^	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	1/2^	1	1

* If the road category is less than Primary Residential in the Master Plan of Highways and Transitway, it will score as a 2, otherwise it will score a 3.

^If the pathway buffer width is 15' or greater, it will score as a 1, otherwise it will score as a 2.

No Pedestrian Pathway Table

Streets with no pathway receive special consideration because they cannot be scored based on path width or buffer. The most important considerations on these streets are posted speed, amount of vehicle traffic, land use and parking presence. In this table, functional class is used as a substitute for vehicle traffic volumes, since traffic volume data are not available on all roads. No road without a pathway can receive a perfect score of 1 using the available variables.²⁶ Parking on Less than Primary Residential streets may decrease pedestrian comfort by forcing pedestrians to share a narrower right of way with vehicular traffic, thereby contributing to potential conflicts.

CONTEXT	MASTER PLAN OF HIGHWAYS AND TRANSITWAYS (MPOHT) FUNCTIONAL CLASSIFICATION	PARKING ALLOWED	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	≥ 40 mph
URBAN	Any	No / Yes	4	4	4	4	4
NON-URBAN	Less than Primary Residential	No	2	3	4	4	4
		Yes	2	3	4	4	4
	Primary Residential or Greater	No	2	4	4	4	4
		Yes	3	4	4	4	4

²⁶ In the future, M-NCPPC may collect data on traffic calming measures, neighborhood slow zones with traffic calming, neighborhood shared streets or commercial shared streets, all of which would receive a score of 1 with speeds of less than 25 mph. All other scores for these contexts would remain the same.

VI. Crossings Evaluation

Crossings are scored using two main tables and an overlay table for factors that, if evaluated, can affect the base score. The two primary crossing tables are mutually exclusive (controlled or uncontrolled crossings). After crossings are scored, the overlay bonus can be assessed, as described in the crossing overlays section.

Controlled Crossings (Signalized or Stop-Controlled) Table

The following variables are considered for signalized crossings or stop-controlled crossings: number of lanes, median type, crosswalk type and posted speed limit. The highest posted speed limit of the segments that comprise the crossing is the speed limit used for scoring. These variables interact to produce the scores below.

# OF LANES	MEDIAN TYPE	CROSSWALK TYPE	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	>= 40
1 to 3	Raised Refuge Island	High Visibility	1	1	1	2	2
		Marked	1	1	2	2	2
		Unmarked	1	1	3	3	4
	Raised/Hardened Centerline	High Visibility	1	1	2	2	3
		Marked	1	1	2	2	3
		Unmarked	1	2	3	4	4
	Painted/None	High Visibility	1	1	2	3	3
		Marked	1	1	2	3	3
		Unmarked	1	2	3	4	4
4 to 5	Raised Refuge Island	High Visibility	1	1	2	3	3
		Marked	1	1	2	3	3
		Unmarked	1	3	3	4	4
	Raised/Hardened Centerline	High Visibility	2	2	2	3	3
		Marked	2	2	3	3	4
		Unmarked	2	3	4	4	4
	Painted/None	High Visibility	2	2	2	3	3
		Marked	3	3	3	3	4
		Unmarked	4	4	4	4	4
6 +	Raised Refuge Island	High Visibility	2	2	2	3	3
		Marked	3	3	3	3	3
		Unmarked	4	4	4	4	4
	Raised/Hardened Centerline	High Visibility	2	2	2	3	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	2	3	3	3	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4

Uncontrolled Crossings Table

The same primary variables are considered for uncontrolled crossings as signalized crossings or stop controlled crossings, however, the scoring is specific to uncontrolled crossings.

# OF LANES	MEDIAN TYPE	CROSSWALK TYPE	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	>= 40
1 to 3*	Raised Refuge Island	High Visibility	1	1	2	3	4
		Marked	1	1	3	3	4
		Unmarked	2	2	4	4	4
	Raised/Hardened Centerline	High Visibility	1	1	2	3	4
		Marked	1	2	3	3	4
		Unmarked	2	2	4	4	4
	Painted/None	High Visibility	1	2	2	3	4
		Marked	1	2	3	3	4
		Unmarked	2	3	4	4	4
4 to 5	Raised Refuge Island	High Visibility	1	2	2	3	4
		Marked	1	2	2	3	4
		Unmarked	2	3	4	4	4
	Raised/Hardened Centerline	High Visibility	2	2	3	4	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	4	4	4	4	4
		Marked	4	4	4	4	4
		Unmarked	4	4	4	4	4
6+	Raised Refuge Island	High Visibility	3	3	3	4	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Raised/Hardened Centerline	High Visibility	3	3	4	4	4
		Marked	3	3	4	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	4	4	4	4	4
		Marked	4	4	4	4	4
		Unmarked	4	4	4	4	4

*In locations where a 3-lane road does not include a turn lane, the crossing should be scored as if it has 4 travel lanes.

VII. Crossing Overlays

Overlays are used for crossings that have additional safety and comfort features present as follows:

Lighting

All crossings should be evaluated for lighting where data are available. If lit to MCDOT standards, a crossing's score is improved by a half point.

Protected Pedestrian Phase or Leading Pedestrian Interval (LPI)

Scores for controlled crossings are improved by the presence of either a protected pedestrian phase (fully protected or protected/permissive) or an LPI that allows the pedestrian a head start into an intersection before vehicle traffic signals turn green.

Rectangular Rapid Flashing Beacon (RRFB)

The presence of an RRFB, a traffic control device that improves motorist yielding compliance at uncontrolled crossing locations, improves a crossing's score by a half-point.

No Right Turn on Red Signage (No RTOR)

At signalized intersections, the presence of a "No Right Turn on Red" sign improves the final crossing score by a half point.

Traffic Calming

At all crossing locations, treatments that slow traffic speeds, improve visibility, and increase yield compliance improve the crossing score by a half point. Such treatments can include raised centerlines, raised intersections, raised crossings, or turn wedges.

Overlay Scoring

The total maximum scoring adjustment for the crossing overlays is 0.5, with the exception of any combination including traffic calming, where the maximum scoring adjustment is 1.0. An overlay category can be ignored if data for that feature are not yet available.

CROSSING TYPE	CROSSING OVERLAY FEATURE	PRESENT	BONUS POINTS	ADDITIVE
Controlled Crossings	Protected Pedestrian Phase or Leading Pedestrian Interval	Yes	0.5	No
		No	0	
	No Right Turn on Red Signage Present (Signalized)	Yes	0.5	No
		No	0	
Uncontrolled Crossings	Rectangular Rapid Flashing Beacon	Yes	0.5	No
		No	0	
All Crossings	Lighting to MCDOT Standards	Yes	0.5	No
		No	0	
	Traffic Calming	Yes	0.5	Yes
		No	0	

VIII. Accessibility Evaluation

In addition to the PLOC evaluation, an accessibility evaluation is recommended for both street blocks and crossings. If a street block or crossing has a score of greater than zero, it may have accessibility issues that need to be addressed.

	ADA CONDITION	YES/NO	SCORE	NOTES
Street Block (Score each segment)	Pathway is under 5' wide	Yes	1	Sum = number of ADA issue categories. Score of 0 = No known accessibility issues from available data.
		No	0	
	Trip hazards of 1/4" or greater	Yes	1	
		No	0	
	Cross slope less than 0% or greater than 2%	Yes	1	
		No	0	
	Obstruction(s) creating a less than 36"*** pedestrian access route (PAR)	Yes	1	
		No	0	
Crossings (Score each crossing direction or crosswalk)	Missing pathway section(s) within segment	Yes	1	Sum = number of ADA issue categories. Score of 0 = No known accessibility issues from available data.
		No	0	
	Lacking detectable warning surface (DWS)	Yes	1	
		No	0	
	Ratio of DWS width / Ramp width is less than 1	Yes	1	
		No	0	
	Ramp width is less than 36"***	Yes	1	
		No	0	
	Ramp slope is less than 0% or greater than 8.33%	Yes	1	
		No	0	
	Ramp landing area slope is less than 0% or greater than 2%	Yes	1	
		No	0	
	Ramp landing area is less than 5' x 5'	Yes	1	
		No	0	
	Accessible pushbutton not present (when pedestrian signal is present)	Yes	1	
		No	0	

*Current ADA Standards from the U.S. Department of Justice/Federal Highway Administration (USDOJ)/FHWA) require 36" minimum width for segments (with 60" passing space every 200' minimum for segments). When adopted, Public Right of Way Accessibility Guidelines (PROWAG) will require a 48" minimum and recommend a 60" width for segments. Obstructions include any fixed object, such as signs, planters, utility poles, tree trunks/pits, etc.

**Current ADA Standards (USDOJ/FHWA) recommend a 48" minimum curb ramp with a minimum of 36" required in locations where space is restricted. PROWAG recommends 48" minimum width for curb ramps at all locations.

V. Pathway Evaluation

Pedestrian pathways will be scored using the following table. A separate scoring table for roadways with no pedestrian pathway follows.

Pedestrian Pathway Table

N Side of MD117 (MD118 to Kingsview Village)

This table is categorized along the vertical axis by land use (urban, non-urban) and compares pathway width (broken down into speed categories) to total buffer width, further classified by on-street buffer type. On-street buffers are abbreviated as DPL (designated parking lane), SBL (separated bike lane) and 2SBL (two-way separated bike lane). These variables were considered because a pathway's relative distance from a roadway (i.e. the buffer plus on-street separation), its width, and the speed of that roadway have interrelated effects on pedestrian comfort. *The scores in this table assume the pathway is in good condition. If the pathway is in fair condition, 0.5 will be added to the score. For poor condition, 1 will be added to the score (with a maximum score of 4).*

	PATHWAY WIDTH	POSTED SPEED LIMIT	PATHWAY BUFFER WIDTH / ON-STREET SEPARATION											
			0 ft to <2 ft			2 to <5 ft			5 to <8 ft			≥8 ft		
			No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL
URBAN	No walkway		Use "No Pathway" Table											
	< 5 ft	< 25 mph	4	3	1	4	3	1	3	2	1	2	1	1
		25 mph	4	3	1	4	3	1	3	2	1	2	1	1
		30 mph	4	3	1	4	3	1	3	2	1	2	1	1
		35 mph	4	3	2	4	3	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥5 to 8 ft	< 25 mph	2	2	1	2	2	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2/3*	2	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥8 to 10 ft	< 25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥10 ft	< 25 mph	2	1	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	3	2	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	1/2^	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	1/2^	1	1

	PATHWAY WIDTH	POSTED SPEED LIMIT	PATHWAY BUFFER WIDTH / ON-STREET SEPARATION											
			0 ft to <2 ft			2 to <5 ft			5 to <8 ft			≥8 ft		
			No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL	No DPL or SBL	DPL or 1SBL	2SBL or DPL & SBL
NON-URBAN	No walkway		Use "No Pathway" Table											
	Less than 5ft	< 25 mph	2	2	1	2	1	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2	1	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥5 to 8 ft	< 25 mph	2	2	1	2	1	1	2	1	1	1	1	1
		25 mph	2/3*	2	1	2	1	1	2	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	2	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	2	1	1
	≥8 ft	< 25 mph	2	1	1	2	1	1	1	1	1	1	1	1
		25 mph	2	2	1	2	1	1	1	1	1	1	1	1
		30 mph	4	3	1	3	2	1	2	1	1	1	1	1
		35 mph	4	3	2	3	2	2	3	2	1	1/2^	1	1
		≥ 40 mph	4	4	3	4	3	2	3	2	2	1/2^	1	1

* If the road category is less than Primary Residential in the Master Plan of Highways and Transitway, it will score as a 2, otherwise it will score a 3.

^If the pathway buffer width is 15' or greater, it will score as a 1, otherwise it will score as a 2.

No Pedestrian Pathway Table

Streets with no pathway receive special consideration because they cannot be scored based on path width or buffer. The most important considerations on these streets are posted speed, amount of vehicle traffic, land use and parking presence. In this table, functional class is used as a substitute for vehicle traffic volumes, since traffic volume data are not available on all roads. No road without a pathway can receive a perfect score of 1 using the available variables.²⁶ Parking on Less than Primary Residential streets may decrease pedestrian comfort by forcing pedestrians to share a narrower right of way with vehicular traffic, thereby contributing to potential conflicts.

CONTEXT	MASTER PLAN OF HIGHWAYS AND TRANSITWAYS (MPOHT) FUNCTIONAL CLASSIFICATION	PARKING ALLOWED	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	≥ 40 mph
URBAN	Any	No / Yes	4	4	4	4	4
NON-URBAN	Less than Primary Residential	No	2	3	4	4	4
		Yes	2	3	4	4	4
	Primary Residential or Greater	No	2	4	4	4	4
		Yes	3	4	4	4	4

²⁶ In the future, M-NCPPC may collect data on traffic calming measures, neighborhood slow zones with traffic calming, neighborhood shared streets or commercial shared streets, all of which would receive a score of 1 with speeds of less than 25 mph. All other scores for these contexts would remain the same.

VI. Crossings Evaluation

Crossings are scored using two main tables and an overlay table for factors that, if evaluated, can affect the base score. The two primary crossing tables are mutually exclusive (controlled or uncontrolled crossings). After crossings are scored, the overlay bonus can be assessed, as described in the crossing overlays section.

Controlled Crossings (Signalized or Stop-Controlled) Table

The following variables are considered for signalized crossings or stop-controlled crossings: number of lanes, median type, crosswalk type and posted speed limit. The highest posted speed limit of the segments that comprise the crossing is the speed limit used for scoring. These variables interact to produce the scores below.

# OF LANES	MEDIAN TYPE	CROSSWALK TYPE	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	>= 40
1 to 3	Raised Refuge Island	High Visibility	1	1	1	2	2
		Marked	1	1	2	2	2
		Unmarked	1	1	3	3	4
	Raised/Hardened Centerline	High Visibility	1	1	2	2	3
		Marked	1	1	2	2	3
		Unmarked	1	2	3	4	4
	Painted/None	High Visibility	1	1	2	3	3
		Marked	1	1	2	3	3
		Unmarked	1	2	3	4	4
4 to 5	Raised Refuge Island	High Visibility	1	1	2	3	3
		Marked	1	1	2	3	3
		Unmarked	1	3	3	4	4
	Raised/Hardened Centerline	High Visibility	2	2	2	3	3
		Marked	2	2	3	3	4
		Unmarked	2	3	4	4	4
	Painted/None	High Visibility	2	2	2	3	3
		Marked	3	3	3	3	4
		Unmarked	4	4	4	4	4
6 +	Raised Refuge Island	High Visibility	2	2	2	3	3
		Marked	3	3	3	3	3
		Unmarked	4	4	4	4	4
	Raised/Hardened Centerline	High Visibility	2	2	2	3	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	2	3	3	3	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4

Uncontrolled Crossings Table

The same primary variables are considered for uncontrolled crossings as signalized crossings or stop controlled crossings, however, the scoring is specific to uncontrolled crossings.

# OF LANES	MEDIAN TYPE	CROSSWALK TYPE	POSTED SPEED LIMIT				
			< 25 mph	25 mph	30 mph	35 mph	>= 40
1 to 3*	Raised Refuge Island	High Visibility	1	1	2	3	4
		Marked	1	1	3	3	4
		Unmarked	2	2	4	4	4
	Raised/Hardened Centerline	High Visibility	1	1	2	3	4
		Marked	1	2	3	3	4
		Unmarked	2	2	4	4	4
	Painted/None	High Visibility	1	2	2	3	4
		Marked	1	2	3	3	4
		Unmarked	2	3	4	4	4
4 to 5	Raised Refuge Island	High Visibility	1	2	2	3	4
		Marked	1	2	2	3	4
		Unmarked	2	3	4	4	4
	Raised/Hardened Centerline	High Visibility	2	2	3	4	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	4	4	4	4	4
		Marked	4	4	4	4	4
		Unmarked	4	4	4	4	4
6+	Raised Refuge Island	High Visibility	3	3	3	4	4
		Marked	3	3	3	4	4
		Unmarked	4	4	4	4	4
	Raised/Hardened Centerline	High Visibility	3	3	4	4	4
		Marked	3	3	4	4	4
		Unmarked	4	4	4	4	4
	Painted/None	High Visibility	4	4	4	4	4
		Marked	4	4	4	4	4
		Unmarked	4	4	4	4	4

*In locations where a 3-lane road does not include a turn lane, the crossing should be scored as if it has 4 travel lanes.

VII. Crossing Overlays

Overlays are used for crossings that have additional safety and comfort features present as follows:

Lighting

All crossings should be evaluated for lighting where data are available. If lit to MCDOT standards, a crossing's score is improved by a half point.

Protected Pedestrian Phase or Leading Pedestrian Interval (LPI)

Scores for controlled crossings are improved by the presence of either a protected pedestrian phase (fully protected or protected/permissive) or an LPI that allows the pedestrian a head start into an intersection before vehicle traffic signals turn green.

Rectangular Rapid Flashing Beacon (RRFB)

The presence of an RRFB, a traffic control device that improves motorist yielding compliance at uncontrolled crossing locations, improves a crossing's score by a half-point.

No Right Turn on Red Signage (No RTOR)

At signalized intersections, the presence of a "No Right Turn on Red" sign improves the final crossing score by a half point.

Traffic Calming

At all crossing locations, treatments that slow traffic speeds, improve visibility, and increase yield compliance improve the crossing score by a half point. Such treatments can include raised centerlines, raised intersections, raised crossings, or turn wedges.

Overlay Scoring

The total maximum scoring adjustment for the crossing overlays is 0.5, with the exception of any combination including traffic calming, where the maximum scoring adjustment is 1.0. An overlay category can be ignored if data for that feature are not yet available.

CROSSING TYPE	CROSSING OVERLAY FEATURE	PRESENT	BONUS POINTS	ADDITIVE
Controlled Crossings	Protected Pedestrian Phase or Leading Pedestrian Interval	Yes	0.5	No
		No	0	
	No Right Turn on Red Signage Present (Signalized)	Yes	0.5	No
		No	0	
Uncontrolled Crossings	Rectangular Rapid Flashing Beacon	Yes	0.5	No
		No	0	
All Crossings	Lighting to MCDOT Standards	Yes	0.5	No
		No	0	
	Traffic Calming	Yes	0.5	Yes
		No	0	

VIII. Accessibility Evaluation

In addition to the PLOC evaluation, an accessibility evaluation is recommended for both street blocks and crossings. If a street block or crossing has a score of greater than zero, it may have accessibility issues that need to be addressed.

	ADA CONDITION	YES/NO	SCORE	NOTES
Street Block (Score each segment)	Pathway is under 5' wide	Yes	1	Sum = number of ADA issue categories. Score of 0 = No known accessibility issues from available data.
		No	0	
	Trip hazards of 1/4" or greater	Yes	1	
		No	0	
	Cross slope less than 0% or greater than 2%	Yes	1	
		No	0	
	Obstruction(s) creating a less than 36"* pedestrian access route (PAR)	Yes	1	
		No	0	
Crossings (Score each crossing direction or crosswalk)	Missing pathway section(s) within segment	Yes	1	Sum = number of ADA issue categories. Score of 0 = No known accessibility issues from available data.
		No	0	
	Lacking detectable warning surface (DWS)	Yes	1	
		No	0	
	Ratio of DWS width / Ramp width is less than 1	Yes	1	
		No	0	
	Ramp width is less than 36"***	Yes	1	
		No	0	
	Ramp slope is less than 0% or greater than 8.33%	Yes	1	
		No	0	
	Ramp landing area slope is less than 0% or greater than 2%	Yes	1	
		No	0	
	Ramp landing area is less than 5' x 5'	Yes	1	
		No	0	
	Accessible pushbutton not present (when pedestrian signal is present)	Yes	1	
		No	0	

*Current ADA Standards from the U.S. Department of Justice/Federal Highway Administration (USDOJ)/FHWA) require 36" minimum width for segments (with 60" passing space every 200' minimum for segments). When adopted, Public Right of Way Accessibility Guidelines (PROWAG) will require a 48" minimum and recommend a 60" width for segments. Obstructions include any fixed object, such as signs, planters, utility poles, tree trunks/pits, etc.

**Current ADA Standards (USDOJ/FHWA) recommend a 48" minimum curb ramp with a minimum of 36" required in locations where space is restricted. PROWAG recommends 48" minimum width for curb ramps at all locations.

Appendix E

Vision Zero Statement

Speed Studies

District: 3
County: Montgomery County
Location: MD 118 near Leaman Farm Road
Date: 4/28/2021
Time: 2:00 PM

Direction	Northbound MD 118	Southbound MD 118
Observation #	Speed (MPH)	Speed (MPH)
1	37	44
2	41	58
3	45	47
4	40	45
5	40	47
6	42	47
7	43	43
8	39	41
9	43	39
10	42	39
11	41	42
12	42	44
13	44	45
14	44	50
15	43	49
16	45	46
17	46	40
18	48	37
19	47	41
20	41	39
21	43	43
22	40	45
23	33	43
24	44	37
25	40	49
26	41	43
27	42	45
28	40	47
29	40	41
30	43	44
31	45	39
32	38	41
33	40	49
34	42	36
35	43	45
36	44	47
37	41	44
38	40	46
39	42	49
40	36	50
41	34	37
42	45	39
43	47	34
44	45	37
45	46	40
46	45	36
47	40	42
48	41	44
49	38	41
50	42	38

40 MPH Posted Speed Limit

48 20% Above Speed Limit

NB - 50th Percentile Speed 42 MPH

NB - 85th Percentile Speed 45 MPH

SB - 50th Percentile Speed 43 MPH

SB - 85th Percentile Speed 47 MPH

District: 3
County: Montgomery County
Location: MD 117 east of Liberty Mill Road
Date: 4/28/2021
Time: 1:15 PM

Direction	Eastbound MD 117	Westbound MD 117
Observation #	Speed (MPH)	Speed (MPH)
1	34	37
2	42	38
3	38	44
4	32	41
5	36	37
6	31	38
7	37	36
8	40	42
9	34	39
10	36	38
11	34	27
12	39	41
13	40	37
14	35	40
15	42	46
16	47	33
17	39	31
18	34	26
19	42	31
20	38	33
21	40	38
22	43	34
23	42	35
24	40	36
25	35	44
26	39	37
27	35	42
28	36	33
29	34	33
30	37	34
31	39	44
32	41	37
33	39	40
34	36	38
35	33	41
36	35	35
37	39	30
38	38	39
39	33	34
40	34	35
41	41	35
42	28	39
43	37	37
44	41	39
45	38	33
46	28	32
47	42	42
48	38	42
49	38	39
50	34	37

30 MPH Posted Speed Limit

36 20% Above Speed Limit

EB - 50th Percentile Speed 38 MPH

EB - 85th Percentile Speed 41 MPH

WB - 50th Percentile Speed 37 MPH

WB - 85th Percentile Speed 42 MPH

District: 3
County: Montgomery County
Location: Leaman Farm Road east of MD 118
Date: 4/28/2021
Time: 1:45 PM

Direction	Both Directions	
Observation #	Speed (MPH)	
1	25	
2	40	
3	36	
4	33	
5	35	
6	24	
7	29	
8	34	
9	32	
10	34	
11	31	
12	34	
13	39	
14	36	
15	41	
16	32	
17	27	
18	36	
19	43	
20	27	
21	27	
22	30	
23	30	
24	27	
25	33	
26	32	
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48		
49		
50		

30 MPH Posted Speed Limit

36 20% Above Speed Limit

EB - 50th Percentile Speed 32 MPH

EB - 85th Percentile Speed 36 MPH