

Comments on the Calvert County Transportation Plan, September 2019 Draft

Additional comments received December 17, 2019

	NAME	GROUP / AGENCY	TOWN	DATE RECEIVED	# OF PAGES
1	Andree Green Checkley	The Maryland-National Capital Park and Planning Commission	Upper Marlboro	12/4/19	2
2	Charles W. Boyd, AICP	Maryland Department of Planning	Baltimore	12/12/19	6
3	Heather Murphy	Maryland Department of Transportation	Hanover	12/12/19	2
4	David Bury		Chesapeake Beach	12/17/19	6



14741 Governor Oden Bowie Drive
Upper Marlboro, Maryland 20772
www.mncppc.org/pgco

Planning & Zoning

December 2, 2019

DEC 04 2019

RECEIVED

Britany J. Waddell, AICP
Deputy Director, Planning
Calvert County Planning Commission
150 Main Street
Prince Frederick, MD 20678

Re: Draft Calvert County
Transportation Plan Comments

Dear Ms. Waddell:

Thank you for the opportunity to review the draft *Calvert County Transportation Plan* dated September 19, 2019. The Prince George's County Planning Department of the Maryland-National Capital Park and Planning Commission (M-NCPPC) is in support of the proposed Transportation Plan provided by the Calvert County Planning Commission.

The draft Transportation Plan is built upon the principles of managing motor vehicle transportation, increasing opportunities for multimodal transportation, and improving transportation safety for everyone. These align with the goals of the 2014 *Prince George's County General Plan (Plan Prince George's 2035)*.

Specifically, the Prince George's County Planning Department supports the following goals:

- Deploy intelligent transportation technologies to improve reliability and travel time on MD 4. MD 4 is the key connection between Calvert and Prince George's Counties and using 'Smart Signal Systems' and real-time data will better manage traffic flow, as well as provide better information and opportunities for alternative travel modes for people driving into Prince George's County. This will further reduce motor vehicle congestion along one of Prince George's County's most traveled routes.
- Expand commuter bus service to reflect the actual patterns of County residents, particularly considering new service to federal facilities in northern Prince George's County. Improved transit is one of the most effective approaches for reducing congestion and increased regional transit will benefit people in both Calvert and Prince George's Counties.
- Upgrade the bicycle and pedestrian network. While it is unlikely that many trips between Calvert and Prince George's Counties will be solely by walking and bicycling, local efforts to improve active transportation infrastructure can have indirect benefits to Prince George's County. This includes smoother overall traffic flow along MD 4, higher rate of regional transit use from complete first- and last-mile connections, less vehicular emissions, and safer roadways.

- Eliminate traffic and pedestrian deaths and serious injuries. Prince George's County has recently adopted a Vision Zero policy to achieve the same ends. Consistent efforts between our counties to eliminate traffic and pedestrian death and serious injuries will support a safer statewide transportation network.

These are all important aspects to developing a multimodal and sustainable transportation network. As described in the draft, there are more commuters traveling outside Calvert County to Prince George's County than any other jurisdiction in the region. Inter-county transportation improvements in Calvert County such as increasing transit service, more effectively managing traffic along MD 4, and improving alternative modes of transportation will help reduce congestion in Prince George's County. Our counties are linked directly by transportation and we can build upon our mutual successes for a stronger region.

Please contact Bryan Barnett-Woods at 301-952-3473 or at bryan.barnett-woods@ppd.mncppc.org, if you have any questions or need additional information. Thank you for your time and attention to this matter.

Sincerely,


Andree Green Checkley
Planning Director

cc: Terry L. Bellamy, Director, DPW&T
Marion Brown, Special Assistant, DPW&T
Derick Berlage, Acting Deputy Director, Planning Department
Katina Shoulars, Acting Division Chief, Countywide Planning Division
Iftin Thompson, Senior Planner, Transportation Planning Section



Maryland DEPARTMENT OF PLANNING

December 12, 2019

Mr. Greg Kernan, Chair
Calvert County Planning Commission
150 Main Street, Suite 300
Prince Frederick, Maryland 20678

Dear Mr. Kernan:

Thank you for the opportunity to review the proposed rewrite of the 2010 County Transportation Plan for Calvert County, Maryland, effective March 10, 1998 and incorporated by reference in the 2010 Calvert County Comprehensive Plan; since replaced by Calvert 2040, adopted August 2019.

The department forwarded a copy of the amendment to several state agencies including the Maryland Historic Trust and the Departments of Commerce, Environment, Housing, Natural Resources and Transportation. Comments from the Maryland Department of Transportation are included below. Any plan review comments received after the date of this letter will be forwarded upon receipt.

Please consider that the Maryland Department of Planning's comments reflect the agency's recommendations and observations on ways to strengthen the county's plan, as well as satisfy the requirements and intent of the State Land Use Article.

Planning respectfully requests that this letter be made part of the county's public hearing record. Please feel free to contact me at (410) 767-1401 or Sarah Lipkin Sularz, Southern Maryland Regional Planner, at (410) 767-3837. We appreciate your participation in the plan review process.

Sincerely,

Charles W. Boyd, AICP
Director, Planning Coordination

cc: Mark Willis, Calvert County Director of Planning and Zoning
Joe Griffiths, Manager Local Assistance and Training
Sarah Lipkin Sularz, Southern Maryland Regional Planner

Maryland Department of Planning Review Comments
December 12, 2019
2019, Draft Calvert County Transportation Plan

The Maryland Department of Planning (Planning) has reviewed the 2019, DRAFT Calvert County Transportation Plan (Transportation Plan) and offers the following comments for your consideration. These comments are offered as suggestions to improve the draft plan and better address the statutory requirements of the Land Use Article. Other state agencies as noted have contributed comments. Still others may have comments submitted separately. If comments from other agencies are subsequently received by Planning, they will be forwarded to the county in a timely manner.

Summary of the Draft Comprehensive Plan

This is a complete update to the 2010 County Transportation Plan for Calvert County, Maryland (2010 Transportation Plan), which was originally adopted in 1997 and then incorporated into the 2010 Comprehensive Plan. Calvert County is part of the Southern Maryland region. Calvert County is located on a peninsula approximately 30 miles southeast of Washington D.C. and it is bordered by water on two sides - to the east by the Chesapeake Bay, and to the west by the Patuxent River. Its northern border is shared with Anne Arundel County. The county has a total area of approximately 220 square miles and has 120 miles of shoreline. This unique geography, along with the imbalance of outbound commuters and the increase in median commuting time in the past two decades (pg. 2) present transportation challenges for the county.

The Transportation Plan responds to the county's population growth, nearly 160% increase since the mid 1980's. Since 1997, the adoption date of the now-named 2010 Transportation Plan, the region has experienced an influx of new growth, leading to a residential boom, with large lots and an auto-centric development layout responding to this demand. The predominant mode of transportation in Calvert County is the personal vehicle, 90% of county residents commute with their own car while just 3% use public transportation. The introduction states that with changes in development policies and transportation investment it is possible to shape Town Centers with a more balanced transportation network (pg. 1).

The Transportation Plan follows a different structural approach than the one currently adopted. It is organized around transportation topics, including Commuting and Traffic Conditions, Transportation Challenges, The Road Ahead: Forecasting Travel Demand through 2040, The Plan: Strategic Transportation Policies and Investments for Calvert County, and Conclusion and Path Forward. The previous plan included a traditional outline with chapter titles such as; Introduction, Existing Conditions, Objectives, Final Recommended Plan, Plan Evaluation, and Plan Implementation. Following this topical analysis, the Transportation Plan includes responsive transportation goals, objectives, and strategies; as well as an appendix with maps highlighting the sidewalk networks of the county's town centers and accident hotspots.

Improving mobility is a repeated theme throughout existing and historic Calvert County transportation goals and objectives. MD 2/4 is the only main arterial road in and out of the county (2019 Comprehensive Plan, 2-5). The 2010 Comprehensive Plan called for the construction of other sections of the Prince Frederick Loop Road, the network of local roads parallel to MD 2/4 in Prince Frederick. The 2013 Prince Frederick Charrette Report bases its recommended Town Center land use upon these roads. The Transportation Plan focuses on

missing connections to other roads, added turn lanes, and improvements to MD 231 (pg. 21). Another goal, included in both multiple historic planning documents and survey feedback, is improving the quality and connectivity of sidewalks and bike trails. The strategies include safe and comfortable pedestrian and bicycle connections between residential and commercial areas (2019 Comprehensive Plan, 2-5).

General Comments

Planning commends the county on crafting a document that responds to many dynamic transportation issues. The county may want to copy the goals, which are written in the “Conclusion and Path Forward” section, to the Introduction and Executive Summary, as well as include a document vision or statement of intent. Planning suggests the county also include and explanation of the relationship between this document and the newly adopted 2019 Comprehensive Plan (Comprehensive Plan) and the Town Center Master Plans.

The analysis provided in this transportation plan is thorough and well presented, both written and visually. Planning recommends the county address the jobs and housing imbalance noted in the Comprehensive Plan and link it to a related goal or objective(s) in the Transportation Plan. Perhaps including a jobs and housing balancing objective under Goal 4, such as reference to the implementation strategies suggested in the Comprehensive Plan (pg. 3-14, 3-17, 3-18). Planning appreciates that the plan includes objectives to address multimodal transportation solutions, traffic safety, access management and other strategies. However, long distance commuting will continue to impact local roadway maintenance, quality of life and impact adjoining jurisdictions. The county may want to consider developing policies to attract employment and housing within Town Centers, which could reduce the need for expansion of low-density developments, while still encouraging and accommodating employment development. These goals can be related to the Comprehensive Plan strategies listed in Chapter 8: Economic Vitality (8-1), “emerging industries” (8-11) and “strategies” (8-14).

Planning appreciates that the transportation plan includes a bicycle and pedestrian facility gap analysis in the appendix. It would be helpful to clarify the responsibilities (e.g., the state, local jurisdictions, and private developers), funding mechanisms, timeframes and prioritization for proposed roadway, sidewalk, or trail improvement projects. The circulation plans represented by the appendix maps could be strengthened with a discussion about the rationale for the priority, e.g., supporting planned growth in the Priority Funding Areas, providing needed connections to address local traffic, etc.

Information on how the county plans to fund new non-motorized facilities would be beneficial. The State Highway Administration’s (SHA) Transportation Alternatives Program may be a funding option for sidewalk construction. More information can be found at <http://www.roads.maryland.gov/Index.aspx?PageId=144>.

Planning recommends incorporating the Maryland Department of Energy’s Climate Plan Outreach: 2030 Greenhouse Gas Reduction Act Plan, which deals with transportation and emissions. The Transportation Plan could utilize tools, programs and initiatives to meet these goals which are outlined here: <https://mde.maryland.gov/programs/Air/ClimateChange/Pages/index.aspx>

Planning commends the Transportation Plan for incorporating additional charts and figures that help the reader better understand the issues facing transportation for residents and visitors of Calvert County. Planning also commends the county striving for balance that supports measured growth (pg.26) while preserving rural landscape and creating vibrant town centers.

Technical Edits/Suggestions

1. The Transportation Plan uses different projection data (pg. 14) than was used in the Comprehensive Plan (ES-3). This discrepancy should be resolved or explained in the document.
2. A specific edit to review is (refer to Figure K, Page 15) where the figure title does not describe attributes of both charts shown, times denoted only suggest AM Peak data, but charts show both AM and PM data.
3. Existing infrastructure conditions should be explicitly labeled and explained in comparison to improvements so that intersections and updates are fully legible as shown (pg. 21).

Additional Specific Review Comments

The following are detailed comments on each section of the Plan.

1. Introduction
 - a. Relocate goals from Conclusion to Introduction.
 - b. Add intent for document
2. Commuting and Traffic Conditions
 - a. **Refer to Page 6, table 5:** the preceding descriptive paragraph states inaccurately that, "Like the traffic speeds, intersections along the MD 2/4 corridor also operate as intended with only Cox Road in Huntingtown operating at level service (LOS) "F" during morning peak hours." However, this is not what is shown or reflected in the table 5 analysis. Planning strongly encourages that this be corrected and properly portrayed. The plan has not been built out and executed according to the 2010 document. Planning recommends specific endeavors and projects to limit exceeding LOS ratings as is.
3. The Road Ahead: Forecasting Travel Demand through 2040
 - a. Planning commends use of the MWCOG Travel Demand Model with refinement for Calvert County (pg. 14).
4. The Plan: Strategic Transportation Policies and Investments for Calvert County
 - a. **Refer to Goal #1** (pg. 17)
 - i. Consider adding varied and cost-effective strategies such as Green Infrastructure technologies, including stormwater management and street trees along roadways, specifically along pedestrian routes.
 - ii. The county may want to include an objective or a strategy to consider paving shoulders, adding sharrows, bike lanes etc...for bicycle users where feasible and appropriate as part of the roadway maintenance program (incorporate resurfacing programs to include these changes).

- b. **Refer to Goal #2** (pg. 18)
 - i. In the second strategy, explain intent and function behind “analyze and design.”
- c. **Refer to Goal #3** (pg. 20)
 - i. Improvements should be delineated and labeled so intersections and updates are fully understood.
 - ii. Are there needs to improve pedestrian and bicycle safety crossing MD 2/4 or other major highways in the town center areas? If so, the county may want to include a strategy to address it and work with SHA to achieve safe passage to pedestrians.
- d. **Refer to Goal #4** (pg. 22)
 - i. Has the county evaluated the need to provide commuter bus service to southern St. Mary’s County such as the NAS Pax River area, a major employment destination for Calvert County commuters? Should such bus service be reviewed by the MTA?
 - ii. The county should include a Transportation Demand Management (TDM) strategy to encourage car-pools, telework, flexible work hours/schedules, and addressing the need for park and ride lots expansion (if any) for transit services and car-/van-pools. Planning suggests that the county work with MDOT and major employers of county commuters/residents through the Commuter Program (<https://www.mta.maryland.gov/commuter-programs>) to reduce the need for SOV and long distance travels.
- e. **Refer to Goal #5** (pg. 24)
 - i. The county may want to consider including strategies which address emerging transportation technologies and their impacts on transportation planning, e.g., electric vehicles (EVs), connected and autonomous vehicles (CAVs) and shared-mobility services (e.g., Uber and Lyft). The county may also want to explore if transportation network companies’ service, such as Uber or Lyft, can be used to enhance demand-response public transportation service to benefit the elderly, disabled and low-income seeking employment. In addition, as demand for senior housing increases due to an aging population, the county should consider a strategy that encourages locating senior housing development in the town center areas and near service establishments. This could be achieved by bridging connections from the Comprehensive Plan’s “Chapter 6. Housing: Goal 4” and all related implementation work (6-1).

5. Conclusion and Path Forward

- a. Planning values the county’s aspirations to strike a balance between preservation and development. This section could benefit from expanding the implementation strategies and steps to move towards success.

END MARYLAND DEPARTMENT OF PLANNING COMMENTS

Maryland Department of Planning Review Comments
December 12, 2019
2019, Draft Calvert County Transportation Plan

STATE AGENCY COMMENTS

The following pages contain comments from other State agencies in support of the Maryland Department of Planning (Planning) review of the 2019 Draft Calvert County Transportation Plan.

As part of the standard 60-day review period for municipalities and non-charter counties. Comments not included here may be submitted under separate cover, or via the State Clearinghouse. If comments from other agencies are received by Planning, they will be forwarded to the County in a timely manner.

Attachments

Maryland Department of Transportation (letter)

December 9, 2019

Sarah Lipkin Sularz, Regional Planner
Maryland Department of Planning
301 W. Preston Street, Suite 1101
Baltimore MD 21201

Dear Ms. Sularz:

Thank you for coordinating the State of Maryland's comments on the 2019 Calvert County Transportation Plan, hereafter referred to as the "the Plan". The Maryland Department of Transportation (MDOT) offers the following comments.

General Comments:

- There are some goals in the Plan that align with the 2040 Maryland Transportation Plan [http://www.mdot.maryland.gov/newMDOT/Planning/Maryland Transportation Plan/Ind ex.html](http://www.mdot.maryland.gov/newMDOT/Planning/Maryland_Transportation_Plan/Ind ex.html). MDOT recommends referencing the Maryland Transportation Plan to demonstrate that many of the goals of the Plan align and support Maryland statewide goals.
- This plan should align with the 2019 Calvert County Priority Letter or explain why there are discrepancies between the two documents. To be consistent with Calvert County's most recent priority letter, the Plan should mention the need for MD 231 corridor improvements and a transit center, if these projects are still desired by the County.
- List of Acronyms – CTP is the abbreviation for Consolidated Transportation Program, not Capital Transportation Program.

Specific Comments:

Transportation Challenges

- p. 10 – Consider including State of Good Repair (SGR) and the importance to maintain a funding level to at least ensure assets stay in SGR.
- p. 11 – In discussing climate change and infrastructure resiliency, this plan states "increasing tidal activity and severe storms are causing more roads to flood than ever before; thirty roads have experienced recent or recurring flooding since 2018." The County should clearly document which roads have been subject to flooding and/or inundation and which agencies are responsible for those facilities.

Ms. Sarah Lipkin Sularz
Page Two

The Plan: Strategic Transportation Policies and Investments for Calvert County

- p. 19, goal 2 – Make clear if Calvert County has adopted a Vision Zero strategy, is considering a Vision Zero Strategy, or if adoption of a Vision Zero strategy is a goal of only this plan.
- p. 22, goal 3 – Clarify whether Calvert County has adopted a sidewalk maintenance ordinance and, if so, what responsibilities are placed on which entities and persons for maintaining sidewalk.
- p. 23, Goal 4 – The MDOT supports the goal to expand achieve reliable travel times for commuters using MD 2/4. For your information, MDOT formally developed a Transportation Systems Management and Operations (TSM&O) Strategic Implementation Plan. The MDOT TSMO strategies identified for Calvert County outline operational technologies to assist programming and align funding and priorities to maximize the performance of the existing highway system. The next step is to begin concept design and the systems engineering process to better define the TSMO strategies and develop a deployment plan based on priorities, benefit cost, and available funding.

Thank you again for the opportunity to review the Plan. If you have any questions or concerns, please do not hesitate to contact Mr. Dan Janousek, Regional Planner, MDOT Office of Planning and Capital Programming (OPCP) at 410-865-1098, toll free at 888-713-1414 or via email at djanousek@mdot.state.md.us. He will be happy to assist you.

Sincerely,



Heather Murphy
Director, OPCS, MDOT

cc: Mr. Dan Janousek, Regional Planner, OPCS, MDOT

David Bury

There's a lot of good information in the current draft. Unfortunately, however, the assessments of current and projected future traffic congestion are either missing or displayed in ways that may be unintentionally misleading. These assessments are critical to Planning Commission legal responsibilities to help determine adherence to the road and intersection Level of Service (LOS) requirements in the County Adequate Public Facility Ordinance (APFO). In particular, these assessments will be vital inputs as the County Government, Planning Commission and public begin working on the County-wide Zoning Ordinance rewrite and updating the Town Center Master Plans and Zoning Ordinances.

Based on this, I would respectfully urge the Planning Commission to vote to return the draft to the Planning and Zoning Department to make the following changes:

- **Issue 1. Current Intersection Level of Service.** Current AM and PM rush hour Level of Service (LOS) data for the 13 County intersections studied is displayed as the average LOS for the whole intersection (page 6, Table 5, appended below). The draft should be changed to include tables that separate out the data to show individual LOS's for each approach to these intersections. The contractor actually generated these separate intersection approach tables (also appended below) in a technical report accompanying the draft. These tables give significantly different results that far more accurately reflect the actual driving experience of County residents, and shows greater traffic congestion (see further description below).

- **Issue 2. Future Intersection LOS.** Projected future AM and PM rush hour LOS's for these 13 County intersections through the year 2040 was studied by the contractor, according to the RFP and contract, but results are not included in the draft. The draft should be changed to include tables that show projected future intersection LOS's for each of the three County residential growth scenarios studied. Ideally, tables should be provided that show projected intersection LOS's in 5-year increments out to the year 2040. This would give County Government, the Planning Commission and the public a better understanding of where, and how soon, residential growth might violate the APFO.

- **Issue 3. Inconsistency with State Highway Administration (SHA) Intersection LOS Data.** For at least one intersection (the RT 2/4 split at Sunderland), the draft's data for current average PM rush hour LOS conflicts with SHA data (appended below). The draft's data shows the PM rush hour LOS as "C," or acceptable, whereas the SHA data shows it as an "F," or failure under APFO requirements. I have requested from SHA their LOS data for the remaining 12 intersections studied for the Transportation Plan Update, but not yet received it. Before approving the Transportation Plan Update draft, I strongly recommend that the Planning Commission also request this SHA data to determine whether additional discrepancies may exist.

- Issue 4. Current and Future Roadway LOS. In addition to intersection LOS's, the APFO also has requirements for County road LOS's of "C" or better, and State roads of "D" or better. The SHA defines "D" LOS as a Critical Lane Volume (CLV) of 1600 vehicles per hour or less, and it should be measured during hours when traffic volume is greatest – typically AM and PM rush hours. CLV data is missing from the draft, and is also critical to giving County Government, the Planning Commission and the public a better understanding of where, and how soon, residential growth might violate the APFO. The only data on roadway volume given in the draft is average vehicles per day. This measure does not break out rush hour congestion or account for the number of lanes in a roadway, and does not determine whether the APFO has been adhered to. The draft should be changed to provide current and projected future CLVs through 2040, for all three residential growth scenarios, for those sections of RT 2/4, 260 and 231 deemed to have the highest AM and PM rush hour congestion.

- Issue 5. Residential Growth Scenario Detail. Although the three residential growth scenarios are nicely described in the draft text, only the lowest growth scenario is shown on the graph, and the actual figures for year-by-year population projections through are not included anywhere. Including the actual population numbers projected through 2040 for all three growth scenarios in both graphic and tabular form will give County Government, the Planning Commission and the public a better understanding of the population levels that correlate to intersection and road LOS's. This in turn gives a better estimate of thus how soon residential growth might violate the APFO.

In addition, the study RFP indicated that the contractor and the Planning and Zoning Department would project population growth for all three scenarios through 2040 broken out by individual geographic Traffic Analysis Zones (TAZs) in the County. This data, along with a map showing the TAZ's, should be provided in an appendix to the draft, so that County Government, the Planning Commission and the public can determine with greater granularity whether a new proposed residential development in a given TAZ might include population increases above those projected in a given scenario, and thus whether it is at risk of violating the APFO.

Finally, the methodology used to generate future traffic volumes based on residential growth is not clearly explained in the draft, and even the explanation in an accompanying contractor technical report is unclear. The most reliable way to estimate AM and PM rush hour peak traffic volumes is to assign each type of residence a "trip generation factor" – a multiplier that converts the numbers of residences of a given type (e.g. single family home, townhouse, apartment, senior retiree apartment, etc) into the numbers of rush hour vehicles on the road. For example, the 2015 Traffic Impact Analysis for the then-proposed Armory Square project assumed that each new apartment would generate 0.49 AM rush hour trips and 0.55 PM rush hour trips. However, Planning and Zoning staff has indicated to me that a different methodology was used that does not rely on trip generation factors.

Strongly recommend that the Planning Commission ask Planning and Zoning how future AM and PM rush hour peak traffic volumes were estimated for the three residential growth scenarios. Understanding how these estimates were made will be important for the Planning Commission and the public in helping to determine when future residential growth might be at risk of violating the APFO.

Detailed Description of Issue 1: Current Intersection LOS.

The Calvert County Adequate Public Facilities Ordinance states that:

“[A] traffic impact study will be required to determine if the roadways and intersections are adequate to accommodate the proposed residential subdivision or residential development. To be determined "adequate" by the Planning Commission, the County road(s) must maintain a level "C" service rating, after full development of this and all other existing and proposed residential developments and subdivisions within the study area. The County intersections must maintain a level "C" service rating except for Town Centers where a level "D" service rating will be acceptable. State roads and intersections must maintain a minimum level "D" service rating, after full development of this and all other existing and proposed subdivisions and residential development within the study area.”

Table 5 - 2019 Intersection Capacity and Delay				
Intersection	LOS		Average Delay (sec)	
	(AM)	(PM)	(AM)	(PM)
MD 4 @ Ward Road	C	D	26	48
MD 2/4 Split	D	C	39	28
MD 2/4 @ Cox Road	D	F	47	217
MD 2/4 @ Plum Point Road	C	B	25	17
MD 2/4 @ Stoakley Road	C	D	21	46
MD 2/4 @ Dares Beach Road	C	D	28	40
MD 2/4 @ Church Road	C	C	26	33
Adelina Road @ MD 231 (NB Approach)*	B	C	15	18
MD 2/4 @ Sixes Road (EB Approach)*	F	F	186	300+
MD 4 @ Broomes Island Road	B	B	12	12
MD 2/4 @ Calvert Beach Road	C	D	24	39
MD 2/4 @ Cove Point Road	B	C	13	25
MD 2/4 @ Dowell Road* (avg. all approaches)	C	B	8	9

* Unsignalized Intersection. Note: MD 2/4 intersection improvement opened in August 2019 is expected to return location to LOS B (AM) and B (PM)

Source: Data collected by SAI, April 2019

Figure 1: Draft Transportation Plan Update Depiction of LOS for 13 Key Intersections

The problem with Table 5 in the current draft is that it averages the LOS across all approaches to each intersection, rather than citing the individual LOS at each approach to an intersection. The LOS data for individual approaches to intersection is contained in a technical report done by Sabra (the contractor hired by Calvert P&Z to do much of the analysis for the Transportation Plan Update). This data (figures 2 and 3 below) is not included in the draft Transportation Plan Update, and tells a very different story. Several intersections that would be characterized as “acceptable” under AFPO criteria according to Table 5 in fact fail if all approaches to the intersections are individually measured.

Intersection	Control	Approach	Existing - AM			Existing - PM		
			V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
MD 4 & Ward Rd.	Signalized	Overall	0.68	26.2	C	0.86	48.3	D
		EB	0.56	46.5	D	0.68	37.3	D
		WB	0.23	65.6	E	0.88	95.4	F
		NB	0.76	23.5	C	0.58	31.2	C
		SB	0.23	16.0	B	0.93	47.3	D
MD 2-4/MD 4 & MD 2	Signalized	Overall	0.82	39.2	D	0.84	28.4	C
		WB	0.90	84.5	F	0.90	44.9	D
		NB	0.81	37.8	D	0.83	49.7	D
		SB	0.64	12.3	B	0.68	6.0	A
MD 2-4 & MD 524/COX Road	Signalized	Overall	0.86	45.8	D	1.31	217.5	F
		EB	0.70	74.6	E	0.74	77.4	E
		WB	0.50	75.7	E	0.65	81.2	F
		NB	0.93	44.6	D	1.79	227.6	F
		SB	0.64	31.0	C	1.45	247.9	F
MD 2/4 & MD 263 Plum Point Rd.	Signalized	Overall	0.78	25.3	C	0.74	16.7	B
		WB	0.92	92.2	F	0.82	82.2	F
		NB	0.68	24.5	C	0.61	19.5	B
		SB	0.71	5.8	A	0.74	4.5	A
MD 2-4 & Stoakley/Hospital	Signalized	Overall	0.75	21.3	C	0.85	46.4	D
		EB	0.67	54.9	D	0.80	84.1	F
		WB	0.29	52.7	D	0.68	82.1	F
		NB	0.84	15.1	B	0.77	34.0	C
		SB	0.62	20.4	C	0.93	43.1	D
MD 2-4 & MD 402	Signalized	Overall	0.76	27.6	C	0.85	39.7	D
		EB	0.23	48.1	D	0.74	82.8	F
		WB	0.49	42.3	D	0.66	65.2	E
		NB	0.92	30.0	C	0.69	31.4	C
		SB	0.56	16.2	B	0.96	29.4	C
MD 2-4 & MD 231/Church St.	Signalized	Overall	0.56	26.2	C	0.70	32.9	C
		EB	0.61	35.8	D	0.77	44.2	D
		WB	0.31	50.8	D	0.63	80.3	F
		NB	0.69	25.0	C	0.65	30.5	C
		SB	0.31	19.1	B	0.70	23.3	C

Figure 2. Sabra Technical Memorandum Depiction of LOS for the Same 13 Key Intersections. Source: Sabra Memo to Calvert P&Z, July 8, 2019, "Travel Demand Forecast for Calvert County Transportation Plan," page 20.

Intersection	Control	Approach	Existing - AM			Existing - PM		
			V/C	Delay (s)	LOS	V/C	Delay (s)	LOS
MD 508 Adelina Rd. & MD 231	Unsignalized	Overall	-	-	-	-	-	-
		EB	0.28	0.0	A	0.38	0.0	A
		WB ¹	0.33	1.2	A	0.37	9.6	A
		NB ¹	0.20	14.5	B	0.23	18.2	C
MD 2-4 & Sixes Rd.	Unsignalized	Overall	-	-	-	-	-	-
		EB ¹	1.01	185.6	F	9.60	Err	F
		NB ¹	0.60	0.2	B	0.46	0.5	E
		SB	0.28	0.0	A	0.78	0.8	A
MD 2-4 & MD 264	Signalized	Overall	0.61	11.7	B	0.73	11.6	B
		EB	0.71	39.9	D	0.73	65.9	E
		NB	0.43	1.0	A	0.34	1.1	A
		SB	0.40	17.4	B	0.69	11.1	B
MD 2/4 & Ball Rd./Calvert Beach Rd.	Signalized	Overall	0.67	23.8	C	0.78	38.6	D
		EB	0.38	52.9	D	0.56	74.2	E
		WB	0.50	18.9	B	0.76	61.3	E
		NB	0.68	23.2	C	0.60	29.8	C
		SB	0.38	20.7	C	0.78	36.1	D
MD 2-4 & MD 497 Cove Point Rd.	Signalized	Overall	0.51	12.9	B	0.72	24.7	C
		EB	0.45	20.6	C	0.00	24.3	C
		WB	0.20	22.2	C	0.45	25.8	C
		NB	0.50	13.2	B	0.70	16.6	B
		SB	0.45	8.7	A	1.12	31.8	C
MD 2-4 & Monticello Dr./Dowell Rd.	Unsignalized	Overall	-	-	-	-	-	-
		EB	0.04	19.1	C	0.04	13.2	B
		WB	0.10	12.1	B	0.22	17.9	C
		NB ¹	0.26	0.0	C	0.44	0.1	B
		SB ¹	0.55	0.4	B	0.34	1.7	C

1- These approaches are "free". The delay reported is for the main line left movements.

Figure 3. Sabra Technical Memorandum Depiction of LOS for the Same 13 Key Intersections, cont'd. Source: Sabra Memo to Calvert P&Z, July 8, 2019, "Travel Demand Forecast for Calvert County Transportation Plan," page 21.

In my view, the draft Transportation Plan Update should replace Table 5 (my figure 1) with the more accurate table in my figures 2 and 3. The draft should also add text describing how these figures relate to the APFO. Based on the data in these figures, a strong case can be made that future residential development may already be restricted under the AFPO in several areas of Calvert County, based on intersection LOS – a key conclusion missing from the current draft.

Detail on Issue 3, Inconsistency with State Highway Administration (SHA) Intersection LOS Data.

Please compare the SHA PM rush hour LOS data for the RT 2/4 split at Sunderland, below, with the Transportation Plan Update draft's data in Figure 1 above. The SHA data shows an LOS of "F," whereas the draft data shows an LOS of "C." Before approving the Transportation Plan Update draft, I strongly recommend that the Planning Commission also request SHA LOS data for the other 12 intersections studied in the Transportation Plan Update to determine whether additional discrepancies may exist.

North of Huntlytown

Maryland Department of Transportation
State Highway Administration Data Services Engineering Division
Turning Movement Count Study - Field Sheet

Henry Zhang
Am - D-13B
Pm - F-1612

Station ID: S1994040002
Date: Thursday 07/19/2018
Location: MD 2 at MD 4 (Sunderland)
Interval (dd): 60 min

County: Calvert
Town: none
Weather: Clear

Comments:

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	LOS	V/C	PM PERIOD 12:00PM-19:00P	Start	End	Volume	LOS	V/C
		08:00	Calve	3169	D	0.83		17:00	Calve	4106	F	1.04

Hour Ending	MD 4					MD 4					MD 2					Ent to First Lutheran Church					Grand Total
	From North					From South					From East					From West					
	U.Turn	Left	Through	Right	TOTAL	U.Turn	Left	Through	Right	TOTAL	U.Turn	Left	Through	RIGHT	TOTAL	U.Turn	Left	Through	Right	TOTAL	
1:00	0	4	105	0	109	0	0	41	26	67	0	27	0	5	32	0	0	0	0	0	208
2:00	0	5	59	1	65	0	0	30	13	43	0	27	0	2	29	0	0	0	1	1	138
3:00	0	5	49	0	54	0	0	90	11	101	0	13	0	0	13	0	0	0	0	0	168
4:00	0	5	56	0	61	0	0	228	17	245	0	15	0	5	20	0	0	0	0	0	326
5:00	0	10	84	0	94	0	0	843	84	927	0	47	0	24	71	0	0	0	0	0	1092
6:00	1	22	238	0	261	0	0	1609	241	1850	0	125	0	33	158	0	0	0	0	0	2269
7:00	2	38	422	0	462	0	0	1679	407	2086	0	259	0	40	299	0	0	0	0	0	2847
8:00	2	79	615	1	697	0	0	1502	500	2002	0	418	0	54	472	0	0	0	0	0	3171
9:00	0	79	628	6	713	0	0	1058	421	1479	0	508	0	73	581	0	0	0	3	3	2776
10:00	1	83	588	9	681	0	0	881	418	1299	0	386	0	60	446	0	0	0	2	2	2428
11:00	0	75	697	2	774	0	0	722	425	1147	0	392	0	66	458	0	0	3	4	7	2386
12:00	0	90	702	6	798	0	0	666	399	1065	0	368	0	60	428	0	0	0	5	5	2296
13:00	1	91	760	2	854	0	0	691	439	1130	0	331	0	68	399	0	0	2	1	3	2386
14:00	3	88	889	1	981	0	0	742	400	1142	0	453	0	60	513	0	0	0	0	0	2636
15:00	1	104	1162	0	1267	0	0	744	471	1215	0	491	0	67	558	0	0	0	2	2	3042
16:00	2	105	1586	3	1696	0	0	760	483	1243	0	548	0	81	629	0	0	0	4	4	3572
17:00	3	131	1780	1	1915	0	0	814	662	1476	0	633	0	81	714	0	0	0	4	4	4109
18:00	1	159	1732	0	1892	0	0	765	602	1367	0	702	0	93	795	0	0	0	0	0	4054
19:00	1	131	1251	0	1383	0	0	639	431	1070	0	535	0	65	600	0	0	0	0	0	3053
20:00	1	89	933	0	1023	0	0	451	320	771	0	394	0	54	448	0	0	3	1	4	2246