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# TRAFFIC CONCEPTS, INC.

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*Traffic Impact Studies • Feasibility • Traffic Signal Design • Traffic Counts • Expert Testimony*

September 27, 2022

Ms. Sutapa Samanta, P.E.  
Acting Metropolitan District Engineer  
MDOT State Highway Administration  
District 4 – Baltimore and Harford Counties  
320 West Warren Road  
Hunt Valley, MD 21030

RE: Traffic Impact Study – Point by Point Letter  
Mitchell Property Warehouse Development – MD 159  
Revised Traffic Impact Study Dated June 2022  
MDOT SHA 21APHA021XX  
Harford County TIA 63502021, version 2  
T/C 3762

Dear Ms. Samanta:

We are addressing your July, 18 2022 comments with this point-by-point response letter.

MDOT SHA Comments and conclusions:

1. **Trip Generation** – *The revised trip generation utilizes ITE Trip Generation Manual 11<sup>th</sup> Edition Land Use 155 (High-Cube Fulfillment Center Warehouse – Non-Sort). In the Manual for Land Use 155, trip generations are provided for both “sort” and “non-sort” facilities. ITE indicates a “sort” facility ships out smaller items, requiring extensive sorting typically by manual means, and a “non-sort” facility is a fulfillment center that ships large box items that are processed primarily with automation rather than through manual means. The developer utilized the significantly less conservative non-sort facility trip generation to calculate trips rather than a sort facility of the same size. (See table below to see a comparison.) Based on the number of parking spaces called for (3,773 parking spaces and 2,178 trailer parking spaces for a total of 5,951 spaces), it appears more likely the developer plans for it to operate as a sort facility. Therefore, we require the developer to provide more detailed information as to the type / operation / employees expected at the proposed facility. **Until this information is provided to us, we cannot provide detailed comments on the analysis and mitigation proposals in the TIS.***

The Mitchell Property developer has provided Harford County and the MDOT SHA with additional information concerning the proposed use. In its letter dated August, 16, 2022, MDOT SHA has agreed that the proposed use is a non-sort warehouse as described in the TIS. Changes have been made to the site plan to reflect the non-sort warehouse use, reduced car and truck parking, and the expected peak employee shifts. The TIS incorporates the agreed upon revised trip generation based upon ITE Trip Generation Manual 11th Edition Land Use 155 (High-Cube Fulfillment Center Warehouse – Non-Sort).

2. **Adequacy of Roadway Network** - Since it is anticipated a much larger quantity of trucks and passenger vehicles will be using the state roadway network (MD 543, US 40, MD 159, MD 7, etc.) in the area because of the proposed development, the developer will be required to determine whether the existing roadways' pavement design is adequate especially due to the increase in truck volumes.

This comment appears to be derived from the MDOT SHA assertion that the project is a warehouse "sort" facility. However, with new information provided to MDOT SHA, the MDOT SHA has agreed that the proposed use is a traditional "non-sort" warehouse. The truck trips as shown in the traffic study and listed below were determined with the *ITE, Trip Generation Manual 11<sup>th</sup> Edition*. The truck trips are typical for the use and size of the proposed warehouse development. The road classifications and existing peak hour percentages of heavy vehicles for the State roadways are also summarized in the table below. These roads are designed by the MDOT SHA in consideration of the expected volumes and truck percentages. While the traffic impact study addresses APFO based upon volume capacity, not pavement design, Traffic Concepts feels that the levels of service from the intersections studied would be the best evidence that the MDOT SHA's road design is adequate to support the proposed trips from this project. The traffic impact study includes the heavy truck percentages as noted in the table below.

	AM		PM	
	<u>IN</u>	<u>OUT</u>	<u>IN</u>	<u>OUT</u>
<b>High Cube Fulfillment Center Warehouse ITE LUC 155 (Non-sort Facility)</b>				
5,200,000 gsf	632	148	324	508
<b>Trucks Trips (30%)</b>	<b>190</b>	<b>44</b>	<b>97</b>	<b>152</b>
<b>Passenger Vehicles (70%)</b>	<b>442</b>	<b>104</b>	<b>227</b>	<b>356</b>

STATE ROADWAY	CLASSIFICATION	Peak Hour % of Heavy Trucks (from SHA data – see attached)
MD 543	Minor Arterial	12%
US 40	Principal Arterial	10%
MD 159 (Old Philadelphia Road)	Minor Arterial	No Data Available
MD 7	Minor Arterial	No Data Available
MD 132	Minor Arterial	5%
MD 22	Principal Arterial	5%
MD 715	Minor Arterial	No Data Available
MD 159 (Perryman Road)	Major Collector	15% (see attached traffic count conducted by TCI)

- 3. **Truck Percentages** – MDOT SHA understands the County's comment on truck percentages to be used in analysis; however, we recommend looking at actual site generated truck volumes to total future traffic volumes to determine if the 10% truck percentage rate should be extended beyond the specific roadways mentioned. If trip generation is revised based on other comments, recommend reviewing truck percentages after volumes are revised.*

The original traffic impact study scope of services required the developer to use the Harford County warehouse rates that were developed by County engineers using existing warehouse facilities located on the Perryman Peninsula. The scope of services did not specify that the truck trips must be determined separate from the passenger car trips. The MDOT SHA officials were present at this meeting.

After the traffic study was submitted for review, County and MDOT SHA reversed the former trip generation decision and stated all new site trips would be generated with ITE data. The ITE data includes a heavy truck rate percentage. The use of the ITE Trip Generation Manual complies with the Harford County APFO. Therefore, additional changes to the trip generation, as stated in the current revised traffic study are not warranted.

Nonetheless, Traffic Concepts counted the existing traffic volumes on September 7, 2022 starting at 6AM for a period of 24 hours along Perryman Road (south of the MD 159 roundabout). The existing truck trips make up 15% of the total vehicles on Perryman Road during the morning peak hour (note that the evening peak hour is lower at 13%). Therefore, the TIS has been revised to include 15% heavy vehicles for the Perryman Road peninsula. Please note that the peak hour percentage of heavy vehicles included in the attached revised TIS include those noted in the chart above under comment #2.

- 4. **MD 159 and Spesutia Road** - On page 38, the analysis of MD 159 and Spesutia Road indicates a traffic signal is warranted based on only Warrant 3 (Peak Hour Warrant). A complete traffic signal warrant analysis should be conducted and included in the next submission using ITE trip generation time of day distribution.*

Traffic Concepts performed a complete traffic signal warrant analysis for this intersection, which is included in the attached revised TIS. As noted in the analysis, a traffic signal is not warranted at this intersection under the existing or the full build out traffic conditions. However, in order to alleviate any concerns that MDOT SHA may have regarding this intersection, the Developer agrees to prepare an updated traffic signal warrant analysis after occupancy of each building. If the analysis shows a traffic signal is warranted, the Developer will design and install the traffic signal upon MDOT SHA and Harford County approval.

In addition, and in order to mitigate the traffic impacts associated with the proposed development, the Developer proposes to revise the geometry of this intersection. The existing right turn lane from Spesutia Road to MD 159 will be widened and channelization markings added to encourage right turning traffic to flow without stopping, which does not exist today. Also, the existing small median along southbound MD 159 will be removed to provide a wider left turn lane for trucks turning into the private property across from Spesutia Road. This lane will also be extended to provide a longer queue area for trucks without blocking southbound vehicles along MD 159 passing through the intersection. The existing channelized median on the private leg of the intersection will be cut back to improve the turning radius for large vehicles

entering the property. Field observations show that these intersection modifications will improve the flow of traffic and shorten delay times for the left turning vehicles from northbound MD 159 and eastbound Spesutia Road. A conceptual mitigation plan has been included in the revised TIS.

5. **MD 159 and Chelsea Road** - *On page 39, the analysis of the intersection of MD 159 and Chelsea Road indicates a traffic signal is warranted based on only Warrant 3 (Peak Hour Warrant). A complete traffic signal warrant analysis should be conducted and included in the next submission.*

Traffic Concepts performed a complete traffic signal warrant analysis for this intersection, which is included in the attached revised TIS. A signal warrant analysis was conducted for the existing and future traffic volumes. Warrants are not met for the existing traffic conditions. However, the future volume test determined that Warrant 1 (Eight-Hour Vehicular Volume), Warrant 2 (Four-Hour Vehicular Volume), and Warrant 3 (Peak Hour Volume) are satisfied.

Alternatively, and in order to mitigate the traffic impacts associated with the proposed development, the Developer proposes to revise the geometry of this intersection to create a Maryland T style intersection. The primary delays of this intersection are left turns from northbound MD 159 onto Chelsea Road. The proposed Maryland T improvement mitigates the delays and results in an acceptable level of service. A conceptual mitigation plan has been provided in the revised TIS.

6. **Perryman Road** - *Comment #3 mentioned the need to encourage vehicles coming to / leaving from site to use Canning House Road (AKA Roadway A), and the response indicated the assignment pattern has vehicles taking that route. However, the comment also requested information as to mitigation and calming measure to **ensure** trucks do not use Perryman Road. Please provide a response for this as well.*

Canning House Road (Road "A") will be signed in a way to discourage heavy truck traffic from using the residential portion along MD 159. Multiple, multilingual "No Truck Turning" signs will be posted in intervals along relocated Canning House Road before the proposed intersection at MD 159. These signs will meet AASHTO standards. In addition, "No Truck Turning" signs will be posted at the intersection of Canning House Road and MD 159. A detailed signing plan will be prepared and included with the final plans. The Developer will instruct each tenant that all trucks are required to be routed along Canning House Road and truck traffic on MD 159 is prohibited.

7. *Proposed MD 715 at Woodley Road (extended) signalized intersection has been removed from the study by the developer.*

Harford County staff requested the removal of this Capital Improvement Project from the traffic study including the intersection of MD 715 @ Woodley Road.

8. **Queuing Analysis** – *Please confirm the queuing analysis and storage lengths required considered the longer lengths of trucks due to the high truck percentage.*

The queuing analyses conducted with the HCM and the SimTraffic program accounted for the heavy truck percentages.

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September 27, 2022

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9. *To aid in the review of futures submissions, any differences between the last submission and the current one should be made obvious to the reviewer. For example, italics or highlights could be used to indicate any revisions to the text.*

The attached revised TIS text changes are italicized.

10. *Between the original TIS and the current revision, many of the key intersections were renumbered. To be consistent, any future revisions must use the same key intersection numbering as in this revision. If a key intersection is removed from the study, please make a note of it on each applicable sheet.*

The attached September 2022 revised TIS uses the same key intersection numbering as the June 2022 TIS revision.

11. *Exhibits 2B, 3B, 7B – The intersection #18 label in the line diagram should be replaced by labels for Intersections #18a and #18b in the figures to correspond with the volume figures.*

The stated exhibits are revised in the September 2022 TIS revision.

12. *Since no legend is on Exhibit 3B, provide label for proposed Canning House Road. The current label only shows that Canning House Road is being relocated at MD 159 but does not demonstrate that the northeast portion of the roadway being proposed and does not currently exist.*

Exhibit 3B has been revised to demonstrate the northeast portion of the roadway is proposed and does not currently exist.

Sincerely,

TRAFFIC CONCEPTS, INC.



Mark Keeley, PTP

Project Manager

[MKeeley@traffic-concepts.com](mailto:MKeeley@traffic-concepts.com)

Attachments: Truck Count Data  
Revised TIS



Maryland Department of Transportation  
 State Highway Administration  
 Data Services Division  
 Class Count Report

STATE HIGHWAY  
 ADMINISTRATION

Location ID: S1998120135

Location: MD 543-.10 mi N of Gilmer Way

County: Harford

Date Range: 04/02/2019 to 04/03/2019

\*\*\*Summary Of Total Report\*\*\*

BEGIN HOUR	CLASS 1 MOTORCYCL E	CLASS 2 CARS	CLASS 3 PICKUPS	CLASS 4 BUS	CLASS 5 2 AXLE 6	CLASS 6 3 AXLE	CLASS 7 >=4 AXLE	CLASS 8 <= 4 AXLE	CLASS 9 5 AXLE	CLASS 10 >=6 AXLE	CLASS 11 <=5 AXLE	CLASS 12 6 AXLE	CLASS 13 >= 7 AXLE	TOTAL
0:00	1	282	32	5	0	5	0	23	30	0	0	1	0	379
1:00	0	161	28	3	1	3	0	14	31	0	0	1	0	242
2:00	0	174	28	3	4	2	0	14	39	0	2	0	0	266
3:00	0	153	24	10	6	6	1	12	41	0	0	1	0	254
4:00	0	451	88	23	6	15	3	18	64	1	0	1	0	670
5:00	0	874	215	23	45	13	2	19	66	1	0	0	0	1,258
6:00	5	1,909	351	40	73	24	5	15	73	0	0	0	0	2,495
7:00	11	2,305	286	43	84	36	21	26	96	0	0	0	0	2,908
8:00	7	2,107	280	39	92	74	18	25	127	1	0	0	0	2,770
9:00	2	1,168	201	44	78	67	16	36	116	0	0	0	0	1,728
10:00	4	839	198	30	58	54	13	32	155	2	0	0	0	1,385
11:00	4	1,238	222	29	52	55	16	31	166	0	0	0	0	1,813
12:00	4	1,448	262	32	66	64	12	37	140	0	1	0	0	2,066
13:00	6	1,168	244	33	72	45	12	37	136	2	1	0	0	1,756
14:00	2	1,478	311	51	60	54	8	33	118	1	1	0	0	2,117
15:00	3	2,213	367	63	100	40	3	33	122	0	0	0	0	2,944
16:00	6	2,137	311	39	81	24	5	36	95	1	2	0	0	2,737
17:00	4	2,091	253	17	46	19	1	34	58	0	1	0	0	2,524
18:00	8	1,438	170	10	47	14	1	33	65	0	2	0	0	1,788
19:00	6	978	108	7	20	9	1	16	70	0	2	0	0	1,217
20:00	2	716	85	2	21	8	0	24	50	0	0	3	0	911
21:00	1	607	63	2	8	7	0	22	58	0	1	2	0	771
22:00	3	450	45	1	6	9	0	10	42	0	2	1	0	569
23:00	3	400	59	3	5	9	0	14	50	0	0	0	0	543
<b>Total:</b>	<b>82</b>	<b>26,785</b>	<b>4,231</b>	<b>552</b>	<b>1,031</b>	<b>656</b>	<b>138</b>	<b>594</b>	<b>2,008</b>	<b>9</b>	<b>15</b>	<b>10</b>	<b>0</b>	<b>36,111</b>
<b>Percentage:</b>	<b>0.23%</b>	<b>74.17%</b>	<b>11.72%</b>	<b>1.53%</b>	<b>2.86%</b>	<b>1.82%</b>	<b>0.38%</b>	<b>1.64%</b>	<b>5.56%</b>	<b>0.02%</b>	<b>0.04%</b>	<b>0.03%</b>	<b>0.00%</b>	
<b>Total Class 1-3:</b>	<b>31,098</b>	<b>Percent Class 1-3:</b>	<b>86.12%</b>	<b>Total Class 4:</b>	<b>552</b>	<b>Percent Class 4:</b>	<b>1.53%</b>	<b>Total Class 5-13:</b>	<b>4,461</b>	<b>Percent Class 5-13:</b>	<b>12.35%</b>			

← 306 11%

← 361 12%



Maryland Department of Transportation  
 State Highway Administration  
 Data Services Division  
 Class Count Report

STATE HIGHWAY ADMINISTRATION

Location ID: B2343

Location: US40-.50 MI W OF SPESUTIA RD

County: Harford

Date Range: 09/05/2018 to 09/06/2018

***Summary Of Total Report***														
BEGIN HOUR	CLASS 1 MOTORCYCL E	CLASS 2 CARS	CLASS 3 PICKUPS	CLASS 4 BUS	CLASS 5 2 AXLE 6	CLASS 6 3 AXLE	CLASS 7 >=4 AXLE	CLASS 8 <= 4 AXLE	CLASS 9 5 AXLE	CLASS 10 >=6 AXLE	CLASS 11 <=5 AXLE	CLASS 12 6 AXLE	CLASS 13 >= 7 AXLE	TOTAL
0:00	2	306	46	5	6	14	3	16	68	0	0	0	0	466
1:00	3	233	52	6	4	5	15	10	50	0	0	0	0	378
2:00	3	432	71	12	8	7	5	12	67	0	0	0	0	617
3:00	0	317	75	3	8	15	7	12	60	0	0	0	0	497
4:00	1	784	139	9	19	19	16	19	82	0	0	0	0	1,088
5:00	10	1,432	369	20	61	25	13	27	95	0	0	0	0	2,052
6:00	12	3,080	631	43	124	38	37	28	95	0	0	0	0	4,088
7:00	11	3,266	600	50	136	65	38	37	108	1	1	0	0	4,313 ← 436 10%
8:00	6	2,376	536	75	129	75	40	41	122	6	1	0	0	3,407
9:00	7	1,622	420	58	105	85	49	36	134	2	0	0	0	2,518
10:00	8	1,469	485	50	118	82	39	51	138	6	0	0	0	2,446
11:00	2	1,656	450	42	110	77	39	52	157	4	1	0	1	2,591
12:00	6	1,715	498	39	110	63	38	48	156	3	1	0	0	2,677
13:00	6	1,758	463	39	129	71	27	45	134	4	1	0	0	2,677
14:00	11	2,136	584	54	157	66	37	40	137	4	0	0	0	3,226
15:00	9	3,282	762	44	133	66	16	30	136	2	2	0	0	4,482
16:00	10	3,680	798	36	158	31	1	47	124	1	0	0	0	4,886 ← 398 8%
17:00	13	3,383	599	16	76	16	2	31	84	1	1	0	0	4,222
18:00	7	2,456	387	17	69	13	1	35	99	0	0	0	0	3,084
19:00	10	1,420	224	9	36	8	0	32	97	0	1	0	0	1,837
20:00	9	1,108	176	7	18	13	0	22	86	0	0	0	0	1,439
21:00	7	818	147	8	17	14	0	21	96	0	2	0	0	1,130
22:00	7	690	127	6	17	11	3	24	90	0	0	0	0	975
23:00	0	527	83	5	16	14	7	10	71	0	0	0	0	733
<b>Total:</b>	<b>160</b>	<b>39,946</b>	<b>8,722</b>	<b>653</b>	<b>1,764</b>	<b>893</b>	<b>433</b>	<b>726</b>	<b>2,486</b>	<b>34</b>	<b>11</b>	<b>0</b>	<b>1</b>	<b>55,829</b>
<b>Percentage:</b>	<b>0.29%</b>	<b>71.55%</b>	<b>15.62%</b>	<b>1.17%</b>	<b>3.16%</b>	<b>1.60%</b>	<b>0.78%</b>	<b>1.30%</b>	<b>4.45%</b>	<b>0.06%</b>	<b>0.02%</b>	<b>0.00%</b>	<b>0.00%</b>	
<b>Total Class 1-3:</b>	<b>48,828</b>	<b>Percent Class 1-3:</b>	<b>87.46%</b>	<b>Total Class 4:</b>	<b>653</b>	<b>Percent Class 4:</b>	<b>1.17%</b>	<b>Total Class 5-13:</b>	<b>6,348</b>	<b>Percent Class 5-13:</b>	<b>11.37%</b>			



STATE HIGHWAY  
ADMINISTRATION

Maryland Department of Transportation  
State Highway Administration  
Data Services Division  
Class Count Report

Location ID: B2347

Location: MD132-30 MI W OF US40

County: Harford

Date Range: 05/11/2021 to 05/12/2021

***Summary Of Total Report***														
BEGIN HOUR	CLASS 1 MOTORCYCL E	CLASS 2 CARS	CLASS 3 PICKUPS	CLASS 4 BUS	CLASS 5 2 AXLE 6	CLASS 6 3 AXLE	CLASS 7 >=4 AXLE	CLASS 8 <= 4 AXLE	CLASS 9 5 AXLE	CLASS 10 >=6 AXLE	CLASS 11 <=5 AXLE	CLASS 12 6 AXLE	CLASS 13 >= 7 AXLE	TOTAL
0:00	0	121	10	2	7	1	0	0	0	0	0	0	0	141
1:00	4	95	13	3	1	0	0	0	0	0	0	0	0	116
2:00	0	64	15	1	3	0	0	3	1	0	0	0	0	87
3:00	1	85	11	0	1	0	0	0	0	0	0	0	0	98
4:00	0	110	20	1	6	2	0	0	1	0	0	0	0	140
5:00	1	306	71	4	21	3	0	3	0	0	0	0	0	409
6:00	1	519	88	2	37	7	2	4	3	1	0	0	0	664
7:00	1	940	158	1	36	11	0	12	1	0	0	0	0	1,160
8:00	6	1,074	162	4	37	8	1	15	2	0	0	0	0	1,309 ← 67 5%
9:00	3	1,100	215	3	45	10	1	8	2	0	0	0	0	1,387
10:00	1	1,175	211	6	40	8	1	13	4	0	0	0	0	1,459
11:00	8	1,340	224	2	45	13	2	14	8	1	0	0	0	1,657
12:00	6	1,600	263	2	50	13	0	9	5	1	0	0	0	1,949
13:00	4	1,514	213	2	37	13	0	14	5	0	0	0	0	1,802
14:00	6	1,667	256	2	51	6	0	6	3	0	0	0	0	1,997
15:00	11	1,753	268	0	50	15	0	10	1	2	0	0	0	2,110
16:00	15	1,880	259	3	37	11	0	15	2	0	0	0	0	2,222 ← 68 3%
17:00	6	1,741	223	3	37	5	0	10	2	1	0	0	0	2,028
18:00	9	1,458	182	1	36	2	0	1	4	0	0	0	0	1,693
19:00	7	1,239	165	1	27	1	0	4	2	0	0	0	0	1,446
20:00	6	1,077	96	1	17	2	0	4	2	0	0	0	0	1,205
21:00	3	666	62	1	10	1	0	7	2	0	0	0	0	752
22:00	2	460	24	0	5	1	0	1	0	0	0	0	0	493
23:00	5	261	25	0	2	0	0	0	1	0	0	0	0	294
Total:	106	22,245	3,234	45	638	133	7	153	51	6	0	0	0	26,618
Percentage:	0.40%	83.57%	12.15%	0.17%	2.40%	0.50%	0.03%	0.57%	0.19%	0.02%	0.00%	0.00%	0.00%	
Total Class 1-3:	25,585	Percent Class 1-3:	96.12%	Total Class 4:	45	Percent Class 4:	0.17%	Total Class 5-13:	988	Percent Class 5-13:	3.71%			





STATE HIGHWAY  
ADMINISTRATION

Maryland Department of Transportation  
State Highway Administration  
Data Services Division  
Class Count Report

Location ID: B2321

Location: MD22-.20 MI E OF MD462

County: Harford

Date Range: 08/28/2018 to 08/29/2018

\*\*\*Summary Of Total Report\*\*\*

BEGIN HOUR	CLASS 1 MOTORCYCL E	CLASS 2 CARS	CLASS 3 PICKUPS	CLASS 4 BUS	CLASS 5 2 AXLE 6	CLASS 6 3 AXLE	CLASS 7 >=4 AXLE	CLASS 8 <= 4 AXLE	CLASS 9 5 AXLE	CLASS 10 >=6 AXLE	CLASS 11 <=5 AXLE	CLASS 12 6 AXLE	CLASS 13 >= 7 AXLE	TOTAL
0:00	0	227	28	4	0	3	0	12	32	0	0	1	0	307
1:00	4	141	24	2	5	3	0	10	30	0	0	0	0	219
2:00	1	111	19	4	2	2	0	17	31	0	0	0	0	187
3:00	2	168	34	9	5	3	0	14	45	0	0	0	0	280
4:00	0	358	96	6	21	9	0	10	38	0	0	0	0	538
5:00	8	1,265	401	16	86	10	4	17	39	0	0	0	0	1,846
6:00	21	2,915	750	8	153	16	1	21	55	0	0	0	0	3,940
7:00	23	3,640	725	12	117	9	18	13	64	0	0	0	0	4,621 ← 233 5%
8:00	10	2,840	584	22	120	14	5	24	67	0	0	0	0	3,686
9:00	10	1,928	432	31	110	14	3	22	102	0	0	0	0	2,652
10:00	5	1,809	418	18	116	22	6	18	81	0	0	0	0	2,493
11:00	8	2,811	589	23	121	15	3	31	102	0	0	0	0	3,703
12:00	15	3,071	623	26	115	24	2	36	107	0	0	0	0	4,019
13:00	6	2,551	516	25	119	14	5	19	98	1	0	0	1	3,355
14:00	8	2,433	551	24	130	21	2	24	82	1	0	0	0	3,276
15:00	12	3,396	752	18	124	4	2	24	85	0	0	0	0	4,417
16:00	29	4,577	875	14	114	9	2	25	71	0	0	0	1	5,717 ← 236 4%
17:00	22	3,906	594	10	91	6	0	23	59	0	0	0	0	4,711
18:00	8	2,698	465	8	69	5	0	14	59	0	2	0	0	3,328
19:00	7	1,889	284	4	46	9	0	16	30	0	0	2	1	2,288
20:00	11	1,656	204	10	33	4	0	5	35	0	1	0	0	1,959
21:00	4	1,044	127	2	25	1	0	5	37	0	0	1	0	1,246
22:00	2	741	87	2	12	3	0	9	27	0	0	2	0	885
23:00	2	426	35	4	4	3	0	10	43	0	0	0	0	527
<b>Total:</b>	<b>218</b>	<b>46,601</b>	<b>9,213</b>	<b>302</b>	<b>1,738</b>	<b>223</b>	<b>53</b>	<b>419</b>	<b>1,419</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>3</b>	<b>60,200</b>
<b>Percentage:</b>	<b>0.36%</b>	<b>77.41%</b>	<b>15.30%</b>	<b>0.50%</b>	<b>2.89%</b>	<b>0.37%</b>	<b>0.09%</b>	<b>0.70%</b>	<b>2.36%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.01%</b>	<b>0.00%</b>	
<b>Total Class 1-3:</b>	<b>56,032</b>	<b>Percent Class 1-3:</b>	<b>93.08%</b>	<b>Total Class 4:</b>	<b>302</b>	<b>Percent Class 4:</b>	<b>0.50%</b>	<b>Total Class 5-13:</b>	<b>3,866</b>	<b>Percent Class 5-13:</b>	<b>6.42%</b>			

## 24-HOUR CLASSIFIED COUNT SUMMARY

**LOCATION:** MD 159 (S. of MD 159 Roundabout)

**COUNTY:** HARFORD

**COUNT BY:** CAM

**DATE:** SEPTEMBER 7, 2022

**WEATHER:** OVERCAST/RAIN

**DAY:** WEDNESDAY

TIME	NB MD 159		SB MD 159		TOTAL NB & SB		
	ALL	HV	ALL	HV	ALL	HV	% HV
HOURLY							
<b>6:00-7:00 AM</b>	<b>188</b>	<b>40</b>	<b>307</b>	<b>33</b>	<b>495</b>	<b>73</b>	<b>15%</b>
7:00-8:00 AM	239	40	151	33	390	73	19%
8:00-9:00 AM	147	36	147	38	294	74	25%
9:00-10:00 AM	152	45	141	41	293	86	29%
10:00-11:00 AM	155	45	146	51	301	96	32%
11:00 AM -12:00 PM	184	35	179	59	363	94	26%
12:00-1:00 PM	173	49	185	58	358	107	30%
1:00-2:00 PM	200	42	190	45	390	87	22%
2:00-3:00 PM	243	50	225	49	468	99	21%
<b>3:00-4:00 PM</b>	<b>383</b>	<b>39</b>	<b>253</b>	<b>48</b>	<b>636</b>	<b>87</b>	<b>14%</b>
4:00-5:00 PM	264	23	189	37	453	60	13%
5:00-6:00 PM	285	31	239	37	524	68	13%
6:00-7:00 PM	160	31	170	29	330	60	18%
7:00-8:00 PM	104	26	114	22	218	48	22%
8:00-9:00 PM	127	34	131	30	258	64	25%
9:00-10:00 PM	82	25	88	25	170	50	29%
10:00-11:00 PM	95	24	90	19	185	43	23%
11:00 PM - 0:00 AM	73	20	42	18	115	38	33%
0:00-1:00 AM	70	28	35	17	105	45	43%
1:00-2:00 AM	29	18	33	16	62	34	55%
2:00-3:00 AM	72	20	52	22	124	42	34%
3:00-4:00 AM	80	34	36	13	116	47	41%
4:00-5:00 AM	107	29	108	18	215	47	22%
5:00-6:00 AM	100	24	239	38	339	62	18%
<b>24 HR TOTALS</b>	<b>3712</b>	<b>788</b>	<b>3490</b>	<b>796</b>	<b>7202</b>	<b>1584</b>	<b>22%</b>

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