

WWW.TRAFFICPD.COM

October 9, 2023

Ms. Jennifer Boyer – Community Development Director Upper Allen Township 100 Gettysburg Pike Mechanicsburg, PA 17055

Re: Response to Township's 9/12/23 Board of Commissioners Comments

2509 Mill Road Townhouses

TPD# RJFA.00006

Mrs. Boyer:

On behalf of the Applicant (Mihail Malinov), Traffic Planning and Design, Inc. (TPD) is submitting this letter related to the Transportation Impact Study (TIS) associated with the proposed 2509 Mill Road Townhomes Development, dated July 21, 2023. The purpose of this letter is to address the Township's concerns related to the TIS.

Response to Township's September 12, 2023, TIS Comment

For the discussion below, the Township's TIS related comments from the 9/12/23 review letter are shown in italics, with the corresponding TPD responses in bold type.

1. Conduct a revised traffic study. Traffic counts should be conducted during a time in which local schools and the university are in session, during non-holiday periods, during which there is no inclement weather, nor any other events which would cause a decline in normal traffic patterns.

The traffic counts provided in the Traffic Study submission, were conducted on Thursday, May 4, 2023, in accordance with standard engineering practices. Prior to completing the traffic counts, TPD observed the study area and confirmed with Township staff that the Mill Road bridge (just south of Hemlock Road) was open and fully operational with no active detours in place. The local schools and Messiah University were operating under normal schedules except that Messiah University undergraduates were taking "finals".

On this day, the weather was clear over the course of the entire day and no other nearby events were identified which may impact traffic patterns within the study area.

However, to address the Township's concern, TPD conducted new traffic counts at the intersection of W. Lisburn Road (SR 2004)/Mill Road on Wednesday, October 4, 2023. The counts were conducted on a typical weekday during the weekday A.M. (6-9 A.M.) and weekday P.M. (3-6 P.M.) peak periods. At the time of the traffic counts, the weather was clear, local schools and Messiah University were operating under normal schedules and there were no identified events in the area that may impact traffic patterns. Pertinent data related to the counts are summarized in Table 1 and attached for reference.

TABLE 1 MANUAL TRAFFIC COUNT COMPARISON MAY 2023 TIS COUNTS VS. OCTOBER 2023 TRAFFIC COUNTS

Intersection	Time Period	Overall Intersection Volume Peak Hour Counts – May 2023 ¹	Overall Intersection Volume Peak Hour Counts – October 2023 ²	% Difference ³
W. Lisburn Road (SR 2004)	Weekday A.M.	683	736	+8%
& Mill Road	Weekday P.M.	1,032	887	-14%

¹ Counts from July 21, 2023 TIS conducted in May 2023

As shown in Table 1, the supplemental counts conducted in October 2023 at the subject intersection are lower than or within 8% of the traffic counts conducted in May 2023. Additionally, the weekday P.M. peak hour traffic volumes are the basis for the results/conclusions of the TIS and are significantly lower (-14%) than those presented in the submitted TIS. This level of variation in traffic volume is negligible and within the typical PennDOT/engineering standard (10%) for validating traffic count data. Since the current traffic volumes are comparable to the traffic volumes used in the previously submitted *Transportation Impact Study for 2509 Mill Road Townhomes*, dated July 21, 2023, TPD believes that the recommendations/conclusions from the TIS are valid, and no further analysis is necessary.

Furthermore, in reviewing the levels-of-service (LOS) reported in the TIS, all approaches and turning movements for the intersections in the study area will operate at LOS C or better and the proposed development is only anticipated to generate a maximum of 4 peak hour trips, which will not have any real impact on the adjacent roadways regardless of the volumes presented in the TIS.

We also suggest reviewing the Bridge 247 replacement project to determine the potential impact it may have on Mill Road. Please check with Cumberland and York Counties and/or Monaghan Township for more information. Some information can also be found here on our website: https://uatwp.org/community/development-projects/.

TPD reviewed the current Bridge 247 replacement project information as suggested. As previously identified the bridge on Mill Road over Trout Run, just south of Hemlock Road was replaced and fully operational at the time the traffic counts were conducted in May 2023. Thus, any impact to Mill Road associated with this bridge replacement was accounted for in the submitted TIS.

The bridge on N. Grantham Road crossing the Yellow Breeches Creek, just north of Al-Pat Drive is scheduled to be replaced with construction starting in Spring 2025. The bridge will be completely replaced with weight restrictions removed. Given the project timeline, the proposed 2509 Mill Road Townhomes development is likely to be constructed/occupied prior to completion of the bridge replacement.

Any impacts to Mill Road traffic patterns as a result of this bridge replacement project would be highly speculative, however on initial review it does not appear that this replacement would result in any substantial increase in traffic volumes along Mill Road. Regardless, the purpose of the Traffic Impact Study is to assess the impact of the proposed 2509 Mill Road development on the

² Supplemental counts conducted on Wednesday, October 4, 2023

³ Difference = (October Counts - May TIS Counts)/May TIS Counts (value represents % difference in total intersection volume)

surrounding roadway network. As noted in the TIS, the proposed development will have minimal impact on the adjacent roadways and complies with the requirements outlined in §220-3.7.F of the Upper Allen Township Subdivision and Land Development Ordinance.

Sincerely,

TRAFFIC PLANNING AND DESIGN, INC.

Jason T. Wheeler, PTP Project Manager

Jwheeler@TrafficPD.com

Craig Mellott, P.E., PTOE

(in few

Vice President

CMellott@Trafficpd.com

Attachments:

Upper Allen Township letter regarding BOC tabled action, dated 9/12/2023 October 2023 Manual Traffic Count Data May 2023 Manual Traffic Count Data – As submitted in July 2023 TIS.

COMMISSIONERS of UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY

100 GETTYSBURG PIKE MECHANICSBURG, PA 17055-5698

BOARD OF COMMISSIONERS: KENNETH M. MARTIN, President RICHARD A. CASTRANIO, JR., Vice President GINNIE M. ANDERSON, Assistant Secretary JAMES G. COCHRAN, Assistant Secretary JEFFREY M. WALTER, Assistant Secretary TOWNSHIP MANAGER: Scott W. Fraser

TELEPHONE: (717) 766-0756 FAX: (717) 796-9833 WEB PAGE: uatwp.org

September 12, 2023 Certified Mail: 9214 8901 8754 6300 0141 36

Mihail Malinov 2509 Mill Road Mechanicsburg, PA 17055

Re:

BOC Tabled Action for P/F LD Plan for 2509 Mill Road: UAT File # 22-05-02

Dear Mr. Malinov:

The Upper Allen Township Board of Commissioners ("Board"), at its meeting on September 6, 2023, discussed the above-referenced Plan. After much discussion, and a verbal agreement of a time extension, the Board tabled action on this plan.

The Board's motion to table action on the plan was conditioned that written confirmation of a time extension would be granted. If a written time extension is received prior to the Board's next meeting on September 20, 2023, then the Board will consider acting on your plan at a later date. If a written time extension is not received, the Board will consider acting on your plan during their September 20th meeting.

During the September 6th Board of Commissioners' meeting, there were multiple concerns brought up by both the public and the Board. We ask that you address the following concerns and provide the township with any additional or revised documents for our review and consideration:

- Conduct a revised traffic study. Traffic counts should be conducted during a time in which local schools and the university are in session, during non-holiday periods, during periods of which there is no inclement weather, nor any other events which would cause a decline in normal traffic patterns.
 - We also suggest reviewing the Bridge 247 replacement project to determine the potential impact it may have on Mill Road. Please check with Cumberland and York Counties and/or Monaghan Township for more information. Some information can also be found here on our website: https://uatwp.org/community/development-projects/.
- 2. During the January 18, 2023 meeting, the Board asked that a discussion take place with adjoining/abutting property owners to discuss the project and address their concerns.

At a minimum, please be prepared to discuss stormwater and drainage issues, number of townhomes and why the building footprints were reduced and not the total number of homes, maintenance of the sanitary sewer pumping station, general maintenance of the site, and any other issues or items which may be discussed with the surrounding neighbors.

3. Review the design of the driveway access and the 15-foot radius. There are concerns about the grading issues and access issues.

The Board of Commissioners meets the first and third Wednesday of each month. If a time extension is granted, any revised plan and corresponding materials/information must be submitted to the township no later than the Monday three weeks prior to the next available Board of Commissioners' meeting.

If you have any further questions, please contact me at jboyer@uatwp.org or 717-766-0756.

Sincerely,

Jennifer M. Boyer, AICP

Community Development Director

cc:

Dan Wise, P.E., R.J. Fisher & Associates. Project File



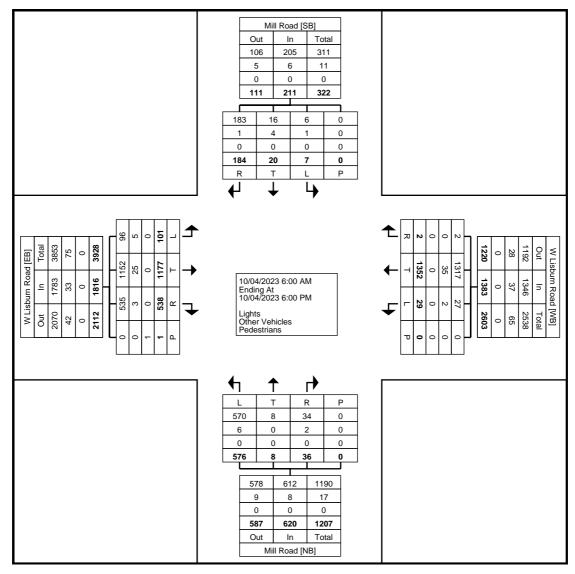
Count Name: AM PM W Lisburn Road (SR 2004) & Mill Road Site Code: W Lisburn Road (SR 2004) & Mill Road Start Date: 10/04/2023 Page No: 1

Turning Movement Data

						i	ı	urnir	ig ivi	ovei	ovement Data									i	
		W L	isburn F	Road			WL	isburn R	oad			1	Mill Road	t				Mill Road	i		
- · · -		E	astbour	nd			V	Vestboun	d			N	orthbour	nd			S	outhbour	nd		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
6:00 AM	0	12	6	0	18	0	23	0	0	23	7	0	0	0	7	0	0	2	0	2	50
6:15 AM	1	23	6	0	30	0	22	0	0	22	11	0	0	0	11	0	1	3	0	4	67
6:30 AM	2	15	3	0	20	0	41	0	0	41	25	0	0	0	25	0	0	8	0	8	94
6:45 AM	0	43	4	0	47	0	45	0	0	45	16	0	0	0	16	0	0	6	0	6	114
Hourly Total	3	93	19	0	115	0	131	0	0	131	59	0	0	0	59	0	1	19	0	20	325
7:00 AM	4	44	8	0	56	0	56	0	0	56	24	0	1	0	25	1	0	13	0	14	151
7:15 AM	1	47	16	0	64	1	57	0	0	58	33	0	1	0	34	0	1	11	0	12	168
7:30 AM	2	46	23	0	71	2	72	0	0	74	27	1	0	0	28	0	0	9	0	9	182
7:45 AM	1	67	44	0	112	0	57	0	0	57	22	1	2	0	25	1	1	17	0	19	213
Hourly Total	8	204	91	0	303	3	242	0	0	245	106	2	4	0	112	2	2	50	0	54	714
8:00 AM	3	45	31	0	79	0	44	0	0	44	31	1	2	0	34	1	1	14	0	16	173
8:15 AM	4	37	22	0	63	0	33	0	0	33	21	0	1	0	22	0	0	6	0	6	124
8:30 AM	3	41	30	0	74	1	52	0	0	53	19	0	0	0	19	0	2	. 7	0	9	155
8:45 AM	2	46	26	0	74	0	49	0	0	49	15	0	0	0	15	0	0	9	0	9	147
Hourly Total	12	169	109	0	290	1	178	0	0	179	86	1	3	0	90	1	3	36	0	40	599
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-	-	-	_	-
3:00 PM	7	38	19	0	64	1	70	0	0	71	36	1	1	0	38	0	3	4	0	7	180
3:15 PM	6	44	22	0	72	2	62	1	0	65	28	0	1	0	29	0	1	6	0	7	173
3:30 PM	6	44	29	0	79	0	57	0	0	57	22	3	1	0	26	1	1	4	0	6	168
3:45 PM	7	59	24	0	90	2	52	0	0	54	21	0	0	0	21	1	4	10	0	15	180
Hourly Total	26	185	94	0	305	5	241	1	0	247	107	4	3	0	114	2	9	24	0	35	701
4:00 PM	4	64	16	1	84	1	73	0	0	74	28	0	5	0	33	0	0	9	0	9	200
4:15 PM	6	66	40	0	112	6	68	0	0	74	23	0	5	0	28	0	0	5	0	5	219
4:30 PM	5	70	28	0	103	0	62	1	0	63	30	1	5	0	36	1	1	4	0	6	208
4:45 PM	11	57	30	0	98	3	68	0	0	71	16	0	1	0	17	0	0	5	0	5	191
Hourly Total	26	257	114	1	397	10	271	1	0	282	97	1	16	0	114	1	1	23	0	25	818
5:00 PM	1	67	23	0	91	1	83	0	0	84	38	0	4	0	42	0	1	12	0	13	230
5:15 PM	10	82	34	0	126	2	65	0	0	67	35	0	3	0	38	0	2	4	0	6	237
5:30 PM	7	67	30	. 0	104	5	78	0	0	83	27	0	2	. 0	29	1	1	11	0	13	229
5:45 PM	8	53	24	0	85	2	63	0	0	65	21	0	1	0	22	0	0	5	0	5	177
Hourly Total	26	269	111	0	406	10	289	0	0	299	121	0	10	0	131	1	4	32	0	37	873
Grand Total	101	1177	538	. 1	1816	29	1352	2	0	1383	576	. 8	36	. 0	620	7	20	184	0	211	4030
Approach %	5.6	64.8	29.6		-	2.1	97.8	0.1	-	-	92.9	1.3	5.8	_	-	3.3	9.5	87.2	-		-
Total %	2.5	29.2	13.3	-	45.1	0.7	33.5	0.0	-	34.3	14.3	0.2	0.9	-	15.4	0.2	0.5	4.6	-	5.2	-
Lights	96	1152	535		1783	27	1317	2	-	1346	570	. 8	34		612	6	16	183	-	205	3946
% Lights	95.0	97.9	99.4	-	98.2	93.1	97.4	100.0	-	97.3	99.0	100.0	94.4	_	98.7	85.7	80.0	99.5	-	97.2	97.9
Other Vehicles	5	25	3	-	33	2	35	0	-	37	6	0	2	-	8	1	4	1	-	6	84
% Other Vehicles	5.0	2.1	0.6	-	1.8	6.9	2.6	0.0	-	2.7	1.0	0.0	5.6	-	1.3	14.3	20.0	0.5	-	2.8	2.1
Pedestrians	-	-		1	-	-			0	-	-	_	-	0	-	-	-		0	-	-
% Pedestrians	-			100.0	-	-			-	-	-		-	-	-	-	-		-	<u>-</u>	-



Count Name: AM PM W Lisburn Road (SR 2004) & Mill Road Site Code: W Lisburn Road (SR 2004) & Mill Road Start Date: 10/04/2023 Page No: 2



Turning Movement Data Plot



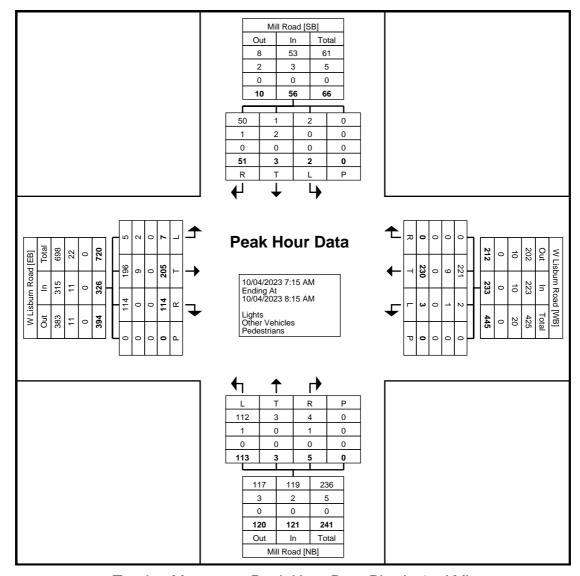
Count Name: AM PM W Lisburn Road (SR 2004) & Mill Road Site Code: W Lisburn Road (SR 2004) & Mill Road Start Date: 10/04/2023 Page No: 3

Turning Movement Peak Hour Data (7:15 AM)

			isburn R			W Lisburn Road Westbound						Mill Road Northbound						Mill Road Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total		
7:15 AM	1	47	16	0	64	1	57	0	0	58	33	0	1	0	34	0	1	11	0	12	168		
7:30 AM	2	46	23	0	71	2	72	0	0	74	27	1	0	0	28	0	0	9	0	9	182		
7:45 AM	1	67	44	0	112	0	57	0	0	57	22	1	2	0	25	1	1	17	0	19	213		
8:00 AM	3	45	31	0	79	0	44	0	0	44	31	1	2	0	34	1	1	14	0	16	173		
Total	7	205	114	0	326	3	230	0	0	233	113	3	5	0	121	2	3	51	0	56	736		
Approach %	2.1	62.9	35.0	-	-	1.3	98.7	0.0	-	-	93.4	2.5	4.1	-	-	3.6	5.4	91.1	-	-	-		
Total %	1.0	27.9	15.5	-	44.3	0.4	31.3	0.0	-	31.7	15.4	0.4	0.7	-	16.4	0.3	0.4	6.9	-	7.6	-		
PHF	0.583	0.765	0.648	-	0.728	0.375	0.799	0.000	-	0.787	0.856	0.750	0.625	-	0.890	0.500	0.750	0.750	-	0.737	0.864		
Lights	5	196	114	-	315	2	221	0	-	223	112	3	4	-	119	2	1	50	-	53	710		
% Lights	71.4	95.6	100.0	-	96.6	66.7	96.1	-	-	95.7	99.1	100.0	80.0	-	98.3	100.0	33.3	98.0	-	94.6	96.5		
Other Vehicles	2	9	0	-	11	1	9	0	-	10	1	0	1	-	2	0	2	1	-	3	26		
% Other Vehicles	28.6	4.4	0.0	-	3.4	33.3	3.9	-	-	4.3	0.9	0.0	20.0	-	1.7	0.0	66.7	2.0	-	5.4	3.5		
Pedestrians	-	-	-	0	-	-	_	-	0	-	-	_	_	0	-	•	-	-	0	-	-		
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		



Count Name: AM PM W Lisburn Road (SR 2004) & Mill Road Site Code: W Lisburn Road (SR 2004) & Mill Road Start Date: 10/04/2023 Page No: 4



Turning Movement Peak Hour Data Plot (7:15 AM)



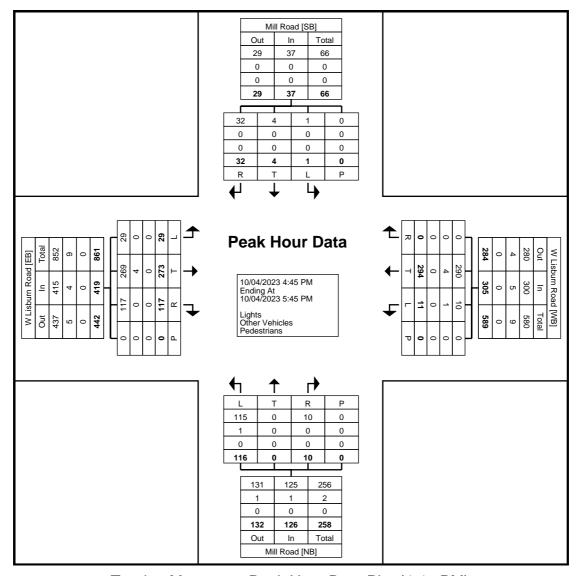
Count Name: AM PM W Lisburn Road (SR 2004) & Mill Road Site Code: W Lisburn Road (SR 2004) & Mill Road Start Date: 10/04/2023 Page No: 5

Turning Movement Peak Hour Data (4:45 PM)

			isburn R			W Lisburn Road Westbound						Mill Road Northbound						Mill Road Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total		
4:45 PM	11	57	30	0	98	3	68	0	0	71	16	0	1	0	17	0	0	5	0	5	191		
5:00 PM	1	67	23	0	91	1	83	0	0	84	38	0	4	0	42	0	1	12	0	13	230		
5:15 PM	10	82	34	0	126	2	65	0	0	67	35	0	3	0	38	0	2	4	0	6	237		
5:30 PM	7	67	30	0	104	5	78	0	0	83	27	0	2	0	29	1	1	11	0	13	229		
Total	29	273	117	0	419	11	294	0	0	305	116	0	10	0	126	1	4	32	0	37	887		
Approach %	6.9	65.2	27.9	-	-	3.6	96.4	0.0	-	-	92.1	0.0	7.9	-	-	2.7	10.8	86.5	-	-	-		
Total %	3.3	30.8	13.2	-	47.2	1.2	33.1	0.0	-	34.4	13.1	0.0	1.1	-	14.2	0.1	0.5	3.6	-	4.2	-		
PHF	0.659	0.832	0.860	-	0.831	0.550	0.886	0.000	-	0.908	0.763	0.000	0.625	-	0.750	0.250	0.500	0.667	-	0.712	0.936		
Lights	29	269	117	-	415	10	290	0	-	300	115	0	10	-	125	1	4	32	-	37	877		
% Lights	100.0	98.5	100.0	-	99.0	90.9	98.6	-	-	98.4	99.1	-	100.0	-	99.2	100.0	100.0	100.0	-	100.0	98.9		
Other Vehicles	0	4	0	-	4	1	4	0	-	5	1	0	0	-	1	0	0	0	-	0	10		
% Other Vehicles	0.0	1.5	0.0	-	1.0	9.1	1.4	-	-	1.6	0.9	-	0.0	-	0.8	0.0	0.0	0.0	-	0.0	1.1		
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-		
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		



Count Name: AM PM W Lisburn Road (SR 2004) & Mill Road Site Code: W Lisburn Road (SR 2004) & Mill Road Start Date: 10/04/2023 Page No: 6



Turning Movement Peak Hour Data Plot (4:45 PM)



Counter: MIO: Set up by: KY:

Traffic Planning and Design, Inc 2500 East High Street Suite 650 Pottstown, Pennsylvania, United States 19464 610.326.3100 kyoung@trafficpd.com

Count Name: (1) AM/PM Mill Road x W Lisburn Road SR 2004 Site Code: Start Date: 05/04/2023 Page No: 1

Turning Movement Data

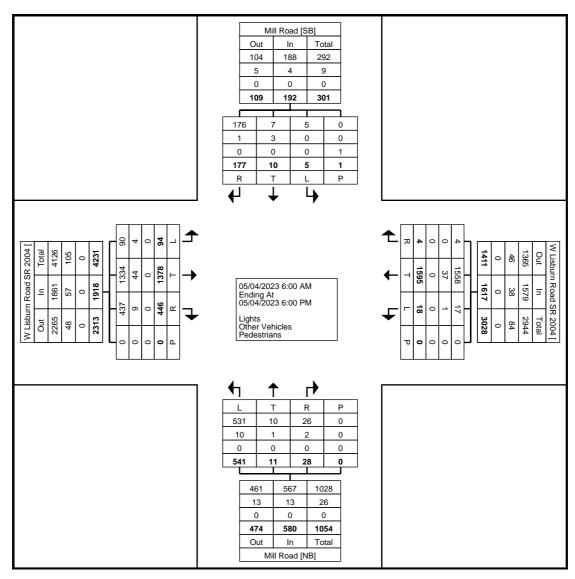
Name								I	urnii	ng IV	lovei	vement Data										
Sear Time			W Lisbu	rn Road	SR 2004										t t				Mill Road	t t		
Company Comp			E	astboun	d			V	Vestbour	ıd			N	orthbour	nd			S	outhbour	nd		
6:30 AM 6:30 A	Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
6:46 AM 0 29 1 0 30 0 31 0 0 31 11 0 0 0 1 11 0 0 0 9 0 9 10 9 1	6:00 AM	3	15	1	0	19	0	24	0	0	24	7	0	0	0	7	0	0	1	0	1	51
Houry Total	6:15 AM	3	24	4	0	31	0	20	0	0	20	7	0	0	0	7	0	1	4	0	5	63
Hourly Total	6:30 AM	0	29	1	0	30	0	31	0	0	31	11	0	0	0	11	0	0	9	0	9	81
7:00 AM	6:45 AM	0	36	9	0	45	0	36	0	0	36	13	0	0	0	13	0	0	10	0	10	104
7:16 AM 7:30 A	Hourly Total	6	104	15	0	125	0	111	0	0	111	38	0	0	0	38	0	1	24	0	25	299
7:30 AM 7:30 AM 7:30 AM 7:45 AM 4	7:00 AM	5	27	4	0	36	0	53	0	0	53	21	1	1	0	23	0	0	16	0	16	128
T-45 AM	7:15 AM	1	45	12	0	58	2	55	0	0	57	36	1	0	0	37	0	0	. 8	0	8	160
Hourly Total	7:30 AM	3	50	25	0	78	0	72	0	0	72	22	0	0	0	22	0	0	16	0	16	188
8:00 AM	7:45 AM	4	62	25	0	91	1	65	0	0	66	20	1	0	0	21	0	0	12	1	12	190
8:15 AM	Hourly Total	13	184	66	0	263	3	245	0	0	248	99	3	1	0	103	0	0	52	1	52	666
8:30 AM 8:45 A	8:00 AM	2	59	15	0	76	0	43	0	0	43	16	0	1	0	17	0	1	8	0	9	145
Best	8:15 AM	3	57	16	0	76	0	51	0	0	51	14	0	2	0	16	0	0	5	0	5	148
Hourly Total 9 220 61 0 290 2 176 0 0 178 74 0 5 0 79 0 1 19 0 20 567 ***BREAK***	8:30 AM	2	51	17	0	70	1	49	0	0	50	22	0	1	0	23	0	0	3	0	3	146
**************************************	8:45 AM	2	53	13	0	68	1	33	0	0	34	22	0	1	0	23	0	0	3	0	3	128
3:00 PM	Hourly Total	9	220	61	0	290	2	176	0	0	178	74	0	5	0	79	0	1	19	0	20	567
3:15 PM	*** BREAK ***	-			-	-	-	-		-		-		-	-		-	-		-	-	-
3:30 PM	3:00 PM	2	71	20	0	93	1	74	2	0	77	21	1	0	0	22	0	2	4	0	6	198
Book	3:15 PM	5	84	28	0	117	0	70	0	0	70	23	0	1	0	24	0	0	3	0	3	214
Hourly Total 18 323 92 0 433 1 309 3 0 313 100 1 4 0 105 0 4 15 0 19 870 4:00 PM 2 73 29 0 104 1 95 1 0 97 26 2 2 0 30 0 0 6 0 6 237 4:15 FM 7 70 29 0 106 0 103 0 0 103 26 1 5 0 32 0 0 5 0 5 246 4:30 PM 3 71 21 0 95 3 76 0 0 79 31 2 1 0 34 2 1 6 0 9 15 246 Hourly Total 22 298 94 0 414 5 368 1 0 374 109 5 9 0 123 5 1 29 0 35 946 Hourly Total 22 298 94 0 414 5 368 1 0 374 109 5 9 0 123 5 1 29 0 35 946 5:00 PM 4 57 38 0 99 4 125 0 0 129 31 0 5 0 36 0 1 1 10 0 1 1 275 5:15 FM 7 80 38 0 125 1 98 0 0 99 34 1 2 2 0 37 0 1 9 0 10 271 5:30 PM 7 62 32 0 101 1 94 0 0 95 34 1 1 0 36 0 0 8 0 8 240 5:45 FM 8 50 10 0 68 1 69 0 0 70 22 0 1 0 0 23 0 1 11 0 1 0 12 173 Hourly Total 26 249 118 0 393 7 386 0 0 0 333 121 2 9 0 132 0 3 38 0 41 959 Grand Total 94 1378 446 0 1918 18 1595 4 0 1617 541 11 28 0 580 5 10 177 1 192 4307 Approach% 4.9 71.8 23.3 1.1 98.6 0.2 93.3 1.9 4.8 2.6 5.2 92.2 Total% 2.2 32.0 10.4 - 44.5 0.4 37.0 0.1 - 37.5 12.6 0.3 0.7 - 13.5 0.1 0.2 4.1 - 4.5 Total% 95.7 96.8 98.0 - 97.0 94.4 97.7 100.0 - 97.6 98.2 90.9 92.9 - 97.8 100.0 70.0 99.4 - 97.9 97.4 Other Vehicles 4.3 3.2 2.0 - 3.0 5.6 2.3 0.0 - 2.4 1.8 9.1 7.1 - 2.2 0.0 30.0 0.6 - 2.1 2.6 Pedestrians 0	3:30 PM	7	92	27	0	126	0	76	1	0	77	24	0	3	0	27	0	1	6	0	7	237
4:00 PM 2 73 29 0 104 1 95 1 0 97 26 2 2 0 30 0 0 6 0 6 237 4:15 PM 7 70 29 0 106 0 103 0 0 103 26 1 5 0 32 0 0 5 0 5 246 4:30 PM 3 71 21 0 95 3 76 0 0 79 31 2 1 0 34 2 1 6 0 9 217 4:45 PM 10 84 15 0 109 1 94 0 0 95 26 0 1 0 27 3 0 12 15 246 Hourly Total 22 298 94 0 4125 0 0 129 31 0	3:45 PM	4	76	17	0	97	0	89	0	0	89	32	0	0	0	32	0	1	2	0	3	221
4:15 PM 7 70 29 0 106 0 103 0 0 103 26 1 5 0 32 0 0 5 0 5 246 4:30 PM 3 71 21 0 95 3 76 0 0 79 31 2 1 0 34 2 1 6 0 9 217 4:45 PM 10 84 15 0 109 1 94 0 0 95 26 0 1 0 27 3 0 12 0 15 246 Hourly Total 22 298 94 0 414 5 368 1 0 374 109 5 9 0 123 5 1 29 0 35 946 5:00 PM 4 57 38 0 99 4 125 0 0 129 31 0 5 0 36 0 1 10 0 11 <td>Hourly Total</td> <td>18</td> <td>323</td> <td>92</td> <td>0</td> <td>433</td> <td>1</td> <td>309</td> <td>3</td> <td>0</td> <td>313</td> <td>100</td> <td>1</td> <td>4</td> <td>0</td> <td>105</td> <td>0</td> <td>4</td> <td>15</td> <td>0</td> <td>19</td> <td>870</td>	Hourly Total	18	323	92	0	433	1	309	3	0	313	100	1	4	0	105	0	4	15	0	19	870
4:30 PM 3 71 21 0 95 3 76 0 0 79 31 2 1 0 34 2 1 6 0 9 217 4:45 PM 10 84 15 0 109 1 94 0 0 95 26 0 1 0 27 3 0 12 0 15 246 Hourly Total 22 298 94 0 414 5 368 1 0 374 109 5 9 0 123 5 1 29 0 35 946 5:00 PM 4 57 38 0 99 4 125 0 0 129 31 0 5 0 36 0 1 10 0 11 10 0 11 29 0 132 9 0 10 22 0 37 0 1 9 0 10 22 0 36 0 0 8 <	4:00 PM	2	73	29	0	104	1	95	1	0	97	26	2	2	0	30	0	0	6	0	6	237
4:45 PM 10 84 15 0 109 1 94 0 0 95 26 0 1 0 27 3 0 12 0 15 246 Hourly Total 22 298 94 0 414 5 368 1 0 374 109 5 9 0 123 5 1 29 0 35 946 5:00 PM 4 57 38 0 99 4 125 0 0 129 31 0 5 0 36 0 1 10 0 11 275 5:15 PM 7 80 38 0 125 1 98 0 0 99 34 1 2 0 37 0 1 9 0 10 271 1 28 240 11 2 0 37 0 1 9 0 10 2 0 1 0 36 0 0 8 240 2	4:15 PM	7	70	29	0	106	0	103	0	0	103	26	1	5	0	32	0	0	. 5	0	5	246
Hourly Total 22 298 94 0 414 5 368 1 0 374 109 5 9 0 123 5 1 29 0 35 946 5:00 PM 4 57 38 0 99 4 125 0 0 129 31 0 5 0 36 0 1 10 0 11 275 5:15 PM 7 80 38 0 125 1 98 0 0 99 34 1 2 0 37 0 1 9 0 10 271 5:30 PM 7 62 32 0 101 1 94 0 0 95 34 1 1 0 36 0 0 8 0 8 240 5:45 PM 8 50 10 0 68 1 69 0 0 70 22 0 1 0 23 0 1 11 0 12 173 Hourly Total 26 249 118 0 393 7 386 0 0 3393 121 2 9 0 132 0 3 38 0 41 959 Grand Total 94 1378 446 0 1918 18 1595 4 0 1617 541 11 28 0 580 5 10 177 1 192 4307 Approach 4.9 71.8 23.3 1.1 98.6 0.2 93.3 1.9 4.8 2.6 5.2 92.2 1.1 1 98.6 0.2 93.3 1.9 4.8 2.6 5.2 92.2 1.1 1 98.6 0.2 1.1 1578 1 10 26 - 567 5 7 176 - 188 4195 Mights 95.7 96.8 98.0 - 97.0 94.4 97.7 100.0 - 97.6 98.2 90.9 92.9 - 97.8 100.0 70.0 99.4 - 97.9 97.4 Other Vehicles 4 44 9 - 57 1 37 0 - 38 10 1 2 2 - 13 0 3 0 0 6 - 2.1 2.6 September 1	4:30 PM	3	71	21	0	95	3	76	0	0	79	31	2	1	0	34	2	1	6	0	9	217
5:00 PM 4 57 38 0 99 4 125 0 0 129 31 0 5 0 36 0 1 10 0 11 275 5:15 PM 7 80 38 0 125 1 98 0 0 99 34 1 2 0 37 0 1 9 0 10 271 5:30 PM 7 62 32 0 101 1 94 0 0 95 34 1 1 0 36 0 0 8 240 5:45 PM 8 50 10 0 68 1 69 0 0 70 22 0 1 0 3 38 0 41 959 Grand Total 94 1378 446 0 1918 18 1595 4 0 1617 541 11 28	4:45 PM	10	84	15	0	109	1	94	0	0	95	26	0	1	0	27	3	0	12	0	15	246
5:15 PM 7 80 38 0 125 1 98 0 0 99 34 1 2 0 37 0 1 9 0 10 271 5:30 PM 7 62 32 0 101 1 94 0 0 95 34 1 1 0 36 0 0 8 240 5:45 PM 8 50 10 0 68 1 69 0 0 70 22 0 1 0 23 0 1 11 0 12 173 Hourly Total 26 249 118 0 393 7 386 0 0 393 121 2 9 0 132 0 3 38 0 41 959 Grand Total 94 1378 446 0 1918 18 1595 4 0 1617 <t< td=""><td>Hourly Total</td><td>22</td><td>298</td><td>94</td><td>0</td><td>414</td><td>5</td><td>368</td><td>1</td><td>0</td><td>374</td><td>109</td><td>5</td><td>9</td><td>0</td><td>123</td><td>5</td><td>1</td><td>29</td><td>0</td><td>35</td><td>946</td></t<>	Hourly Total	22	298	94	0	414	5	368	1	0	374	109	5	9	0	123	5	1	29	0	35	946
5:30 PM 7 62 32 0 101 1 94 0 0 95 34 1 1 0 36 0 0 8 0 8 240 5:45 PM 8 50 10 0 68 1 69 0 0 70 22 0 1 0 23 0 1 11 0 12 173 Hourly Total 26 249 118 0 393 7 386 0 0 393 121 2 9 0 132 0 3 38 0 41 959 Grand Total 94 1378 446 0 1918 18 1595 4 0 1617 541 11 28 0 580 5 10 177 1 192 4307 Approach % 4.9 71.8 23.3 - - 1.1 98.6 <t< td=""><td>5:00 PM</td><td>4</td><td>57</td><td>38</td><td>0</td><td>99</td><td>4</td><td>125</td><td>0</td><td>0</td><td>129</td><td>31</td><td>0</td><td>5</td><td>0</td><td>36</td><td>0</td><td>1</td><td>10</td><td>0</td><td>11</td><td>275</td></t<>	5:00 PM	4	57	38	0	99	4	125	0	0	129	31	0	5	0	36	0	1	10	0	11	275
5:45 PM 8 50 10 0 68 1 69 0 0 70 22 0 1 0 23 0 1 11 0 12 173 Hourly Total 26 249 118 0 393 7 386 0 0 393 121 2 9 0 132 0 3 38 0 41 959 Grand Total 94 1378 446 0 1918 18 1595 4 0 1617 541 11 28 0 580 5 10 177 1 192 4307 Approach % 4.9 71.8 23.3 - - 1.1 98.6 0.2 - - 93.3 1.9 4.8 - - 2.6 5.2 92.2 - - - Total % 2.2 32.0 10.4 - 44.5 0.4 <t< td=""><td>5:15 PM</td><td>7</td><td>80</td><td>38</td><td>0</td><td>125</td><td>1</td><td>98</td><td>0</td><td>0</td><td>99</td><td>34</td><td>1</td><td>2</td><td>0</td><td>37</td><td>0</td><td>1</td><td>9</td><td>0</td><td>10</td><td>271</td></t<>	5:15 PM	7	80	38	0	125	1	98	0	0	99	34	1	2	0	37	0	1	9	0	10	271
Hourly Total 26 249 118 0 393 7 386 0 0 393 121 2 9 0 132 0 3 38 0 41 959	5:30 PM	7	62	32	0	101	1	94	0	0	95	34	1	1	0	36	0	0	. 8	0	8	240
Grand Total 94 1378 446 0 1918 18 1595 4 0 1617 541 11 28 0 580 5 10 177 1 192 4307 Approach % 4.9 71.8 23.3 - - 1.1 98.6 0.2 - - 93.3 1.9 4.8 - - 2.6 5.2 92.2 - - - Total % 2.2 32.0 10.4 - 44.5 0.4 37.0 0.1 - 37.5 12.6 0.3 0.7 - 13.5 0.1 0.2 4.1 - 4.5 - Lights 90 1334 437 - 1861 17 1558 4 - 1579 531 10 26 - 567 5 7 176 - 188 4195 % Lights 95.7 96.8 98.0 - 97.0 <td>5:45 PM</td> <td>8</td> <td>50</td> <td>10</td> <td>0</td> <td>68</td> <td>1</td> <td>69</td> <td>0</td> <td>0</td> <td>70</td> <td>22</td> <td>0</td> <td>1</td> <td>0</td> <td>23</td> <td>0</td> <td>1</td> <td>11</td> <td>0</td> <td>12</td> <td>173</td>	5:45 PM	8	50	10	0	68	1	69	0	0	70	22	0	1	0	23	0	1	11	0	12	173
Approach % 4.9 71.8 23.3 - - 1.1 98.6 0.2 - - 93.3 1.9 4.8 - - 2.6 5.2 92.2 -	Hourly Total	26	249	118	0	393	7	386	0	0	393	121	2	9	0	132	0	3	38	0	41	959
Total % 2.2 32.0 10.4 - 44.5 0.4 37.0 0.1 - 37.5 12.6 0.3 0.7 - 13.5 0.1 0.2 4.1 - 4.5 - Lights 90 1334 437 - 1861 17 1558 4 - 1579 531 10 26 - 567 5 7 176 - 188 4195 % Lights 95.7 96.8 98.0 - 97.0 94.4 97.7 100.0 - 97.6 98.2 90.9 92.9 - 97.8 100.0 70.0 99.4 - 97.9 97.4 Other Vehicles 4 44 9 - 57 1 37 0 - 38 10 1 2 - 13 0 3 1 - 4 112 % Other Vehicles 4.3 3.2 2.0 - 3.0 5.6 2.3 0.0 - 2.4 1.8 9.1 7.1 - 2.2 0.0 30.0 0.6 - 2.1 2.6 Pedestrians 0 - 0 0 - 0 0 1 - 1	Grand Total	94	1378	446	0	1918	18	1595	4	0	1617	541	11	28	0	580	5	10	177	1	192	4307
Lights 90 1334 437 - 1861 17 1558 4 - 1579 531 10 26 - 567 5 7 176 - 188 4195 % Lights 95.7 96.8 98.0 - 97.0 94.4 97.7 100.0 - 97.6 98.2 90.9 92.9 - 97.8 100.0 70.0 99.4 - 97.9 97.4 Other Vehicles 4 44 9 - 57 1 37 0 - 38 10 1 2 - 13 0 3 1 - 4 112 % Other Vehicles 4.3 3.2 2.0 - 3.0 5.6 2.3 0.0 - 2.4 1.8 9.1 7.1 - 2.2 0.0 30.0 0.6 - 2.1 2.6 Workington - - - - -	Approach %	4.9	71.8	23.3	-	-	1.1	98.6	0.2	-	_	93.3	1.9	4.8	-	-	2.6	5.2	92.2	-	-	-
% Lights 95.7 96.8 98.0 - 97.0 94.4 97.7 100.0 - 97.6 98.2 90.9 92.9 - 97.8 100.0 70.0 99.4 - 97.9 97.4 Other Vehicles 4 44 9 - 57 1 37 0 - 38 10 1 2 - 13 0 3 1 - 4 112 % Other Vehicles 4.3 3.2 2.0 - 3.0 5.6 2.3 0.0 - 2.4 1.8 9.1 7.1 - 2.2 0.0 30.0 0.6 - 2.1 2.6 Pedestrians - - 0 - - 0 - - - 0 - - - 0 - - - - 0 - - - 0 - - 2.1 2.6	Total %	2.2	32.0	10.4	-	44.5	0.4	37.0	0.1	-	37.5	12.6	0.3	0.7	-	13.5	0.1	0.2	4.1	-	4.5	-
Other Vehicles 4 44 9 - 57 1 37 0 - 38 10 1 2 - 13 0 3 1 - 4 112 % Other Vehicles 4.3 3.2 2.0 - 3.0 5.6 2.3 0.0 - 2.4 1.8 9.1 7.1 - 2.2 0.0 30.0 0.6 - 2.1 2.6 Pedestrians - - - 0 - - - - 0 - - - - 1 - <td>Lights</td> <td>90</td> <td>1334</td> <td>437</td> <td>-</td> <td>1861</td> <td>17</td> <td>1558</td> <td>4</td> <td>_</td> <td>1579</td> <td>531</td> <td>10</td> <td>26</td> <td>_</td> <td>567</td> <td>5</td> <td>7</td> <td>176</td> <td>-</td> <td>188</td> <td>4195</td>	Lights	90	1334	437	-	1861	17	1558	4	_	1579	531	10	26	_	567	5	7	176	-	188	4195
% Other Vehicles 4.3 3.2 2.0 - 3.0 5.6 2.3 0.0 - 2.4 1.8 9.1 7.1 - 2.2 0.0 30.0 0.6 - 2.1 2.6 Pedestrians - - - 0 - - - 0 - - - 1 - - 1 - - - 1 - <td>% Lights</td> <td>95.7</td> <td>96.8</td> <td>98.0</td> <td>-</td> <td>97.0</td> <td>94.4</td> <td>97.7</td> <td>100.0</td> <td>-</td> <td>97.6</td> <td>98.2</td> <td>90.9</td> <td>92.9</td> <td>-</td> <td>97.8</td> <td>100.0</td> <td>70.0</td> <td>99.4</td> <td>-</td> <td>97.9</td> <td>97.4</td>	% Lights	95.7	96.8	98.0	-	97.0	94.4	97.7	100.0	-	97.6	98.2	90.9	92.9	-	97.8	100.0	70.0	99.4	-	97.9	97.4
Vehicles 4.3 3.2 2.0 - 3.0 5.6 2.3 0.0 - 2.4 1.8 9.1 7.1 - 2.2 0.0 30.0 0.6 - 2.1 2.5 Pedestrians - - - 0 - - - 0 - - - - - 1 - -	Other Vehicles	4	44	9	-	57	1	37	0	-	38	10	1	2	-	13	0	3	1	-	4	112
		4.3	3.2	2.0	-	3.0	5.6	2.3	0.0	-	2.4	1.8	9.1	7.1	-	2.2	0.0	30.0	0.6	-	2.1	2.6
% Pedestrians - <	Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-		1	-	-
	% Pedestrians	-		-	-	-	-			-	-	-	-	-	-	-	-	-		100.0	-	-



Counter: MIO: Set up by: KY:

Traffic Planning and Design, Inc 2500 East High Street Suite 650 Pottstown, Pennsylvania, United States 19464 610.326.3100 kyoung@trafficpd.com

Count Name: (1) AM/PM Mill Road x W Lisburn Road SR 2004 Site Code: Start Date: 05/04/2023 Page No: 2



Turning Movement Data Plot



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Count Name: (1) AM/PM Mill Road x W Lisburn Road SR 2004 Site Code: Start Date: 05/04/2023 Page No: 3

Turning Movement Peak Hour Data (7:15 AM)

ranning movement reaction batta (1110 1111)																					
		W Lisbu	rn Road	SR 2004			W Lisbu	rn Road	SR 2004	ļ			Mill Road	t				Mill Road	d		
		E	astboun	d			V	Vestbour	ıd			N	lorthbour	nd			S	outhbour	nd		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	1	45	12	0	58	2	55	0	0	57	36	1	0	0	37	0	0	8	0	8	160
7:30 AM	3	50	25	0	78	0	72	0	0	72	22	0	0	0	22	0	0	16	0	16	188
7:45 AM	4	62	25	0	91	1	65	0	0	66	20	1	0	0	21	0	0	12	1	12	190
8:00 AM	2	59	15	0	76	0	43	0	0	43	16	0	1	0	17	0	1	8	0	9	145
Total	10	216	77	0	303	3	235	0	0	238	94	2	1	0	97	0	1	44	1	45	683
Approach %	3.3	71.3	25.4	-	-	1.3	98.7	0.0	-	-	96.9	2.1	1.0	-	-	0.0	2.2	97.8	-	-	-
Total %	1.5	31.6	11.3	-	44.4	0.4	34.4	0.0	-	34.8	13.8	0.3	0.1	-	14.2	0.0	0.1	6.4	-	6.6	-
PHF	0.625	0.871	0.770	-	0.832	0.375	0.816	0.000	-	0.826	0.653	0.500	0.250	-	0.655	0.000	0.250	0.688	-	0.703	0.899
Lights	8	203	76	-	287	2	220	0	-	222	91	2	0	-	93	0	0	44	-	44	646
% Lights	80.0	94.0	98.7	-	94.7	66.7	93.6	-	-	93.3	96.8	100.0	0.0	-	95.9	-	0.0	100.0	-	97.8	94.6
Other Vehicles	2	13	1	-	16	1	15	0	-	16	3	0	1	-	4	0	1	0	-	1	37
% Other Vehicles	20.0	6.0	1.3	-	5.3	33.3	6.4	-	-	6.7	3.2	0.0	100.0	-	4.1	-	100.0	0.0	-	2.2	5.4
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	_	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

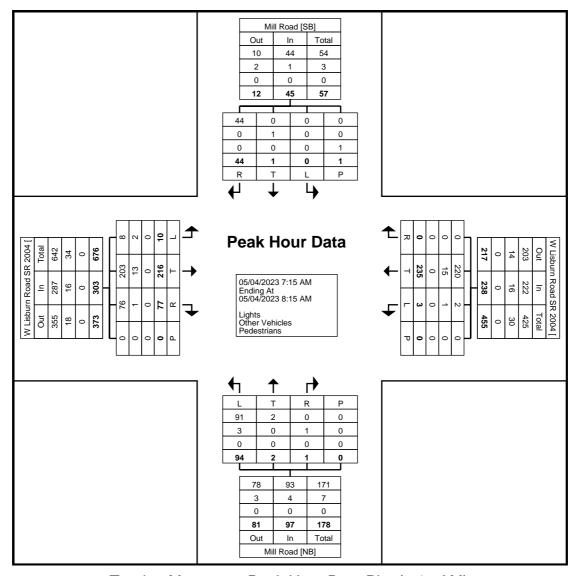


Counter: MIO: Set up by: KY:

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Count Name: (1) AM/PM Mill Road x W Lisburn Road SR

2004 Site Code: Start Date: 05/04/2023 Page No: 4



Turning Movement Peak Hour Data Plot (7:15 AM)



Counter: MIO: Set up by: KY:

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Count Name: (1) AM/PM Mill Road x W Lisburn Road SR 2004 Site Code: Start Date: 05/04/2023 Page No: 5

Turning Movement Peak Hour Data (4:45 PM)

						9		01110		Jan		. – u	ω , .		<i>,</i>						
		W Lisbu	rn Road	SR 2004		W Lisburn Road SR 2004							Mill Road	t							
		E	astboun	d			V	Vestboun	ıd			N	orthbour	nd			S	outhbour	nd		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
4:45 PM	10	84	15	0	109	1	94	0	0	95	26	0	1	0	27	3	0	12	0	15	246
5:00 PM	4	57	38	0	99	4	125	0	0	129	31	0	5	0	36	0	1	10	0	11	275
5:15 PM	7	80	38	0	125	1	98	0	0	99	34	1	2	0	37	0	1	9	0	10	271
5:30 PM	7	62	32	0	101	1	94	0	0	95	34	1	1	0	36	0	0	8	0	8	240
Total	28	283	123	0	434	7	411	0	0	418	125	2	9	0	136	3	2	39	0	44	1032
Approach %	6.5	65.2	28.3	-	-	1.7	98.3	0.0	-	-	91.9	1.5	6.6	-	-	6.8	4.5	88.6	-	-	
Total %	2.7	27.4	11.9	-	42.1	0.7	39.8	0.0	-	40.5	12.1	0.2	0.9	-	13.2	0.3	0.2	3.8	-	4.3	-
PHF	0.700	0.842	0.809	-	0.868	0.438	0.822	0.000	-	0.810	0.919	0.500	0.450	-	0.919	0.250	0.500	0.813	-	0.733	0.938
Lights	28	282	123	-	433	7	406	0	-	413	124	2	9	-	135	3	2	39	-	44	1025
% Lights	100.0	99.6	100.0	-	99.8	100.0	98.8	-	-	98.8	99.2	100.0	100.0	-	99.3	100.0	100.0	100.0	-	100.0	99.3
Other Vehicles	0	1	0	-	1	0	5	0	-	5	1	0	0	-	1	0	0	0	-	0	7
% Other Vehicles	0.0	0.4	0.0	-	0.2	0.0	1.2	-	-	1.2	0.8	0.0	0.0	-	0.7	0.0	0.0	0.0	-	0.0	0.7
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

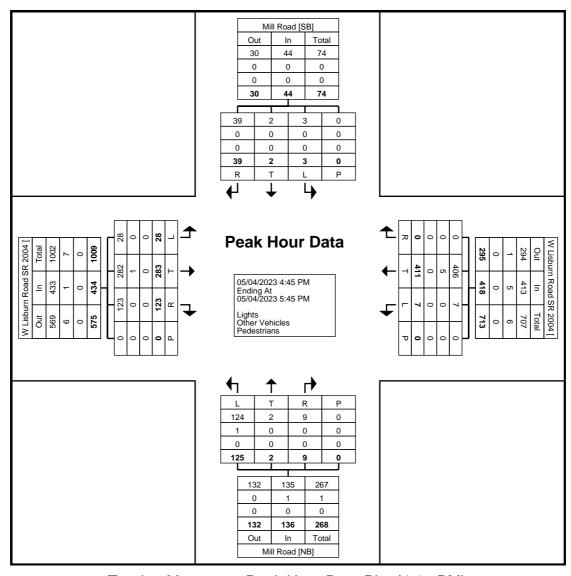


Counter: MIO: Set up by: KY:

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Count Name: (1) AM/PM Mill Road x W Lisburn Road SR

2004 Site Code: Start Date: 05/04/2023 Page No: 6



Turning Movement Peak Hour Data Plot (4:45 PM)