



**Bright View Engineering**  
*Moving you forward*

March 28, 2022

**VIA EMAIL**

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**Re: Traffic Engineering Services  
Old York Country Club – Origin-Destination Study  
Chesterfield Township, Burlington County, New Jersey  
Project No.: 203112**

Bright View Engineering was tasked by Active Acquisitions (*the Applicant here-in*) with performing an evaluation of the existing heavy vehicle traffic along Old York Road and Crosswicks Chesterfield Road, including specifically from the Matrix warehouse located in the northwest quadrant of the intersection of Old York Road and Georgetown Road. This analysis was performed in response to concerns expressed by residents of the Crosswicks Community, which is located in Chesterfield Township off of Crosswicks Chesterfield Road (*CR 660*). Residents of the Crosswicks Community have expressed concern to the Township regarding an increase in heavy vehicle traffic traveling through their neighborhood, which they attribute to the increase in warehouse land uses in the area.

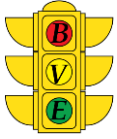
Bright View Engineering (*BVE here-in*) performed traffic data collection, visited the study location, and performed analysis to assess the existing conditions in the study area. Our methodology conforms with the provisions set forth in NJSA *Title 39*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Traffic volume data collection at the intersections of Main Street in Crosswicks & Crosswicks Chesterfield, and Old York Road driveway from the Matrix warehouse located in the northwest quadrant of the intersection of Old York Road and Georgetown Road; and
- Summary and Conclusions.

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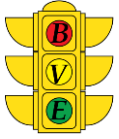
## **EXISTING CONDITIONS**

Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways.

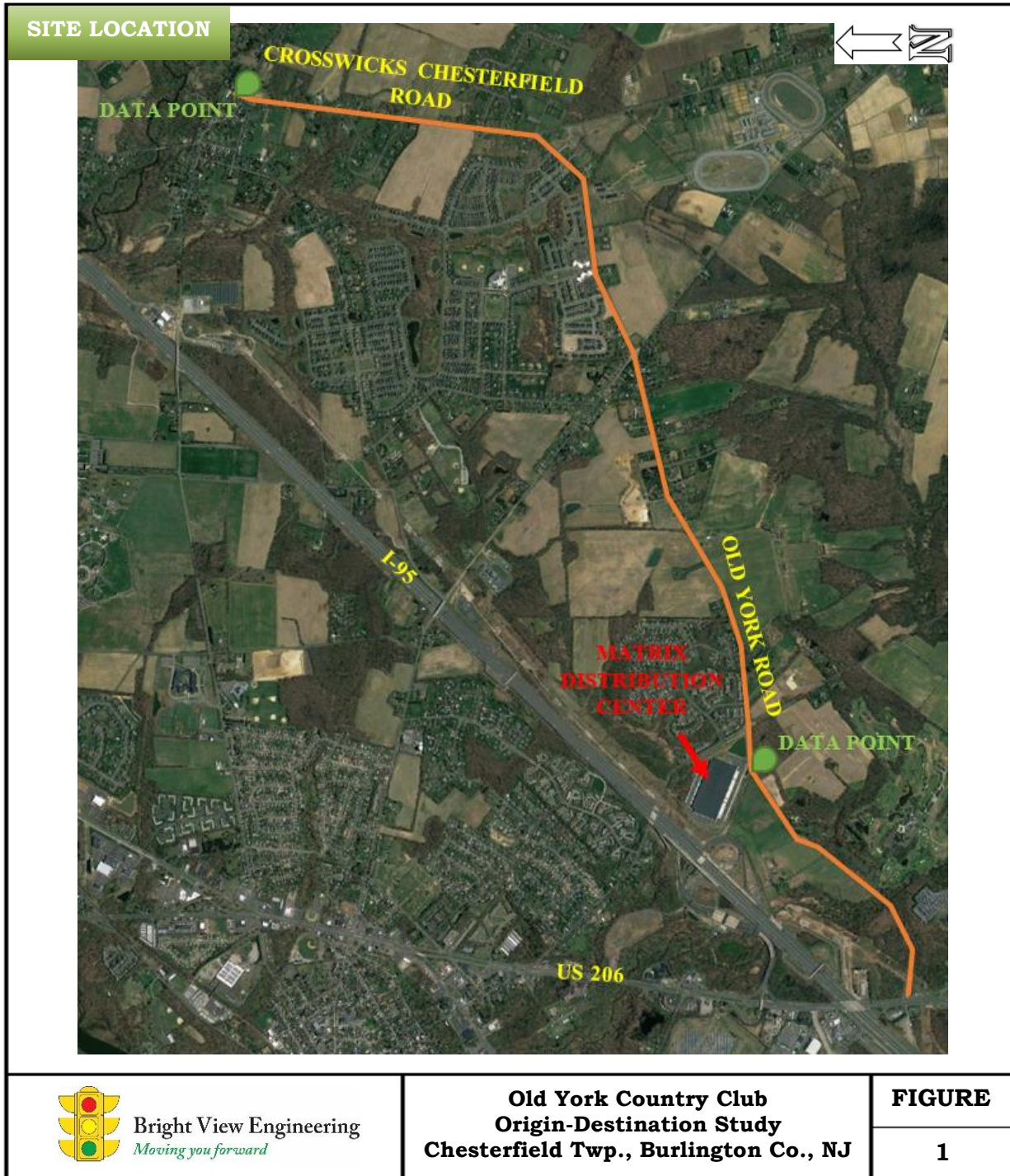
**Old York Road** is a North- South oriented roadway which spans approximately 5.04 miles through the study area. The available NJDOT Straight-line Diagram for this roadway segment was last inventoried in April 2011 and indicates that the roadway segment is bounded by US 206 to the west and continues east as Church Street, where Burlington County's jurisdiction ends over the Crosswicks Creek. The Straight-line Diagram indicates that the roadway segment has various speed limits posted along its stretch; where the roadway segment is identified as Old York Road the speed limit is posted at 45 MPH, as Chesterfield Crosswicks Road the speed limit transitions from 45 MPH down to 35 MPH, Main Street the speed limit is posted at 25 MPH, and Church Street the speed limit is 35 MPH. Based upon the operating characteristics of the roadway segment and the adjacent land uses along each stretch, it is our opinion that the speed limit(s) are posted correctly and conforms with the guidance set forth within New Jersey Statutes Title 39, Chapter 4, Section 98, and the provisions set forth in R.S.39:4-96 and R.S.39:4-97.

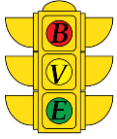
The roadway provides for a minimum pavement width of approximately 24 feet and allows for bidirectional travel, with one travel lane in each direction. At its intersection with US 206 to the west, Old York Road is governed by a STOP Control. At its intersections with Georgetown Road and Bordentown Chesterfield Road the intersections are governed by roundabouts. At Crosswicks Chesterfield Road, Old York Road is governed by a STOP Control; and at Main Street in Crosswicks, Crosswicks Chesterfield Road is governed by a STOP Control.

In general, we observed the land uses in the study area to be a blend of commercial properties, agricultural lands, and concentrated pockets of single-family residential dwellings. The sample warehouse facility driveway where data was collected is located along Old York Road approximately at Mile Point 9.64 WB; approximately 680' west of the Bordentown Georgetown Road roundabout.



**FIGURE 1**



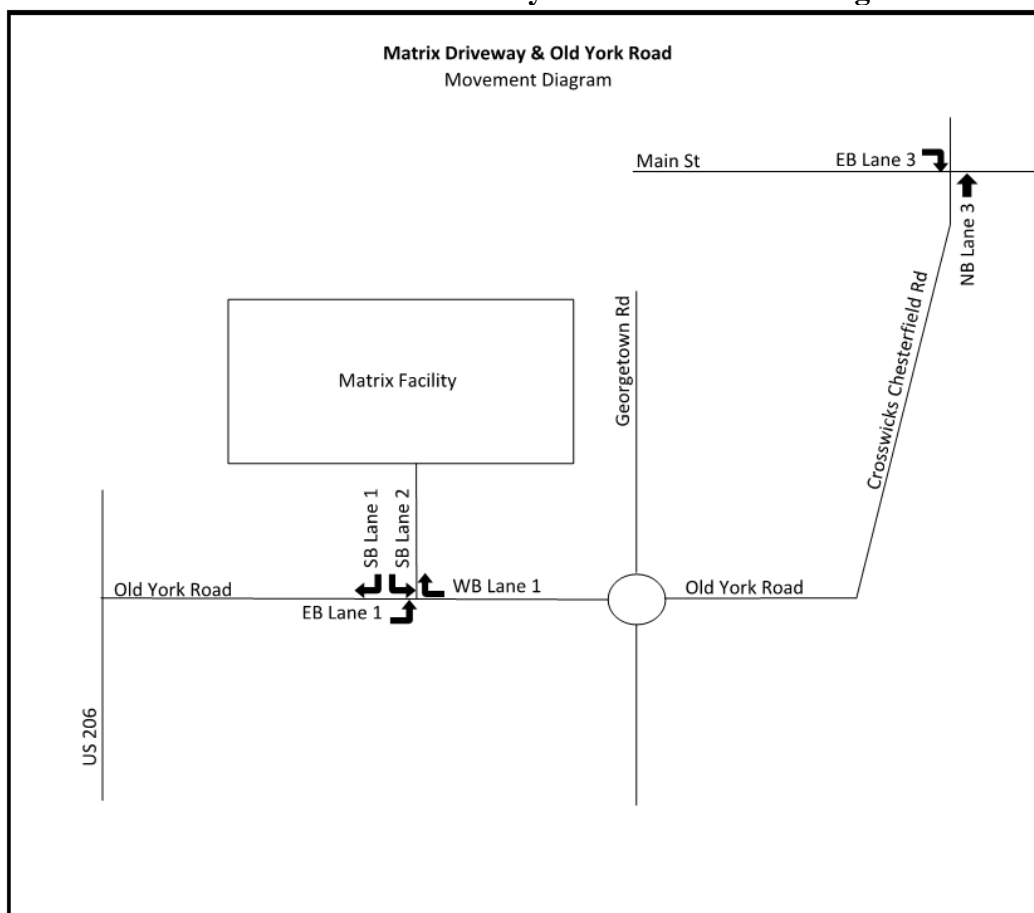


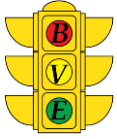
## DATA COLLECTION

### 2021 Existing Traffic Conditions

To better understand the existing traffic conditions, BVE conducted traffic data collection at the intersections of Old York Road & the Matrix Distribution Center Driveway and Main Street in Crosswicks & Crosswicks Chesterfield Road. We utilized High-Definition video recorders positioned at the appropriate location with clear sight lines. This data collection was performed in order to provide observations on how many heavy vehicles originating from the Matrix facility on Old York Road utilize Main Street in the Crosswicks section of Chesterfield Township. Traffic volume data was collected on Tuesday, October 26, 2021, from 6:00AM to 7:00PM providing thirteen (13) continuous hours of high-definition video at each of the locations studied. Traffic volumes were classified into three separate categories: Lights, Buses, and Trucks. *Light* vehicles are defined as motorcycles, cars, and light goods vehicles (*such as a cargo van*), *Buses* includes buses and single-unit trucks, and *Trucks* refers to articulated trucks.

**FIGURE 2 – Matrix Driveway & Old York Road Diagram**





This data is tabulated below:

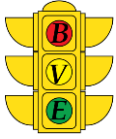
**Table 1 – 2021 Existing Traffic Volumes – Matrix Facility (Exiting away from Crosswicks)**

Peak Hour of Operation	SB Lane 1 <i>Right onto Old York Road</i>			
	<i>Lights</i>	<i>Buses</i>	<i>Trucks</i>	<i>Overall</i>
AM Peak	7:30AM – 8:30AM	6:00AM – 7:00AM	11:00AM – 12:00PM	7:30AM 8 :30AM
AM Vol	0	0	3	3
PM Peak	5:00PM – 6:00PM	12:00PM – 1:00PM	12:30PM – 1:30PM	5:00PM – 6:00PM
PM Vol	2	0	2	4
Tot Vol <i>6:00AM – 7:00PM</i>	11	0	18	29
(%)	37.9	0.0	62.1	100.0

**Table 2 – 2021 Existing Traffic Volumes – Matrix Facility (Exiting to Crosswicks)**

Peak Hour of Operation	SB Lane 2 <i>Left onto Old York Road</i>			
	<i>Lights</i>	<i>Buses</i>	<i>Trucks</i>	<i>Overall</i>
AM Peak	7:30AM – 8:30AM	6:00AM – 7:00AM	11:00AM – 12:00PM	7:30AM 8 :30AM
AM Vol	4	0	0	4
PM Peak	5:00PM – 6:00PM	12:00PM – 1:00PM	12:30PM – 1:30PM	5:00PM – 6:00PM
PM Vol	10	0	0	10
Tot Vol <i>6:00AM – 7:00PM</i>	36	0	1*	37
(%)	97.3	0.0	2.7	100.0

*\*Single-Unit UPS Truck, not an articulating truck.*

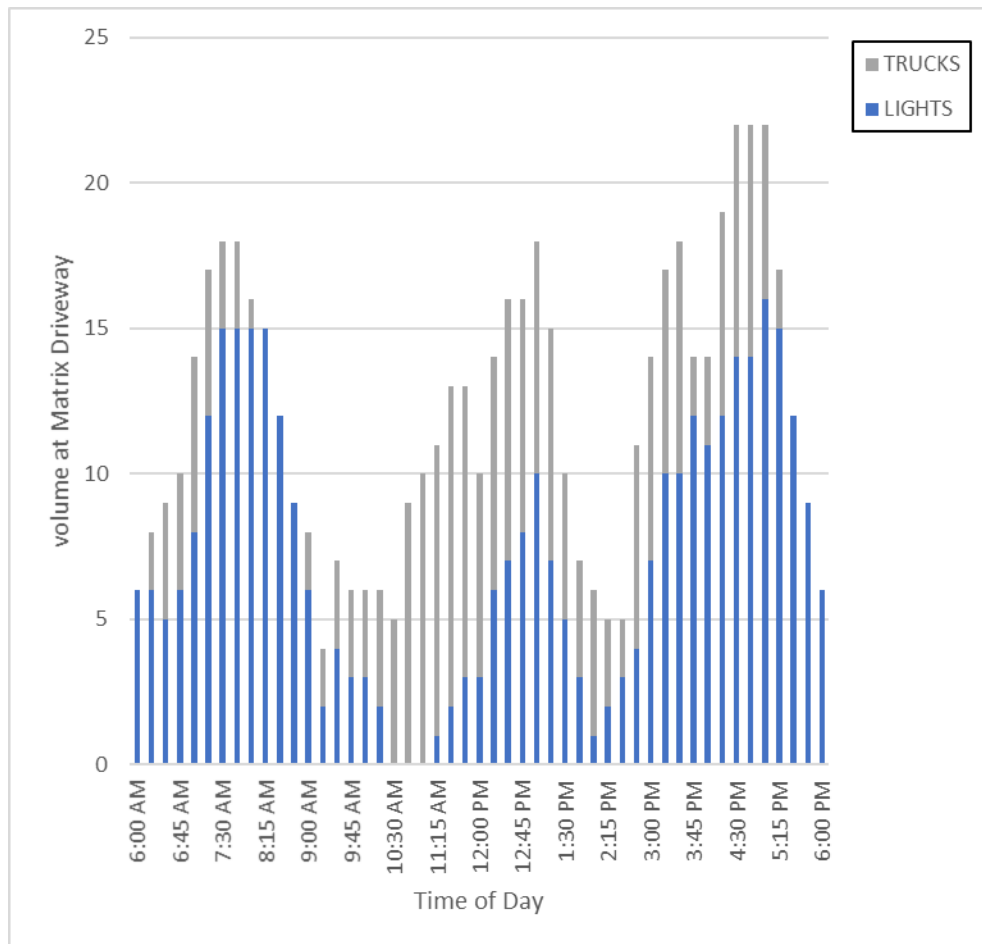
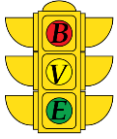


**Table 3 – 2021 Existing Traffic Volumes – Matrix Facility (Entering from Rt 206)**

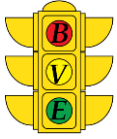
Peak Hour of Operation	EB Lane 1 <i>Entering Left from Old York Road (US 206)</i>			
	<i>Lights</i>	<i>Buses</i>	<i>Trucks</i>	<i>Overall</i>
AM Peak	6:00AM – 7:00AM	6:00AM – 7:00AM	11:00AM – 12:00PM	11:00AM – 12:00PM
AM Vol	0	0	2	2
PM Peak	12:00PM – 1:00PM	12:00PM – 1:00PM	3:30PM – 4:30PM	3:30PM – 4:30PM
PM Vol	0	0	3	3
Tot Vol <i>6:00AM – 7:00PM</i>	0	0	11	11
(%)	0.0	0.0	100.0	100.0

**Table 4 – 2021 Existing Traffic Volumes – Matrix Facility (Entering from Circle at Old York and Georgetown Roads)**

Peak Hour of Operation	WB Lane 1 <i>Entering Right from Old York Road (Circle)</i>			
	<i>Lights</i>	<i>Buses</i>	<i>Trucks</i>	<i>Overall</i>
AM Peak	8:00AM – 9:00AM	6:00AM – 7:00AM	11:30AM – 12:30PM	8:00AM – 9:00AM
AM Vol	13	0	2	13
PM Peak	1:00PM – 2:00PM	12:00PM – 1:00PM	12:30PM – 1:30PM	1:00 – 2:00PM
PM Vol	5	0	3	7
Tot Vol <i>6:00AM – 7:00PM</i>	45	0	8	53
(%)	84.9	0.0	15.1	100.0

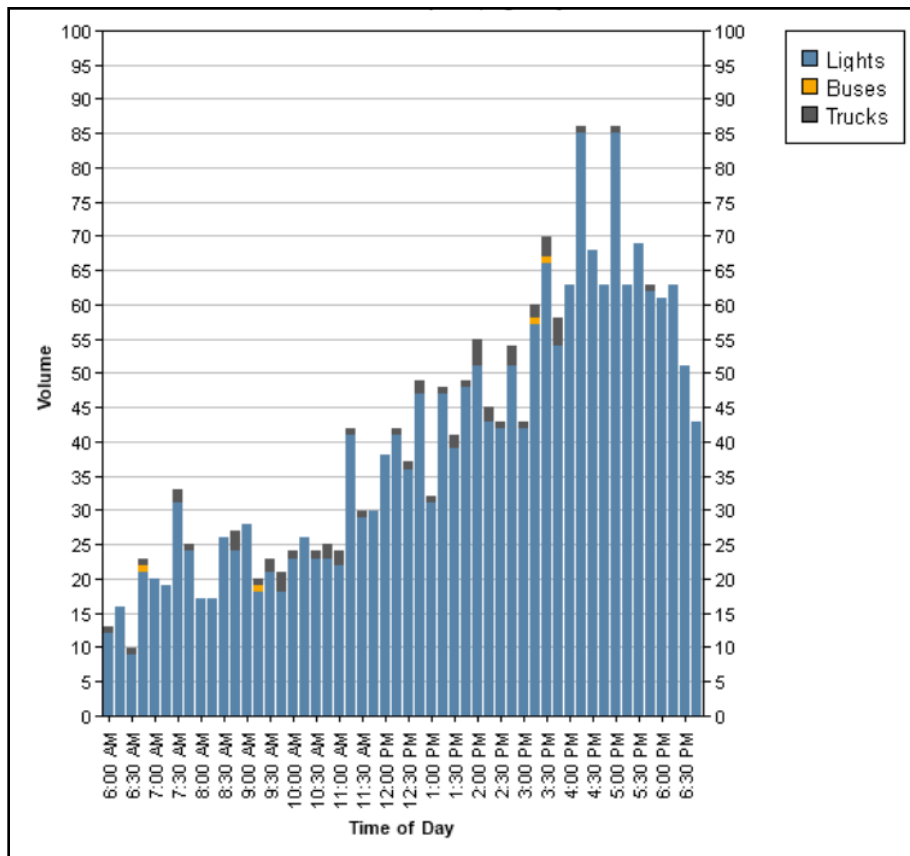


From the data tabulated above, we observed that eight (8) trucks originated from the direction of the Circle at Old York Road and Georgetown Roads going into the Matrix facility and that only one (1) articulating truck was noted to make a southbound left out of the Matrix facility toward Crosswicks Chesterfield Road, for the entire count period. There is a concrete barrier in place at this split driveway which prevents articulating trucks from making a left turn out of the site without bottoming out and damaging the trailer in tow. Upon reviewing the video data at the driveway, we note that the one vehicle making a left out of the driveway was a single-unit UPS delivery truck, not an articulating truck. As UPS specifically designs their driver's routes to avoid left turns, it is likely that this vehicle was there in error.

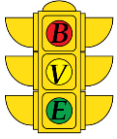


**Table 5 – 2021 Existing Traffic Volumes – Main Street in Crosswicks EB**

Peak Hour of Operation	EB Lane 3 <i>EB on Main Street in Crosswicks at Crosswicks Chesterfield Road</i>			
	<i>Lights</i>	<i>Buses</i>	<i>Trucks</i>	<i>Overall</i>
AM Peak	11:00AM – 12:00PM	6:00AM – 7:00AM	9:15AM – 10:15AM	11:00AM – 12:00PM
AM Vol	122	1	7	126
PM Peak	4:15PM – 5:15PM	2:45PM – 3:45PM	2:00PM – 3:00PM	4:15PM – 5:15PM
PM Vol	301	2	10	303
Tot Vol <i>6:00AM – 7:00PM</i>	2,059	4	43	2,106
(%)	97.8	0.2	2.0	100.0

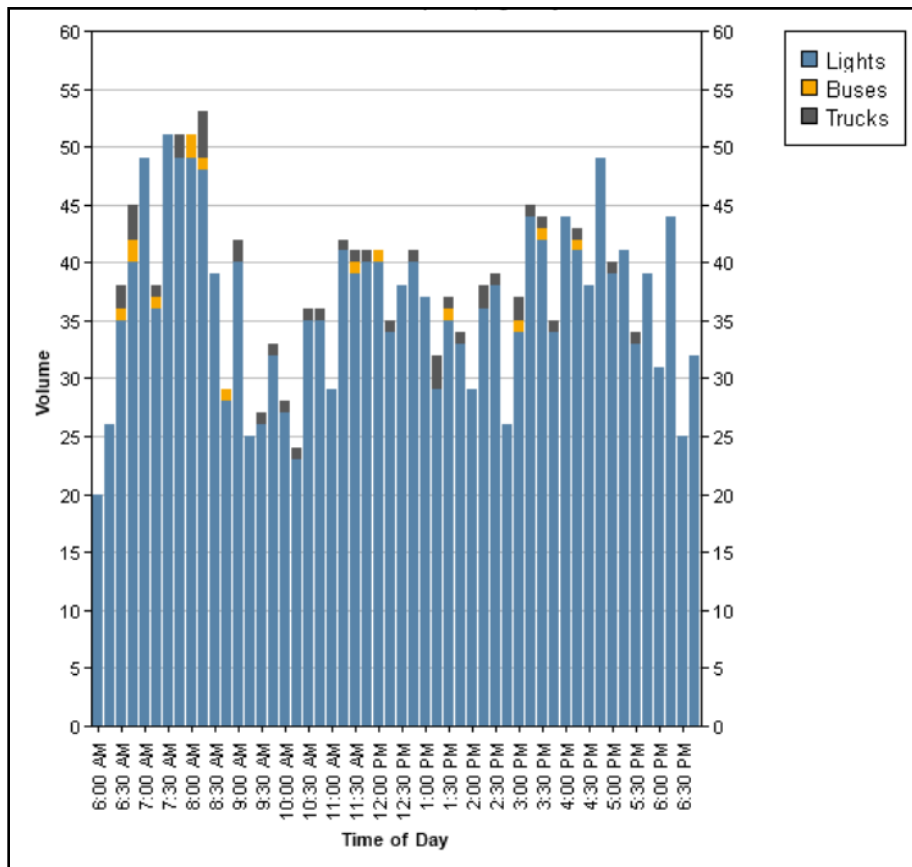


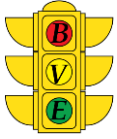




**Table 6 – 2021 Existing Traffic Volumes – Crosswicks Chesterfield Road NB**

Peak Hour of Operation	NB Lane 3 <i>NB on Crosswicks Chesterfield Road at Main Street in Crosswicks</i>			
	<i>Lights</i>	<i>Buses</i>	<i>Trucks</i>	<i>Overall</i>
AM Peak	7:30AM – 8:30AM	6:30AM – 7:30AM	6:30AM – 7:30AM	7:30AM – 8:30AM
AM Vol	197	4	6	206
PM Peak	4:00PM – 5:00PM	2:45PM – 3:45PM	12:45PM – 1:45PM	4:00PM – 5:00PM
PM Vol	172	2	5	174
Tot Vol <i>6:00AM – 7:00PM</i>	1,887	14	41	1,942
(%)	97.2	0.7	2.1	100.0



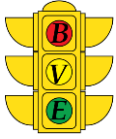


From the data tabulated above (Table 5 & 6), we observe that forty-three (43) heavy vehicles were traveling eastbound on Main Street in Crosswicks at its intersection with Crosswicks Chesterfield Road, and forty-one (41) heavy vehicles were observed traveling northbound on Crosswicks Chesterfield Road at its intersection with Main Street in Crosswicks. This represents the total heavy vehicle volume for the entire data collection period (6:00AM – 7:00PM), thus, this would equate to less than seven (7) trucks through Main Street & Crosswicks Chesterfield Road per hour during this time period.

We observed approximately 4,048 vehicles pass through the intersection of Main Street & Crosswicks Chesterfield Road during our data collection period of which eighty-four (84) heavy vehicles were counted. This heavy vehicle volume represents approximately 2.0% of the overall volume at the intersection. For reference, typically 2% heavy vehicle volume is expected on an average road on a daily basis. Thus, it is our opinion that the heavy vehicle traffic experienced through Main Street in Crosswicks at its intersection with Crosswicks Chesterfield Road is in line with the typical traffic operations of an average roadway.

We then performed an in-depth analysis of the video data collected. Our analysis indicated that no heavy vehicles made a left turn out of the Matrix facility toward Crosswicks. However, there were eight (8) trucks that made a right turn into the Matrix facility from the direction of the Circle at Old York and Georgetown Roads. In order to determine if any of the trucks accessing the Matrix facility passed through the intersection of Main Street & Crosswicks Chesterfield Road we conducted a heavy vehicle analysis of the trucks' size, color, and configuration and cross-checked the images of the trucks at the Matrix Facility (Appendix A) with the heavy vehicles observed at the intersection of Main Street & Crosswicks Chesterfield Road (Appendix B).

Based on our analysis of the data, eight (8) trucks were observed entering the matrix driveway from the direction of the Circle at Old York Road and Georgetown Road. After a careful review of the videos, we determined that **none** of the trucks that entered the matrix driveway matched any of the trucks passing through the Main Street & Crosswicks Chesterfield Road intersection.



## **SUMMARY & CONCLUSIONS**

Based upon our analysis of the existing traffic conditions, we provide the following points for your consideration:

- BVE performed traffic data collection at the intersections of Old York Road & the Matrix Distribution Center Driveway and Main Street in Crosswicks & Crosswicks Chesterfield Road on Tuesday, October 26, 2021, from 6:00AM to 7:00PM. The traffic volume data collected was processed to identify the volume and type of heavy vehicle traffic;
- Based upon this data, we observe that approximately 2.0% of all traffic volume through Main Street is attributed to heavy vehicle traffic. This is in line with the standard traffic operations of an average road;
- The video data collected at the study intersections was further analyzed to determine heavy vehicle origin/destination. Based upon this data, we observe that none of the heavy vehicle traffic leaving the Matrix facility made a left turn out of the site toward Crosswicks;
- Eight (8) trucks were observed coming from the direction of Georgetown Road (Crosswicks) going into the Matrix facility. Utilizing a careful comparison of the high definition video of the heavy trucks observed at the Matrix facility it was determined that none of the trucks originating in the direction of Crosswicks were observed passing through Main Street.
- Our Study indicates that heavy vehicles (trucks) **using the Matrix Facility** are not passing through Main Street & Crosswicks Chesterfield Road.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,

John Jahr, P.T.P., T.S.O.S.  
Principal  
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