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January 22, 2021

VIA EMAIL

Mr. Chris Brand, Chairman
Town of Marlborough Planning Board
Town Hall
21 Milton Turnpike
Milton, NY 12547

Re: Proposed Dollar General
Town of Marlborough, Ulster County, New York
MC Project No. 20006148A

Dear Chairman Brand and Members of the Planning Board:

Based on comment received from Mr. James Garofalo, AICP, CTP (Planning Board Member), we are enclosing the following additional information relative to the Dollar General application. The information enclosed includes the following:

1. Copies of the traffic count data from December 8, 2020 collected at the intersection of U.S. Route 9W and Mahoney Road south of the Dollar General site.
2. Copies of New York State Department of Transportation (NYSDOT) historical data for the U.S. Route 9W corridor.
3. The December 8, 2020 traffic counts were adjusted to reflect the historical flows along the U.S. Route 9W corridor, which were higher than during the count collected during COVID-19 pandemic conditions.
4. The traffic study includes a background growth of 1% per year plus traffic included from other major developments including the Hudson Valley Wine Village, which is proposed in the Town of Lloyd north of this area. Copies of the site generated traffic for that development are attached.
5. Page 2, Item 4 of the traffic report references a 25% pass-by anticipated with respect to the generation of this site and that not all trips would be new trips to the roadway network. However, note that no credit for this was applied in the analysis to be conservative.



Chairman Chris Brand
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6. The peak site trip generation for Saturday is expected to be similar to the PM peak volumes. However, the PM Peak Hour was the critical time period in terms of total traffic volumes in the corridor.
7. The traffic analysis (Table 2 of December 2020 Report) indicates a Level of Service "D" for left turns exiting the site driveway. Note that the Level of Service and average vehicle delay of 34.5 seconds shown in Table No. 2 of the study is approaching the border of a Level of Service "E" (see attached excerpt from the report summarizing the Level of Service criteria for unsignalized intersections). Also note that a Level of Service "E" at a driveway on a corridor such as U.S. Route 9W due to the heavy through traffic volumes, is not unusual during peak periods.
8. As part of the preparation of the traffic study, the U.S. Route 9W management plan was reviewed as noted on Item 11 of our December report. The link to that master plan is as follows:
https://www.townofmarlboroughny.org/DocumentCenter/View/2139/AppendixF_Access_ManagementPlan

This section of U.S. Route 9W was not identified as high accident location.

We trust the enclosed information will be helpful to the Board as part of their review and if you have any questions, please do not hesitate to contact us.

Very truly yours,

MASER CONSULTING CONNECTICUT, P.C.



Philip J. Grealy, Ph.D., P.E.
Principal/Department Manager

PJG/ces
Enclosures
cc: K. Fioretti

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LOCATION:	U.S. ROUTE 9W & MAHONEY ROAD			PROJECT:	DOLLAR GENERAL		
DATE OF COUNT:	12/08/20		DAY: TUESDAY	JCE JOB #:	20006148A		START TIME : 15:30
					PM		

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

PM PEAK HOUR	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			total	
	1	2	3	4	5	6	7	8	9	10	11	12		
03:30 PM	03:45 PM	0	0	2	0	1	2	1	167	1	2	154	1	331 A
03:45 PM	04:00 PM	1	0	0	1	0	2	0	146	1	1	164	2	318 A
04:00 PM	04:15 PM	0	0	2	3	0	2	0	173	2	0	181	0	363 A
04:15 PM	04:30 PM	0	0	0	2	0	2	0	170	1	1	222	0	398 X 1410
04:30 PM	04:45 PM	1	0	0	2	0	0	0	144	0	0	155	3	305 X 1384
04:45 PM	05:00 PM	1	0	1	2	1	0	3	135	1	2	198	0	344 X 1410
05:00 PM	05:15 PM	0	0	1	1	0	1	2	180	1	2	192	5	385 X 1432
05:15 PM	05:30 PM	0	0	0	2	0	3	0	138	0	0	229	2	374 A 1408
05:30 PM	05:45 PM	1	1	0	0	0	0	3	124	1	2	164	0	296 A 1399
05:45 PM	06:00 PM	1	1	1	1	0	1	1	112	0	0	148	0	266 A 1321
06:00 PM	06:15 PM	0	0	0	0	0	0	1	123	0	1	117	0	242 A 1178
06:15 PM	06:30 PM	0	0	0	1	0	0	2	76	2	2	100	1	184 A 988
06:30 PM	06:45 PM												0	A 692
06:45 PM	07:00 PM												0	A 426
07:00 PM	07:15 PM												0	A 184
07:15 PM	07:30 PM												0	A 0

CALCULATED PEAK 15-MINUTE VOLUMES

03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	2	0	2	0	170	1	1	222	0	398
04:30 PM	04:45 PM	1	0	0	2	0	0	0	144	0	0	155	3	305
04:45 PM	05:00 PM	1	0	1	2	1	0	3	135	1	2	198	0	344
05:00 PM	05:15 PM	0	0	1	1	0	1	2	180	1	2	192	5	385
05:15 PM	05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

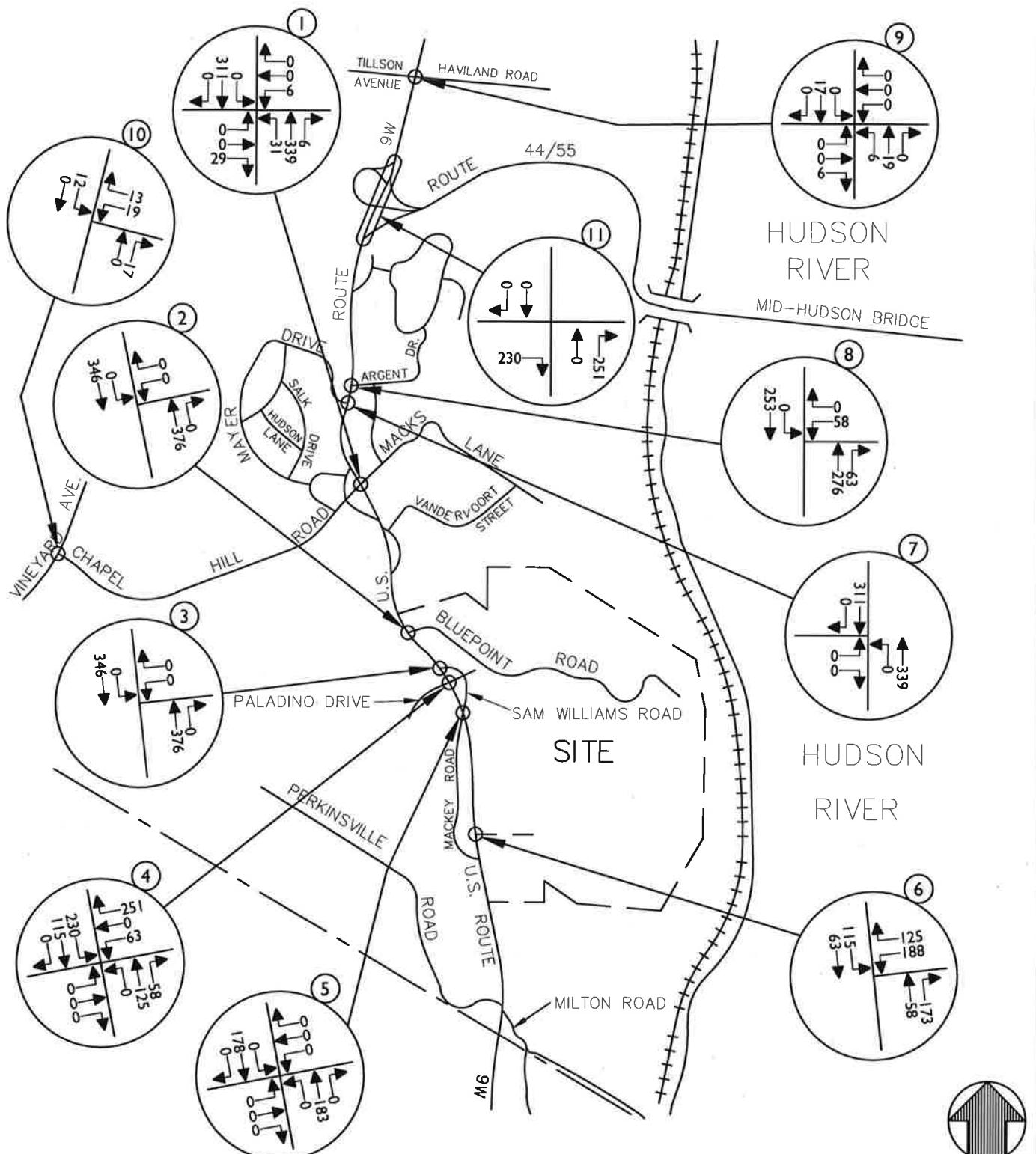
PM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
04:15 PM	2	0	2	7	1	3	5	629	3	5	767	8	1432	0.899497
PHF BY MOVEMENT	0.50	#DIV/0!	0.50	0.88	0.25	0.38	0.42	0.87	0.75	0.63	0.86	0.40		
PHF BY APPROACH	0.50			0.69			0.87			0.87				

8	767	5	^	6	3
12	11	10	<	5	1
<	v	>	v	4	7
2	1	^	<	^	>
0	2	>	7	8	9
2	3	v	5	629	3

NYSDOT

COUNT_ID	860040_10032017	COUNT_ID	860040_10032017	COUNT_ID	860040_10032017
REGION	8 REGION		8 REGION		8
REGION_CODE	8 REGION_CODE		8 REGION_CODE		8
COUNTY_CODE	6 COUNTY_CODE		6 COUNTY_CODE		6
STATION	40 STATION		40 STATION		40
RCSTA	860040 RCSTA		860040 RCSTA		860040
FUNCTIONAL_CLAS S	14 FUNCTIONAL_CLAS S		14 FUNCTIONAL_CLAS S		14
FACTOR_GROUP	30 FACTOR_GROUP		30 FACTOR_GROUP		30
LATITUDE	41.6924 LATITUDE		41.6924 LATITUDE		41.6924
LONGITUDE	-73.9656 LONGITUDE		-73.9656 LONGITUDE		-73.9656
SPECIFIC_RECORD	365'S OF MARIE	SPECIFIC_RECORD	365'S OF MARIE	SPECIFIC_RECORD	365'S OF MARIE
ER_PLACEMENT	RD	ER_PLACEMENT	RD	ER_PLACEMENT	RD
CHANNEL_NOTES	NB Travel Lane	CHANNEL_NOTES	SB Travel Lane	CHANNEL_NOTES	
DATA_TYPE	Volume Statistics	DATA_TYPE	Volume Statistics	DATA_TYPE	Volume Statistics
VEHICLE_AXLE_CO DE	1 VEHICLE_AXLE_CO DE		1 VEHICLE_AXLE_CO DE		1
YEAR	2017	YEAR	2017	YEAR	2017
MONTH	10 MONTH		10 MONTH		10
DAY_OF_FIRST_DA TA	3 DAY_OF_FIRST_DA TA		3 DAY_OF_FIRST_DA TA		3
FEDERAL_DIRECTI ON	Northbound	FEDERAL_DIRECTI ON	Southbound	FEDERAL_DIRECTI ON	Combined Total
FULL_COUNT	FULL_COUNT		FULL_COUNT		Y
AVG_WKDAY_INTE RVAL_1	50 AVG_WKDAY_INTE RVAL_1		50 AVG_WKDAY_INTE RVAL_1		100
AVG_WKDAY_INTE RVAL_2	40 AVG_WKDAY_INTE RVAL_2		35 AVG_WKDAY_INTE RVAL_2		75
AVG_WKDAY_INTE RVAL_3	29 AVG_WKDAY_INTE RVAL_3		34 AVG_WKDAY_INTE RVAL_3		63
AVG_WKDAY_INTE RVAL_4	34 AVG_WKDAY_INTE RVAL_4		36 AVG_WKDAY_INTE RVAL_4		70
AVG_WKDAY_INTE RVAL_5	62 AVG_WKDAY_INTE RVAL_5		66 AVG_WKDAY_INTE RVAL_5		128
AVG_WKDAY_INTE RVAL_6	179 AVG_WKDAY_INTE RVAL_6		220 AVG_WKDAY_INTE RVAL_6		399
AVG_WKDAY_INTE RVAL_7	538 AVG_WKDAY_INTE RVAL_7		444 AVG_WKDAY_INTE RVAL_7		982
AVG_WKDAY_INTE RVAL_8	911 AVG_WKDAY_INTE RVAL_8		564 AVG_WKDAY_INTE RVAL_8		1475
AVG_WKDAY_INTE RVAL_9	782 AVG_WKDAY_INTE RVAL_9		545 AVG_WKDAY_INTE RVAL_9		1327
AVG_WKDAY_INTE RVAL_10	596 AVG_WKDAY_INTE RVAL_10		454 AVG_WKDAY_INTE RVAL_10		1050
AVG_WKDAY_INTE RVAL_11	544 AVG_WKDAY_INTE RVAL_11		468 AVG_WKDAY_INTE RVAL_11		1012
AVG_WKDAY_INTE RVAL_12	535 AVG_WKDAY_INTE RVAL_12		478 AVG_WKDAY_INTE RVAL_12		1013
AVG_WKDAY_INTE RVAL_13	543 AVG_WKDAY_INTE RVAL_13		546 AVG_WKDAY_INTE RVAL_13		1089
AVG_WKDAY_INTE RVAL_14	548 AVG_WKDAY_INTE RVAL_14		551 AVG_WKDAY_INTE RVAL_14		1099
AVG_WKDAY_INTE RVAL_15	566 AVG_WKDAY_INTE RVAL_15		607 AVG_WKDAY_INTE RVAL_15		1173
AVG_WKDAY_INTE RVAL_16	696 AVG_WKDAY_INTE RVAL_16		804 AVG_WKDAY_INTE RVAL_16		1500
AVG_WKDAY_INTE RVAL_17	728 AVG_WKDAY_INTE RVAL_17		878 AVG_WKDAY_INTE RVAL_17		1606
AVG_WKDAY_INTE RVAL_18	720 AVG_WKDAY_INTE RVAL_18		954 AVG_WKDAY_INTE RVAL_18		1674
AVG_WKDAY_INTE RVAL_19	572 AVG_WKDAY_INTE RVAL_19		652 AVG_WKDAY_INTE RVAL_19		1224
AVG_WKDAY_INTE RVAL_20	384 AVG_WKDAY_INTE RVAL_20		456 AVG_WKDAY_INTE RVAL_20		840
AVG_WKDAY_INTE RVAL_21	272 AVG_WKDAY_INTE RVAL_21		332 AVG_WKDAY_INTE RVAL_21		604
AVG_WKDAY_INTE RVAL_22	215 AVG_WKDAY_INTE RVAL_22		279 AVG_WKDAY_INTE RVAL_22		494
AVG_WKDAY_INTE RVAL_23	182 AVG_WKDAY_INTE RVAL_23		192 AVG_WKDAY_INTE RVAL_23		374
AVG_WKDAY_INTE RVAL_24	95 AVG_WKDAY_INTE RVAL_24		107 AVG_WKDAY_INTE RVAL_24		202
AVG_WKDAY_DAIL Y_TRAFFIC	9821 AVG_WKDAY_DAIL Y_TRAFFIC		9752 AVG_WKDAY_DAIL Y_TRAFFIC		19573
SEASONAL_FACTO R	1.078 SEASONAL_FACTO R		1.078 SEASONAL_FACTO R		1.078
AXLE_FACTOR	1 AXLE_FACTOR		1 AXLE_FACTOR		1
AADT	9110 AADT		9046 AADT		18156
HIGH_HOUR_VALU E	911 HIGH_HOUR_VALU E		954 HIGH_HOUR_VALU E		1674
HIGH_HOUR_INTE RVAL	8 HIGH_HOUR_INTE RVAL		18 HIGH_HOUR_INTE RVAL		18
K_FACTOR	K_FACTOR		K_FACTOR		9
D_FACTOR	D_FACTOR		D_FACTOR		57
FLAG_FIELD	FLAG_FIELD		FLAG_FIELD		
BATCH_ID	256635 BATCH_ID		256635 BATCH_ID		256635

Station	FC	County	End Mile	Section Length	Road Name	Beginning Description	End Description	2019 Estimate			<<<		Previous Counts		>>>		
								AADT	% Trucks	YEAR	AADT	YEAR	AADT	YEAR	AADT	YEAR	
83_0660	14	02	1673	0092	ROBINSON AVE	RT 94	START 9W/32 OLAP BROADWAY	10843	6.5	2017	10922	2011	10374	2007	10535	2004	11517
83_0239	14	02	1793	0120	ROBINSON AVE	START 9W/32 OLAP BROADWAY	NEWBURGH CL / NEWBURGH TL	11552	7.9	2016	11678	2013	11453	2007	12034	2004	13455
83_0037	14	02	1802	0009		NEWBURGH CL / NEWBURGH TL	ACC RTS 841 & 52	45358	4.7	2014	46189	2011	36396	2006	28083	2001	30263
83_0039	14	02	1808	0006		ACC RTS 841 & 52	END 9W/32 OLAP	43152	4.7	2017	43465	2009	39564	2003	35471	2000	32745
83_0662	14	02	2018	0210		END 9W/32 OLAP	LESLIE RD	15545	6.7	2018	15601	2014	22684	2011	18817	2008	23017
83_0124	14	02	2328	0310		LESLIE RD	Orange/Ulster Co Line	19169	8.4	2018	19238	2015	19515	2009	17984	2006	18460
Route		US9W		County		111		Ulster		Region 08							
86_0036	14	03	0532	0532		Orange/Ulster Co Line	MILTON TURNPIKE	15994	7.9	2018	16052	2014	20711	2011	16423	2007	17944
86_0040	14	03	0790	0258	US 9W	MILTON TURNPIKE	MACKS LA	18025	5.5	2017	18156	2011	15922	2008	15124	2005	16979
86_0001	14	03	0885	0095	US 9W	MACKS LA	START 9W/44/55 OLAP	23780	4.7	2010	24576	2007	26955	2004	22992	2001	20312
86_0276	14	03	0935	0050		START 9W/44/55 OLAP	MILTON AVE	30225	4.7	2017	30444	2010	27971	2007	26957	2004	32108
86_0111	14	03	1117	0182		MILTON AVE	RT 299	26808	5.4	2017	27002	2011	25884	2008	23804	2005	26744
86_0018	4	03	1937	0820	US 9W	RT 299	ULSTER AVE	11089	5.1	2018	11114	2015	10717	2012	10704	2009	10330
86_0002	14	03	2318	0381		ULSTER AVE	OLD RT 9W RT 984D	12293	6.5	2019	12293	2014	13229	2011	12887	2008	11606
86_0031	14	03	2430	0112		OLD RT 9W RT 984D	DELAWARE AVE	15871	5.6	2017	15986	2011	14989	2008	15198	2003	17636
86_0032	14	03	2555	0125		DELAWARE AVE	START 9W/32 OLAP	15687	4.1	2017	15801	2012	16696	2009	15704	2006	15223
86_0034	14	03	2582	0027		START 9W/32 OLAP	E CHESTER/FLATBUSH	13025	4.7	2019	13025	2015	11262	2009	13449	2006	13442
86_0035	16	03	2720	0138	EAST CHESTER ST	E CHESTER/FLATBUSH	RT 981M ULSTER AVE	12117	4.2	2018	12134	2014	12241	2011	12197	2008	12289
86_0021	16	03	2735	0015		RT 981M ULSTER AVE	BOICES LN	24116	4.5	2010	24426	2007	32623	2003	27359	2000	25214
86_0666	14	03	2796	0061	ULSTER AVE US 9	BOICES LN	FRANK SOTTILE BLVD	24805	2.6	2019	24805	2016	26305	2010	22967	2007	34053
86_0057	16	03	2856	0060	US 9W	FRANK SOTTILE BLVD	GRANT AVE	22575	3.5	2017	22639	2011	38970				
86_0022	16	03	2926	0070		GRANT AVE	CR 31 LEGGS MILL RD	16579	4.1	2018	16602	2014	15375	2008	16482	2003	21334
86_0667	16	03	3271	0345	ULSTER AVE US 9	CR 31 LEGGS MILL RD	CR 32/GLASCO TPKE	12291	3.3	2015	12361	2011	12942	2008	11367	2005	13902
86_0668	16	03	3391	0120		CR 32/GLASCO TPKE	START US 9W/NY 32 OLAP / RIO	10183	3.6	2018	10197	2014	9839	2011	10178	2008	10050
86_0109	16	03	3610	0219	US 9W/NY 32	START US 9W/NY 32 OLAP / RIO	END US 9W/NY 32 OLAP/JOHN ST	12436	2.5	2018	12454	2014	13762	2011	14112	2008	14071
86_0037	16	03	3721	0111		END US 9W/NY 32 OLAP/JOHN ST	CR 34 MALDEN TURNPIKE	3153	7.4	2016	3166	2013	3403	2010	3949	2007	4187
86_0038	16	03	4038	0317		CR 34 MALDEN TURNPIKE	Ulster/Greene Co Line	2669	6.5	2017	2677	2012	2854	2009	2779	2006	3098
Route		US9W		County		039		Greene		Region 01							
13_0030	6	04	0609	0609		Ulster/Greene Co Line	RT 23A JCT LEFT CATSKILL	2406	11.9	2016	2390	2010	2429	2007	2834	2004	3269
13_0015	16	04	0664	0055		RT 23A JCT LEFT CATSKILL	NY 385	11886	6.3	2017	11929	2008	13810	2006	15491		
13_0036	16	04	0791	0127		NY 385	RT 910P JCT RIGHT	13690	6	2016	13764	2010	11581	2007	12017	2004	12855



NOTE: LINE DIAGRAM NOT TO SCALE



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TRAFFIC IMPACT STUDY

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	4/17/20	R.H.	P.J.G.
PROJECT NUMBER:		DRAWING NUMBER:	

20000992A BUILD OUT
SHEET TITLE: FUTURE CONTEMPLATED PHASES
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER

LEVEL OF SERVICE CRITERIA
FOR TWO-WAY STOP-CONTROLLED (TWSC) UNSIGNALIZED INTERSECTIONS

Level of Service (LOS) for a two-way stop-controlled (TWSC) intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns. LOS is not defined for the intersection as a whole or for major-street approaches.

The Level of Service Criteria for TWSC unsignalized intersections are given in Exhibit 20-2 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 20-2

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c > 1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

The LOS criteria apply to each lane on a given approach and to each approach on the minor street.
LOS is not calculated for major-street approaches or for the intersection as a whole.

As Exhibit 20-2 notes, LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

The Level of Service Criteria for unsignalized intersections are somewhat different from the criteria for signalized intersections.

TABLE NO. 2
LEVEL OF SERVICE SUMMARY TABLE

		2020 BUILD				
		V/C	LOS	DELAY		
1	U.S. ROUTE 9W & SITE ACCESS DRIVEWAY	UN SIGNALIZED	WB LR SB LT	0.22 0.02	D A	34.5 9.3

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.