



January 29, 2020

Jay Ussery  
JR Russo & Associates  
1 Shoham Road  
PO Box 938  
East Windsor, CT 06088

**RE: Traffic Impact Assessment  
Blake Center – Somers, Connecticut**

Dear Jay,

Tessera has prepared this traffic impact assessment in support of a site plan approval for the proposed religious institution to be located at 732 Hall Hill Road in Somers, Connecticut.

Hillsdale College proposes to develop a religious institution space for holding lectures and seminars. Participants will periodically fly in to attend educational events, with shuttle service from the airport provided. The seminars and events will generally not be open to the public. A total of 32 parking spaces will be provided on the site. The build year of the proposed development is 2020.

Access to the site was originally proposed opposite Bilton Road. In response to comments from the public meeting on January 6, 2020, the site driveway has been moved to the location of the existing northerly site driveway.

Tessera Engineering conducted a capacity analysis to determine the potential impact of the proposed development on the adjacent roadway network. This report summarizes the findings of the analysis.

### Study Intersections

Capacity analyses for the following intersections were conducted using Synchro Signal Timing & Analysis Software Version 10 and the methodologies outlined in the 2010 Highway Capacity Manual:

- Hall Hill Road (Route 186) at Bilton Road
- Hall Hill Road (Route 186) at Watchaug Road and Four Bridges Road

The intersection of Hall Hill Road (Route 186) at Bilton Road is a three-way intersection with stop control at the Bilton Road approach. A single travel lane is provided at each approach. Hall Hill Road (Route 186) is classified by CT DOT as an urban collector. It begins at the Connecticut border with Massachusetts and continues south to Watchaug Road where it becomes Four Bridges Road. This roadway provides one lane in each direction and has a posted speed limit of 45 miles per hour. Bilton Road (Route 404) is classified by CT DOT as an urban collector and has a posted speed limit of 30 miles per hour. It begins at Hall Hill Road and continues west to the Enfield town line where it becomes Shaker Road.

The intersection of Hall Hill Road (Route 186) at Watchaug Road and Four Bridges Road is a four-way stop-controlled intersection. A single travel lane is provided at each approach. Four Bridges Road has a posted speed limit of 35 miles per hour and is classified by CT DOT as an urban collector. It begins at Hall Hill Road and continues south and east to Springfield Road (Route 83). Watchaug Road is classified by CT DOT as a local road and has a posted speed limit of 35 miles per hour. It begins at Hall Hill Road and continues east and north to the border with Massachusetts.

### Data Collection and Analysis

The proposed development's greatest potential traffic impact to the area will occur during the peak hours of commuter trips. These peaks are expected to be during the Morning peak hour and the Afternoon peak hour. Representatives of Tessera Engineering conducted peak hour manual turning movement counts on December 10, 2019 at the study area intersections. Based on the data collected, Tessera determined the Morning peak hour to be from 7:00 am to 8:00 am and the Afternoon peak hour to be from 4:45 pm to 5:45 pm. The traffic volumes for these peak hours are illustrated in the attached Figure 1.

### Growth Rate

Tessera obtained a background growth rate of 1% from CT DOT Planning to account for anticipated increases in traffic within the study area. We used this growth rate to project the existing traffic volumes to the year 2020.

### Other Development

Tessera contacted the CT DOT Bureau of Policy and Planning, the Town of Somers Planning and Zoning office and the Town of East Longmeadow office of Planning and Community Development to identify any pending or approved developments that are expected to generate traffic within the study area. None were identified. The 2019 traffic volumes projected to the year 2020 serve as the 2020 no-build volumes as illustrated in the attached Figure 2.

### Trip Generation and Distribution

The 10<sup>th</sup> edition of the Institute of Transportation Engineers' publication *Trip Generation* serves as the industry standard reference for determining trip

generation. This publication does not include a trip generation rate for a seminar space. Based on conversations with the owner's representative, a conservative estimate of the number of trips generated by the site during the typical peak hours of adjacent street traffic is 30 trips (15 entering, 15 exiting). Approximately 5 percent of these trips are anticipated to come from the north, 35 percent from the south and 60 percent from the west. It should be noted that this assumes participants are arriving separately in passenger vehicles. As noted above, shuttle service will be provided to transport groups from the airport.

### Build Traffic Volumes

The site generated traffic volumes were added to the 2020 No Build volumes to obtain the 2020 Build Traffic Volumes.

### Intersection Capacity Analysis

Level of service (LOS) and volume to capacity ratio (v/c) are two of the terms typically used in discussing the character of roadway operations.

Vehicle level of service is a measure of the quality of the vehicular traffic flow on a given roadway facility. Level of service describes a roadway in terms of speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience for drivers. It is not a direct measure of safety.

For signalized and unsignalized intersections, LOS is determined based on travel delay. Vehicle level of service is reported on a scale of A to F, with A representing the best vehicular operating conditions with little or no delay to motorists. It is not a complete measure of intersection operations as it does not consider other modes of travel, nor does it take into consideration qualitative metrics which may be of importance to the community.

A level of service F represents undesirable vehicular operating conditions, with long delays and traffic demand that exceeds the roadway's vehicular capacity. A level of service of D or better is typically considered acceptable. The specific delay criteria employed by the 2010 Highway Manual are provided in Table 3 below:

Level of Service	Unsignalized Intersections
<b>A</b>	10 or less
<b>B</b>	10.1 to 15
<b>C</b>	15.1 to 25
<b>D</b>	25.1 to 35
<b>E</b>	35.1 to 50
<b>F</b>	50.1 or more

\*Values shown are in seconds of delay. LOS F is assigned if the v/c ratio is greater than 1.0.

For two-way stop-controlled intersections, level of service is used to describe the delay experienced by individual lanes or lane groups where one or more legal movements require stopping or yielding to oncoming traffic. As it is assumed that through movements on the main street have the right-of-way and are not delayed by side street traffic, no level of service is provided for these lanes or lane groups. The v/c ratio is a comparison of the peak hour traffic volume to the capacity of the intersection (the maximum number of vehicles that may use the intersection during a given hour). A v/c ratio of 1.0 indicates that a movement or intersection is operating at its theoretical capacity.

Potential traffic impacts from the proposed land use are determined by comparing the No Build Condition (without the proposed use) to the Build Condition (with the proposed use). Levels of service for the No Build and Build conditions are summarized below. To demonstrate the excess capacity available on the roadway network, the study area intersections were analyzed with 300 additional trips during the peak hour. All intersection approaches would continue to operate at Level of Service A or B with even with the addition of ten times the number of trips generated by the use currently proposed.

Two-Way Stop Controlled Intersections (Critical Movements)	2020 AM Peak Hour			2020 PM Peak Hour		10X Build Trips
	No-Build	Build	10X Build Trips	No-Build	Build	
Hall Hill Road (Route 186) at Bilton Road						
NB Left Turn	A	A	A	A	A	A
EB Approach	A	A	B	B	B	B
Hall Hill Road at Blake Center Drive						
SB Left Turn		A	A		A	A
WB Approach		B	B		B	B
Hall Hill Road (Route 186) at Watchaug Road and Four Bridges Road						
NB Approach	A	A	A	A	A	A
SB Approach	A	A	A	A	A	A
EB Approach	A	A	A	A	A	A
WB Approach	A	A	A	A	A	A

\*Values indicated are unsignalized intersection LOS

### Intersection Sight Distance

Tessera conducted Automated Traffic Recorder (ATR) counts on Hall Hill Road to determine existing traffic volumes and speeds. The ATR unit was placed in the roadway on Hall Hill Road (Route 186) from December 24, 2019 to December 27,

2019 to record 85<sup>th</sup> percentile speeds. The recorded 85<sup>th</sup> percentile speed on Hall Hill Road (Route 186) was 47 miles per hour. The sight distance required by CT DOT for an 85<sup>th</sup> percentile speed of 47 miles per hour is 522 feet. Sight distances from the proposed driveway on Hall Hill Road, at the location of the existing northerly driveway to the property, were measured to be 600 feet to the left (South) and 600 feet to the right (north). The provided sight distances meet CT DOT requirements for safe egress from the site.

### Collision Analysis

Tessera obtained collision reports for the most recent three years of available data, 2016 to 2018. There were no collisions within 300 feet of the intersection of Hall Hill Road at Bilton Road where the proposed driveway is located.

It is my professional opinion that the proposed facility will not have a significant impact to traffic on the surrounding roadway network. If you have questions regarding the provided information, please feel free to contact me at 203 583 2134 or [tschwartz@tesseraengineering.com](mailto:tschwartz@tesseraengineering.com).










Sincerely,  
**Tessera Engineering**

A handwritten signature in black ink, reading "Theresa Schwartz". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Theresa Schwartz, PE, PTOE  
Principal/Owner










HCM 2010 Capacity Analysis  
1: Hall Hill Road & Bilton Road

















Blake Center - Somers, CT  
Build Condition - AM Peak

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	10	34	80	37	71
Future Volume (vph)	16	10	34	80	37	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.948	0.911				
Flt Protected	0.970	0.985				
Satd. Flow (prot)	1713	0	0	1835	1697	0
Flt Permitted	0.970	0.985				
Satd. Flow (perm)	1713	0	0	1835	1697	0
Link Speed (mph)	25	45				
Link Distance (ft)	704	490				
Travel Time (s)	19.2	7.4				
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	19	12	41	96	45	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	0	137	131	0
Sign Control	Stop	Free			Free	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 22.8%				ICU Level of Service A		
Analysis Period (min) 15						

HCM 2010 Capacity Analysis  
1: Hall Hill Road & Bilton Road

Blake Center - Somers, CT  
Build Condition - AM Peak

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	10	34	80	37	71
Future Volume (Veh/h)	16	10	34	80	37	71
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	19	12	41	96	45	86
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	266	88	131			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	266	88	131			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	97			
cM capacity (veh/h)	703	970	1454			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	31	137	131			
Volume Left	19	41	0			
Volume Right	12	0	86			
cSH	787	1454	1700			
Volume to Capacity	0.04	0.03	0.08			
Queue Length 95th (ft)	3	2	0			
Control Delay (s)	9.8	2.4	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.8	2.4	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization		22.8%		ICU Level of Service		A
Analysis Period (min)		15				

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	62	14	33	18	29	11	72	4	22	43	37
Future Volume (vph)	23	62	14	33	18	29	11	72	4	22	43	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.951			0.993			0.951	
Flt Protected		0.989			0.980			0.994			0.989	
Satd. Flow (prot)	0	1807	0	0	1736	0	0	1839	0	0	1752	0
Flt Permitted		0.989			0.980			0.994			0.989	
Satd. Flow (perm)	0	1807	0	0	1736	0	0	1839	0	0	1752	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		654			1097			843			1356	
Travel Time (s)		12.7			21.4			12.8			20.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	26	70	16	38	20	33	13	82	5	25	49	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	0	0	91	0	0	100	0	0	116	0
Sign Control		Stop			Stop			Stop			Stop	

#### Intersection Summary

















Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 24.0% ICU Level of Service A










Analysis Period (min) 15



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	23	62	14	33	18	29	11	72	4	22	43	37
Future Volume (vph)	23	62	14	33	18	29	11	72	4	22	43	37
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	26	70	16	38	20	33	13	82	5	25	49	42
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	112	91	100	116								
Volume Left (vph)	26	38	13	25								
Volume Right (vph)	16	33	5	42								
Hadj (s)	-0.01	-0.10	0.03	-0.14								
Departure Headway (s)	4.5	4.4	4.5	4.4								
Degree Utilization, x	0.14	0.11	0.13	0.14								
Capacity (veh/h)	749	759	750	777								
Control Delay (s)	8.2	8.0	8.2	8.1								
Approach Delay (s)	8.2	8.0	8.2	8.1								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.1									
Level of Service			A									
Intersection Capacity Utilization			24.0%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM 2010 Capacity Analysis  
3: Hall Hill Road & Blake Center Drive










Blake Center - Somers, CT  
Build Condition - AM Peak

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	100	124	50	100	147
Future Volume (vph)	50	100	124	50	100	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910		0.961			
Flt Protected	0.984					0.980
Satd. Flow (prot)	1668	0	1790	0	0	1825
Flt Permitted	0.984					0.980
Satd. Flow (perm)	1668	0	1790	0	0	1825
Link Speed (mph)	30		45			30
Link Distance (ft)	290		320			192
Travel Time (s)	6.6		4.8			4.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	109	135	54	109	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	163	0	189	0	0	269
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	41.8%			ICU Level of Service A		
Analysis Period (min)	15					

# HCM 2010 Capacity Analysis










## 3: Hall Hill Road & Blake Center Drive

Blake Center - Somers, CT  
Build Condition - AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	100	124	50	100	147
Future Volume (Veh/h)	50	100	124	50	100	147
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	109	135	54	109	160
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	540	162			189	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	540	162			189	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	88	88			92	
cM capacity (veh/h)	463	883			1385	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	163	189	269			
Volume Left	54	0	109			
Volume Right	109	54	0			
cSH	679	1700	1385			
Volume to Capacity	0.24	0.11	0.08			
Queue Length 95th (ft)	23	0	6			
Control Delay (s)	12.0	0.0	3.6			
Lane LOS	B		A			
Approach Delay (s)	12.0	0.0	3.6			
Approach LOS	B					
Intersection Summary						
Average Delay		4.7				
Intersection Capacity Utilization		41.8%		ICU Level of Service		A
Analysis Period (min)		15				










HCM 2010 Capacity Analysis  
1: Hall Hill Road & Bilton Road

Blake Center - Somers, CT  
Build Condition - PM Peak

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	75	110	101	68	91	25
Future Volume (vph)	75	110	101	68	91	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919				0.971	
Flt Protected	0.980				0.971	
Satd. Flow (prot)	1678	0	0	1809	1809	0
Flt Permitted	0.980				0.971	
Satd. Flow (perm)	1678	0	0	1809	1809	0
Link Speed (mph)	30				30	30
Link Distance (ft)	704				186	490
Travel Time (s)	16.0				4.2	11.1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	90	133	122	82	110	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	223	0	0	204	140	0
Sign Control	Stop				Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	33.4%			ICU Level of Service A		
Analysis Period (min)	15					

HCM 2010 Capacity Analysis  
1: Hall Hill Road & Bilton Road

Blake Center - Somers, CT  
Build Condition - PM Peak

















						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	110	101	68	91	25
Future Volume (Veh/h)	75	110	101	68	91	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	90	133	122	82	110	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	451	125	140			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	451	125	140			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	83	86	92			
cM capacity (veh/h)	518	926	1443			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	223	204	140			
Volume Left	90	122	0			
Volume Right	133	0	30			
cSH	703	1443	1700			
Volume to Capacity	0.32	0.08	0.08			
Queue Length 95th (ft)	34	7	0			
Control Delay (s)	12.5	4.9	0.0			
Lane LOS	B	A				
Approach Delay (s)	12.5	4.9	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay		6.7				
Intersection Capacity Utilization		33.4%		ICU Level of Service		A
Analysis Period (min)		15				

# HCM 2010 Capacity Analysis

Blake Center - Somers, CT

## 2: Four Bridges Road & Hall Hill Road & Watchaug Road

Build Condition - PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	86	6	3	24	23	8	52	4	23	56	56
Future Volume (vph)	60	86	6	3	24	23	8	52	4	23	56	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.937			0.991			0.944	
Flt Protected		0.981			0.997			0.994			0.992	
Satd. Flow (prot)	0	1818	0	0	1740	0	0	1835	0	0	1744	0
Flt Permitted		0.981			0.997			0.994			0.992	
Satd. Flow (perm)	0	1818	0	0	1740	0	0	1835	0	0	1744	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		654			1097			843			1356	
Travel Time (s)		12.7			21.4			12.8			20.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	68	98	7	3	27	26	9	59	5	26	64	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	173	0	0	56	0	0	73	0	0	154	0
Sign Control		Stop			Stop			Stop			Stop	

### Intersection Summary

















Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 32.9%










ICU Level of Service A

Analysis Period (min) 15

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	60	86	6	3	24	23	8	52	4	23	56	56
Future Volume (vph)	60	86	6	3	24	23	8	52	4	23	56	56
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	68	98	7	3	27	26	9	59	5	26	64	64
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	173	56	73	154								
Volume Left (vph)	68	3	9	26								
Volume Right (vph)	7	26	5	64								
Hadj (s)	0.09	-0.23	0.02	-0.18								
Departure Headway (s)	4.6	4.4	4.6	4.4								
Degree Utilization, x	0.22	0.07	0.09	0.19								
Capacity (veh/h)	741	757	727	776								
Control Delay (s)	8.9	7.7	8.1	8.3								
Approach Delay (s)	8.9	7.7	8.1	8.3								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.4									
Level of Service			A									
Intersection Capacity Utilization			32.9%		ICU Level of Service				A			
Analysis Period (min)			15									

# HCM 2010 Capacity Analysis 3: Hall Hill Road & Blake Center Drive

Blake Center - Somers, CT  
Build Condition - PM Peak










						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	100	135	50	100	201
Future Volume (vph)	50	100	135	50	100	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910		0.964			
Flt Protected	0.984					0.984
Satd. Flow (prot)	1668	0	1796	0	0	1833
Flt Permitted	0.984					0.984
Satd. Flow (perm)	1668	0	1796	0	0	1833
Link Speed (mph)	30		30			30
Link Distance (ft)	358		477			186
Travel Time (s)	8.1		10.8			4.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	109	147	54	109	218
Shared Lane Traffic (%)						
Lane Group Flow (vph)	163	0	201	0	0	327
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	45.2%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM 2010 Capacity Analysis

## 3: Hall Hill Road & Blake Center Drive

Blake Center - Somers, CT  
Build Condition - PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	100	135	50	100	201
Future Volume (Veh/h)	50	100	135	50	100	201
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	109	147	54	109	218
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	610	174			201	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	610	174			201	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	87			92	
cM capacity (veh/h)	421	869			1371	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	163	201	327			
Volume Left	54	0	109			
Volume Right	109	54	0			
cSH	643	1700	1371			
Volume to Capacity	0.25	0.12	0.08			
Queue Length 95th (ft)	25	0	6			
Control Delay (s)	12.5	0.0	3.1			
Lane LOS	B		A			
Approach Delay (s)	12.5	0.0	3.1			
Approach LOS	B					
Intersection Summary						
Average Delay			4.4			
Intersection Capacity Utilization			45.2%	ICU Level of Service		A
Analysis Period (min)			15			