

3.6 Traffic and Transportation

3.6.1 Regional Network

The subject site is ideally situated at the confluence of a number of major arterials and highways as indicated on Figure 2-1 (See Project Description). U.S. Route 6 forms the southern boundary of the project site (Gateway Summit portion). U.S. Route 6 parallels I-84 to the east of the project site, where it also intersects with NYS Route 312. NYS Route 312 provides the closest interstate highway access. West of the site, U.S. Route 6 turns southwest towards Peekskill in Westchester County. U.S. Route 6 intersects NYS Route 52 at its northernmost point. NYS Route 52 continues toward the northwest, paralleling I-84 into Dutchess County, and also intersecting with Fair Street.

U.S. Route 6, NYS Route 52, and NYS Route 312 are two lane roadways. The intersections of these roads noted below are all controlled by traffic signals:

- ❖ NYS Route 52/Fair Street (CR 60)
- ❖ U.S. Route 6/NYS Route 52
- ❖ U.S. Route 6/Stoneleigh Avenue (CR 35)
- ❖ U.S. Route 6/John Simpson Road (CR 57)
- ❖ U.S. Route 6/NYS Route 312

Figure 3.6-1 shows these key intersections and local roads discussed in the next section.

3.6.2 Local Roads and Access Points

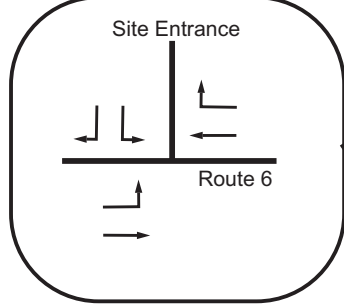
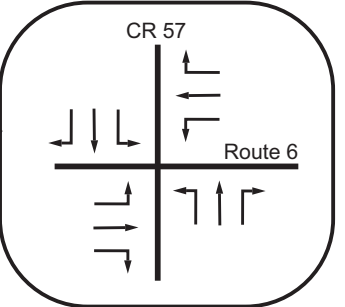
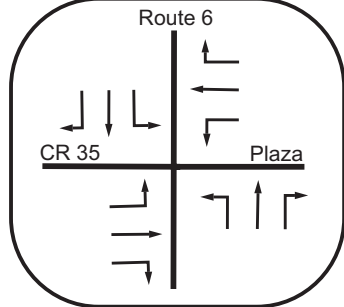
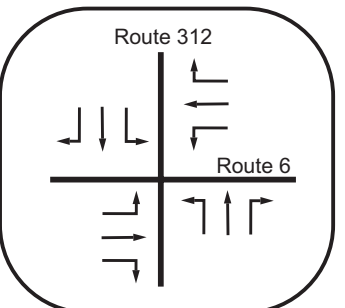
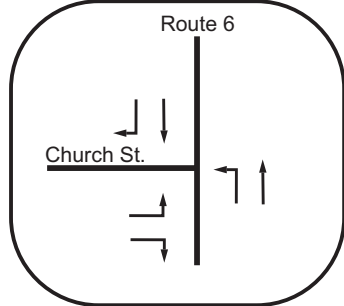
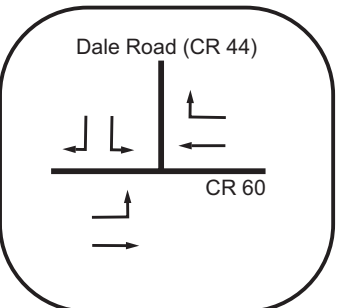
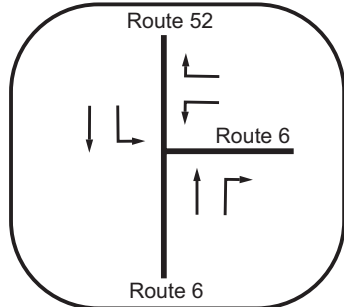
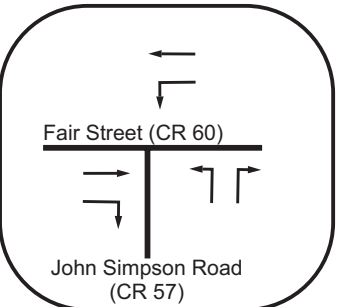
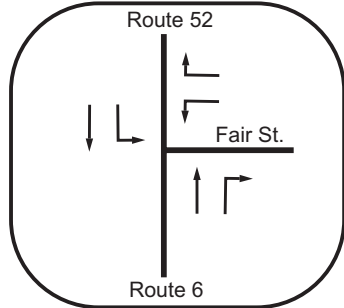
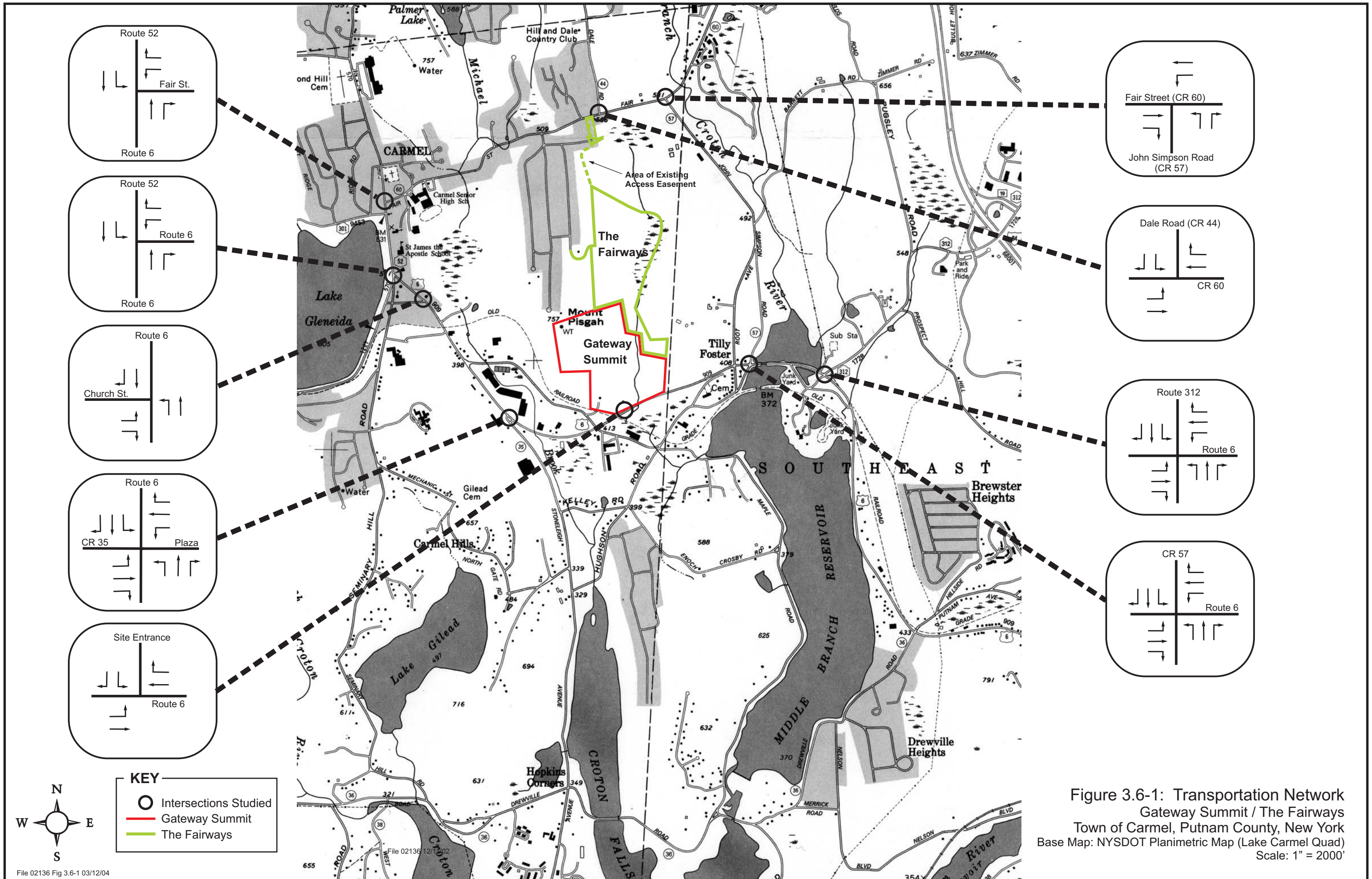
Figure 3.6-1 depicts the local road network in the vicinity of the subject site. The Fairways development abuts the northern boundary of the Gateway Summit development. The Fairways has access through Centennial Golf Course to Fair Street (County Road 60) near Hill and Dale Road (County Road 44). From Fair Street, traffic can go west toward NYS Route 52 or east toward John Simpson Road (County Road 57). John Simpson Road connects Fair Street to U.S. Route 6. Fair Street, John Simpson Road, and Hill and Dale Road are two lane roads.

Posted speeds and recommended speeds are shown in Figure 3.6-2. Traffic controls, and road widths are shown on Figure 3.6-3.

Fair Street is a central point for school bus routes converging on Carmel High School east of the NYS Route 52 intersection and an elementary school in the Town of Southeast east of John Simpson Road. The state roads handle school buses as through traffic. The existing land use on NYS Route 52 and U.S. Route 6 is primarily non-residential, making school bus stops less frequent than on some local streets.

For the purpose of this report, references to the U.S. Route 6/Church Street intersection refer to the eastern (unsignalized) intersection and not the western (signalized) intersection of these two roads, except as specifically noted.

On-street parking is permitted along NYS Route 52, but not along U.S. Route 6 or NYS Route 312. NYS Route 52 has one hour parking from 9 a.m. to 6 p.m. from U.S. Route 6 past Fair Street. The east side of NYS Route 52 between NYS Route 301 and Fair Street



- KEY**
- Intersections Studied
 - Gateway Summit
 - The Fairways

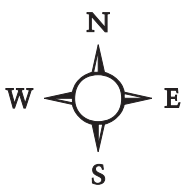
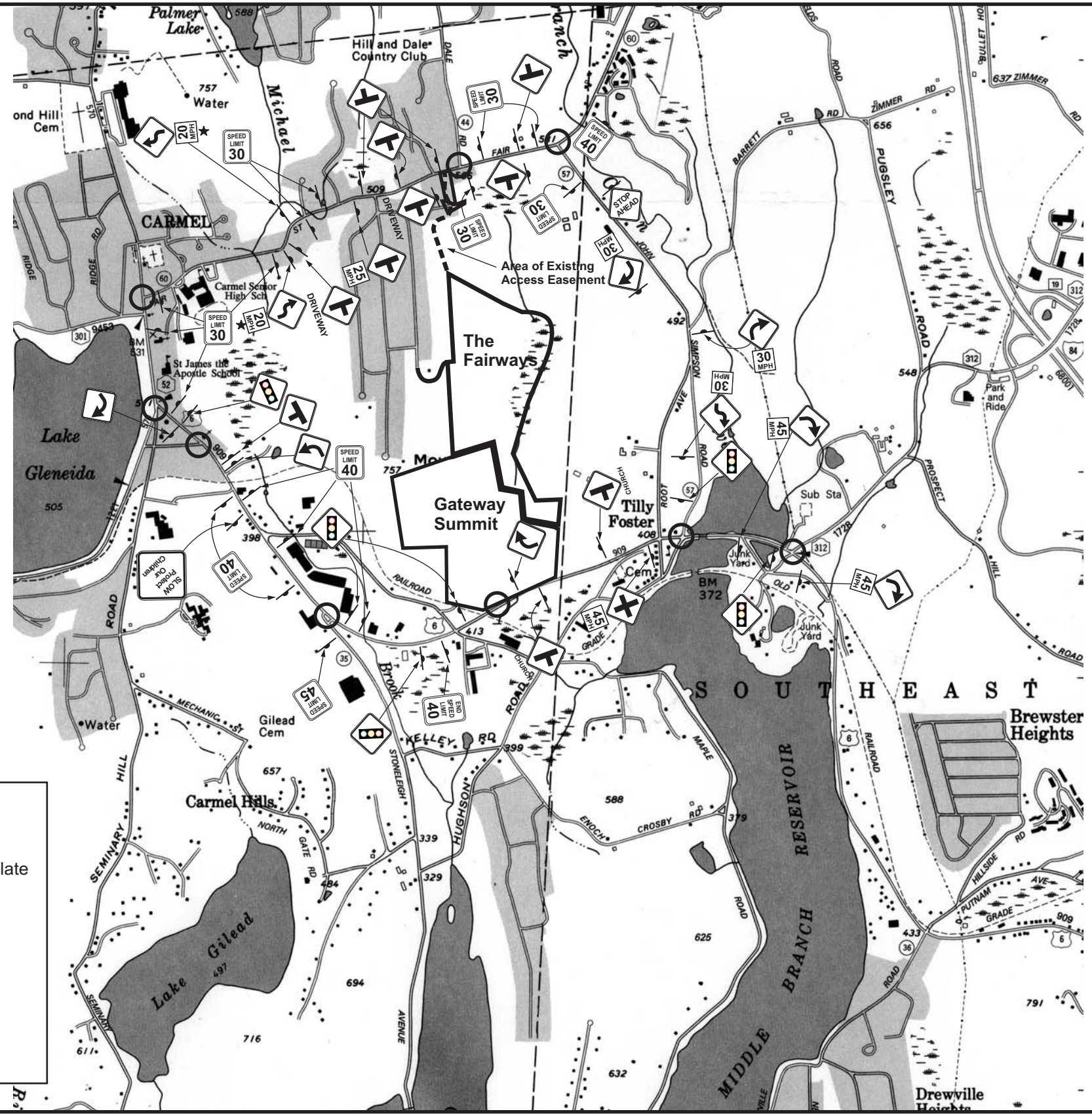


Figure 3.6-1: Transportation Network
Gateway Summit / The Fairways
Town of Carmel, Putnam County, New York
Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
Scale: 1" = 2000'



Legend

- Intersections Studied
- Warning Signs/Recommended Speed Plate
- Speed Limit Signs
- Signal Warning Signs
- "Your Speed Is ____" Variable Message

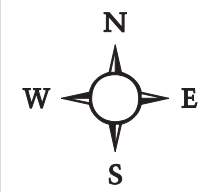
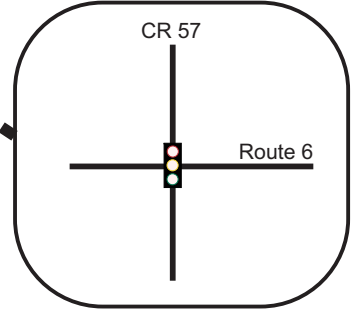
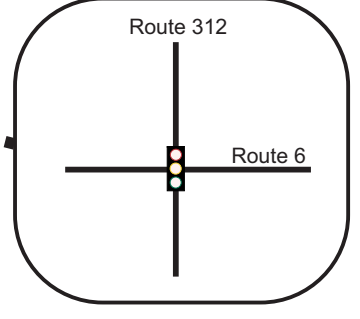
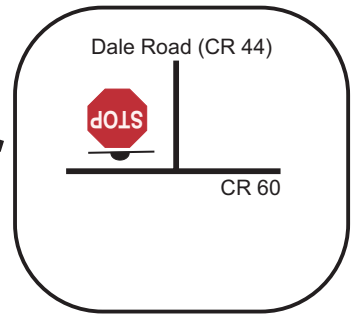
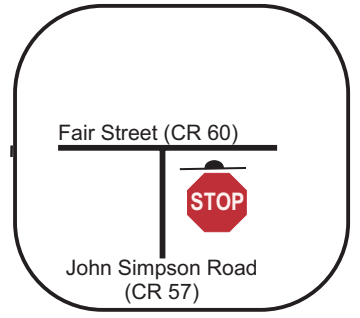
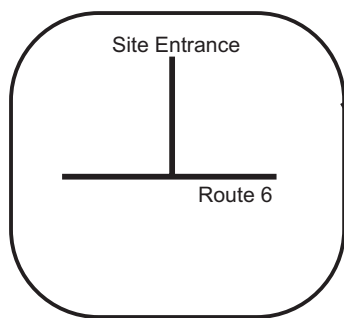
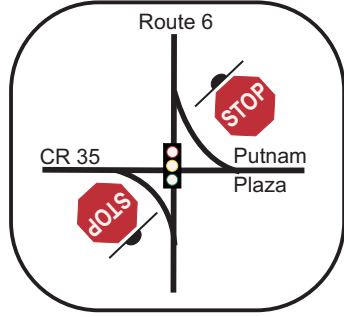
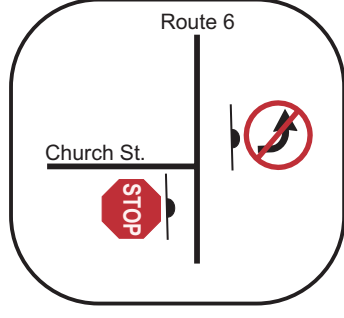
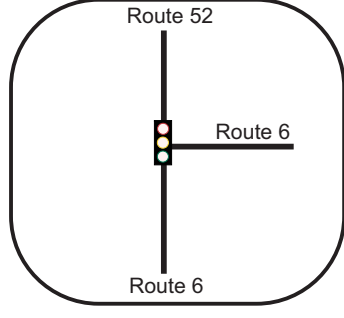
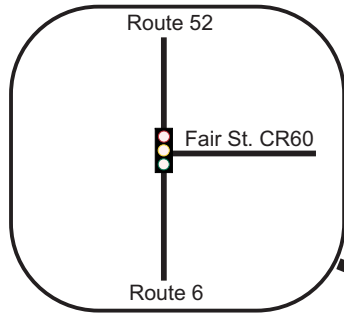
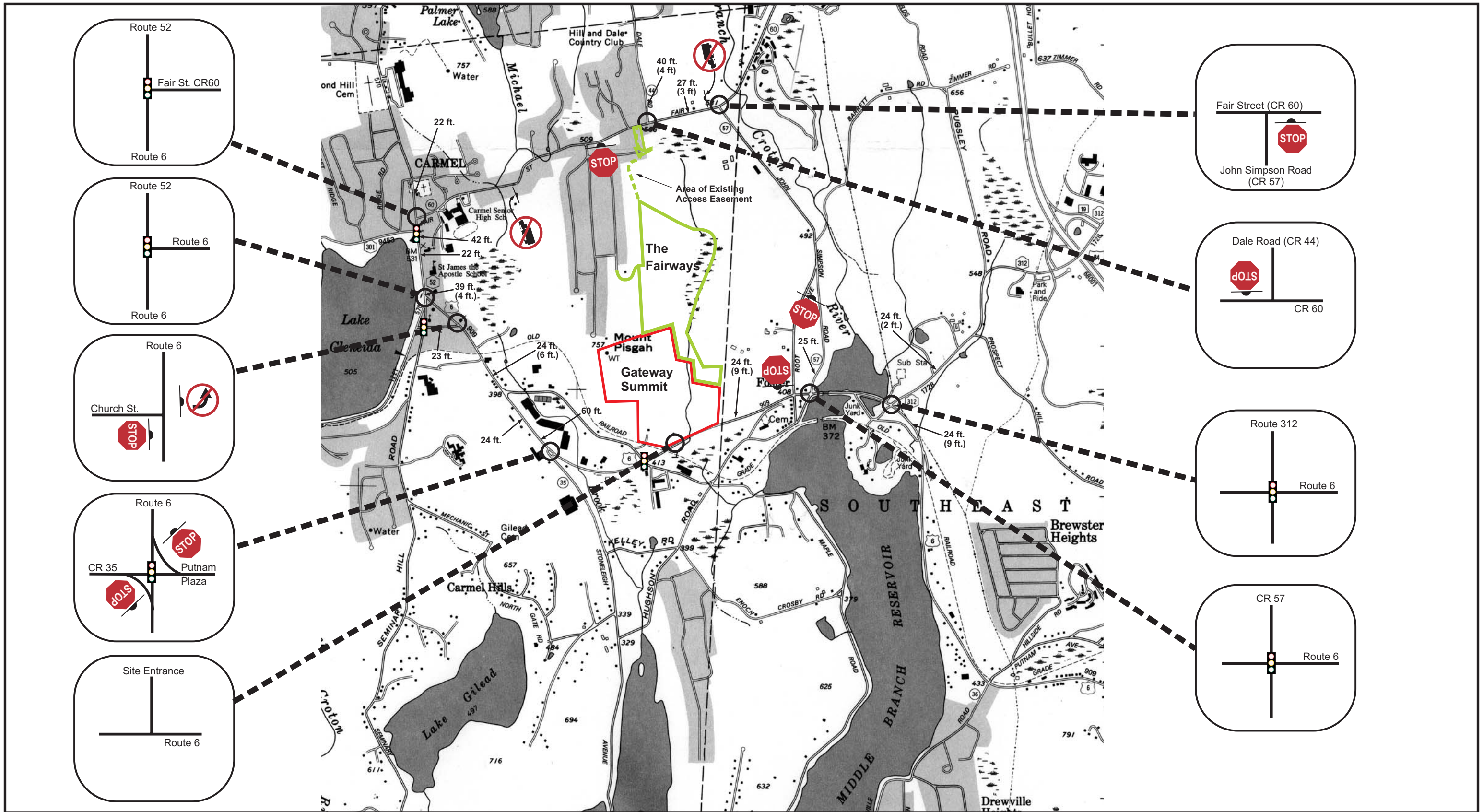


Figure 3.6-2: Speed Controls
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
 Scale: 1" = 2000'



KEY

- Intersections Studied
- Gateway Summit
- The Fairways
- XX Road Widths
- (XX) Shoulder Widths
- STOP Stop Signs
- No Left Turn
- No Trucks Over 5 Tons Except Local Deliveries
- Traffic Signal

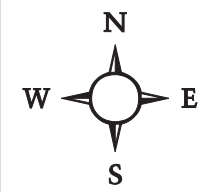


Figure 3.6-3: Traffic Controls and Pavement Widths
Gateway Summit / The Fairways
Town of Carmel, Putnam County, New York
Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
Scale: 1" = 2000'

has no standing regulations to provide for a northbound right turn lane. The County has a wintertime (November 15th to April 15th) restriction on parking on county roads. Functionally, there are few places where vehicles can park on John Simpson Road or Fair Street without blocking traffic.

Except for local deliveries, trucks over 5 tons are prohibited from using Fair Street between the High School and John Simpson Road.

The recently signalized intersection of US Route 6/Old Route 6/Maple Avenue was not included as a study intersection.

3.6.3 Collision Data

Collision data was reviewed at key intersections. Table 3.6-1 shows the frequency of collisions at key intersections.

For all intersections, additional background information is provided in Table 3.6-2. The frequency of collisions relates to a combination of factors, but mostly to driver error.

The largest factor at any one location is failure to yield right-of-way at Fair Street/John Simpson Road. Failure to yield right-of-way is the main problem at the Hill and Dale Road/Fair Street and NYS Route 52/ Fair Street intersections.

Table 3.6-1 Collision Frequency and Severity				
Location	* Number of Collisions in a Three Year Period	Injury	Property Damage Only	Not Reportable
NYS Route 52/ Fair Street	16	7	4	5
U.S. Route 6/NYS Route 52	12	3	3	6
U.S. Route 6/Church	18	4	9	5***
U.S. Route 6/ Stoneleigh (CR 35)/ Putnam Plaza	16	5	5	6
U.S. Route 6/ John Simpson	11	5	4	2
U.S. Route 6/NYS Route 312	29	8	10	11
Dale Road (CR/44)/Fair Street (CR 60)	10	7	1	2
John Simpson Road (CR/57)/ Fair Street (CR 60)	18	10	5	3
* See Table 3.6-2 for details.				
** cover period 5-1-1998 to 4-30-2001				
*** Estimated based on pro rating not reportable accidents between two Church Street intersections with U.S. Route 6.				
No fatalities reported at any of the above intersections				
Source: New York State Department of Transportation, August 2003.				

Table 3.6-2 Collision Summary for Locations with More Than Five Collisions								
Summary ¹	Frequency of Occurrence							
	Rt. 52/ Fair St. (CR 60)	Rt. 6/ Rt. 52	Rt. 6/ Church Street	U.S. Route 6/ Stoneleigh Avenue (CR 35)	U.S. Route 6/ John Simpson (CR 57)	U.S. Route 6 NYS Route 312	Hill and Dale (CR 44) /Fair St. (CR 60)	John Simpson (CR 57)/ Fair St. (CR 60)
Total	16	12	24	16	11	29	10	18
Fixed Object Single Vehicle Accident	1	1	1	1	1	1	1	0
Multi-Vehicle accident	9	5	12	9	8	17	7	15
Pedestrian/bicyclist	1	0	0	0	0	0	0	0
Wet Road	2	3	2	4	2	1	2	2
Dry Road	9	3	11	6	7	17	6	13
Rear end	2	3	6	4	4	5	1	5
Left turn	4	1	3	4	2	2	4	6
Right angle	0	0	1	2	2	2	2	3
Parked	0	0	0	0	0	0	0	0
Sideswipe	0	0	0	0	0	1	0	0
Overtaking	0	0	1	0	0	1	0	0
other	5	1	0	1	0	0	0	1
Apparent Factors ²								
Fell asleep/Alcohol	1	0	0	0	0	0	0	0
Driver inattention	4	0	1	3	0	2	1	1
Unsafe speed	1	1	2	1	2	0	1	1
Failure to yield ROW or disregard traffic control	5	0	1	3	2	3	6	10
Slippery pavement	0	0	1	1	0	0	0	1
View obstruction	0	0	0	1	0	0	0	1
Brakes Defective	0	0	0	0	1	0	0	0
Glare	0	1	0	1	0	0	0	1
Improper turn	0	0	1	0	1	0	0	0
Improper lane use	0	0	1	0	1	0	0	0
Following too close	2	1	6	1	2	5	0	1
Backing unsafe	0	0	0	0	0	0	0	0
Unsafe lane change	0	0	0	0	0	0	0	1
Other	0	1	3	1	0	1	0	0
Source: New York State Department of Transportation, August 2003.								
¹ Reportable Collisions.								
² Reportable Collisions with only one or more apparent factors.								

3.6.4 Alternative Modes of Travel

Pedestrian Activity

Pedestrian activity varies within the project area. Pedestrian counts were taken at Fair Street/Hill and Dale Road and the U.S. Route 6/site access intersections to ascertain pedestrian activity in the vicinity of the future site access. Weekday p.m. peak hour pedestrian counts were collected on Thursday April 10, 2003 between the hours of 3:30 p.m. and 6:30 p.m.; and Saturday April 5, 2003 between 11:00 a.m. and 3:00 p.m.. No pedestrian activity was observed.

Most pedestrian activity in the study area would be expected around key pedestrian attractions such as the public library (southeast corner of U.S. Route 6/NYS Route 52), Carmel High School (western Fair Street), Carmel Post Office (western Fair Street), Lake Gleneida, commercial and government buildings (NYS Route 52 area between Fair Street and U.S. Route 6). In particular, the public library with no designated off-street parking attracts trips from on-street parking in the area.

Figure 3.6-4 shows pedestrian facilities. Sidewalks are located along the east side of NYS Route 52 from U.S. Route 6 extending beyond Fair Street. The westernmost portion of Fair Street at the Post Office and school has sidewalks. A small portion of U.S. Route 6 has sidewalks east of the intersection with NYS Route 52. There are pedestrian crossing signs on U.S. Route 6 east of the Stoneleigh Avenue intersection and on Fair Street near the Carmel High School. The intersection of U.S. Route 6 /NYS Route 52 has crosswalks and pedestrian signals.

Public Transportation

Carmel is served by both Westchester County Bee-line buses and Putnam County PART buses. PART schedules can be found in Appendix G, at www.putnamcountyny.com, or by calling Putnam County Transportation (845) 878-RIDE. Putnam Plaza is the central location for all PART bus route start and end points. Figure 3.6-5 shows key points in the study area for PART routes.

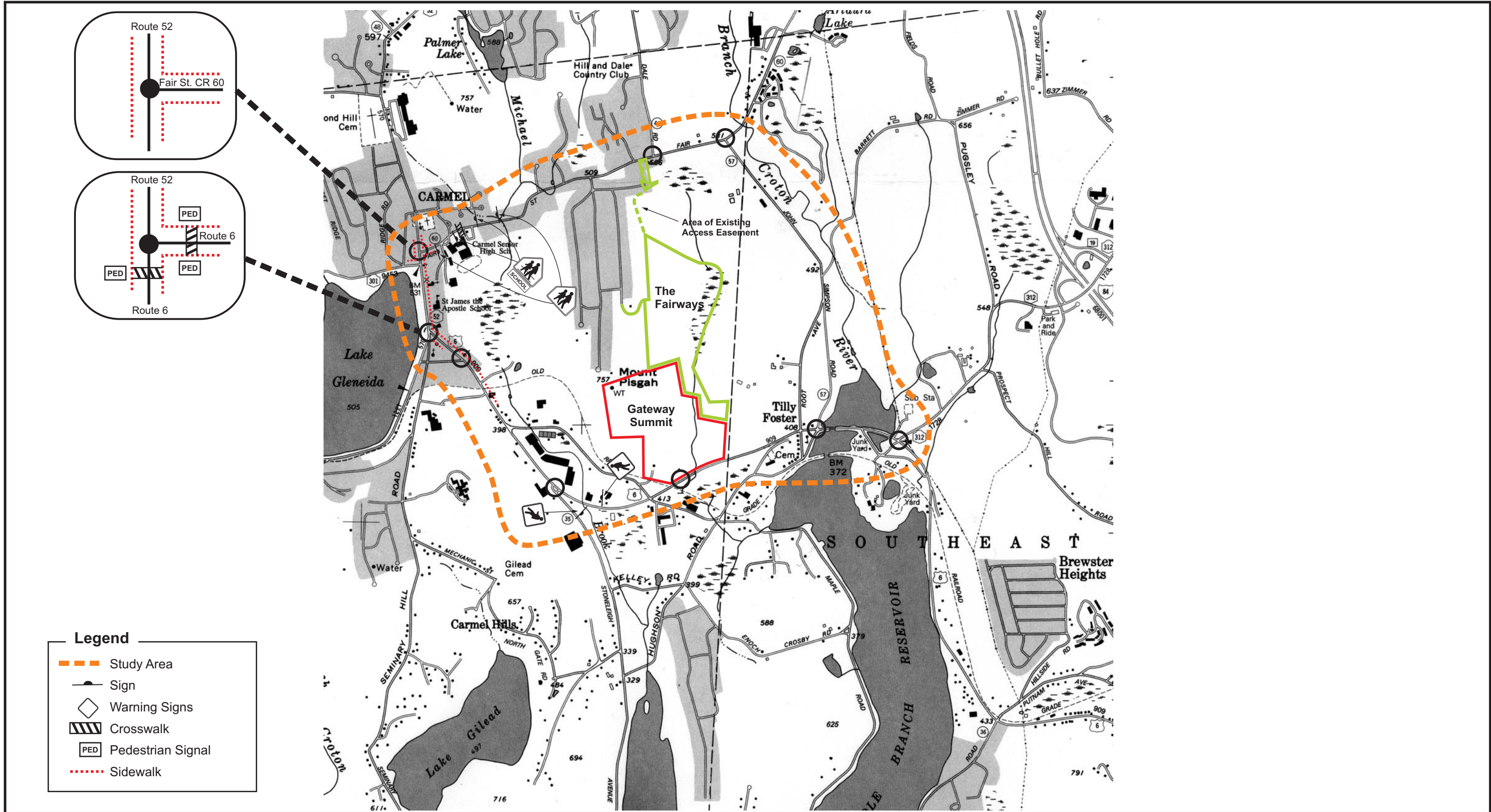
The Westchester County Bee Line runs the 77 Taconic Express out of the Carmel Bowl on Old Route 6. These four buses run down to White Plains via Baldwin Place, Shrub Oaks, and Yorktown Heights in the morning and return with the afternoon commuter rush.

3.6.5 Existing Traffic Volumes

This traffic study reviews 2003 Existing Conditions, based on recent traffic counts and historic data. The existing data forms the basis of the year 2008 No Build Condition (the scenario without the proposed action) and the year 2008 Build Condition (with the proposed action).

The following intersections were evaluated in this traffic capacity review:

1. U.S. Route 6 and NYS Route 312, Town of Southeast,
2. U.S. Route 6 and John Simpson Road, Town of Southeast,
3. U.S. Route 6 and NYS Route 52, Town of Carmel



- Legend**
- — — Study Area
 - Sign
 - Warning Signs
 - Crosswalk
 - Pedestrian Signal
 - · · · · Sidewalk

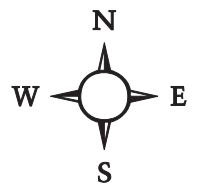
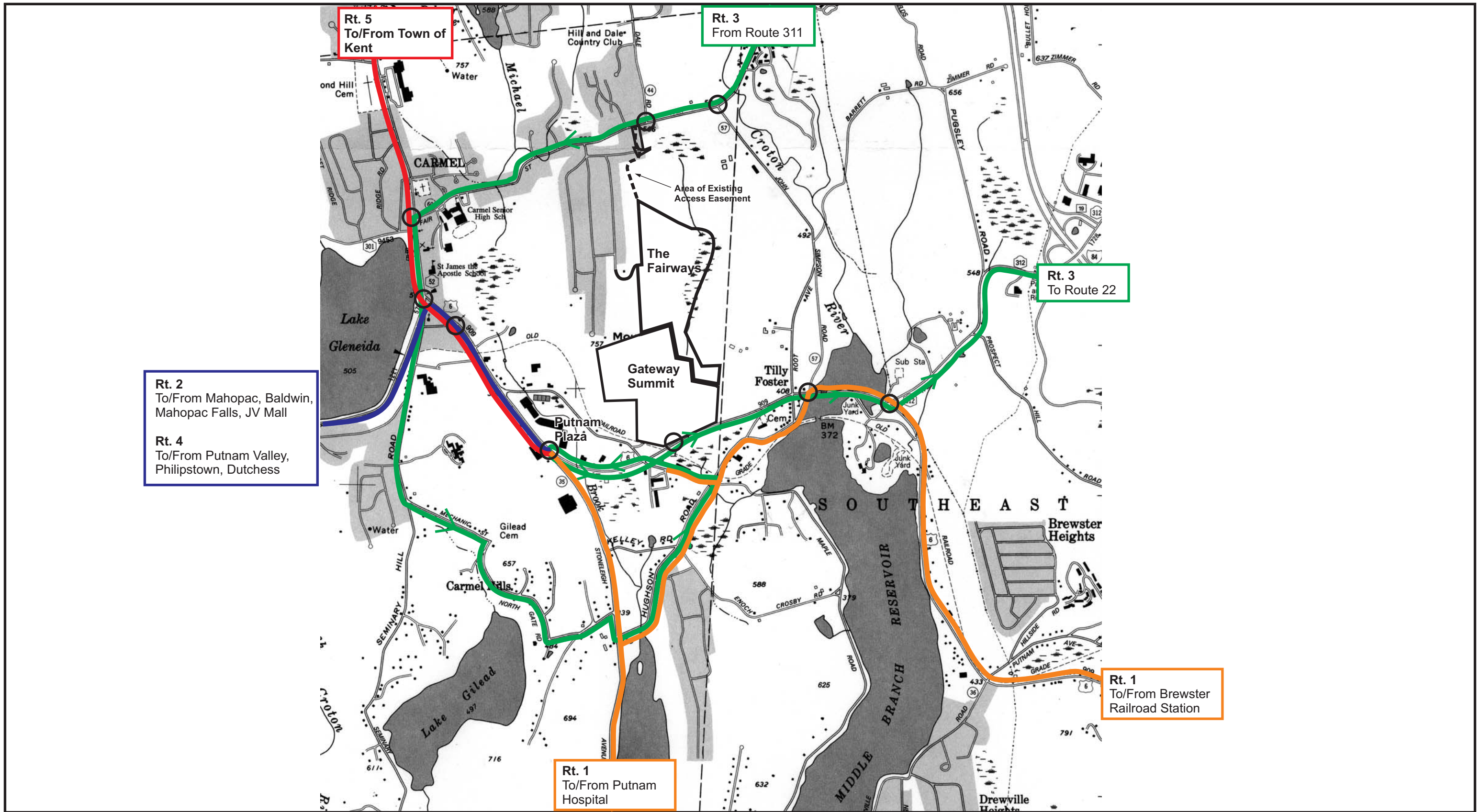


Figure 3.6-4: Pedestrian Infrastructure
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
 Scale: 1" = 2000'



Putnam Area Rapid Transit (PART) Routes

- Intersections Studied
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- Route 3 (One-way Loop)
- Route 2 & 4 (Two-way)
- Route 5 (Two-way)

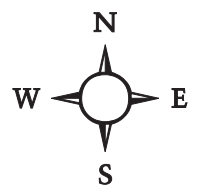


Figure 3.6-5: Existing PART Bus Routes
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
 Scale: 1" = 2000'

4. U.S. Route 6 and Church Street (east), Town of Carmel
5. U.S. Route 6 and Stoneleigh Avenue (CR 35) and Putnam Plaza, Town of Carmel
6. NYS Route 52/Fair Street (CR 60), Town of Carmel
7. Fair Street (CR 60)/ Hill and Dale Road (CR 44), Town of Carmel
8. Fair Street (CR 60)/ John Simpson Road (CR 57), Town of Carmel
9. U.S. Route 6/Site access, Town of Carmel

Figures 3.6-6, and 3.6-7 provide existing p.m. weekday and existing Saturday peak hour traffic volumes in the vicinity of the subject property. These turning movements were collected in April of 2003 except as noted in Appendix O. Weekday P.M. peak hour traffic counts were collected on Thursday April 10, 2003 between the hours of 3:30 p.m. and 6:30 p.m.; and Saturday April 5, 2003 between 11:00 a.m. and 3:00 p.m.. The counts at NYS Route 52 and Fair Street were taken on Thursday, May 22, 2003 between the hours 3:30 p.m. and 6:30 p.m. and Saturday, May 17, 2003 between 11:00 a.m. and 3:00 p.m.. US Route 6/ Stoneleigh Avenue counts are from Frederick P. Clark, Inc., in May of 2004. No counts were taken during a holiday period. The directional flow shifts in the PM peak hours along U.S. Route 6.

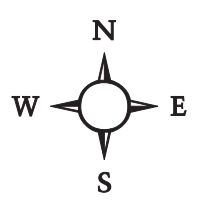
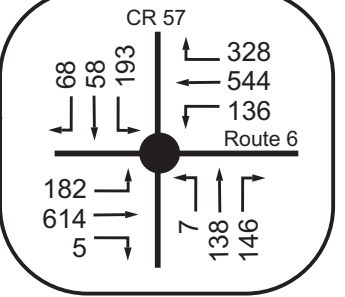
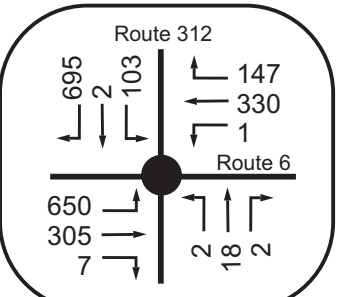
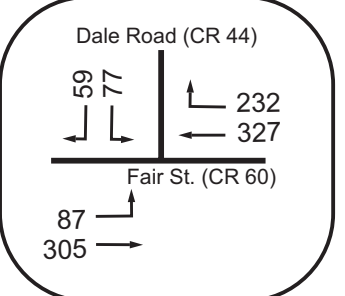
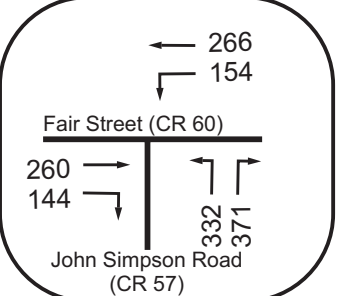
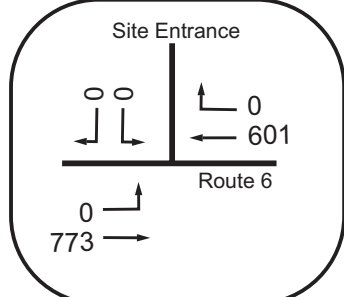
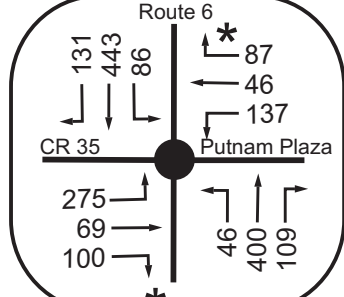
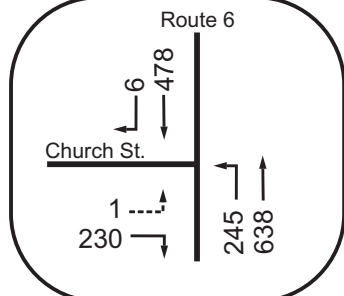
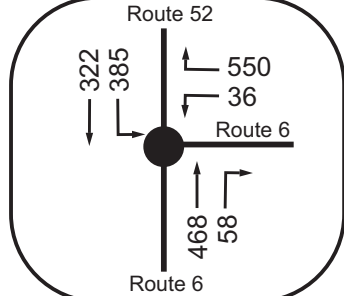
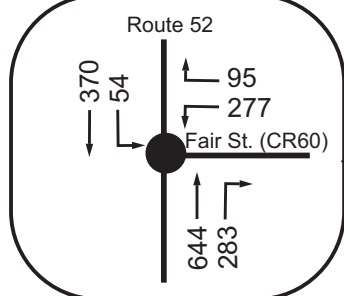
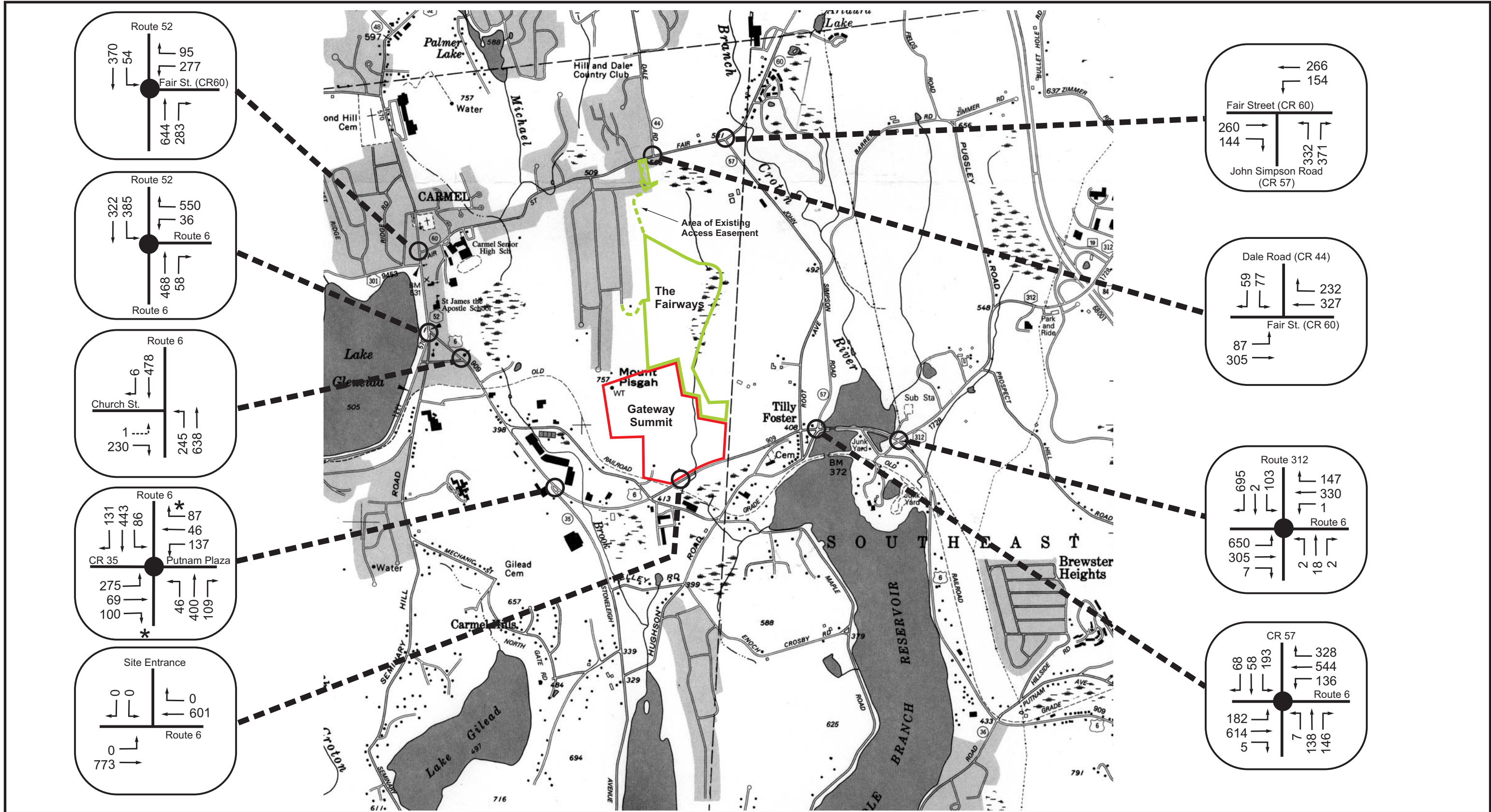
The counts identify the peak afternoon weekday commutation travel and peak Saturday midday shopping periods. Afternoon traffic typically peaks between 3:45 p.m. and 5:45 p.m. Fair Street at John Simpson and Fair Street at Hill and Dale Road peaks were later at 5:30 to 6:30 p.m.. Saturday traffic peaks mostly occurred between 11:00 a.m. and 2:00 p.m.. U.S. Route 6 intersections from Stoneleigh Avenue (CR 35) to the Route 312 intersection peak beginning after 12 p.m.. The Fair Street/John Simpson Road intersection peak started at noon while other study intersections on Route 52 and Hill and Dale Road/Fair Street peak after noon. US Route 6/Stoneleigh Avenue counts are from June 5, 2004. Saturday volumes at study intersections east of Maple Avenue were balanced to reflect 2004 counts taken for Putnam Plaza. This was not done for the p.m. peak hour as there is a shift in directional volumes during the p.m. peak hours.

3.6.6 Level of Service Criteria

The Highway Capacity Manual and the Highway Capacity Software procedures document the methodology used for modeling levels of service, delay, and volume to capacity ratios at both signalized and unsignalized intersections. Level of service is a measure of the operational quality of an intersection; level of service A is the highest, most efficient level, and level of service F is the lowest level. The operational quality of an intersection is based on the average amount of time that a vehicle is delayed. Levels of service are examined by lane group, or the set of lanes allowing the same movements on an approach.

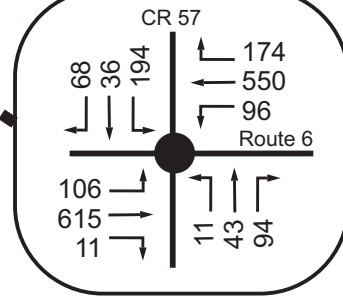
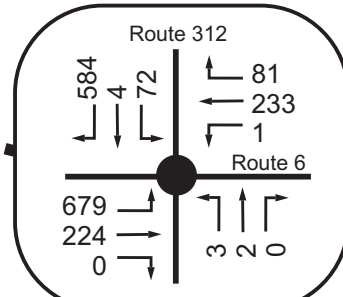
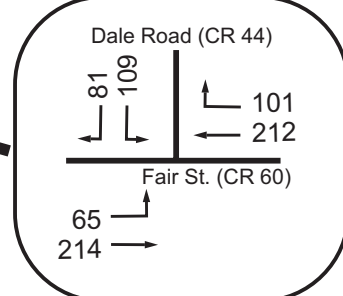
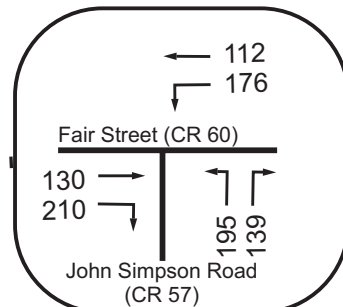
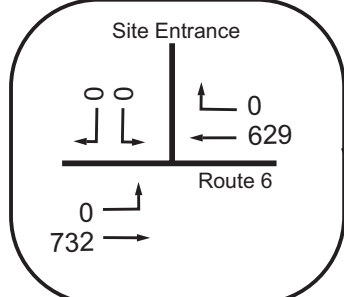
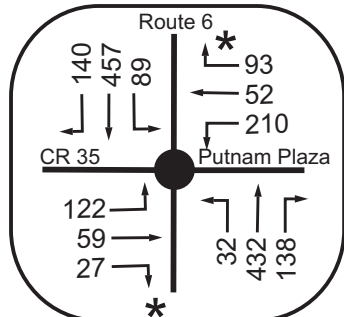
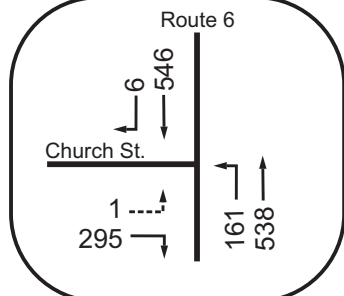
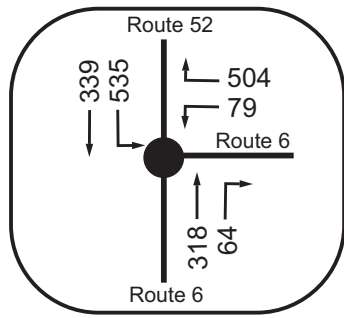
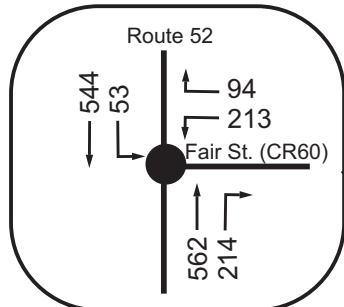
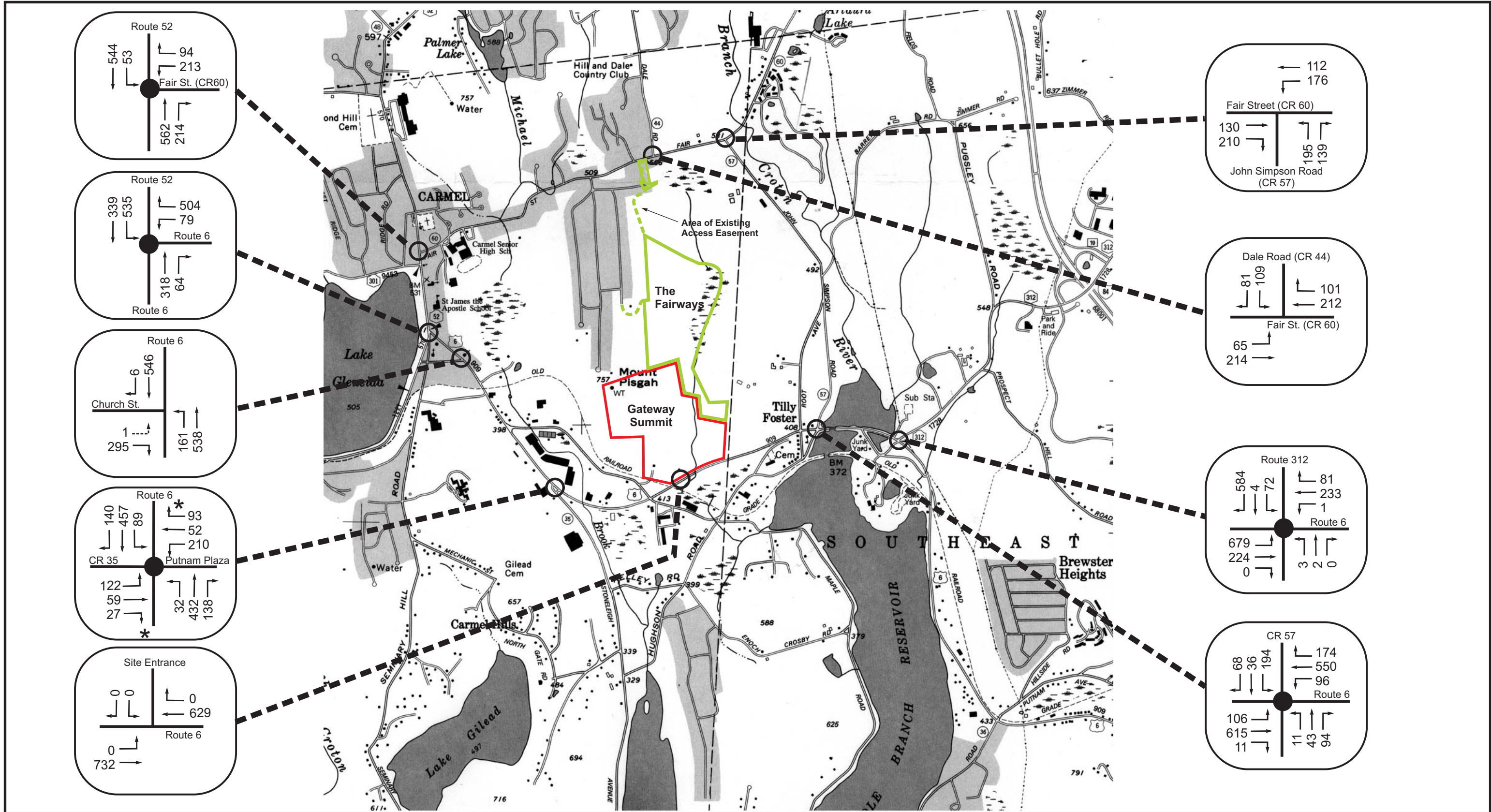
The definitions of delays consider all delays including startup, deceleration and acceleration delays. The New York State Department of Transportation (NYS DOT) prefers the use of the Highway Capacity Manual methodologies over other traffic capacity methodologies.

Table 3.6-3 presents the levels of service criteria for unsignalized intersections.



- KEY**
- Gateway Summit
 - The Fairways
 - Intersections Studied
 - Traffic Signal Controlled
 - * Stop or Yield Controlled Channel
 - Illegal Left Turn

Figure 3.6-6: Existing PM Peak Hour Traffic
Gateway Summit / The Fairways
Town of Carmel, Putnam County, New York
Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
Scale: 1" = 2000'



KEY

- Gateway Summit
- The Fairways
- Intersections Studied
- Traffic Signal Controlled
- * Stop or Yield Controlled Channel
- Illegal Left Turn

Figure 3.6-7: Existing Saturday Peak Hour Traffic
Gateway Summit / The Fairways
Town of Carmel, Putnam County, New York
Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
Scale: 1" = 2000'

Table 3.6-3 Unsignalized Intersections Level of Service Criteria	
Level of Service	Stopped Delay (Seconds Per Vehicle)
A	≤ 10
B	$>10 \text{ and } \leq 15$
C	$>15 \text{ and } \leq 25$
D	$>25 \text{ and } \leq 35$
E	$>35 \text{ and } \leq 50$
F	> 50

SOURCE: Highway Capacity Manual, National Academy of Sciences, Transportation Research Board, National Research Council, Washington, D.C., 2000.

Table 3.6-4 presents the levels of service criteria for signalized intersections. The New York State Department of Transportation (NYS DOT) generally seeks a minimum level of service D (delay of 55 seconds or less for a signalized intersection) for all lane groups. The NYS DOT Highway Design Manual notes, "In some cases, it may be necessary to accept Level of service E or F on individual lane groups due to unreasonable costs or impacts associated with improving the level of service."

For all intersections, the volume to capacity ratio is an indication of the unused capacity or the ability of the intersection to process more traffic. It is possible to have a movement with an adequate level of service (level of service A, B, C or D) and be at capacity for the movement. It is also possible to have a movement with an unacceptable level of service (level of service E or F) with additional capacity available on the movement. The NYS DOT goal for volume to capacity (V/C) ratios at signalized intersections for lane groups is generally below 0.95. The ability of an entire intersection to handle more traffic is a complex issue as traffic can be added to under-capacity movements without impacting over-capacity movements.

Table 3.6-4 Signalized Intersections Level of Service Criteria	
Level of Service	Stopped Delay (Seconds Per Vehicle)
A	≤ 10
B	>10 and ≤ 20
C	>20 and ≤ 35
D *	>35 and ≤ 55
E	>55 and ≤ 80
F	> 80.0

SOURCE: Highway Capacity Manual, National Academy of Sciences, Transportation Research Board, National Research Council, Washington, D.C., 2000.
 * For urban areas, the minimum level of service for design of lane-groups (one or more movements) assuming reasonable costs and impacts.

3.6.7 Existing Levels of Service

The results of the level of service analyses for the study intersections are summarized in Tables 3.6-5, 3.6-6 and 3.6-7. Capacity analysis calculations are provided in Appendix F.

Table 3.6-5 shows the level of service at unsignalized intersections. The left turn from John Simpson Road to Fair Street is operating at level of service F in the p.m. peak hour and the Saturday peak hour.

A nominal use of the site access has been assumed for this analysis, although no traffic was observed entering or exiting during the p.m. or Saturday peak hours.

Left turns are currently prohibited from eastbound Church Street onto U.S. Route 6. For the purposes of this analysis, this illegal traffic has been added to the legal right turn movement to establish level of service.

Tables 3.6-6 and 3.6-7 show the level of service at the existing signalized intersections. Signalized intersections operated at level of service D or better during peak hours at the study locations.

The Highway Capacity Software model results apply to peak hour periods only and do not represent every minute of traffic operations. During off peak periods, which is the majority of the time, drivers typically will find operations adequate and much better than the modeled peak hour results. During peak periods the experience of individual drivers can vary, because the model calculates average delay only.

Since peak 15 minute flows typically do not all occur in the same 15 minute period in the peak hour, the traffic model does not always account for the ability of a traffic signal to compensate for shifting traffic volumes and thus may overestimate delay. For unsignalized intersections the model conservatively assumes that the peak volumes occur simultaneously.

Intersections are typically treated by the model as isolated intersections when in fact traffic is influenced by other intersections. No adjustment has been made for signal coordination. Actual operation of the NYS Route 52 traffic signals may appear better than modeled because of signal coordination.

Table 3.6-5 Existing Condition Level of Service Summary Unsignalized Intersections							
Intersection Road	Lane Group Approach Direction-Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity (v/c)	Delay (seconds /vehicle)	Level of Service	Volume to Capacity (v/c)	Delay (seconds /vehicle)	Level of Service
Fair Street/Hill and Dale Road							
<i>Fair Street</i>	<i>EB-L, T</i>	<i>0.10</i>	<i>9.4</i>	<i>A</i>	<i>0.07</i>	<i>8.2</i>	<i>A</i>
<i>Hill and Dale Road</i>	<i>SB-L</i>	<i>0.39</i>	<i>31.3</i>	<i>D</i>	<i>0.37</i>	<i>20.7</i>	<i>C</i>
	<i>SB-R</i>	<i>0.12</i>	<i>12.5</i>	<i>B</i>	<i>0.13</i>	<i>10.7</i>	<i>B</i>
Church Street/U.S. Route 6							
<i>U.S. Route 6</i>	<i>NB-L, T</i>	<i>0.25</i>	<i>9.6</i>	<i>A</i>	<i>0.17</i>	<i>9.4</i>	<i>A</i>
<i>Church Street (E)</i>	<i>EB-R</i>	<i>0.52</i>	<i>18.2</i>	<i>C</i>	<i>0.62</i>	<i>23.0</i>	<i>C</i>
U.S. Route 6/Site Access							
<i>U.S. Route 6</i>	<i>EB-L, T</i>	<i>0.00</i>	<i>8.8</i>	<i>A</i>	<i>0.00</i>	<i>9.0</i>	<i>A</i>
<i>Site Access¹</i>	<i>SB-L, R</i>	<i>0.04</i>	<i>22.8</i>	<i>C</i>	<i>0.04</i>	<i>22.9</i>	<i>C</i>
Fair Street/John Simpson Road							
<i>Fair Street</i>	<i>WB-L, T</i>	<i>0.19</i>	<i>9.1</i>	<i>A</i>	<i>0.19</i>	<i>8.9</i>	<i>A</i>
<i>John Simpson Road</i>	<i>NB-L</i>	<i>2.03</i>	<i>526.1</i>	<i>F</i>	<i>0.82</i>	<i>58.6</i>	<i>F</i>
	<i>NB-R</i>	<i>0.63</i>	<i>19.3</i>	<i>C</i>	<i>0.21</i>	<i>11.0</i>	<i>B</i>
Level-of-Service (see Table 3.6-3 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R = right, TR = through and right, (e.g. WB-L = Westbound left). ¹ Volumes set at minimum one vehicle per movement. Unsignalized intersections are in <i>italics</i> .							

Table 3.6-6 Existing Condition Level of Service Summary Signalized Intersections in the Town of Carmel							
Intersection Road	Lane Group Approach Direction- Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds/ vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
Fair Street/NYS Route 52							
Fair Street	WB-L	0.76	38.7	D	0.60	31.5	C
	WB-R	0.32	27.4	C	0.32	27.4	C
NYS Route 52	NB-T	0.61	9.6	A	0.52	8.4	A
	NB-R	0.33	6.9	A	0.24	6.4	A
NYS Route 52	SB-L, T	0.49	8.2	A	0.65	10.7	B
	Overall		14.6	B		13.2	B
U.S. Route 6/ NYS Route 52							
U.S. Route 6	WB-L	0.13	34.6	C	0.32	36.3	D
	WB-R	0.76	22.6	C	0.77	23.3	C
U.S. Route 6	NB-T	0.76	32.5	C	0.53	25.5	C
	NB-R	0.10	20.7	C	0.11	20.8	C
NYS Route 52	SB-L	0.67	15.5	B	0.78	15.1	B
	SB-T	0.28	5.0	A	0.28	5.0	A
Overall			20.5	C		18.6	B
Stoneleigh Avenue/U.S. Route 6							
Stoneleigh Avenue	EB-L, T	0.70	33.2	C	0.54	35.2	D
Putnam Plaza	WB-L, T	0.61	38.0	D	0.63	34.4	C
U.S. Route 6	NB-L	0.30	20.0	C	0.24	22.0	C
	NB-T, R	0.76	28.5	C	0.89	41.6	D
U.S. Route 6	SB-L	0.68	35.2	D	0.41	35.3	D
	SB-T	0.68	25.5	C	0.64	21.7	C
	SB-R	0.07	3.7	A	0.10	5.4	A
Overall			28.7	C		31.3	C
Level-of-Service (see Table 3.6-4 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R= right, TR = through and right, (e.g. WB-L = Westbound left).							

Table 3.6-7 Existing Condition Level of Service Summary Signalized Intersections in the Town of Southeast							
Intersection Road	Lane Group Approach Direction- Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
U.S. Route 6/ John Simpson							
U.S. Route 6	EB-L	0.54	39.2	D	0.29	29.2	C
	EB-T, R	0.77	34.1	C	0.64	23.4	C
U.S. Route 6	WB-L	0.54	46.8	D	0.32	30.8	C
	WB-T	0.77	35.2	D	0.75	27.4	C
	WB-R	0.55	27.4	C	0.28	17.6	B
John Simpson	NB-L, T, R	0.74	46.2	D	0.60	47.7	D
John Simpson	SB-L	0.68	48.3	D	0.62	47.3	D
	SB-T, R	0.24	26.0	C	0.23	32.5	C
	Overall		36.8	D		29.1	C
U.S. Route 6/NYS Route 312							
U.S. Route 6	EB-L	0.86	25.9	C	0.86	19.5	B
	EB-T, R	0.24	4.1	A	0.19	4.1	A
U.S. Route 6	WB-L	0.00	22.3	C	0.00	23.5	C
	WB-T	0.72	33.2	C	0.53	28.7	C
	WB-R	0.35	25.4	C	0.20	25.1	C
NYS Route 312	NB-L, T, R	0.21	35.2	D	0.03	31.4	C
NYS Route 312	SB-L, T	0.57	40.8	D	0.40	34.7	C
	SB-R	0.82	22.0	C	0.70	14.1	B
	Overall		24.0	C		18.1	B
Level-of-Service (see Table 3.6-4 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R= right, TR = through and right, (e.g. WB-L = Westbound left).							

3.6.8 Future No-Build Traffic: Network and Volumes

Typically, a project's traffic impact is determined by comparing future traffic conditions without the project's traffic (2008 No-Build conditions) to traffic conditions with project-generated traffic (2008 Build conditions).

The No-Build traffic condition is an interim scenario that establishes a future baseline condition. No-Build traffic conditions are ascertained based on a number of factors: (1) improvements in the local road network that are planned or underway; (2) traffic from general population growth in the local area; and (3) traffic from identified development projects in the project site vicinity.

A traffic signal has been installed at the intersection of Old Route 6 and U.S. Route 6 since the traffic counts were taken in the network. Although this intersection was not studied, changes in traffic that occur should be localized and should not alter the overall traffic through nearby intersections.

The New York State Department of Transportation (NYS DOT) has projects listed in the draft Statewide Transportation Improvement Program (October 1, 2003 to September 30, 2006). The Route 52/Route 311 rehabilitation is anticipated for 2006 (PIN 802136). The Stoneleigh Avenue (CR 35) Drewville Road (CR 36) improvements (PIN 875689) and Stoneleigh Avenue reconstruction project from Putnam Hospital to U.S. Route 6 are slated for 2005.

The first portion of the Fair Street improvements (PIN 875609, extending from NYS Route 52 to John Simpson Road) will be completed in 2004 and will improve the Fair Street/John Simpson Road intersection. The Fair Street/John Simpson Road intersection improvements include signalization, adding a eastbound right turn lane and a westbound left turn lane. These improvements are included in the No Build and Build Conditions.

The Carmel Revitalization project on Route 52 should improve upon the streetscape from U.S. Route 6 to Fair Street and further north. Storage for the left turn from Southbound NYS Route 52 onto U.S. Route 6 is to be extended.

Rehabilitation of the U.S. Route 6 bridge between John Simpson Road and NYS Route 312 (NYS DOT Design Project number D259055) should be completed in December 2004. The right turn lane from U.S. Route 6 to John Simpson Road will be extended to allow for longer queues. The bridge width would be capable of supporting four lanes of traffic on U.S. Route 6 in the long term.

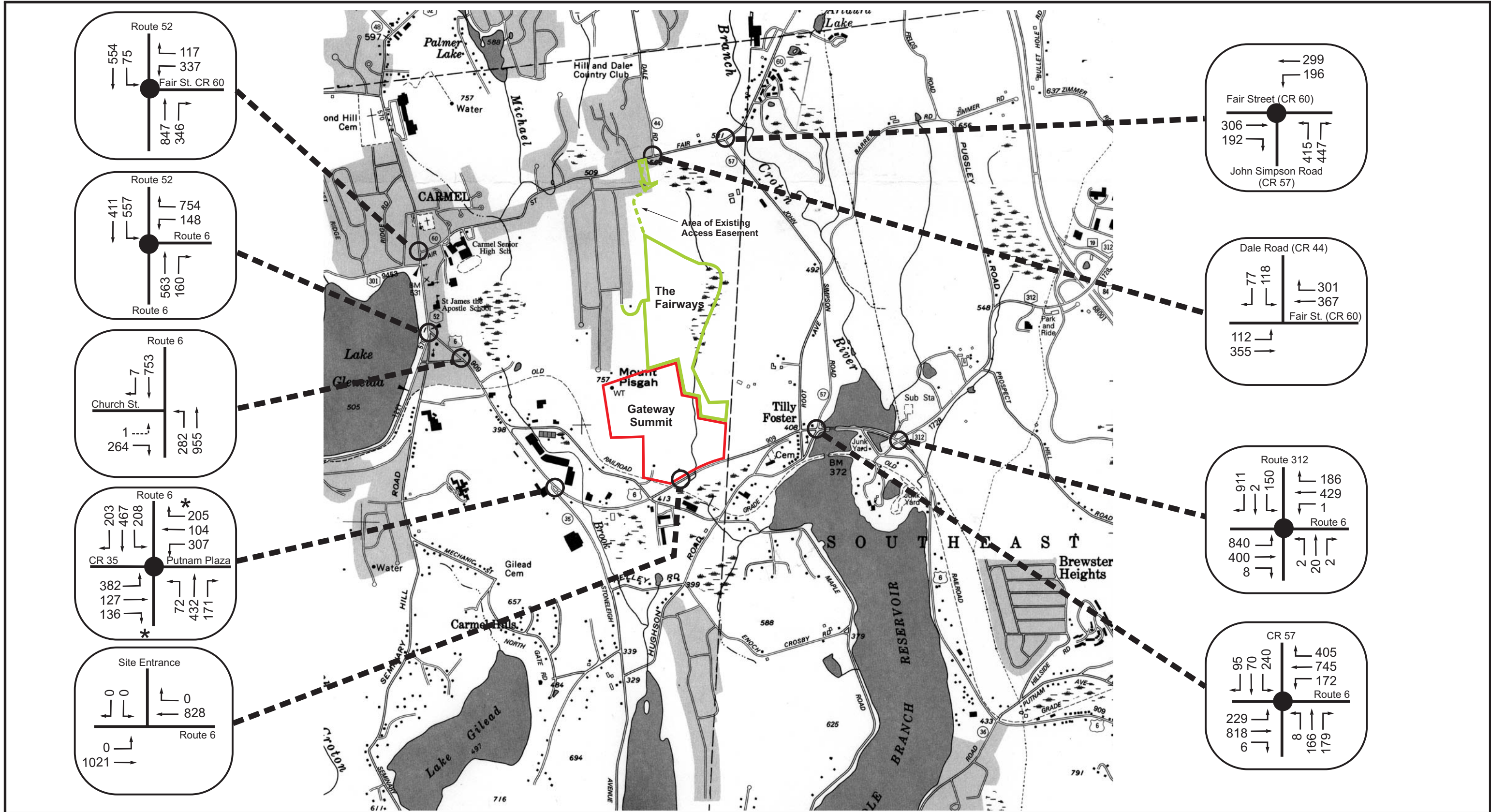
Peak hour traffic volumes for the weekday p.m. and Saturday No-Build scenarios are provided in Figures 3.6-8 and 3.6-9. These figures reflect the existing traffic plus the background traffic growth of two percent annually over five years, plus other area projects. The two percent growth rate has been used and accepted for estimating growth in other area traffic studies. A short-term traffic growth rate of two percent per year was used to establish background growth to the build year of 2008. For the U.S. Route 6/Stoneleigh Avenue intersections background traffic was expanded for four years (2004 to 2008) reflecting more recent counts.

Traffic from 21 area development projects were added to the transportation network. Appendix H tables show trip rates and total vehicular trips from other area developments. Senior unit trip rates were based on maximum trip rates with the entering and exiting traffic evenly split on Saturday. There are no published Saturday trip rates for gas station and convenience stores, so the Saturday rates were based on fueling positions for a gas station and convenience store with car wash. Likewise, no published rates for Saturday peak hour automobile care centers are available so the rate was assumed to be ten percent of the daily rate, with evenly split entering and exiting traffic, as in the p.m. condition.

3.6.9 Alternative Transportation Improvements

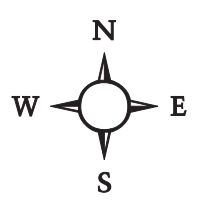
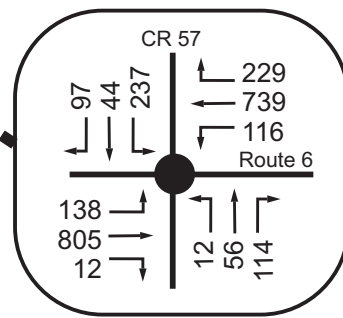
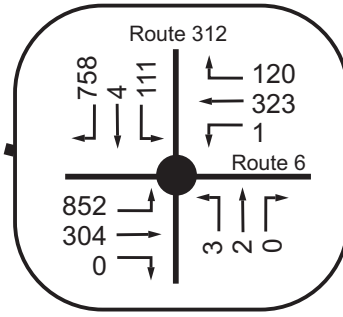
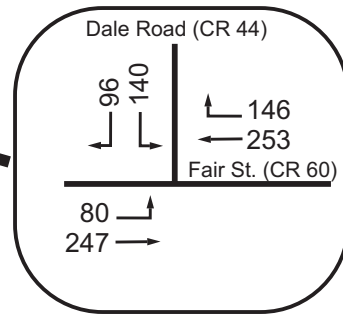
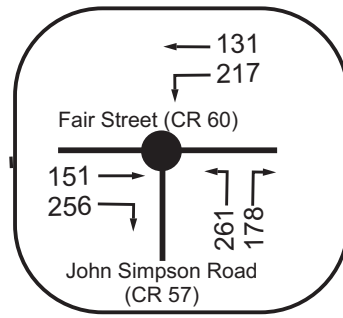
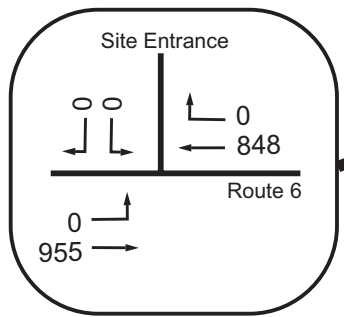
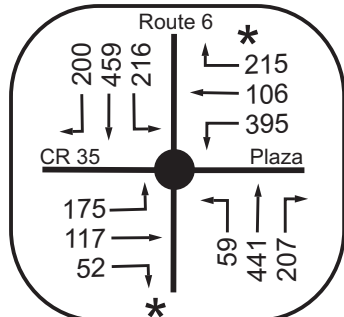
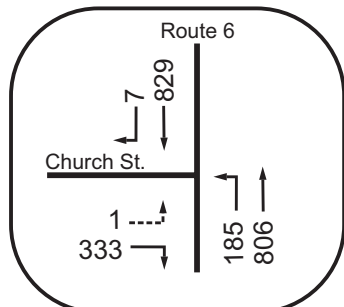
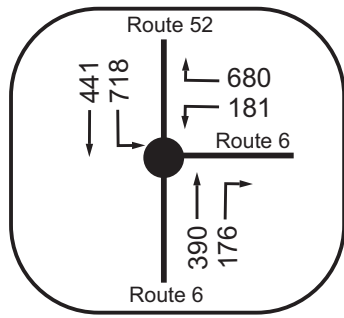
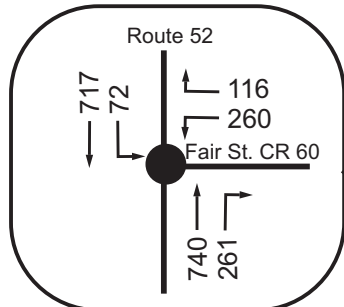
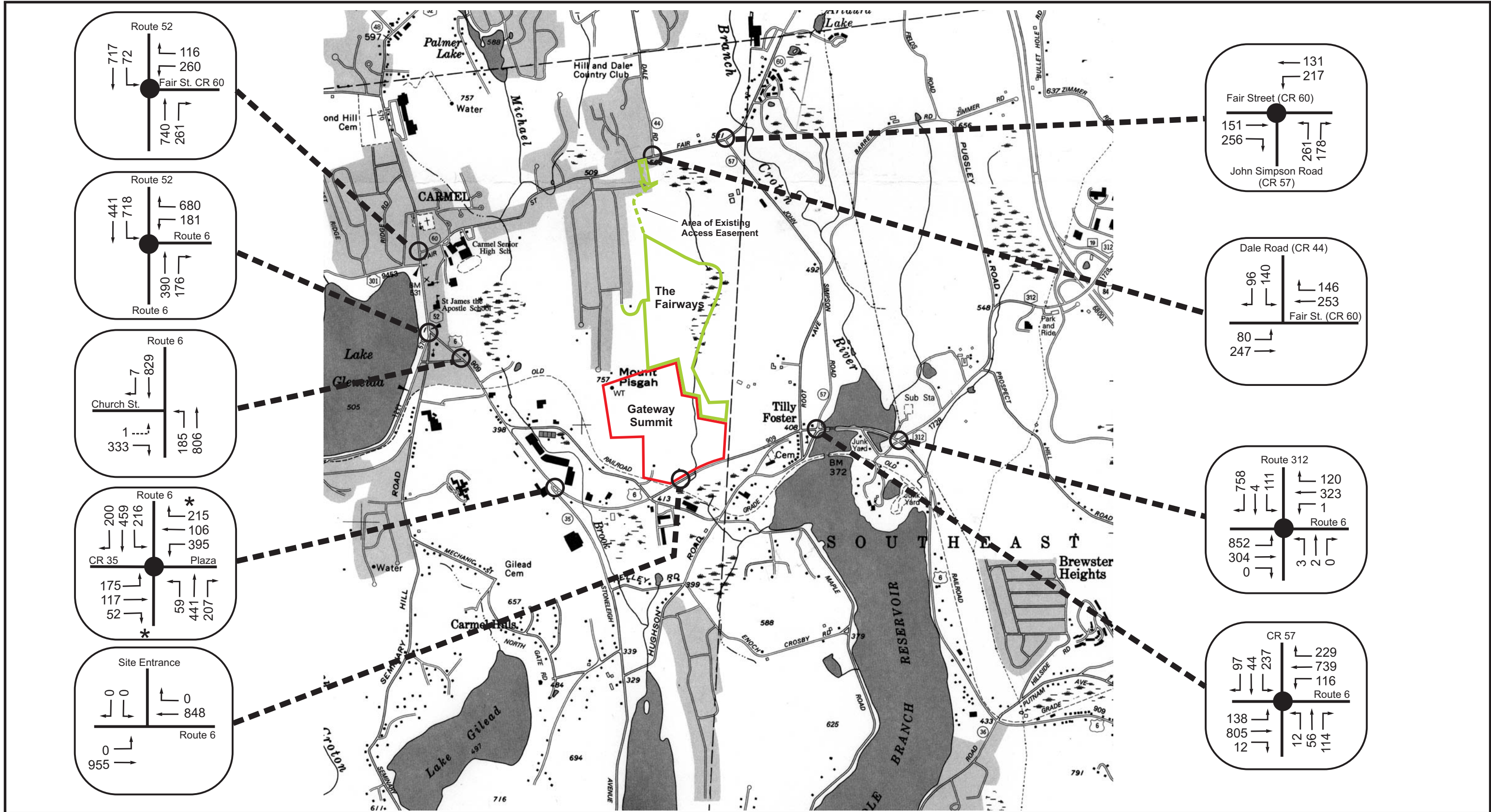
Pedestrian/Bicyclist Improvements

Work is proceeding on pedestrian improvements in the Route 52 area, from U.S. Route 6 slightly past Fair Street. These improvements would alter parking in the area and improve



- KEY**
- Gateway Summit
 - The Fairways
 - Intersections Studied
 - Traffic Signal Controlled
 - * Stop or Yield Controlled Channel
 - Illegal Left Turn

Figure 3.6-8: No Build PM Peak Hour Traffic
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
 Scale: 1" = 2,000'



- KEY**
- Gateway Summit
 - The Fairways
 - Intersections Studied
 - Traffic Signal Controlled
 - * Stop or Yield Controlled Channel
 - Illegal Left Turn

Figure 3.6-9: No Build Saturday
Peak Hour Traffic
Gateway Summit / The Fairways
Town of Carmel, Putnam County, New York
Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
Scale: 1" = 2000'

pedestrian amenities and flow. No changes are included for the intersection operation. Appendix I contains a further description of these improvements.

Other areas of proposed bicycle and pedestrian improvements include a trail along an old railroad grade that runs adjacent to the site and under a U.S. Route 6 bridge to the west of the Gateway Summit site access. The trail would connect to Brewster and improvements along NYS Route 52 north to the County Line. These projects are outlined in the Mid-Hudson South Region Bicycle and Pedestrian Master Plan, dated June 2001, as show in Appendix I.

Public Transportation

With the completion of the new traffic signal at the intersection of Old Route 6 and U.S. Route 6, the PART Route 1 bus route may be rerouted between U.S. Route 6/John Simpson Road and the Office of Aging on Old Route 6. The PART Route 1 historically has used Hughson Road between these points to provide a signalized intersection for accessing U.S. Route 6.

3.6.10 No-Build Level of Service

Tables 3.6-8, 3.6-9 and 3.6-10 contain the level of service summaries for the 2008 No-Build scenario for the unsignalized and signalized intersections. Changes in level of service from the Existing conditions for the study intersections are shown on these tables.

Putnam County signalization and improvements anticipated in 2004 for the Fair Street/John Simpson Road intersection should improve that intersection from a level of service F, as an existing unsignalized intersection, to level of service C or better as a no-build condition signalized intersection.

The renovation of Putnam Plaza with a supermarket is anticipated to include a northbound right turn lane on U.S. Route 6 at Putnam Plaza opposite Stoneleigh Avenue. The northbound right turn lane improvement is included in the No Build and Build analysis.

Table 3.6-8 No Build Condition Level of Service Summary Unsignalized Intersections							
Intersection Road	Lane Group Approach Direction- Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
Fair Street/Hill and Dale Road							
Fair Street	EB-L, T	0.15	10.1	B*	0.09	8.6	A
Hill and Dale Road	SB-L	0.84	91.2	F*	0.59	34.5	D*
	SB-R	0.18	14.0	B	0.18	11.7	B
Church Street/U.S. Route 6							
U.S. Route 6	NB-L, T	0.37	12.1	B*	0.25	11.4	B*
Church Street (E)	EB-R	0.88	54.9	F*	1.05	98.1	F*
U.S. Route 6/Site Access							
U.S. Route 6	EB-L, T	0.00	9.7	A	0.00	9.9	A
Site Access ¹	SB-L, R	0.07	41.0	E*	0.07	39.3	E*
Level-of-Service (see Table 3.6-3 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound. L = left, R= right, TR = through and right, (e.g. WB-L = Westbound left). ¹ Volumes set at one vehicle per movement. * Reduction in level of service from the Existing Condition.							

Table 3.6-9 No Build Condition Level of Service Summary Signalized Intersections in the Town of Carmel							
Intersection Road	Lane Group Approach Direction-Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds/vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds/vehicle)	Level of Service
Fair Street/John Simpson Rd.							
Fair Street	EB-T	0.58	20.4	C	0.30	16.0	B
	EB-R	0.19	2.5	A	0.26	2.9	A
Fair Street	WB-L	0.48	18.9	B	0.44	13.8	B
	WB-T	0.39	10.6	B	0.19	8.7	A
John Simpson Rd.	NB-L	0.79	28.5	C	0.49	18.9	B
	NB-R	0.63	14.8	B	0.25	9.3	A
	Overall		17.2	B		11.5	B
Fair Street/NYS Route 52							
Fair Street	WB-L	0.93	59.9	E*	0.73	36.8	D*
	WB-R	0.39	28.1	C	0.39	28.2	C
NYS Route 52	NB-T	0.80	15.0	B*	0.68	11.1	B*
	NB-R	0.40	7.4	A	0.29	6.7	A
NYS Route 52	SB-L, T	0.81	16.9	B*	0.90	23.7	C*
	Overall		21.9	C*		19.4	B
U.S. Route 6/ NYS Route 52							
U.S. Route 6	WB-L	0.54	39.1	D*	0.73	47.2	D
	WB-R	1.04	65.6	E*	1.04	66.3	E*
U.S. Route 6	NB-T	0.91	46.6	D*	0.65	28.4	C
	NB-R	0.27	22.3	C	0.31	22.6	C
NYS Route 52	SB-L	1.02	67.6	E*	1.11	88.3	F*
	SB-T	0.36	5.4	A	0.34	5.3	A
	Overall		48.1	D*		52.9	D*
Level-of-Service (see Table 3.6-4 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound. L = left, R= right, TR = through and right, (e.g. WB-L = Westbound left). * Decline in level of service from the Existing Condition.							

Table 3.6-10 No Build Condition Level of Service Summary Signalized Intersections in the Towns of Carmel and Southeast							
Intersection Road	Lane Group Approach Direction- Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
Stoneleigh/U.S. Route 6							
Stoneleigh Avenue	EB-L, T	1.15	127.4	F*	1.10	125.0	F*
Putnam Plaza	WB-L, T	1.14	129.2	F*	1.16	131.9	F*
U.S. Route 6	NB-L	0.35	39.0	D*	0.20	28.6	C
	NB-T	0.83	42.1	D*	0.61	26.5	C**
	NB-R	0.29	27.2	C	0.15	6.5	A**
U.S. Route 6	SB-L	0.88	67.4	E*	0.63	34.7	C**
	SB-T	0.94	57.3	E*	0.73	30.6	C
	SB-R	0.19	11.4	B*	0.19	12.9	B*
	Overall		78.1	E*		62.1	E*
John Simpson/U.S. Route 6							
U.S. Route 6	EB-L	0.91	81.2	F*	0.54	48.5	D*
	EB-T, R	1.02	70.9	E*	0.84	31.6	C
U.S. Route 6	WB-L	0.68	54.7	D	0.53	48.4	D*
	WB-T	1.06	84.0	F*	1.00	60.9	E*
	WB-R	0.68	31.3	C	0.37	18.7	B
John Simpson	NB-L, T, R	0.90	63.4	E*	0.74	55.3	E*
John Simpson	SB-L	0.94	83.4	F*	0.82	64.3	E*
	SB-T, R	0.32	26.9	C	0.31	33.5	C
Overall			66.6	E*		45.4	D*
U.S. Route 6/NYS Route 312							
U.S. Route 6	EB-L	1.24	146.1	F*	1.19	116.5	F*
	EB-T, R	0.31	4.4	A	0.25	4.3	A
U.S. Route 6	WB-L	0.00	22.3	C	0.00	23.5	C
	WB-T	0.94	54.8	D*	0.74	35.2	D*
	WB-R	0.45	26.5	C	0.30	26.0	C
NYS Route 312	NB-L, T, R	0.24	35.5	D	0.03	31.4	C
NYS Route 312	SB-L, T	0.82	61.8	E*	0.61	39.7	D*
	SB-R	1.08	72.3	E*	0.91	27.3	C*
Overall			75.8	E*		56.1	E*
Level-of-Service (see Table 3.6-4 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R = right, TR = through and right, (e.g. WB-L = Westbound left). * Reduction in level of service from the Existing Condition. ** Improvement in level of service from the Existing Condition.							

3.6.11 Future Site Improvements

The applicant proposes to create three access points: one from Fair Street to The Fairways, and two from US Route 6 to Gateway Summit. Two emergency access drives are also proposed, including one to Kelly Road and one between The Fairways and Gateway Summit.

No on-street parking is proposed on the new roads. The northern access point is proposed as a three-lane (two lanes in and one lane out) stop sign controlled access drive to Fair Street. The northern access point would serve The Fairways senior housing.

The northern access drive to Fair Street would include the crossing of a golf cart path on the Centennial golf course. A stop sign will be added in both directions on the golf cart path, with warning signs posted in each direction on the access drive to the senior housing. The golf cart path crossing will also be delineated with contrasting materials to further highlight this crossing for motorists and reduce the potential for collisions between golfers and future site residents. Clear sight lines would be established for golf cart users. The need for traffic management, traffic control and traffic calming measures for both the golf cart path and the access drive will be reviewed during the final design phase of the project.

The two southern access points are from U.S. Route 6. One is designed to serve the restaurant and auto dealership. The primary access is designed to serve all of the remaining non-residential uses as well as residents of Gateway Summit. The primary access point would have three lanes and would be signalized, with left turn lanes provided for entering and exiting vehicles (one lane in and two lanes out). The primary access point is on the eastern edge of the US Route 6 frontage, providing 1000 feet of spacing between it and the secondary access. This also maximizes the distance to the Old Route 6/Maple Avenue/US Route 6 traffic signal. To the extent possible, the Gateway Summit traffic light would be centered between the Maple Avenue/Old Route 6/US Route 6 and John Simpson Road/US Route 6 traffic signals

It should be noted that the instant action of subdividing this property and installing the internal roadway will not result in traffic impacts. The purpose of this traffic review is to take a broader look at existing and future traffic conditions to assist the lead agency and other agency officials (Putnam County and NYS DOT) in evaluating potential future infrastructure requirements.

Emergency Access

There are two means of emergency access proposed -- one through Kelly Road and the other between the Gateway Summit and The Fairways project sites.

Emergency access between Gateway Summit and The Fairways would benefit both sites.

3.6.12 Trip Generation and Distribution

Table 3.6-11 shows the potential mix of uses for Gateway Summit and The Fairways with associated trip generation rates based on ITE Trip Generation data. Table 3.6-12 shows the trips generated by each of the proposed project elements. Table 3.6-13 summarizes the trips generated by each of the proposed land use types.

Internal circulation between the various proposed uses is assumed to amount to 10 percent of the total trips generated, excluding trips from Lots 2, and 3, which are physically separated from the other lots. No separate internal reduction was taken for Lots 2, 3 based on the uses. Table 3.6-13 shows the breakdown of internal trips and external trips. These internal trips represent trips between The Fairways (with most of the residential units) and Gateway Summit, which contains all the proposed non-residential development. As these two portions of the development are not internally connected, these trips are assigned to the network between The Fairways and Gateway Summit principal access points. Internal use is also shown for the Gateway Summit main access driveway for internal trips between Gateway Summit residential, convenience retail, hotel, office, and recreation uses. The number of internal trips is shown as ten percent of the residential and convenience retail trips. Internal trips between the secondary access point and the primary access drive are not considered in this report.

It is assumed that a portion of existing pass-by traffic already on the roadway network would access either the commercial or public use on the project site, changing area travel patterns. Table 3.6-15 shows the trips already on the network that, upon passing by the site, would be expected to be attracted to uses on the site. Pass-by trips are assumed to be slightly under 25 percent of the total anticipated retail and recreation center traffic. These trips were assigned to the network to and from U.S. Route 6 based on existing flows. Table 3.6-16 shows the total new external non-pass-by trips.

To calculate trips generated by the proposed senior residential housing, the p.m. peak hour trip generation rate used for senior residential housing is based on the maximum rate and not the average rate. This rate is a more reasonable rate for the expected use.

The worst case traffic conditions for a weekday period would be the p.m. peak hour with commuter traffic mixing with retail traffic. Saturday retail traffic is the dominant site generated traffic.

Lot 9 is proposed to remain vacant and would therefore not generate any new traffic. No parking has been provided for the use of Lot 9.

The senior housing/assisted living units proposed on Lot 6 are each assumed to be two bedroom units with approximately 1,500 square feet. This size is larger than the assisted living quarters discussed in Trip Generation as either a single room or a small apartment style unit with a kitchenette and living space. These units are treated herein as senior housing for trip generation purposes.

The distribution of trips varies for different types of uses. Appendix J shows trip distribution based on residential use, hotel use and all other uses. The hotel use will have a broad attraction with the largest portion of trips from Interstate I-84 and US Route 6. The recreation center and convenience store would attract trips primarily from within the Town of Carmel. The residential trips would be a combination of work, shopping and recreational trips.

Figures 3.6-10 and 3.6-11 summarize the total site generated traffic.

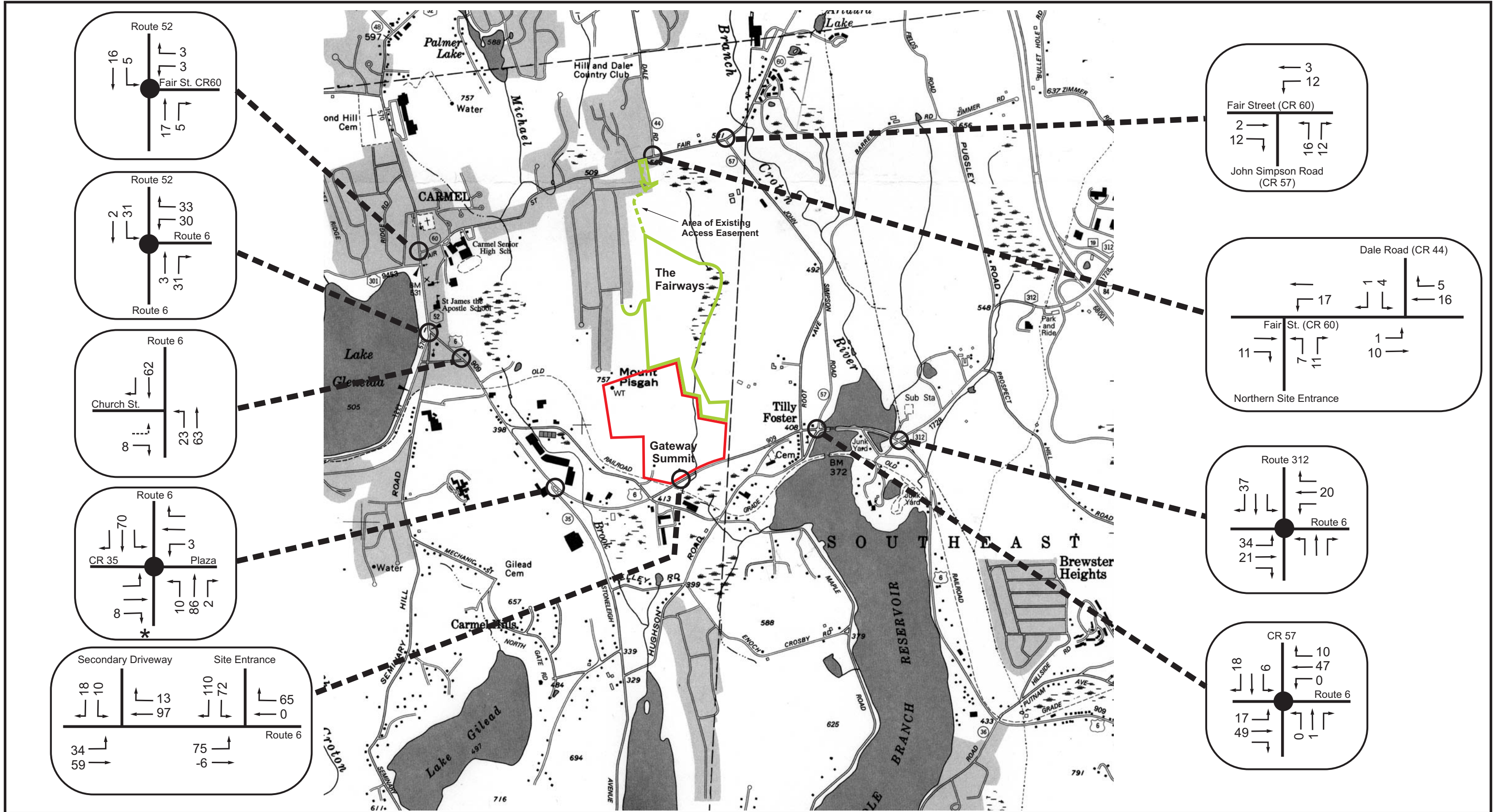
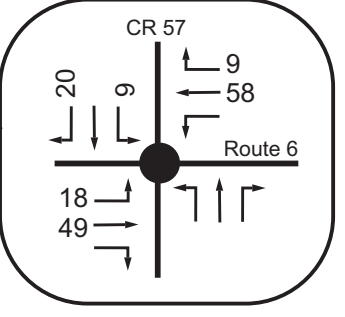
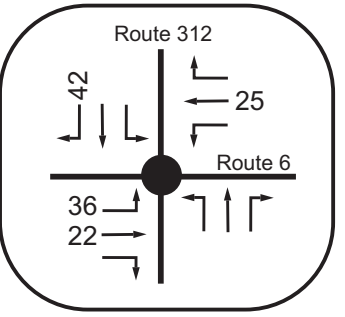
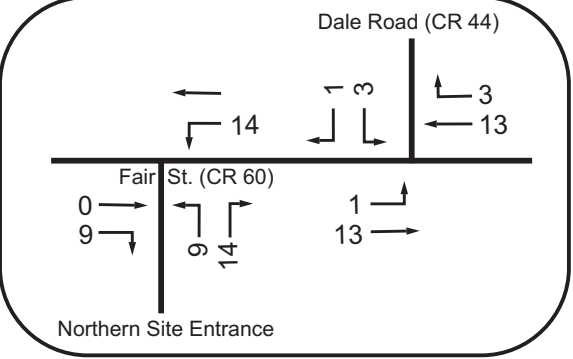
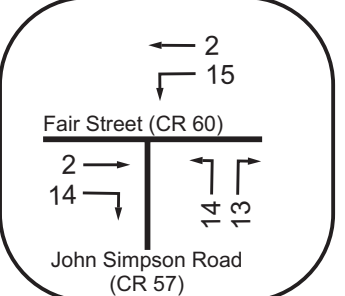
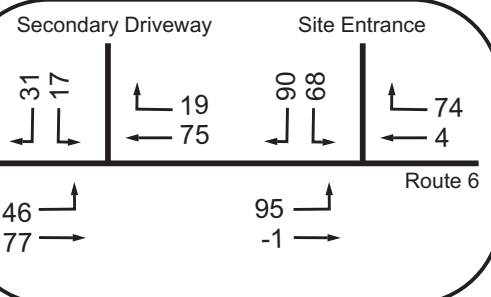
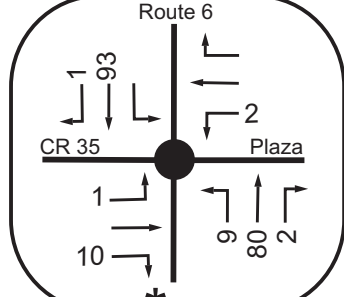
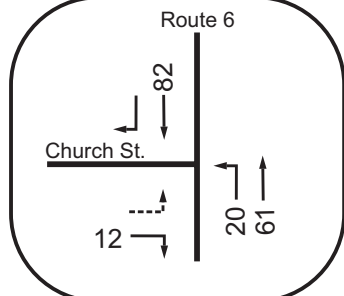
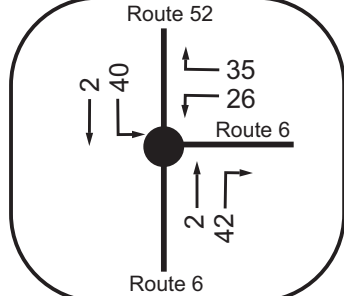
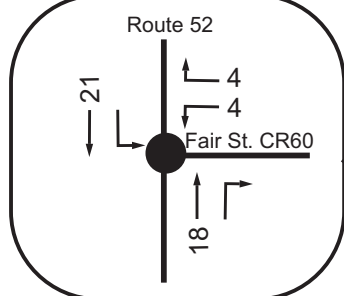
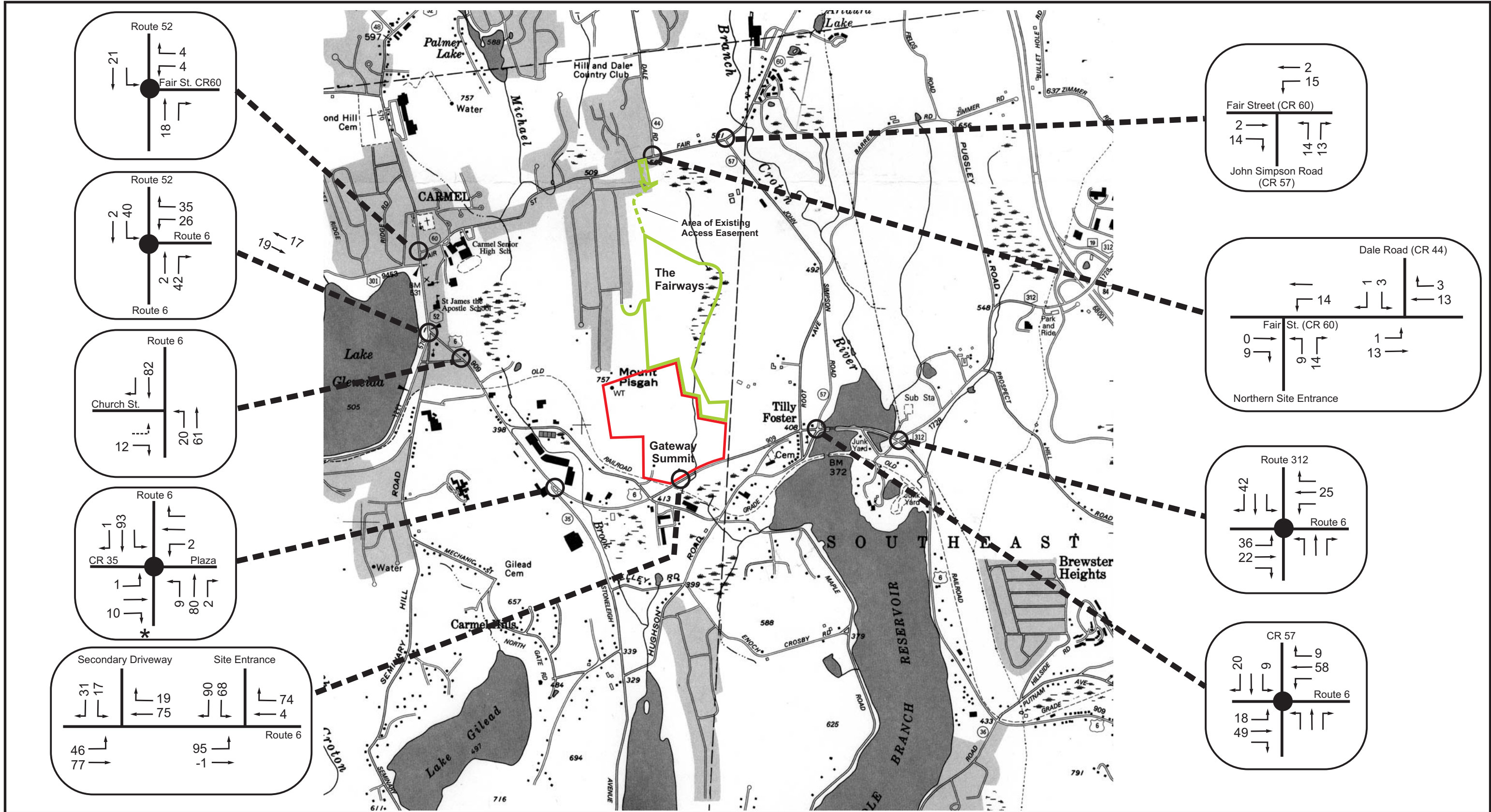


Figure 3.6-10: PM Site Generated Traffic
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
 Scale: 1" = 2000'

KEY

- Gateway Summit
- The Fairways
- Intersections Studied
- Traffic Signal Controlled
- * Stop Controlled Channel
- Illegal Left Turn



- KEY**
- Gateway Summit
 - The Fairways
 - Intersections Studied
 - Traffic Signal Controlled
 - * Stop Controlled Channel
 - Illegal Left Turn

Figure 3.6-11: Saturday Site Generated Peak Hour Traffic
Gateway Summit / The Fairways
Town of Carmel, Putnam County, New York
Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
Scale: 1" = 2000'

Table 3.6-11 Project Site Trip Generation Rate Summary							
Lot #	Land Uses and Size {ITE Code} ¹ Potential Land Uses	Trips Rates					
		A.M. Peak Hour		P.M. Peak Hour		Saturday Peak Hour	
		IN (Trips/ unit **)	OUT (Trips/ unit **)	IN (Trips/ unit **)	OUT (Trips/ unit **)	IN (Trips/ unit **)	OUT (Trips/ unit **)
Lot 1	Hotel 150 rooms, Conference Center, and Banquet Facility {310}	0.274	0.176	0.313*	0.277*	0.403	0.317
Lot 2	Quality Restaurant 7,000 square feet {931}	0.664*	0.146*	5.018*	2.472*	6.375	4.430
Lot 3	Auto Dealership 45,000 square feet {841}	1.547*	0.533*	0.927	1.451	1.515*	1.455*
Lot 4	Office 10,000 square feet {710}	2.616	0.357	0.253*	1.237*	0.309	0.263
Lot 5	Elderly Residences, 143 dwelling units {252} ***	0.122	0.149	0.189	0.121	0.150*	0.150*
Lot 6	Elderly Residences, 48 dwelling units {252} ***	0.122	0.149	0.189	0.121	0.150*	0.150*
Lot 7	Corporate/Professional Offices 7,600 square feet {710}	2.764	0.377	0.253*	1.237*	0.326	0.278
Lot 7	Convenience Store 400 square feet {851}	33.515*	33.515*	26.729*	25.681*	38.555*	38.555*
Lot 8	Recreational Community Center 68,000 square feet {495}	0.988	0.632	0.476*	1.164*	0.627*	0.653*
Lot 9	Conservation Area (Vacant)	0.000	0.000	0.000	0.000	0.000	0.000
Fairways Lot 1	Elderly Residence, Retirement Community 150 dwelling units {252}	0.122	0.149	0.189	0.121	0.150*	0.150*
* Equations rates not available, based on average rates.							
** units are based on: dwelling units for residential rooms for hotel Park for athletic fields 1,000 square feet of gross floor area for retail, restaurant, and recreational community center.							
*** Maximum rate for a.m. and p.m.							
Trip Generation, Institute of Transportation Engineers, 7th edition, Washington D.C., 2003.							

Table 3.6-12 Project Site Trip Generation Summary										
Lot #	Land Uses and Size (Potential Uses)	Trips								
		A.M. Peak Hour			P.M. Peak Hour			Saturday Peak Hour		
		IN (Trips)	OUT (Trips)	Total (Trips)	IN (Trips)	OUT (Trips)	Total (Trips)	IN (Trips)	OUT (Trips)	Total (Trips)
Lot 1	Hotel 150 rooms, Conference Center, and Banquet Facility	41	26	67	47	42	89	60	48	108
Lot 2	Quality Restaurant 7,000 square feet	5	1	6	38	17	55	45	31	76
Lot 3	Auto Dealership 45,000 square feet	68	24	92	42	65	107	68	65	133
Lot 4	Office 10,000 square feet	26	4	30	3	12	15	3	3	6
Lot 5	Elderly Residences, 143 dwelling units	17	21	38	27	17	44	21	21	42
Lot 6	Elderly Residences, 48 dwelling units	6	7	13	9	6	15	7	7	14
Lot 7	Corporate/Professional Offices 7,600 square feet	21	3	24	2	9	11	2	2	4
Lot 7	Convenience Store 400 square feet	13	13	26	11	10	21	15	15	30
Lot 8	Recreational Community Center 68,000 square feet	67	43	110	32	79	111	43	44	87
Lot 9	Conservation Area (Vacant) *	0	0	0	0	0	0	0	0	0
Fairways Lot 1	¹ Elderly Residences, 150 dwelling units	18	22	40	28	18	46	23	23	46
	Total	282	164	446	239	275	514	287	259	546
sf = gross leasable square feet.										
Trip Generation, Institute of Transportation Engineers, 7th edition, Washington D.C., 2003.										

Table 3.6-13									
Project Site Trips By Use									
Land Uses	Trips								
	A.M. Peak Hour			P.M. Peak Hour			Saturday Peak Hour		
	IN (Trips)	OUT (Trips)	Total (Trips)	IN (Trips)	OUT (Trips)	Total (Trips)	IN (Trips)	OUT (Trips)	Total (Trips)
Hotel	41	26	67	47	42	89	60	48	108
Office	47	7	54	5	21	26	5	5	10
Residential	41	50	91	64	41	105	51	51	102
Recreational	67	43	110	32	79	111	43	44	87
Retail, and Restaurant	86	38	124	91	92	183	128	111	239
Total	282	164	446	239	275	514	287	259	546

Trip Generation, Institute of Transportation Engineers, 7th edition, Washington D.C., 2003.

Table 3.6-14						
Retail Site Trips Internal and External						
Retail and community recreational trips	Trips					
	A.M. Peak Hour		P.M. Peak Hour		Saturday Peak Hour	
	IN (Trips)	OUT (Trips)	IN (Trips)	OUT (Trips)	IN (Trips)	OUT (Trips)
Gateway Summit Residential Total	23	28	36	23	28	28
Internal (10%)	2	3	4	2	3	3
Convenience Retail Total	13	13	11	10	15	15
Internal (10%)	1	1	1	1	2	2
Fairways total	18	22	28	18	23	23
* Internal (10%)	2	2	3	2	2	2

Trip Generation, Institute of Transportation Engineers, 7th edition, Washington D.C., 2003.
* Internal trips are trips between The Fairways and the main portion of Gateway Summit using the external road network.

Table 3.6-15									
Pass By Trips									
Gateway Summit	Trips								
	A.M. Peak Hour			P.M. Peak Hour			Saturday Peak Hour		
	Total (Trips)	IN (Trips)	OUT (Trips)	Total (Trips)	IN (Trips)	OUT (Trips)	Total (Trips)	IN (Trips)	OUT (Trips)
Retail and Community Recreational Primary Access									
External Total From Tables 3.6-12 and 3.6-14	136	80	56	132	43	89	117	58	59
passby (25%)	34	17	17	32	16	16	28	14	14
External non passby	102	63	39	100	27	73	89	44	45
Restaurant and Retail Secondary Access									
External Total From Tables 3.6-12 and 3.6-14	98	73	25	162	80	82	209	113	96
passby (25%)	24	12	12	40	20	20	52	26	26
External non passby	74	61	13	122	60	62	157	87	70
Trip Generation, Institute of Transportation Engineers, 7th edition, Washington D.C., 2003.									

Pass-by trips are expected to be to and from the U.S. Route 6 accesses.

In the analysis provided herein, the potential uses identified would generate 514 p.m. peak hour trips and 546 Saturday peak hour trips. These do not account for internal trips within the project area that never enter the transportation network, or trips that are already on the network passing the site that would be drawn into it. Internal trips are shown in Table 3.6-14.

Appendix J Figures show the anticipated traffic distribution. Site generated traffic associated with the proposed development is broken into three parts: the residential area, the hotel and remainder of the site. Build Condition Figures 3.6-12, and 3.6-13 show the site generated trips (Figures 3.6-10 and 3.6-11) added to the No-Build volumes (Figures 3.6-8 to 3.6-9).

Most truck traffic to the site would consist of deliveries to the individual users providing supplies and miscellaneous goods. Generally these trucks will be traveling to and from I-84 using U.S. Route 6 and NYS Route 312. However, in many cases the trucks will have other local stops at retail facilities along U.S. Route 6. Most trucks would use the primary access drive except those destined to the northern residential lots (Lot 4 and Fairways Lot 1) or the secondary access (Lots 2, 3 and 4).

School bus trips are not anticipated on site roads. Neither the hotel nor senior housing is anticipated to have school busing needs. The emergency access from Kelly Road to/from the site would be school bus negotiable in an emergency. However, such use is for the benefit of off-site adjoining residential development.

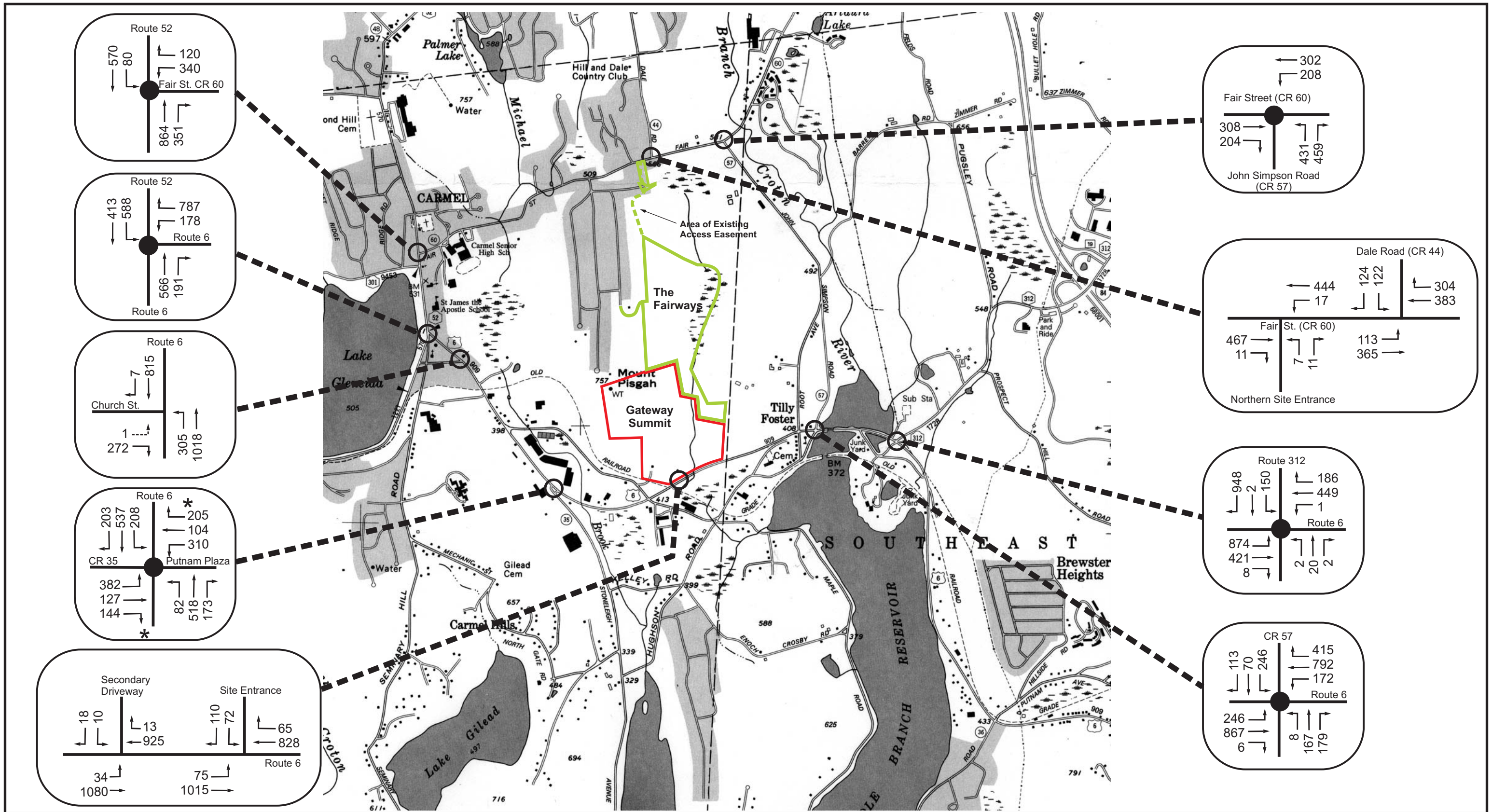
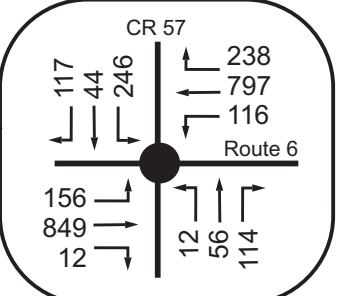
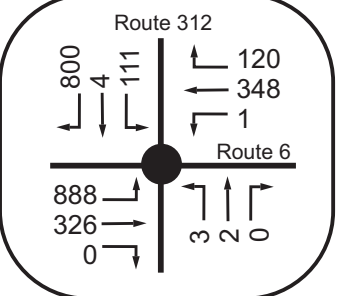
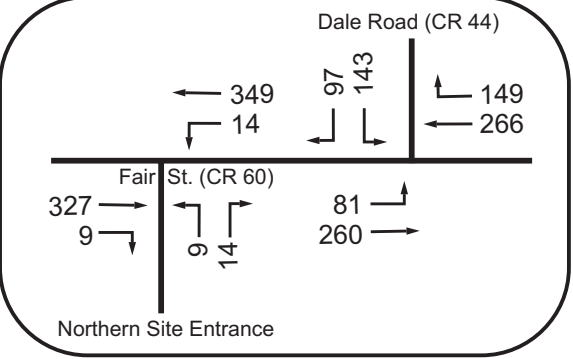
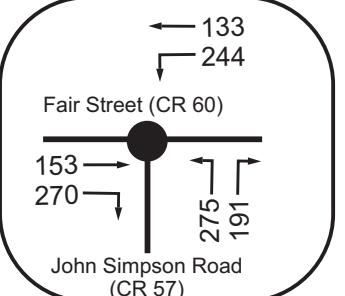
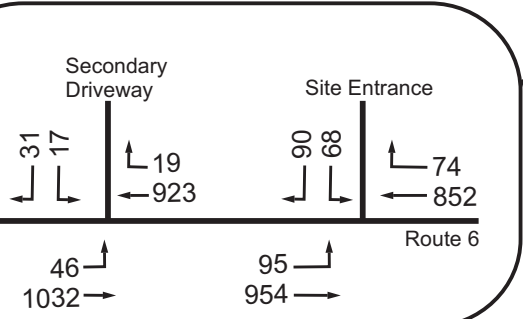
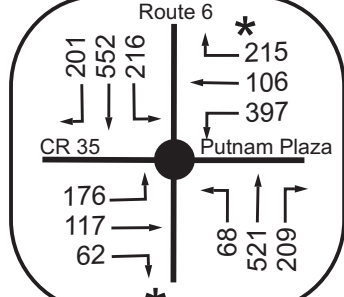
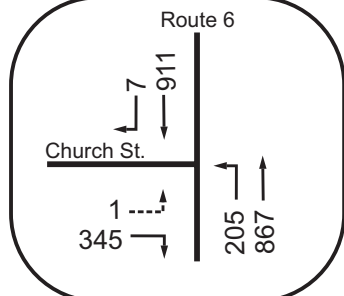
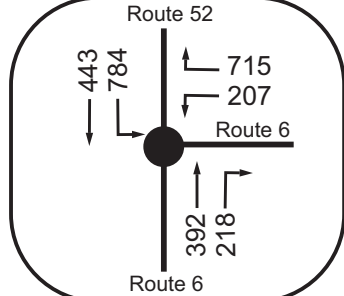
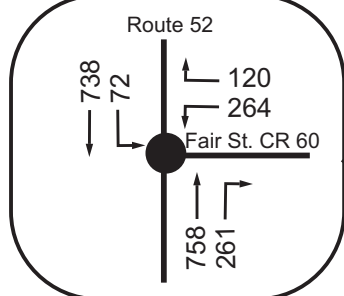
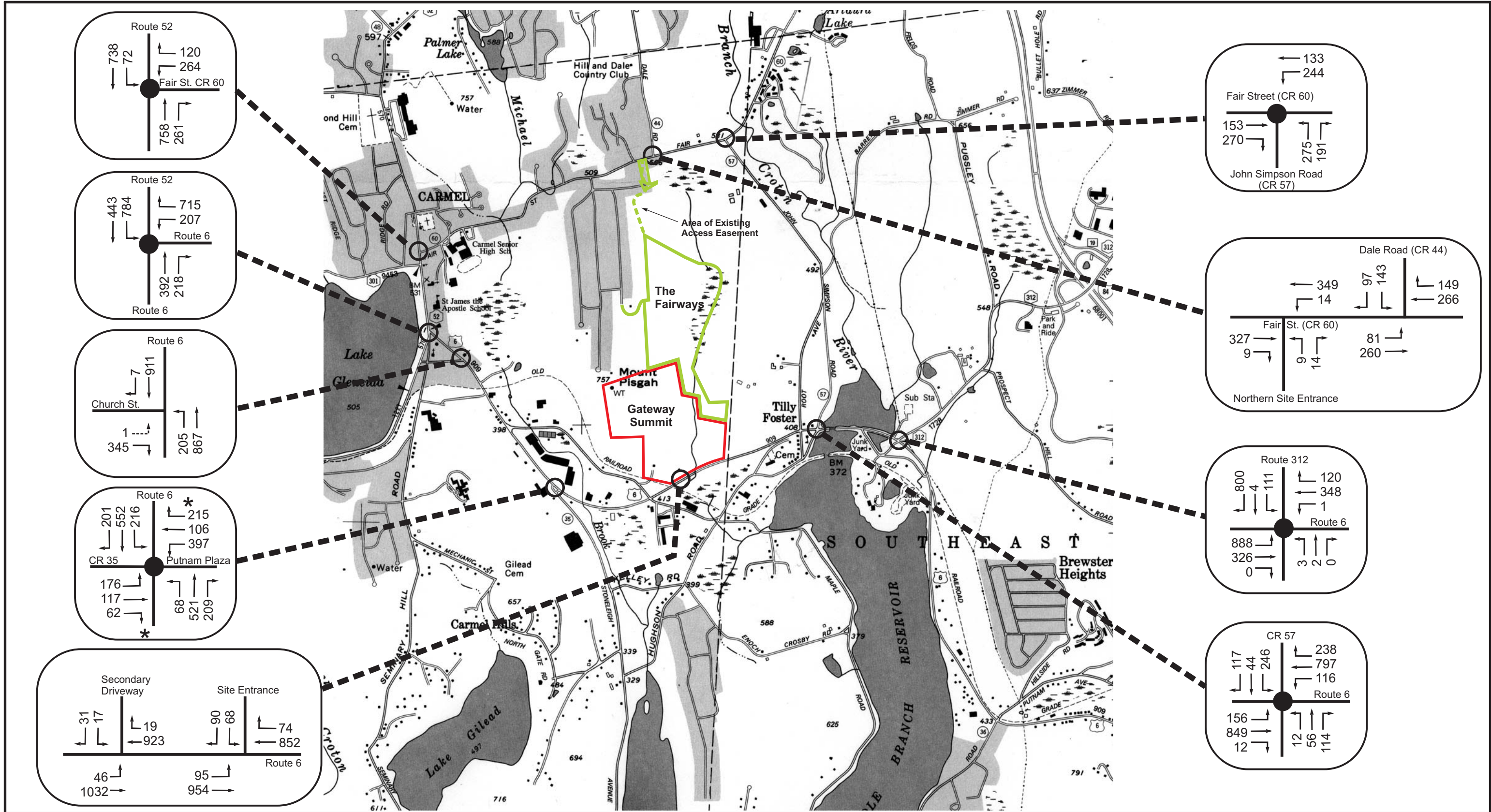


Figure 3.6-12: Build PM Peak Hour Traffic
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
 Scale: 1" = 2000'



File 02136 10/01/04



- KEY**
- Gateway Summit
 - The Fairways
 - Intersections Studied
 - Traffic Signal Controlled
 - * Stop or Yield Controlled Channel
 - Illegal Left Turn

Figure 3.6-13: Build Saturday Peak Hour Traffic
 Gateway Summit / The Fairways
 Town of Carmel, Putnam County, New York
 Base Map: NYSDOT Planimetric Map (Lake Carmel Quad)
 Scale: 1" = 2000'

3.6.13 Build Level of Service

As stated above, the instant action of subdividing the property and installing required infrastructure will not in themselves result in adverse traffic impacts. The discussion below is predicated upon the buildout of the potential uses that are identified in Chapter 2.0 of this DGEIS.

Tables 3.6-16 through 3.6-18 provide level of service summaries for the 2008 proposed Build condition (without any mitigation). If on-site land use and growth occurs as outlined herein, level of service would decline at certain intersections.

Table 3.6-16							
Build Condition Level of Service Summary							
Unsignalized Intersections							
Intersection Road	Lane Group Approach Direction-Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
Fair Street/Hill and Dale Road							
<i>Fair Street</i>	<i>EB-L, T</i>	<i>0.15</i>	<i>10.3</i>	<i>B</i>	<i>0.09</i>	<i>8.7</i>	<i>A</i>
<i>Hill and Dale Road</i>	<i>SB-L</i>	<i>0.93</i>	<i>113.5</i>	<i>F</i>	<i>0.64</i>	<i>39.4</i>	<i>E*</i>
	<i>SB-R</i>	<i>0.19</i>	<i>14.3</i>	<i>B</i>	<i>0.18</i>	<i>11.9</i>	<i>B</i>
Fair Street/Northern Site Access							
<i>Fair Street</i>	<i>WB-L, T</i>	<i>0.02</i>	<i>8.5</i>	<i>A</i>	<i>0.01</i>	<i>8.0</i>	<i>A</i>
<i>Site Access</i>	<i>NB-L, R</i>	<i>0.05</i>	<i>15.3</i>	<i>C</i>	<i>0.05</i>	<i>12.8</i>	<i>B</i>
Church Street/U.S. Route 6							
<i>U.S. Route 6</i>	<i>NB-L, T</i>	<i>0.46</i>	<i>13.8</i>	<i>B</i>	<i>0.33</i>	<i>12.8</i>	<i>B</i>
<i>Church Street (E)</i>	<i>EB-R</i>	<i>1.00</i>	<i>84.5</i>	<i>F</i>	<i>1.26</i>	<i>176.0</i>	<i>F</i>
U.S. Route 6/Secondary Site Access							
<i>U.S. Route 6</i>	<i>EB-L, T</i>	<i>0.09</i>	<i>10.7</i>	<i>B*</i>	<i>0.13</i>	<i>11.2</i>	<i>B*</i>
<i>Site Access Lot 2 and 3</i>	<i>SB-L, R</i>	<i>0.90</i>	<i>148.4</i>	<i>F*</i>	<i>1.10</i>	<i>208.4</i>	<i>F*</i>
Level-of-Service (see Table 3.6-3 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R= right, TR = through and right, (e.g. WB-L = Westbound left). ¹ Volumes set at one vehicle per movement. Unsignalized intersections are in <i>italics</i> . * Reduction in level of service from the No Build Condition.							

Table 3.6-17							
Build Condition Level of Service Summary							
Signalized Intersections in the Town of Carmel							
Intersection Road	Lane Group Approach Direction-Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds/vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds/vehicle)	Level of Service
Fair Street/ John Simpson Rd.							
Fair Street	EB-L	0.59	20.5	C	0.30	16.1	B
	EB-T	0.20	2.6	A	0.28	3.0	A
Fair Street	WB-T	0.51	19.7	B	0.48	14.4	B
	WB-R	0.39	10.6	B	0.19	8.7	A
John Simpson Rd.	NB-L	0.82	30.6	C	0.52	19.4	B
	NB-R	0.65	15.3	B	0.27	9.5	A
	Overall		17.8	B		11.8	B
Fair Street/ NYS Route 52							
Fair Street	WB-L	0.94	61.4	E	0.75	37.5	D
	WB-R	0.40	28.2	C	0.41	28.3	C
NYS Route 52	NB-T	0.82	15.9	B	0.70	11.6	B
	NB-R	0.40	7.4	A	0.29	6.7	A
NYS Route 52	SB-T	0.92	28.6	C*	0.92	27.2	C
	Overall		25.6	C		21.0	C*
U.S. Route 6/ NYS Route 52							
U.S. Route 6	WB-L	0.62	41.6	D	0.81	54.1	D
	WB-R	1.09	83.1	F*	1.10	85.4	F*
U.S. Route 6	NB-T	0.92	47.3	D	0.65	28.5	C
	NB-R	0.33	22.9	C	0.39	23.6	C
NYS Route 52	SB-L	1.09	87.2	F*	1.18	115.6	F
	SB-T	0.36	5.5	A	0.36	5.5	A
	Overall		57.9	E*		65.8	E*
U.S. Route 6 Primary Site Access							
U.S. Route 6	EB-L	0.23	4.3	A	0.28	4.6	A
	EB-T	0.91	18.4	B	0.78	10.1	B
U.S. Route 6 Primary Access	WB-TR	0.75	9.3	A	0.80	10.9	B
	SB-L	0.24	22.1	C	0.22	22.0	C
	SB-R	0.41	23.4	C	0.29	22.5	C
	Overall		14.7	B		11.0	B
Level-of-Service (see Table 3.6-4 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R= right, TR = through and right, (e.g. WB-L = Westbound left). * Reduction in level of service from the No Build Condition.							

Table 3.6-18							
Build Condition Level of Service Summary							
Signalized Intersections in the Towns of Carmel and Southeast							
Intersection Road	Lane Group Approach Direction-Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
Stoneleigh/U.S. Route 6							
Stoneleigh Avenue	EB-L, T	1.15	127.4	F	1.10	125.0	F
Putnam Plaza	WB-L, T	1.15	131.9	F	1.16	133.5	F
U.S. Route 6	NB-L	0.40	40.3	D	0.31	37.0	D*
	NB-T	1.03	80.9	F*	0.74	30.5	C
	NB- R	0.30	27.2	C	0.15	6.5	A
U.S. Route 6	SB-L	0.89	71.8	E	0.78	48.9	D*
	SB-T	1.09	99.6	F*	0.90	43.6	D*
	SB-R	0.19	11.4	B	0.19	12.9	B
	Overall		93.7	F*		65.1	E
John Simpson/U.S. Route 6							
U.S. Route 6	EB-L	0.99	100.8	F	0.62	51.0	D
	EB-T, R	1.09	93.9	F*	0.89	36.4	D*
U.S. Route 6	WB-L	0.68	54.7	D	0.53	48.4	D
	WB-T	1.13	109.2	F	1.09	87.1	F*
	WB-R	0.69	32.0	C	0.38	18.8	B
John Simpson	NB-L, T, R	0.90	63.8	E	0.74	55.5	E
John Simpson	SB-L	0.96	90.1	F	0.86	68.9	E
	SB-T, R	0.36	27.5	C	0.36	34.1	C
	Overall		81.0	F*		55.5	E*
U.S. Route 6/NYS Route 312							
U.S. Route 6	EB-L	1.30	169.9	F	1.28	156.6	F
	EB-T, R	0.33	4.5	A	0.27	4.4	A
U.S. Route 6	WB-L	0.00	22.3	C	0.00	23.5	C
	WB-T	0.98	64.9	E*	0.80	39.2	D
	WB-R	0.45	26.5	C	0.30	26.0	C
NYS Route 312	NB-L, T, R	0.24	35.5	D	0.03	31.4	C
NYS Route 312	SB-L, T	0.82	61.8	E	0.61	39.7	D
	SB-R	1.12	88.9	F*	0.96	36.4	D*
	Overall		89.1	F*		72.4	E
Level-of-Service (see Table 3.6-4 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R= right, TR = through and right, (e.g. WB-L = Westbound left). * Reduction in level of service from the No Build Condition.							

3.6.14 Public Transportation

The PART Bus Routes 1 and 3 travel close to the project site. The following routing changes should be considered to provide service to the area, especially the proposed recreation center.

PART Route 1 currently uses Hughson Road between the Office of Aging and U.S. Route 6 at John Simpson Road. PART Route 1 could potentially be routed from the Office of the Aging on Old Route 6 to the recently signalized intersection of Old Route 6/ U.S. Route 6, and then to the sites recreation center before returning to the original route on U.S. Route 6 east of John Simpson Road. The return trip would stop at the senior center before reaching the Office of the Aging.

PART Route 3, which currently travels past the site, could potentially turn into the main access roadway for the recreation center.

3.6.15 Construction Traffic

The primary constituents of construction traffic are construction vehicles arriving at the beginning of the construction period, trucks carrying excess soil off the site, and daily trips of construction workers. For the instant action, which is the subdivision of this property and construction of the proposed access roads, construction traffic would be limited to that associated with the road construction.

Construction workers typically arrive and depart the site prior to standard peak hours of traffic as would the initial construction vehicles. Trucks removing the excess materials would be arriving and leaving during the day. The number of trucks moving soil to or from the site would depend on the grading requirements of individual sites.

3.6.16 Transportation Improvements

The action of subdividing the property will not adversely impact traffic and no mitigation measures are needed. Mitigation requirements for subsequent site development are highly dependent upon the timing of such development and the proposed use associated with it. A series of potential mitigation measures are discussed below for review and consideration by the Lead Agency and officials with review and permitting authority over local, County and State transportation infrastructure.

Alternative Through Access for Future Site Residents

Allowing transponder access between the Gateway Summit and The Fairways sites for future site residents would enhance access and quality of life for these residents. In addition to the added convenience, allowing through access for site residents would also accomplish two important goals: removing some site generated traffic from Fair Street, John Simpson Road and U.S. Route 6 and other local roads to the north, and directing additional site generated traffic to U.S. Route 6 where a traffic light is proposed and is necessary from the standpoint of future hotel operators on the site. Hotel operators will see the safety improvements of a

traffic light as particularly desirable from a marketing perspective, since hotel patrons and banquet hall visitors will likely be using this access point late at night.

Under a scenario with alternative through access, residents' trips between the Gateway Summit and The Fairways sites would be reduced from about three miles to one half mile. In addition to reducing trip length, four traffic signals would be avoided for a total travel time savings of about five minutes each way. Fuel savings would be about a tenth of a gallon. For vehicles on the network, removal of these trips would result in savings of five seconds or less.

Should the hotel or recreation center have vans, special service could potentially be provided to seniors to events at these locations by allowing temporary use of the transponder access.

Primary Access/U.S. Route 6

The primary access is planned with two exiting lanes, a left turn lane into the site and a traffic signal. Coordination with the Old Route 6/US Route 6 signal should be provided to allow smoother operation of the secondary US Route 6 access.

Secondary Access

The secondary site access would operate with lengthy delays for left turning traffic out of the site when considered as an isolated intersection. The recent installation of a new signal at U.S. Route 6/ Old Route 6 and the proposed installation of a signal at the primary access should be coordinated to provide gaps for traffic exiting the secondary access point. As the left turning traffic from the secondary access (29 vehicles in the p.m. peak hour and 32 vehicles in the Saturday peak hour) are expected to be less than the number of cycles per hour at the nearby traffic signals, the gap frequency should be sufficient to expedite exiting traffic.

The ability of exiting traffic to use these gaps could be increased by providing separate left and right turn lanes exiting the site at the secondary access. Table 3.6-19 shows the level of service with separate lanes without the benefit of signal created gaps. Without considering the signal gaps, average delay for vehicles exiting the secondary access is reduced over 40 percent in the p.m. peak hour and 50 percent in the Saturday peak hour compared to the single exiting lane.

Table 3.6-19 Secondary Access with Left and Right Exiting Lanes Improvements Condition Level of Service Summary Unsignalized Intersection							
Intersection Road	Lane Group Approach Direction-Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
<i>Secondary Access/U.S. Route 6</i>							
<i>U.S. Route 6</i>	<i>EB-LT</i>	<i>0.09</i>	<i>10.7</i>	<i>B*</i>	<i>0.13</i>	<i>11.2</i>	<i>B*</i>
<i>Secondary Access</i>	<i>SB-L</i>	<i>0.72</i>	<i>217.8</i>	<i>F*</i>	<i>0.87</i>	<i>264.8</i>	<i>F*</i>
	<i>SB-R</i>	<i>0.19</i>	<i>19.9</i>	<i>C**</i>	<i>0.24</i>	<i>21.5</i>	<i>C**</i>
	<i>SB total</i>		<i>85.1</i>	<i>F*</i>		<i>101.8</i>	<i>F*</i>
Level-of-Service (see Table 3.6-3 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R = right, T, R = through and right, (e.g. WB-L = Westbound left). Unsignalized intersections are in <i>italics</i> . * Reduction in level of service from the No Build Condition. ** Improvement in level of service from the No Build Condition.							

Church Street/ U.S. Route 6

Peak hour volumes using Church Street will eventually divert to the US Route 6/ NYS Route 52 intersection where the turn onto US Route 6 can be done at a traffic signal with reduced delay. The estimated diversion was based on the delay for making right turns out of Church Street during peak hours. One hundred p.m. peak hour and 210 Saturday peak hour eastbound trips on Church Street were reassigned to the northbound U.S. Route 6 right turn at NYS Route 52 and thus become southbound through traffic upon reaching the Church Street/NYS Route 52 intersection. The U.S. Route 6 northbound right is capable of handling the traffic diversion from Church Street as this movement is made from a right turn lane that carries lower volumes than the adjacent through lane. A protected northbound right turn movement during the westbound phase on Saturday was assumed to occur as a result of the NYSDOT Route 6 corridor study. Table 3.6-20 shows the level of service based on trips shifting to the NYS Route 52/US Route 6 intersection.

Table 3.6-20 Improvements Condition Level of Service Summary Unsignalized Intersection							
Intersection Road	Lane Group Approach Direction-Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
<i>Church Street/U.S. Route 6 Traffic Diversion</i>							
<i>U.S. Route 6</i>	<i>NB-LT</i>	<i>0.51</i>	<i>15.5</i>	<i>C*</i>	<i>0.40</i>	<i>15.5</i>	<i>C*</i>
<i>Church Street (E)</i>	<i>EB-R</i>	<i>0.73</i>	<i>44.4</i>	<i>E**</i>	<i>0.67</i>	<i>49.2</i>	<i>E**</i>
Level-of-Service (see Table 3.6-3 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R = right, T, R = through and right, (e.g. WB-L = Westbound left). Unsignalized intersections are in <i>italics</i> . * Reduction in level of service from the No Build Condition. ** Improvement in level of service from the No Build Condition.							

Signalized Intersections

Signal timing changes will likely be required at all of the studied signalized intersections, since traffic volume changes necessitate the need to shift green time to intersection approaches with growing traffic flows.

The traffic mitigation discussed herein is intended to improve level of service and reduce delays as close to the no-build condition as practicable. The signalized improvements outlined do not eliminate all existing and anticipated levels of service E (delays of 55 to 80 seconds) and F (delays greater than 80 seconds). The above improvements are shown in Tables 3.6-21 and 3.6-22.

U.S. Route 6/NYS Route 52

This intersection is expected to experience minor changes as a result of the Carmel Route 52 Revitalization Project. Further changes may be suggested in the future as part of a NYS DOT corridor study. Until that time, some changes in signal timing are suggested to provide additional green time to the U.S. Route 6 westbound right turn and southbound NYS Route 52 movements and reduce green time from U.S. Route 6 westbound. Traffic from Church Street is anticipated to naturally divert to this intersection as the difficulty in turning right from Church Street onto U.S. Route 6 increases. To a lesser extent Church Street would receive more left turn traffic from U.S. Route 6 westbound. Table 3.6-21 shows the level of service with the U.S. Route 6/ NYS Route 52 intersection receiving traffic diverting away from Church Street.

Table 3.6-21 Improvements Condition Level of Service Summary US Route 6/ NYS Route 52							
Intersection Road	Lane Group Approach Direction- Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds/ vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
U.S. Route 6/ NYS Route 52 With diversion of Traffic to/from Church Street							
U.S. Route 6	WB-L	0.74	51.7	D	0.81	54.1	D
	WB-R	1.01	55.8	E	0.89	25.2	C**
U.S. Route 6	NB-T	1.03	77.0	E*	0.97	71.4	E*
	NB-R	0.56	28.7	C	0.58	19.7	D*
NYS Route 52	SB-L	0.97	53.1	D**	1.07	75.1	E**
	SB-T	0.34	4.4	A	0.36	5.5	A
	Overall		48.7	D		42.1	D
Level-of-Service (see Table 3.6-4 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R= right, TR = through and right, (e.g. WBL = Westbound left). * Worse than the No Build Condition. ** Improvement over the No Build Condition.							

Stoneleigh/U.S. Route 6/ Putnam Plaza

The stop light at the intersection of Stoneleigh/U.S. Route 6/ Putnam Plaza may need to be re-timed to reflect increases in U.S. Route 6 traffic. Some retiming was assumed as part of the addition of the right turn lane on U.S. Route 6, which was assumed to occur as a result of the NYSDOT Route 6 corridor study.

Hill & Dale/Fair Street

A traffic signal at Hill and Dale Road/ Fair Street would assist vehicles entering onto Fair Street. Table 3.6-22 shows the level of service assuming a traffic signal is provided at Fair Street/ Hill and Dale Road. This improvement could be funded as part of Fair Street improvements and by developments with direct or indirect access to either Fair Street or Hill and Dale Road.

Table 3.6-22 Improvement Condition Level of Service Summary Fair Street/Hill and Dale Road							
Intersection Road	Lane Group Approach Direction- Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds/ vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds/ vehicle)	Level of Service
Three-Way Signal Controlled Fair Street/Hill and Dale Road							
Fair Street	EB-L, T	0.64	9.6	A	0.43	6.0	A
Fair Street	WB-T, R	0.72	10.3	B	0.44	5.9	A
Hill and Dale Road	SB-L	0.47	23.8	C	0.58	25.9	C
	SB-R	0.33	22.7	C	0.43	23.5	C
	total		12.0	B		10.5	B
Level-of-Service (see Tables 3.6-3 and 3.6-4 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R = right, T, R = through and right, (e.g. WB-L = Westbound left).							

U.S. Route 6 at John Simpson Road and NYS Route 312

These intersections are in need of additional capacity as indicated by No Build levels of service. Eventually, U.S. Route 6 and NYS Route 312 may need to be widened to accommodate four lanes past the project site. As part of this effort, the project frontage should remain unencumbered to accommodate such a future widening. The bridge between Route 312 and John Simpson Road along US Route 6 has been a major impediment for any future widening of US Route 6. This bridge is currently being widened. Table 3.6-23 shows level of service changes based on retiming the U.S. Route 6/ NYS Route 312 traffic signal.

Table 3.6-23 Improvements Condition Level of Service Summary Signalized Intersections in the Town of Southeast							
Intersection Road	Lane Group Approach Direction- Movement	P.M. Weekday Peak Hour			Saturday Peak Hour		
		Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service	Volume to Capacity Ratio	Delay (seconds /vehicle)	Level of Service
John Simpson/U.S. Route 6							
U.S. Route 6	EB-L	0.92	72.7	E**	0.72	47.0	D
	EB-T, R	1.04	66.7	E	0.84	23.7	C
U.S. Route 6	WB-L	0.64	43.2	D	0.62	41.3	D
	WB-T	1.07	79.7	E**	1.03	58.4	E
	WB-R	0.66	24.4	C	0.36	12.5	B
John Simpson	NB-L, T, R	1.13	127.3	F*	0.80	50.8	D**
John Simpson	SB-L	1.11	129.9	F	0.92	69.7	E
	SB-T, R	0.41	26.5	C	0.39	27.1	C
	Overall		73.2	E		41.1	D
U.S. Route 6/NYS Route 312							
U.S. Route 6	EB-L	1.07	79.0	E**	1.08	77.2	E**
	EB-TR	0.31	3.8	A	0.25	3.4	A
U.S. Route 6	WB-L	0.00	31.6	C	0.00	32.1	C
	WB-T	1.13	124.8	F*	0.94	70.8	E*
	WB-R	0.46	34.1	C	0.26	27.4	C
NYS Route 312	NB-LTR	1.02	177.5	F*	0.13	52.3	D*
NYS Route 312	SB-TL	0.82	73.0	E	0.74	60.4	E*
	SB-R	1.01	52.4	D**	0.87	22.3	C
	Overall		66.9	E		46.9	D**
Level-of-Service (see Table 3.6-4 for level-of-service criteria). NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound L = left, R= right, TR = through and right, (e.g. WB-L = Westbound left). * Decline in Level of service from the No Build Condition. ** Improvement in level of service over the No build Condition.							

Table 3.6-24 summaries area improvements either proposed by the applicant, under construction, programmed to occur, or provided for future planning.

Table 3.6-24 Improvement Summary		
Intersection	Improvement	Implementation
Fair Street/ John Simpson Road	Signalize and add left turn lane	NYS DOT with County 2004 construction
Fair Street/ Hill and Dale Road	Signalize	Applicant as part of Fairways project to pay fair share.
Fairways Access/ Fair Street	New Access Proposed alignment as 3-way intersection,	Part of Fairways Project
Church Street/U.S. Route 6	Divert traffic to U.S. 6/NYS 52	1)This may occur naturally based on delay
U.S. Route 6/Site Access	1) New access 2) Remove Bridge over Abandoned Railroad	1) Applicant to construct as part of Gateway (Lots 2, and 3) 2) NYS DOT Project
U.S. Route 6 New Primary Access	New Construction left turn lanes and signal.	Applicant Part of Gateway Summit
NYS Route 52/ Fair Street	Pedestrian Improvements	NYSDOT project in progress
U.S. Route 6/ NYS Route 52	1) Retime to meet traffic changes 2) Eastbound Church Street Traffic shifts to U.S. Route 6/NYS 52 intersection 3) Corridor study for future improvements	1) NYS DOT as needed 2) Natural traffic shift due to delays at Church Street Eastbound 3) NYS DOT Project ongoing
Stoneleigh Avenue/ U.S. Route 6	1) Retime to meet traffic changes 2) Add northbound Route 6 right turn lane into Putnam Plaza 3) New Connection from Stoneleigh Avenue	1) NYS DOT as needed 2) Putnam Plaza funds 3) Future County Project
John Simpson/ U.S. Route 6	1) Lengthening westbound right turn lane as part of bridge reconstruction 2) retime signal	1) Under Construction 2) As needed In future no build
U.S. Route 6/ NYS Route 312	Retime to meet traffic changes	NYS DOT as needed.
Bicycle/ Pedestrian	Bicycle Parking	Applicant would provide on appropriate lots as needed. Emergency accesses would be useable as bicycle pedestrian facilities for site residents.
Emergency Access between Gateway Summit and The Fairways		Applicant would provide.
Actuated signals will self adjust within parameters set by NYS DOT.		