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Town Planner

PLANNING BOARD AGENDA
MARCH 11, 2021 – 7:00 P.M.

TAX MAP # PUB. HEARING MAP DATE COMMENTS

SITE PLAN

1. Fairhaven at Baldwin Place – Baldwin Place Rd	86.6-1-4	1/14/21	Site Plan & Sketch Plan
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March 2, 2021

Town of Carmel Planning Board
60 McAlpin Avenue
Mahopac, New York 10541

RE: Fairhaven at Baldwin Place
Baldwin Place Road and Route 6
Town of Carmel
TM# 86.6-1-4

Dear Chairman Paeprer and Members of the Board:

At the last Planning Board meeting, we were asked to provide further clarification or input on the following items which have been addressed as follows:

1. As you are aware, we provided the Putnam County Department of Planning with additional information clarifying the use and identifying the modifications made to the application in response to concerns they have raised. We have reached out to their Department to seek a follow up recommendation to be offered to your Board and will report on this at the next meeting.
2. We worked with Mr. Carnazza to identify the fire district line which bifurcates the subject property. Based on the information provided, it appears that the proposed Fairhaven site would lie within the Mahopac Falls Fire District. We are also in receipt of the comments from the Fire District, and note that the Mahopac Fire District did state at the meeting that they would provide mutual service to the facility based on their Department having a ladder truck.
3. We have reached out to the Mahopac School District Transportation Department to confirm that the district policy is to not service private roadways, but they will service the project with a bus pick up at the intersection of Baldwin Place Road and Grand Meadow Drive. Attached is a memo from our office dated March 2, 2021, and a memo from Search For Change dated February 23, 2021 addressing this issue.
4. Search For Change has provided the attached memo dated March 2, 2021 discussing local properties under their operation as requested.
5. Search For Change has prepared the attached document entitled "Fairhaven at Baldwin Place, Part of the Solution to a Pressing Problem" in support of questions relating to the project need.
6. Attached is a statement from Search For Change which further discusses the real property tax arrangement associated with the proposal. Please note the applicant does not have information relating to tax structure of market rate residential rental properties.

March 2, 2021

We believe these final clarifications provide supplemental information to go along with the extensive submittals and testimony provided to the Board. As repeatedly requested, we would ask that the Board make the referral to the Zoning Board of Appeals in order that the use issue can be discussed and settled accordingly.

Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

By: 
Jeffrey J. Contelmo, PE
Senior Principal Engineer

JJC/adt/amk

Enclosures

cc: Ashley Brody / Search for Change
Mike Newman

Insite File No. 20100.100



MEMORANDUM

TO: File
FROM: Adam Thyberg
DATE: March 2, 2021

JOB NAME: Fairhaven at Baldwin Place
JOB #: 20100.100
RE: Mahopac Schools - Transportation

I spoke with Leonor Volpe, the supervisor of transportation for the Mahopac School District. The following items were confirmed regarding district transportation policy:

- Buses will not pick up on a private road.
- When the road is dedicated to the town, there are no specific design guidelines for the road, other than the ability for the bus to turn around.
- Until such time as the proposed entry road was dedicated to the town, a pick up would be established at the entrance to the development along Baldwin Place Road.
- There is currently bus service along Baldwin Place Road at other locations.



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March 3, 2021

VIA EMAIL

Mr. Jeff Contelmo, P.E.
Insite Engineering, Surveying & Landscape Architecture, P.C.
3 Garret Place
Carmel, NY 10512

Re: Fairhaven at Baldwin Place
Town of Carmel, New York
MC Project No. 21000129A

Dear Mr. Contelmo:

We have received a copy of the layout plan for the proposed 72-unit development consisting of 36 units of workforce housing and 36 units of supportive rental housing. This development is proposed on property located within the Union Place project site with access from Baldwin Place Road (C.R. 37) via a new roadway aligning opposite Grand Meadow Drive in the Town of Carmel (see Figure No. 1).

The following tasks were undertaken to evaluate any potential traffic impacts associated with this development.

1. Existing Traffic Volumes (Figures No. 2. and 3)

Historical traffic data, including turning movement counts collected in the area between 2008 – 2016 and additional 2019 New York State Department of Transportation (NYSDOT) and other available data were utilized to establish the existing traffic volumes for the key intersections in the vicinity of the site, including Route 6 and Route 118/Baldwin Road and Baldwin Road and Grand Meadow Drive (Baldwin Park). These traffic counts reflect school bus activity including movements to and from the Pine Grove Country Day School and Parkside Pre-school. These traffic volumes are shown on Figures No. 2 and 3 for the AM and PM Peak Hours. These volumes include school bus traffic and are reflective of pre-Covid pandemic conditions.

2. 2023 Projected No-Build Traffic Volumes (Figure No. 4 and 5)

The Existing Traffic Volumes were projected to a Design Year of 2023 to account for background growth and traffic from any other development in the area. A conservative 2% per year was utilized in making these projections. The Projected Traffic Volumes are shown on Figures No. 4 and 5 for the AM and PM Peak Hours, respectively. These volumes represent future traffic volumes without the proposed project.

3. Site Generated Traffic Volumes (Table No. 1)

Estimates of the peak hour traffic generation for the site were computed utilizing information published by ITE and are summarized in Table No. 1. Note that this table and reflects the peak hour trips associated with a 72-unit multi-family development without any credits for the reductions due to the type of development proposed, which typically would have lower peak hour traffic generation.

4. Arrival/Departure Distribution (Figures No. 6 and 7)

Arrival and departure distributions were developed to assign the site traffic to the roadway network based upon a review of the existing traffic in the area. The arrival and departure distributions are shown on Figures No. 6 and 7, respectively.

5. 2023 Build Conditions Traffic Volumes (Figures No. 8 through 11)

The site generated traffic volumes shown in Table No. 1 were assigned to the roadway network based on the arrival and departure distributions referenced above. The site generated traffic volumes are shown on Figures No. 8 and 9. These volumes were added to the 2023 Projected No-Build Traffic Volumes. The resulting 2023 Build Traffic Volumes are shown on Figures No. 10 and 11 for each of the peak hours, respectively.

6. Description of Analysis Procedures

It was necessary to perform capacity analyses in order to determine existing and future traffic operating conditions at the study area intersections. The following is a brief description of the analysis method utilized in this report:

- Signalized Intersection Capacity Analysis
The capacity analysis for a signalized intersection was performed in accordance with the procedures described in the *Highway Capacity Manual, 6th Edition*, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service “A” represents the best condition and a Level of Service “F” represents the worst condition. A Level of Service “C” is generally used as a design standard while a Level of Service “D” is acceptable during peak periods. A Level of Service “E” represents an operation near capacity. In order to identify an intersection’s Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

- Unsignalized Intersection Capacity Analysis
The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the *Highway Capacity Manual, 6th Edition*. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

Additional information concerning signalized and unsignalized Levels of Service can be found in Appendix “C” of this report.

7. Results of Analysis and Recommendations (Table No. 2)

Utilizing the procedures described above, a capacity analysis was conducted at each of the intersections. Based on the analysis, the additional traffic from the development will not significantly impact traffic conditions at the area intersection and there will be no change in Levels of Service.

At the proposed entrance from Baldwin Place Road, various sight lines and related improvements were previously identified for this intersection for the build out of the total Union Place. The posted speed limit along this section of roadway is 40 MPH. The sight distance, signing and striping improvements will have to be implemented as part of this phase of development to provide adequate sight lines. Also, the “T” intersection signs on



Baldwin Place Road should be replaced with “4-way” intersection sign per the Manual on Uniform Traffic Control Devices (MUTCD). Note that with the future further development along this new roadway, additional future improvements including a turn lane on Baldwin Road may be required, however, these improvement would not be necessary for the current project since it is a relatively low traffic generating use. The access sight line improvements should be implemented, and traffic should be controlled by a stop sign on the exiting approach.

8. Summary and Conclusion

Based on the review of the site plan, the traffic generation for the site, and analysis of the existing and future conditions on the roadway, the Levels of Service will be unchanged and the access road sight distance and other access related signing and striping improvements should be implemented, including the installation of the advance “Intersection Ahead” signing on Baldwin Place Road. These should all be finalized as part of the permits required from the Putnam County Highway Department for this development.

Very truly yours,

MASER CONSULTING CONNNECTICUT, P.C.

A handwritten signature in blue ink, appearing to read 'Philip J. Grealy', is written over a light blue circular stamp.

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

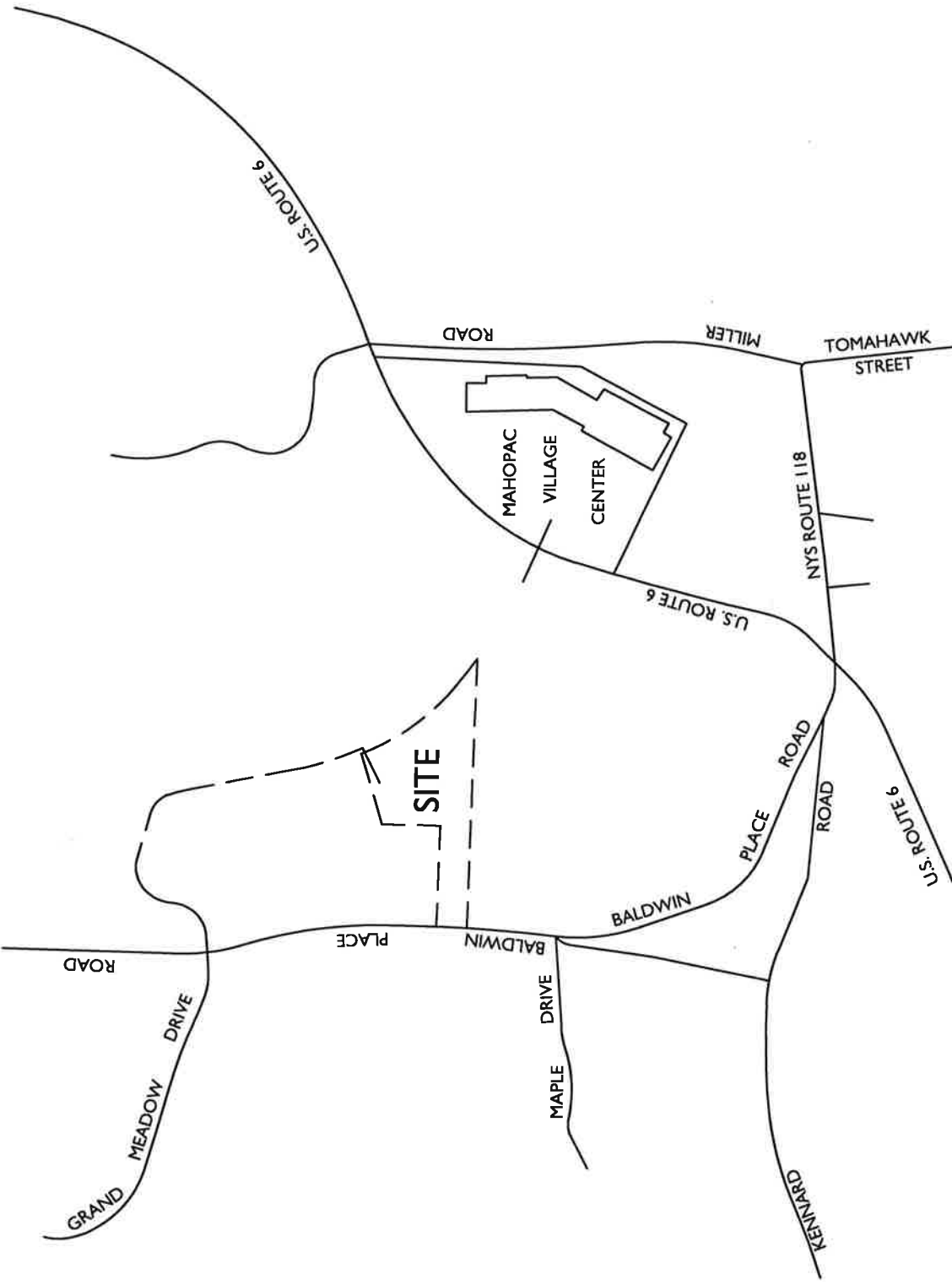
PJG/ces
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FAIRHAVEN AT BALDWIN PLACE

APPENDIX A

FIGURES



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SHEET NUMBER: 1	

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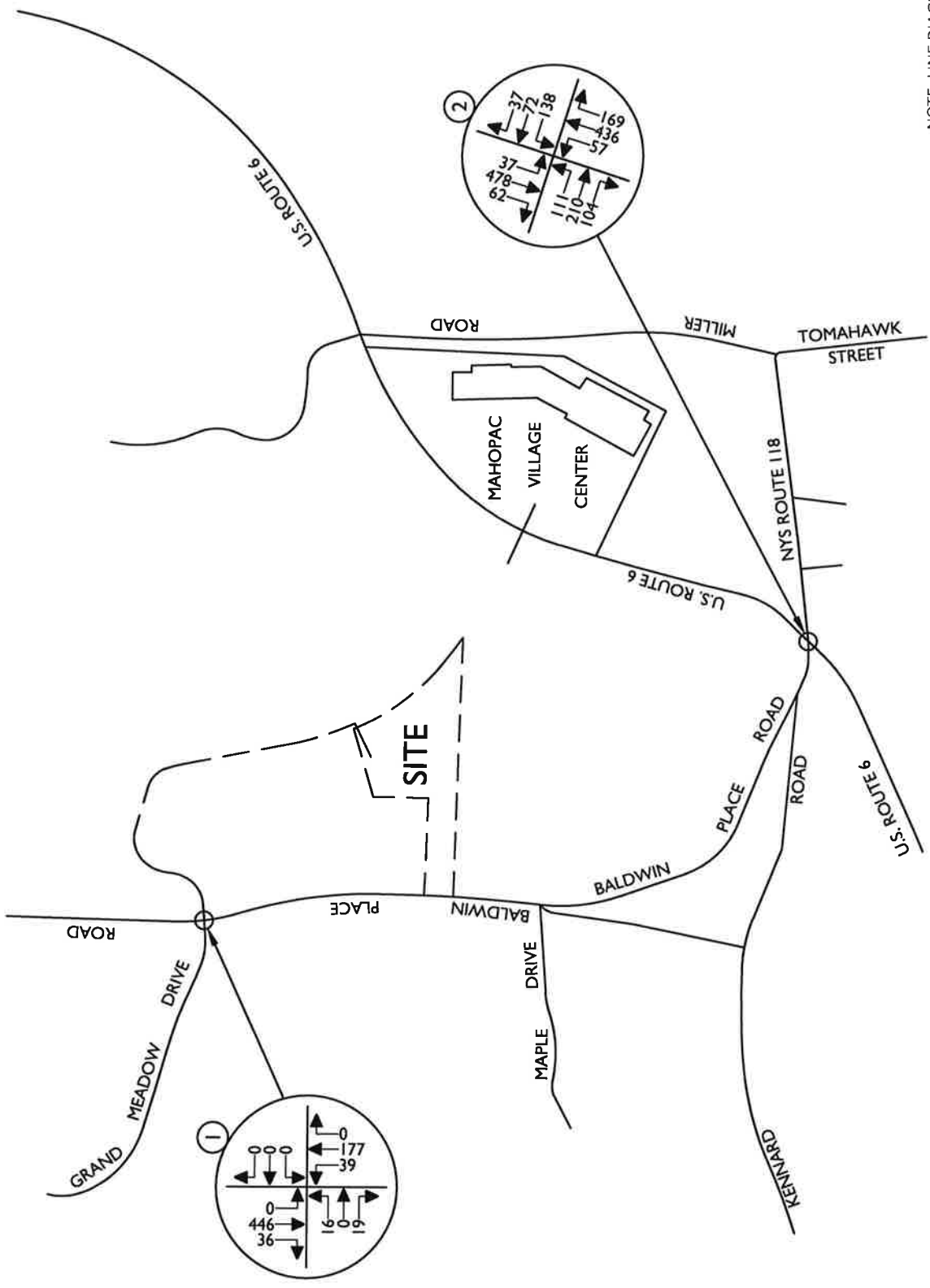
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SHEET TITLE: 2021 EXISTING TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR

SHEET NUMBER: 2

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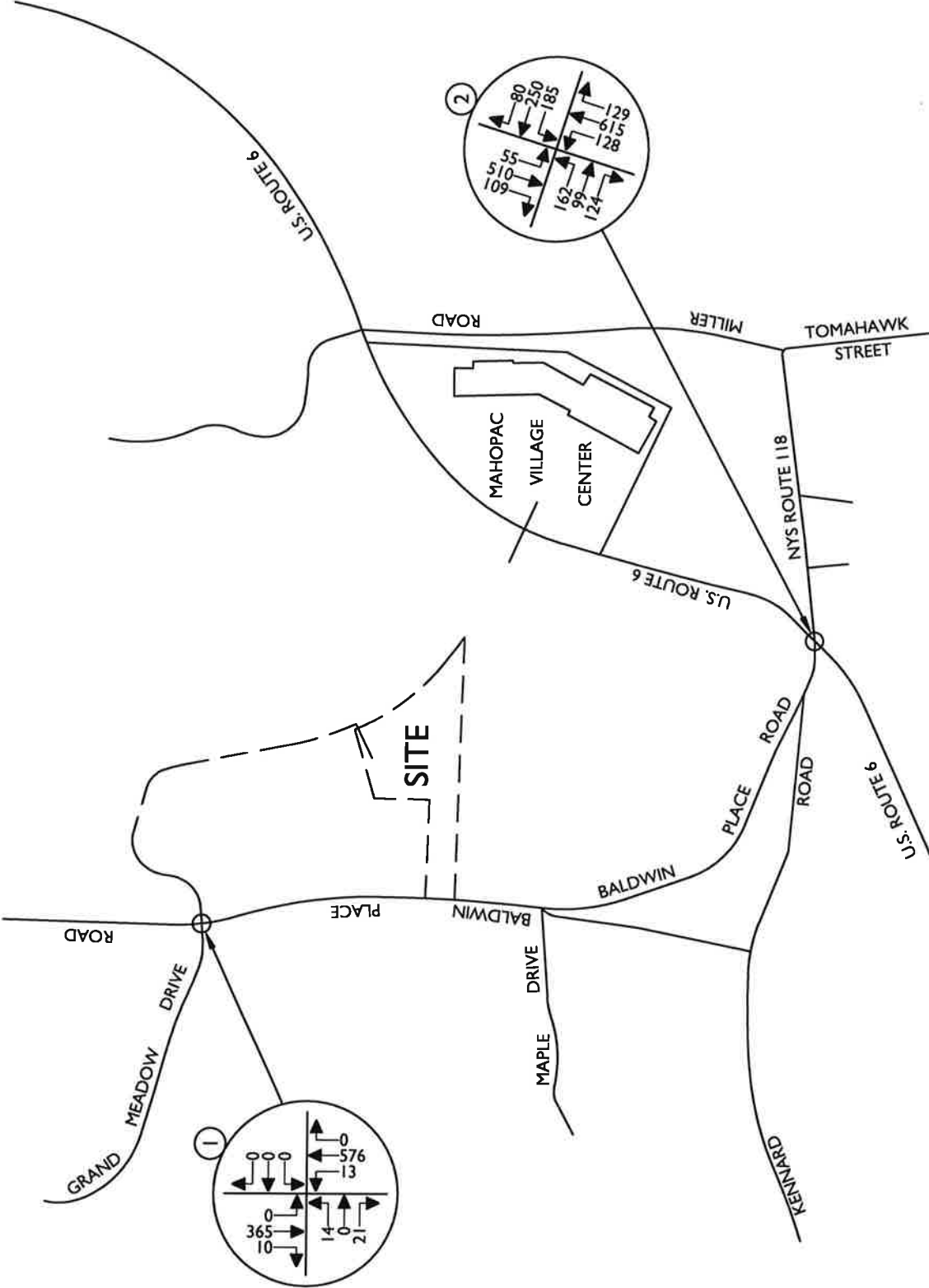
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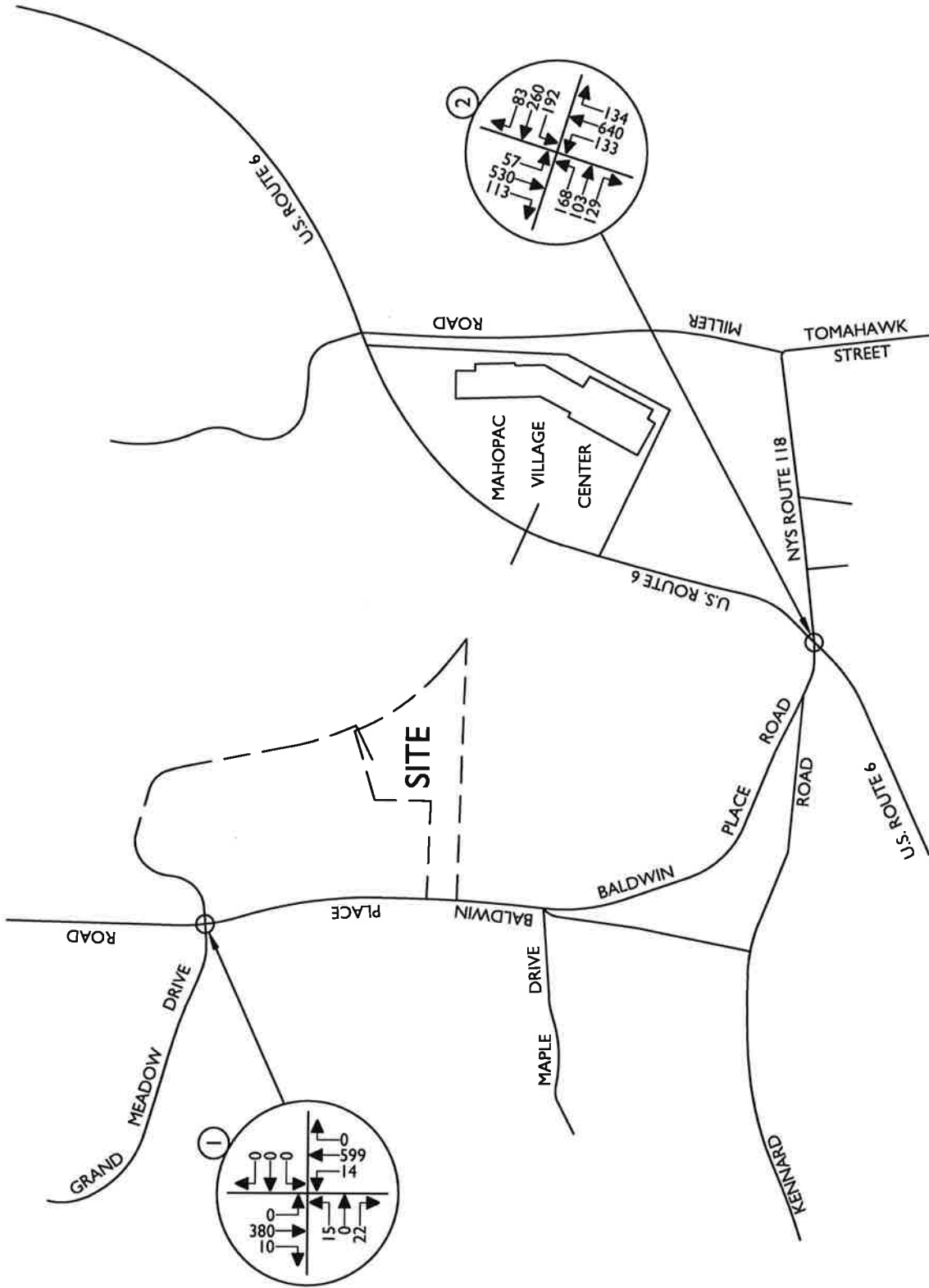
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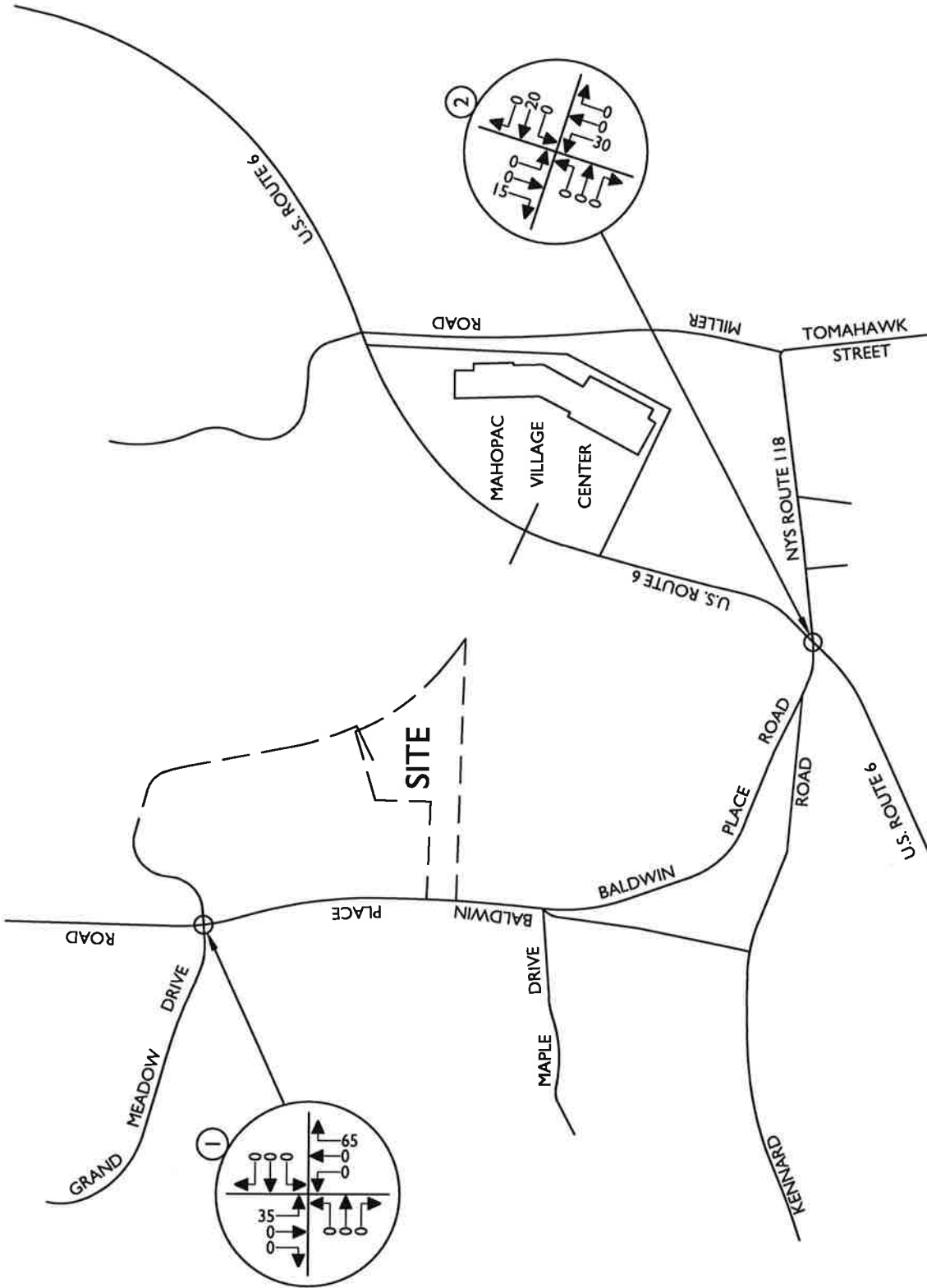
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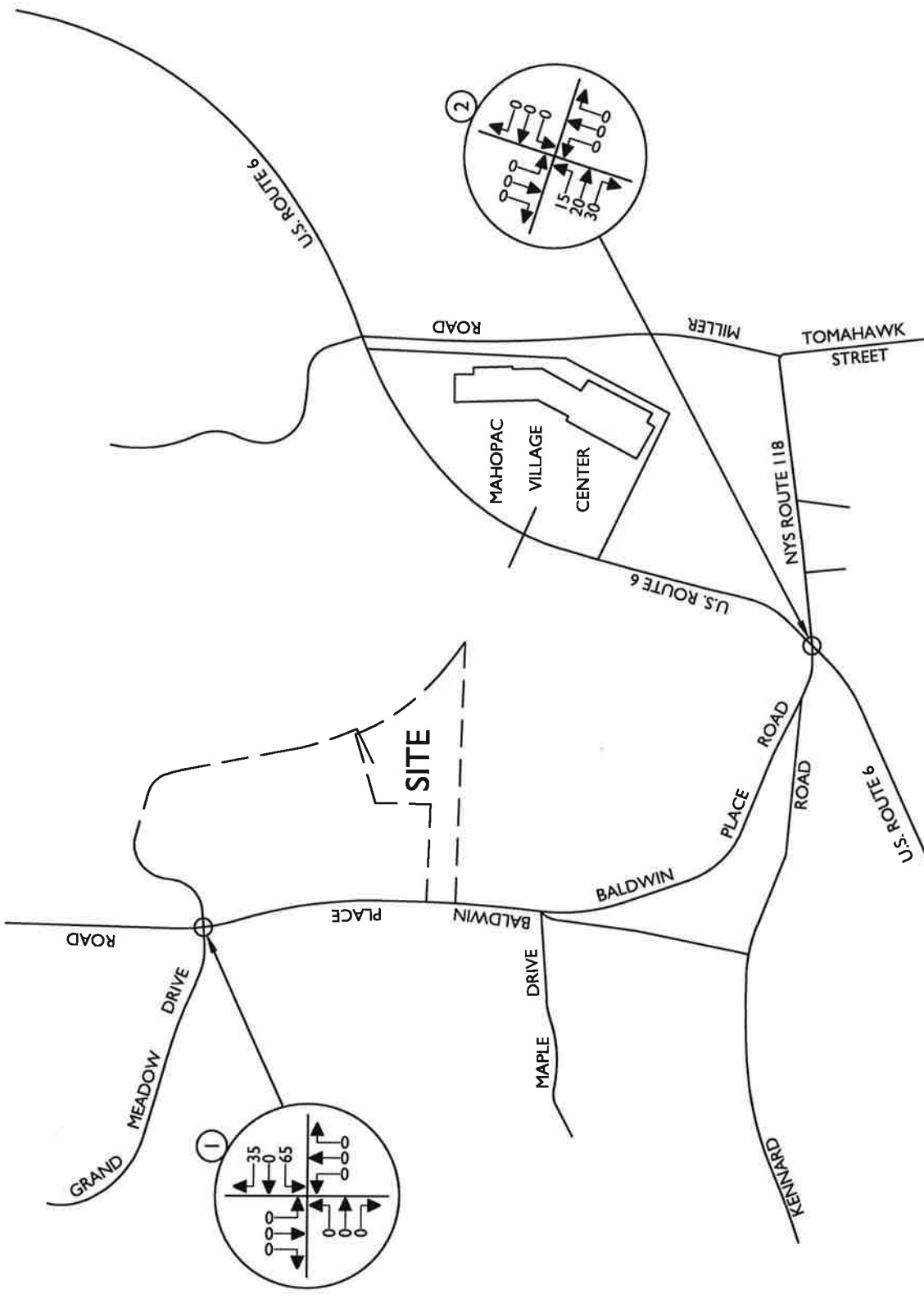
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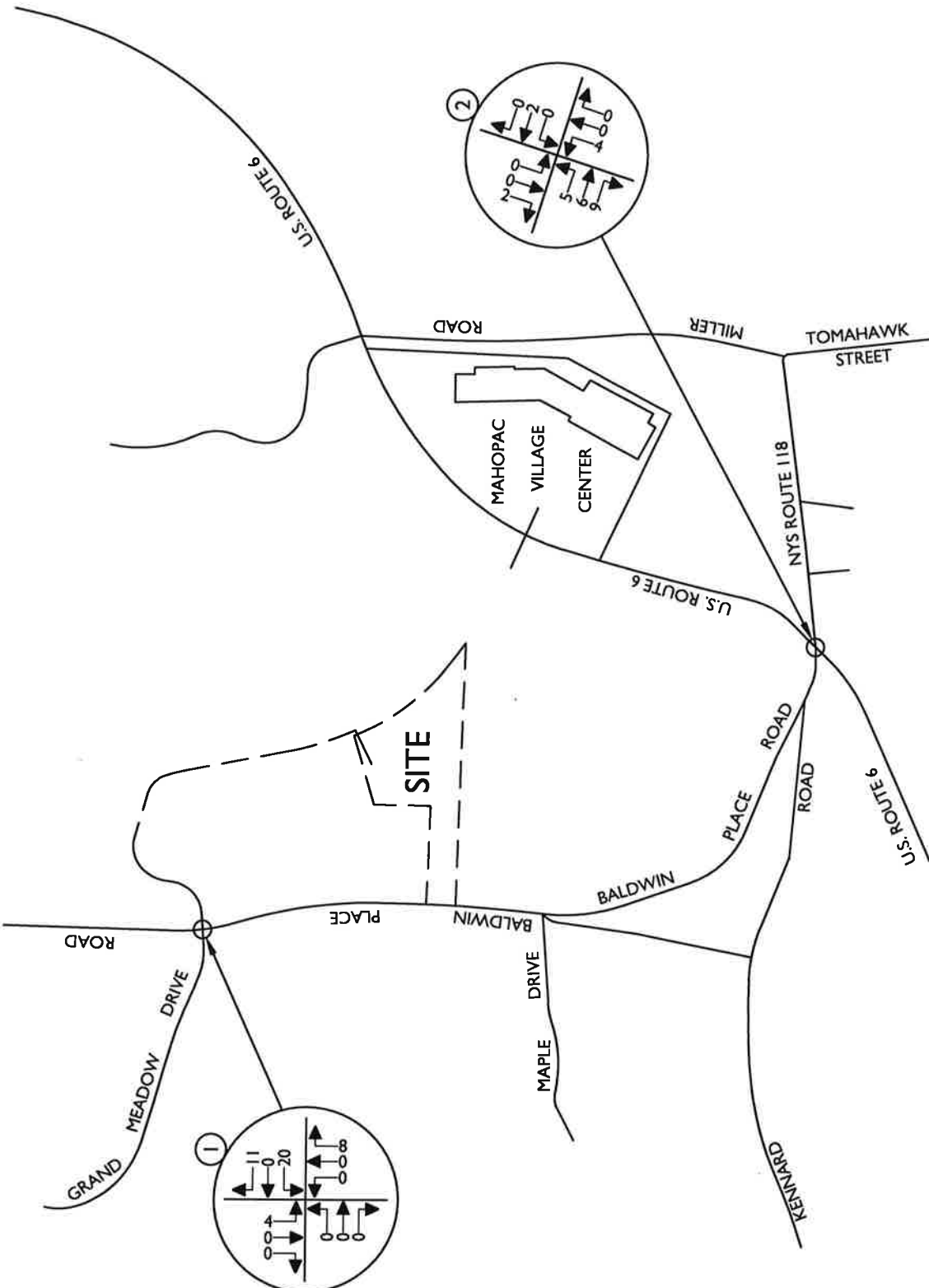
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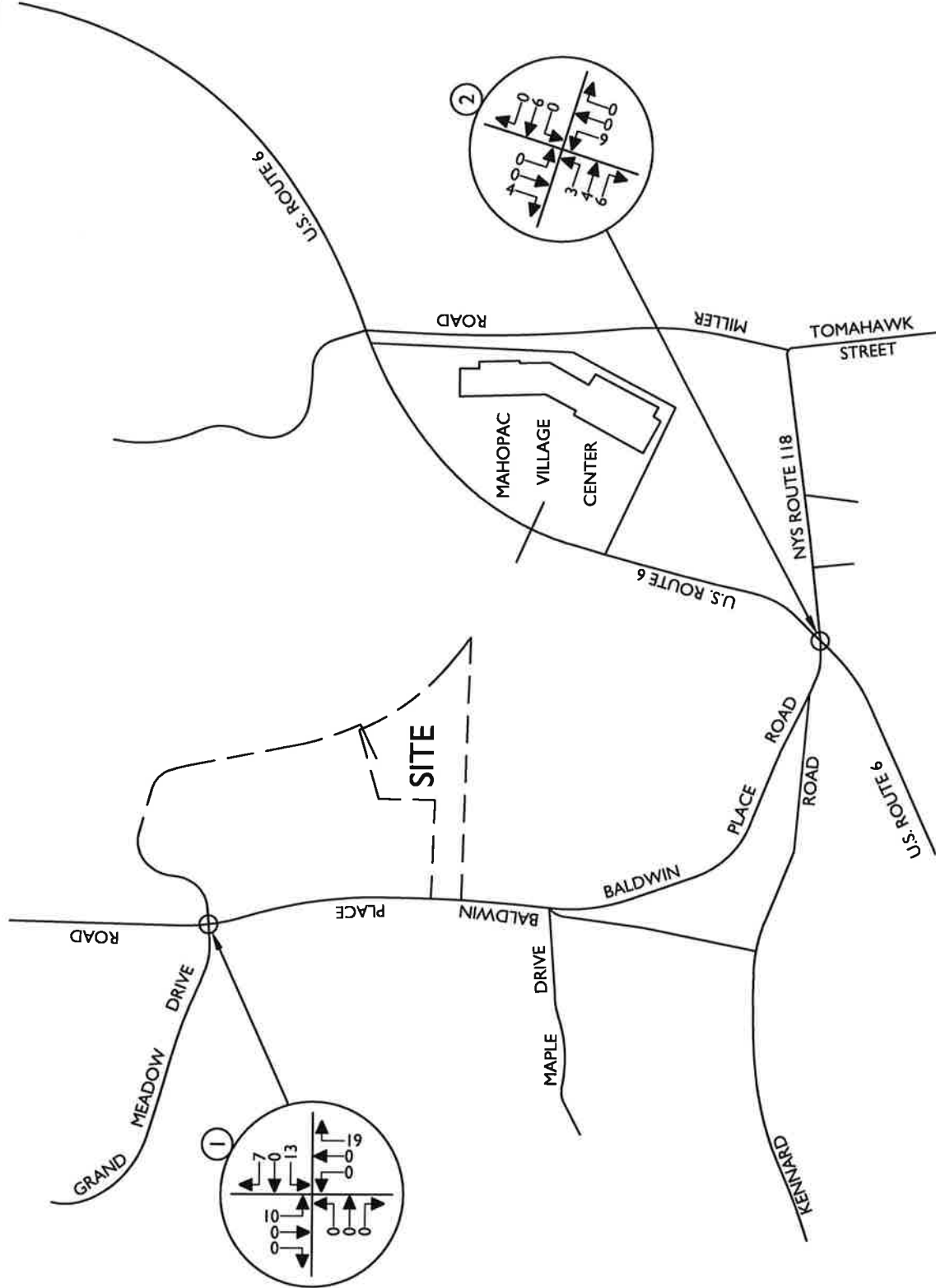
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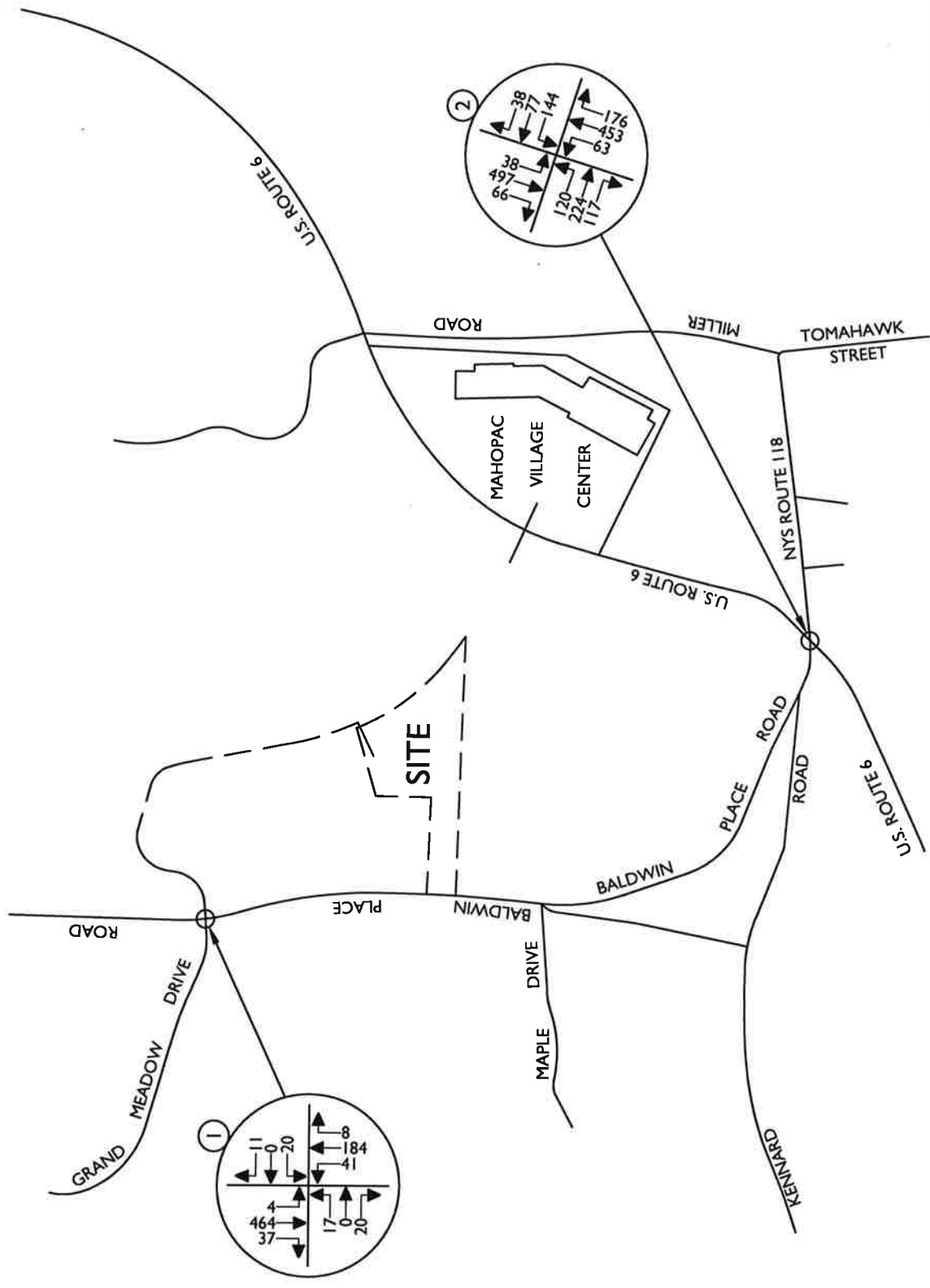
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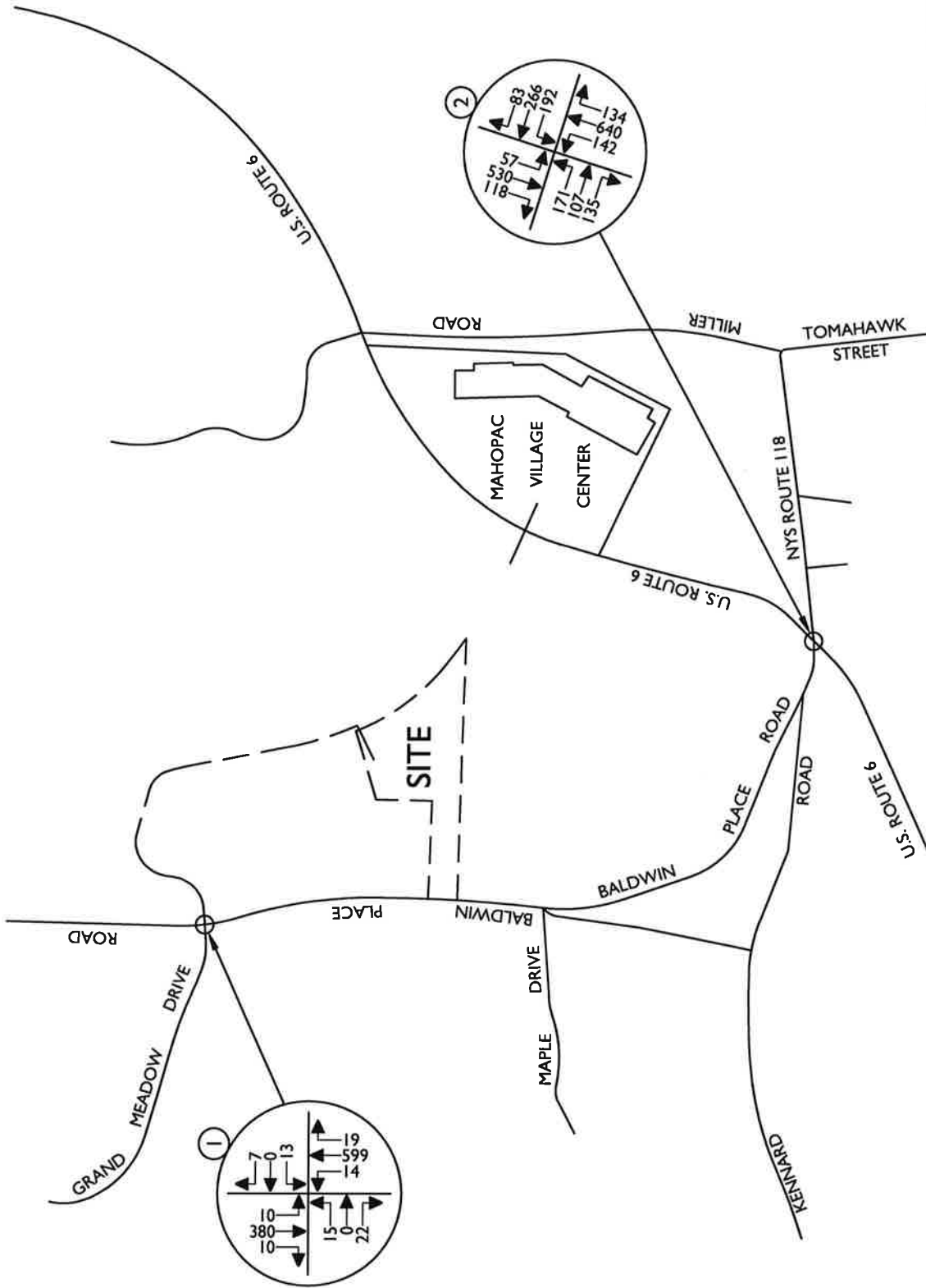
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NOTE: LINE DIAGRAM NOT TO SCALE

TRAFFIC IMPACT STUDY			
SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	2/26/21	R.H.	P.L.G.
PROJECT NUMBER	DRAWING NAME	SHEET TITLE	
21000129A	210226RH.FIGURE	2023 BUILD TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR	
SHEET NUMBER			11

811

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**FAIRHAVEN AT
BALDWIN PLACE**

TOWN OF CARMEL
PUTNAM COUNTY
NEW YORK

REV	DATE	DRAWN BY	DESCRIPTION

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FAIRHAVEN AT BALDWIN PLACE

APPENDIX B

TABLES

TABLE NO. 1

**HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED
SITE GENERATED TRAFFIC VOLUMES**

	ENTRY		EXIT	
	HTGR ¹	VOLUME	HTGR ¹	VOLUME
FAIRHAVEN AT BALDWIN PLACE TOWN OF CARMEL, NEW YORK				
MULTI-FAMILY RESIDENTIAL (72 UNITS)				
PEAK AM HOUR	0.17	12	0.42	30
PEAK PM HOUR	0.40	29	0.28	20

NOTES:

1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 10TH EDITION, 2017. ITE LAND USE CODE - 220 - MULTI-FAMILY.

TABLE NO. 2 AM

LEVEL OF SERVICE SUMMARY TABLE

	AM	2021 EXISTING				2023 NO-BUILD				2023 BUILD				CHANGE IN DELAY NO-BUILD TO BUILD
		V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	
1	UN SIGNALIZED													
	BALDWIN PLACE ROAD & GRAND MEADOW DRIVE/ SITE ACCESS													
	EB	LR	0.12	C	17.4	0.14	C	18.3	-	-	-	-	-	-
	NB	LT	0.05	A	8.9	0.05	A	9.0	-	-	-	-	-	-
	EB	LTR	-	-	-	-	-	-	0.16	C	20.7	-	-	-
	WB	LTR	-	-	-	-	-	-	0.12	C	18.4	-	-	-
	NB	LTR	-	-	-	-	-	-	0.05	A	9.0	-	-	-
	SB	LTR	-	-	-	-	-	-	0.00	A	7.7	-	-	-
2	SIGNALIZED													
	U.S. ROUTE 6 & NYS ROUTE 118/ BALDWIN PLACE ROAD													
	EB	L	0.48	E	56.2	0.48	E	55.8	0.49	E	55.4	-0.4	-	-
		LT	0.87	E	62.5	0.87	E	62.1	0.87	E	62.7	0.6	-	-
		R	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.0	-	-
	EB OVERALL		-	E	60.3	-	E	59.9	-	E	60.2	0.3	-	-
	WB	L	0.83	E	65.9	0.83	E	65.7	0.83	E	65.6	-0.1	-	-
		T	0.41	E	60.1	0.41	E	59.7	0.42	E	59.7	0.0	-	-
		R	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.0	-	-
	WB OVERALL		-	E	63.9	-	E	63.6	-	E	63.6	0.0	-	-
	NB	L	0.16	B	14.6	0.17	B	15.5	0.18	B	15.9	0.4	-	-
		T	0.37	B	17.6	0.39	B	18.6	0.40	B	19.0	0.4	-	-
		TR	0.38	B	17.7	0.40	B	18.7	0.40	B	19.1	0.4	-	-
	NB OVERALL		-	B	17.4	-	B	18.4	-	B	18.7	0.3	-	-
	SB	L	0.08	B	13.0	0.09	B	13.7	0.09	B	14.0	0.3	-	-
		TR	0.52	C	20.5	0.55	C	21.8	0.56	C	22.5	0.7	-	-
	SB OVERALL		-	B	20.0	-	C	21.3	-	C	21.9	0.6	-	-
	OVERALL		-	C	31.5	-	C	32.3	-	C	32.8	0.5	-	-

NOTES:

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

TABLE NO. 2 PM

LEVEL OF SERVICE SUMMARY TABLE

	PM	2021 EXISTING			2023 NO-BUILD			2023 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD	
		V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY		
1	UN SIGNALIZED BALDWIN PLACE ROAD & GRAND MEADOW DRIVE/ SITE ACCESS											
		EB	LR	18.7	0.15	C	20.1	-	-	-	-	
		NB	LT	8.2	0.01	A	8.3	-	-	-	-	
		EB	LTR	-	-	-	-	0.18	C	24.8	-	
		WB	LTR	-	-	-	-	0.11	C	24.7	-	
		NB	LTR	-	-	-	-	0.01	A	8.3	-	
		SB	LTR	-	-	-	-	0.01	A	9.0	-	
		SIGNALIZED										
		U.S. ROUTE 6 & NYS ROUTE 118/ BALDWIN PLACE ROAD										
		EB	L	0.78	E	64.5	0.78	E	64.2	0.79	E	64.1
	LT	0.82	E	65.2	0.82	E	65.0	0.82	E	64.8	-0.2	
	R	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.0	
EB OVERALL												
WB	L	0.69	E	57.9	0.69	E	57.8	0.68	E	57.3	-0.1	
	T	0.88	E	72.7	0.89	E	74.0	0.89	E	74.7	-0.5	
	R	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.0	
WB OVERALL												
NB	L	0.40	B	19.3	0.45	C	21.0	0.49	C	22.0	1.0	
	T	0.47	C	21.2	0.50	C	22.6	0.50	C	23.1	0.5	
	TR	0.47	C	21.2	0.50	C	22.6	0.50	C	23.1	0.5	
NB OVERALL												
SB	L	0.14	B	16.0	0.16	B	17.0	0.16	B	17.5	0.5	
	TR	0.65	C	27.6	0.69	C	30.0	0.71	C	31.4	1.4	
SB OVERALL												
OVERALL												
		-	D	26.7	-	C	29.0	-	C	30.3	1.3	
		-	D	36.8	-	D	38.1	-	D	38.8	0.7	
2												

NOTES:

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

Station	Func. Class	End Point	Mile Section Length	Road Name	Beginning Description	Region	End Description	2019 Estimate		Previous Counts					
								ADT	% Trucks	YEAR	ADT	YEAR	ADT	YEAR	
84_2038	16	0436	0436	County 079 Putnam STONELEIGH AVE	WESTCHESTER CO	08	US 6	5870	2.7	2019	5870	2015	5754	2009	5109
84_6004	17	0277	0277	County 079 Putnam DREWVILLE RD	US 6	08	CR 35	4851	2	2015	4860	2012	5407	2009	2942
84_6040	17	0504	0227	County 079 Putnam DREWVILLE RD	CR 35	08	US 6	2584	2	2015	2589	2012	2764	2009	2827
84_2001	17	0217	0217	County 079 Putnam BALDWIN PL RD	US 6	08	NY 6N	9203	2.8	2019	9203	2009	6508		
84_6012	19	0200	0200	County 079 Putnam W SHORE DR	CROTON FALLS R	08	DREWVILLE RD	1822	1.9	2017	1831	2013	1610		
84_8004	17	0044	0044	County 079 Putnam GIPSY TRAIL RD	NY 301	08	KENT T/L	702	3.6	2016	703	2013	926		
84_2016	7	0596	0596	County 079 Putnam FARMERS MILLS R	NY 301	08	NY 52	1746	5.1	2015	1756	2009	1378		
84_8012	17	0038	0038	County 079 Putnam LUDINGTONVILLE	SR 311	08	KENT T/L	972	6.3	2017	973	2010	908		
84_2025	17	0332	0294	County 079 Putnam LUDINGTONVILLE	KENT T/L	08	I-84 N OVERPASS	715	3.6	2016	716	2013	642	2005	877
84_6038	16	0346	0014	County 079 Putnam LUDINGTONVILLE	I-84 N OVERPASS	08	NY 52	9419	8.7	2015	9473	2009	18566		
84_8005	17	0043	0043	County 079 Putnam HILL & DALE RD	FAIR ST	08	KENT T/L	3981	3.6	2017	3985	2013	3883		
84_2019	17	0102	0059	County 079 Putnam HILL & DALE RD	KENT T/L	08	TOWNERS RD	3066	2.9	2019	3066	2015	3446	2009	4099
84_8011	17	0048	0048	County 079 Putnam TOWNERS RD	NY 52	08	HILL DALE RD	3372	4.8	2019	3372	2015	3572	2013	3461
84_6039	17	0158	0110	County 079 Putnam TOWNERS RD	HILL DALE RD	08	FAIR ST	1477	4.6	2015	1480	2009	1597		
84_2016	7	0596	0596	County 079 Putnam FARMERS MILLS R	NY 301	08	NY 52	1746	5.1	2015	1756	2009	1378		



FAIRHAVEN AT BALDWIN PLACE

APPENDIX C

LEVEL OF SERVICE STANDARDS

LEVEL OF SERVICE STANDARDS

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

LOS A describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate.

LOS D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long.



LOS E describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long.

LOS F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long.

A lane group can incur a delay less than 80 s/veh when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

The Level of Service Criteria for signalized intersections are given in Exhibit 19-8 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 19-8

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10-20	B	F
> 20-35	C	F
> 35-55	D	F
> 55-80	E	F
> 80	F	F

For approach-based and intersection wide assessments, LOS is defined solely by control delay.



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

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

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

Exhibit 20-2

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

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

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

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



LEVEL OF SERVICE CRITERIA

FOR ALL-WAY STOP-CONTROLLED (AWSC) UNSIGNALIZED INTERSECTIONS

The Levels of Service (LOS) for all-way stop-controlled (AWSC) intersections are given in Exhibit 21-8. As the exhibit notes, LOS F is assigned if the volume-to-capacity (v/c) ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

The Level of Service Criteria for AWSC unsignalized intersections are given in Exhibit 21-8 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 21-8

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

For approaches and intersection wide assessment, LOS is defined solely by control delay.



FAIRHAVEN AT BALDWIN PLACE

APPENDIX D

CAPACITY ANALYSIS

2021 Existing Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive

Peak AM Hour
 03/02/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	19	39	177	446	36
Future Volume (vph)	16	19	39	177	446	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12
Grade (%)	5%			-7%	8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.928				0.990	
Flt Protected	0.977			0.991		
Satd. Flow (prot)	1479	0	0	1837	1647	0
Flt Permitted	0.977			0.991		
Satd. Flow (perm)	1479	0	0	1837	1647	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	486			364	421	
Travel Time (s)	11.0			6.2	7.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	5%	21%	8%	10%	10%	5%
Adj. Flow (vph)	19	22	46	208	525	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	0	254	567	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.96	0.92	1.05	1.05
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

2021 Existing Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive

Peak AM Hour
 03/02/2021

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	16	19	39	177	446	36
Future Vol, veh/h	16	19	39	177	446	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	- None		- None		- None	
Storage Length	0	-	-	-	-	-
Veh in Median Storage#	-	-	0	0	-	-
Grade, %	5	-	-	-7	8	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	21	8	10	10	5
Mvmt Flow	19	22	46	208	525	42

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	846	546	567	0	-	0
Stage 1	546	-	-	-	-	-
Stage 2	300	-	-	-	-	-
Critical Hdwy	7.45	6.91	4.18	-	-	-
Critical Hdwy Stg 1	6.45	-	-	-	-	-
Critical Hdwy Stg 2	6.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.489	2.272	-	-	-
Pot Cap-1 Maneuve	260	466	976	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuve	246	466	976	-	-	-
Mov Cap-2 Maneuve	246	-	-	-	-	-
Stage 1	468	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.4	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	976	-	331	-	-
HCM Lane V/C Ratio	0.047	-	0.124	-	-
HCM Control Delay (s)	8.9	0	17.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

2021 Existing Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

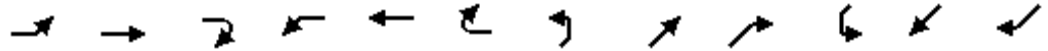
Peak AM Hour
 03/02/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	111	210	104	138	72	37	57	436	169	37	478	62
Future Volume (vph)	111	210	104	138	72	37	57	436	169	37	478	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	12	12	11	12	12	12	12	12	12
Grade (%)		2%			-1%			6%				-4%
Storage Length (ft)	140		110	150		230	125		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.958			0.983	
Flt Protected	0.950	0.997		0.950			0.950			0.950		
Satd. Flow (prot)	1553	1630	1515	1778	1872	1538	1717	3198	0	1805	1805	0
Flt Permitted	0.950	0.997		0.950			0.275			0.357		
Satd. Flow (perm)	1553	1630	1515	1778	1872	1538	497	3198	0	678	1805	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117			117		41				5
Link Speed (mph)		30			30			30				30
Link Distance (ft)		602			604			687				720
Travel Time (s)		13.7			13.7			15.6				16.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	6%	2%
Adj. Flow (vph)	117	221	109	145	76	39	60	459	178	39	503	65
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	105	233	109	145	76	39	60	637	0	39	568	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.06	0.99	0.99	1.04	1.04	1.04	1.04	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	1	2	2	1	2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83	0	83	83	0	83	83		83	83	
Trailing Detector (ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Size(ft)	40	40	0	40	40	0	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

2021 Existing Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak AM Hour
 03/02/2021

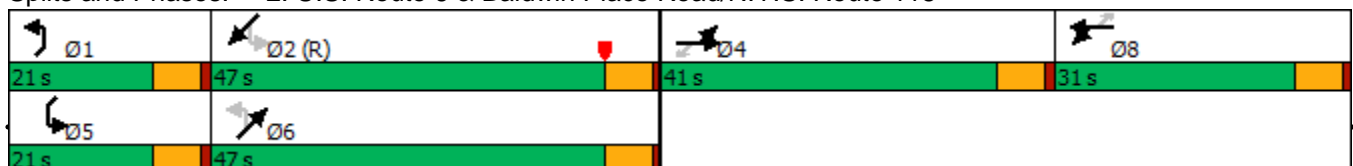


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0		9.0	9.0	
Total Split (s)	41.0	41.0	41.0	31.0	31.0	31.0	21.0	47.0		21.0	47.0	
Total Split (%)	29.3%	29.3%	29.3%	22.1%	22.1%	22.1%	15.0%	33.6%		15.0%	33.6%	
Maximum Green (s)	35.0	35.0	35.0	25.0	25.0	25.0	15.0	41.0		15.0	41.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0	12.0		12.0			12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
v/c Ratio	0.38	0.81	0.30	0.72	0.36	0.14	0.18	0.39		0.09	0.62	
Control Delay	53.4	76.2	8.4	79.1	60.7	1.1	17.1	22.9		16.8	32.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	53.4	76.2	8.4	79.1	60.7	1.1	17.1	22.9		16.8	32.2	
Queue Length 50th (ft)	90	217	0	130	65	0	23	173		15	372	
Queue Length 95th (ft)	141	296	43	197	112	0	57	281		40	#679	
Internal Link Dist (ft)		522			524			607			640	
Turn Bay Length (ft)	140		110	150		230	125					
Base Capacity (vph)	388	407	466	317	334	370	420	1654		514	913	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.27	0.57	0.23	0.46	0.23	0.11	0.14	0.39		0.08	0.62	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45.5 (33%), Referenced to phase 2:SWTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118



2021 Existing Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak AM Hour
 03/02/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗↘		↖	↗	
Traffic Volume (veh/h)	111	210	104	138	72	37	57	436	169	37	478	62
Future Volume (veh/h)	111	210	104	138	72	37	57	436	169	37	478	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	1909	1909	1909	1658	1599	1599	2027	1967	1967
Adj Flow Rate, veh/h	117	221	0	145	76	0	60	459	178	39	503	65
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	6	2	6	6
Cap, veh/h	243	255		175	184		383	1224	471	484	966	125
Arrive On Green	0.14	0.14	0.00	0.10	0.10	0.00	0.03	0.57	0.57	0.02	0.57	0.57
Sat Flow, veh/h	1759	1847	1565	1818	1909	1618	1579	2144	825	1931	1707	221
Grp Volume(v), veh/h	117	221	0	145	76	0	60	324	313	39	0	568
Grp Sat Flow(s),veh/h/ln	1759	1847	1565	1818	1909	1618	1579	1519	1451	1931	0	1928
Q Serve(g_s), s	8.6	16.4	0.0	11.0	5.2	0.0	2.2	16.3	16.5	1.2	0.0	25.4
Cycle Q Clear(g_c), s	8.6	16.4	0.0	11.0	5.2	0.0	2.2	16.3	16.5	1.2	0.0	25.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		0.11
Lane Grp Cap(c), veh/h	243	255		175	184		383	867	828	484	0	1091
V/C Ratio(X)	0.48	0.87		0.83	0.41		0.16	0.37	0.38	0.08	0.00	0.52
Avail Cap(c_a), veh/h	440	462		325	341		508	867	828	647	0	1091
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.7	59.0	0.0	62.1	59.5	0.0	14.5	16.4	16.4	13.0	0.0	18.7
Incr Delay (d2), s/veh	0.5	3.4	0.0	3.8	0.6	0.0	0.1	1.2	1.3	0.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	7.9	0.0	5.3	2.6	0.0	0.8	6.0	5.8	0.5	0.0	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	62.5	0.0	65.9	60.1	0.0	14.6	17.6	17.7	13.0	0.0	20.5
LnGrp LOS	E	E		E	E		B	B	B	B	A	C
Approach Vol, veh/h		338	A		221	A		697			607	
Approach Delay, s/veh		60.3			63.9			17.4			20.0	
Approach LOS		E			E			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	85.3		25.4	9.2	85.9		19.5				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax),s	55.0	41.0		35.0	15.0	41.0		25.0				
Max Q Clear Time (g_c+l1),s	4.2	27.4		18.4	3.2	18.5		13.0				
Green Ext Time (p_c), s	0.1	1.8		1.0	0.0	2.2		0.5				

Intersection Summary

HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2021 Existing Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive

Peak PM Hour
 03/03/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	21	13	576	365	10
Future Volume (vph)	14	21	13	576	365	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12
Grade (%)	5%			-7%	8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.996	
Flt Protected	0.980			0.999		
Satd. Flow (prot)	1591	0	0	1847	1654	0
Flt Permitted	0.980			0.999		
Satd. Flow (perm)	1591	0	0	1847	1654	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	486			364	421	
Travel Time (s)	11.0			6.2	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	10%	10%	5%
Adj. Flow (vph)	16	23	14	640	406	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	654	417	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.96	0.92	1.05	1.05
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

2021 Existing Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive

Peak PM Hour
 03/03/2021

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	14	21	13	576	365	10
Future Vol, veh/h	14	21	13	576	365	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	- None		- None		- None	
Storage Length	0	-	-	-	-	-
Veh in Median Storage#	-	-	0	0	-	-
Grade, %	5	-	-	-7	8	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	10	10	5
Mvmt Flow	16	23	14	640	406	11

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1080	412	417	0	-	0
Stage 1	412	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Critical Hdwy	7.45	6.75	4.15	-	-	-
Critical Hdwy Stg 1	6.45	-	-	-	-	-
Critical Hdwy Stg 2	6.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	176	598	1126	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	173	598	1126	-	-	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	580	-	-	-	-	-
Stage 2	419	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.7	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBTLn1	SBT	SBR
Capacity (veh/h)	1126	- 302	-	-
HCM Lane V/C Ratio	0.013	-0.129	-	-
HCM Control Delay (s)	8.2	0 18.7	-	-
HCM Lane LOS	A	A C	-	-
HCM 95th %tile Q(veh)	0	- 0.4	-	-

2021 Existing Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak PM Hour
 03/03/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	162	99	124	185	250	80	128	615	129	55	510	109
Future Volume (vph)	162	99	124	185	250	80	128	615	129	55	510	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	12	12	11	12	12	12	12	12	12
Grade (%)		2%			-1%			6%				-4%
Storage Length (ft)	140		110	150		230	125		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frnt			0.850			0.850		0.974			0.973	
Flt Protected	0.950	0.987		0.950			0.950			0.950		
Satd. Flow (prot)	1553	1614	1515	1778	1872	1538	1717	3239	0	1805	1791	0
Flt Permitted	0.950	0.987		0.950			0.166			0.308		
Satd. Flow (perm)	1553	1614	1515	1778	1872	1538	300	3239	0	585	1791	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129			117		19				8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		602			604			687				720
Travel Time (s)		13.7			13.7			15.6				16.4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	6%	2%
Adj. Flow (vph)	169	103	129	193	260	83	133	641	134	57	531	114
Shared Lane Traffic (%)	21%											
Lane Group Flow (vph)	134	138	129	193	260	83	133	775	0	57	645	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.06	0.99	0.99	1.04	1.04	1.04	1.04	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	1	2	2	1	2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83	0	83	83	0	83	83		83	83	
Trailing Detector (ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Size(ft)	40	40	0	40	40	0	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

2021 Existing Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak PM Hour
 03/03/2021

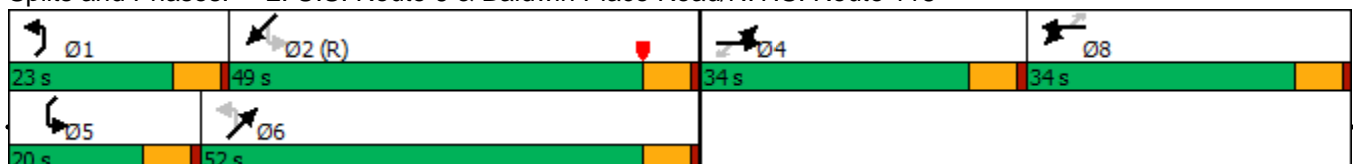


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.0	25.0		9.0	25.0	
Total Split (s)	34.0	34.0	34.0	34.0	34.0	34.0	23.0	52.0		20.0	49.0	
Total Split (%)	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	16.4%	37.1%		14.3%	35.0%	
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0	28.0	17.0	46.0		14.0	43.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0	12.0		12.0			12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
v/c Ratio	0.72	0.72	0.44	0.63	0.81	0.23	0.47	0.47		0.16	0.78	
Control Delay	80.0	78.7	13.0	62.5	74.4	4.0	21.3	26.1		17.6	42.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	80.0	78.7	13.0	62.5	74.4	4.0	21.3	26.1		17.6	42.3	
Queue Length 50th (ft)	126	129	0	166	231	0	53	235		21	480	
Queue Length 95th (ft)	192	195	59	234	312	19	111	374		54	#932	
Internal Link Dist (ft)		522			524			607			640	
Turn Bay Length (ft)	140		110	150		230	125					
Base Capacity (vph)	310	322	406	365	384	409	345	1644		446	822	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.43	0.43	0.32	0.53	0.68	0.20	0.39	0.47		0.13	0.78	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45.5 (33%), Referenced to phase 2:SWTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118



2021 Existing Traffic Volumes
2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak PM Hour
03/03/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔↔		↔	↔	
Traffic Volume (veh/h)	162	99	124	185	250	80	128	615	129	55	510	109
Future Volume (veh/h)	162	99	124	185	250	80	128	615	129	55	510	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	1909	1909	1909	1658	1599	1599	2027	1967	1967
Adj Flow Rate, veh/h	136	149	0	193	260	0	133	641	134	57	531	114
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	6	2	6	6
Cap, veh/h	174	183		281	295		330	1368	286	401	817	175
Arrive On Green	0.10	0.10	0.00	0.15	0.15	0.00	0.05	0.55	0.55	0.03	0.52	0.52
Sat Flow, veh/h	1759	1847	1565	1818	1909	1618	1579	2502	522	1931	1570	337
Grp Volume(v), veh/h	136	149	0	193	260	0	133	389	386	57	0	645
Grp Sat Flow(s),veh/h/ln	1759	1847	1565	1818	1909	1618	1579	1519	1505	1931	0	1907
Q Serve(g_s), s	10.6	11.1	0.0	14.1	18.7	0.0	5.5	21.8	21.9	1.9	0.0	34.3
Cycle Q Clear(g_c), s	10.6	11.1	0.0	14.1	18.7	0.0	5.5	21.8	21.9	1.9	0.0	34.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		0.18
Lane Grp Cap(c), veh/h	174	183		281	295		330	831	823	401	0	993
V/C Ratio(X)	0.78	0.82		0.69	0.88		0.40	0.47	0.47	0.14	0.00	0.65
Avail Cap(c_a), veh/h	352	369		364	382		435	831	823	539	0	993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.6	61.8	0.0	56.0	57.9	0.0	19.0	19.3	19.3	15.9	0.0	24.3
Incr Delay (d2), s/veh	2.9	3.4	0.0	1.9	14.8	0.0	0.3	1.9	1.9	0.1	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	5.4	0.0	6.6	10.2	0.0	2.0	8.1	8.1	0.9	0.0	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	65.2	0.0	57.9	72.7	0.0	19.3	21.2	21.2	16.0	0.0	27.6
LnGrp LOS	E	E		E	E		B	C	C	B	A	C
Approach Vol, veh/h		285	A		453	A		908			702	
Approach Delay, s/veh		64.9			66.4			20.9			26.7	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	78.9		19.8	10.0	82.6		27.6				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax),s	75.0	43.0		28.0	14.0	46.0		28.0				
Max Q Clear Time (g_c+l1),s	7.5	36.3		13.1	3.9	23.9		20.7				
Green Ext Time (p_c), s	0.2	1.5		0.8	0.1	2.8		0.9				

Intersection Summary

HCM 6th Ctrl Delay	36.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2023 No-Build Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive

Peak AM Hour
 03/02/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	17	20	41	184	464	37
Future Volume (vph)	17	20	41	184	464	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12
Grade (%)	5%			-7%	8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926			0.990		
Flt Protected	0.978			0.991		
Satd. Flow (prot)	1475	0	0	1837	1647	0
Flt Permitted	0.978			0.991		
Satd. Flow (perm)	1475	0	0	1837	1647	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	486			364	421	
Travel Time (s)	11.0			6.2	7.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	5%	21%	8%	10%	10%	5%
Adj. Flow (vph)	20	24	48	216	546	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	0	0	264	590	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.96	0.92	1.05	1.05
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

2023 No-Build Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive

Peak AM Hour
 03/02/2021

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	17	20	41	184	464	37
Future Vol, veh/h	17	20	41	184	464	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	- None		- None		- None	
Storage Length	0	-	-	-	-	-
Veh in Median Storage	0	-	-	0	0	-
Grade, %	5	-	-	-7	8	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	21	8	10	10	5
Mvmt Flow	20	24	48	216	546	44

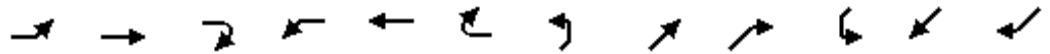
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	880	568	590	0	-	0
Stage 1	568	-	-	-	-	-
Stage 2	312	-	-	-	-	-
Critical Hdwy	7.45	6.91	4.18	-	-	-
Critical Hdwy Stg 1	6.45	-	-	-	-	-
Critical Hdwy Stg 2	6.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.489	2.272	-	-	-
Pot Cap-1 Maneuve	246	451	957	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuve	232	451	957	-	-	-
Mov Cap-2 Maneuve	232	-	-	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	674	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NB	EBLn1	SBT	SBR
Capacity (veh/h)	957	-	315	-	-
HCM Lane V/C Ratio	0.05	-	0.138	-	-
HCM Control Delay (s)	9	0	18.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-

2023 No-Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

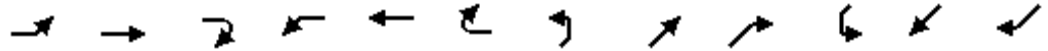
Peak AM Hour
 03/02/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	115	218	108	144	75	38	59	453	176	38	497	64
Future Volume (vph)	115	218	108	144	75	38	59	453	176	38	497	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	12	12	11	12	12	12	12	12	12
Grade (%)		2%			-1%			6%				-4%
Storage Length (ft)	140		110	150		230	125		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.958			0.983	
Flt Protected	0.950	0.998		0.950			0.950			0.950		
Satd. Flow (prot)	1553	1632	1515	1778	1872	1538	1717	3198	0	1805	1805	0
Flt Permitted	0.950	0.998		0.950			0.251			0.341		
Satd. Flow (perm)	1553	1632	1515	1778	1872	1538	454	3198	0	648	1805	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117			117		41				5
Link Speed (mph)		30			30			30				30
Link Distance (ft)		602			604			687				720
Travel Time (s)		13.7			13.7			15.6				16.4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	6%	2%
Adj. Flow (vph)	121	229	114	152	79	40	62	477	185	40	523	67
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	109	241	114	152	79	40	62	662	0	40	590	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.06	0.99	0.99	1.04	1.04	1.04	1.04	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	1	2	2	1	2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83	0	83	83	0	83	83		83	83	
Trailing Detector (ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Size(ft)	40	40	0	40	40	0	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

2023 No-Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak AM Hour
 03/02/2021

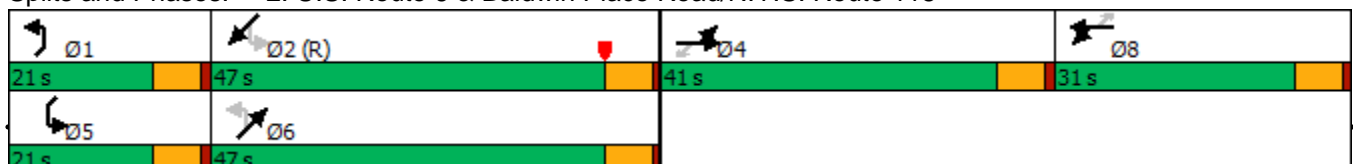


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0		9.0	9.0	
Total Split (s)	41.0	41.0	41.0	31.0	31.0	31.0	21.0	47.0		21.0	47.0	
Total Split (%)	29.3%	29.3%	29.3%	22.1%	22.1%	22.1%	15.0%	33.6%		15.0%	33.6%	
Maximum Green (s)	35.0	35.0	35.0	25.0	25.0	25.0	15.0	41.0		15.0	41.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0	12.0		12.0			12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
v/c Ratio	0.39	0.82	0.31	0.73	0.36	0.14	0.20	0.41		0.10	0.66	
Control Delay	53.0	76.1	9.0	79.0	60.2	1.1	17.9	24.0		17.4	34.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	53.0	76.1	9.0	79.0	60.2	1.1	17.9	24.0		17.4	34.2	
Queue Length 50th (ft)	93	225	0	136	67	0	24	186		15	400	
Queue Length 95th (ft)	144	305	48	204	115	0	59	300		42	#744	
Internal Link Dist (ft)		522			524			607			640	
Turn Bay Length (ft)	140		110	150		230	125					
Base Capacity (vph)	388	408	466	317	334	370	395	1626		494	897	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.28	0.59	0.24	0.48	0.24	0.11	0.16	0.41		0.08	0.66	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45.5 (33%), Referenced to phase 2:SWTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118



2023 No-Build Traffic Volumes
2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak AM Hour
03/02/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	115	218	108	144	75	38	59	453	176	38	497	64
Future Volume (veh/h)	115	218	108	144	75	38	59	453	176	38	497	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	1909	1909	1909	1658	1599	1599	2027	1967	1967
Adj Flow Rate, veh/h	121	229	0	152	79	0	62	477	185	40	523	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	6	2	6	6
Cap, veh/h	251	264		182	191		362	1205	464	462	951	122
Arrive On Green	0.14	0.14	0.00	0.10	0.10	0.00	0.03	0.56	0.56	0.02	0.56	0.56
Sat Flow, veh/h	1759	1847	1565	1818	1909	1618	1579	2144	826	1931	1709	219
Grp Volume(v), veh/h	121	229	0	152	79	0	62	337	325	40	0	590
Grp Sat Flow(s),veh/h/ln	1759	1847	1565	1818	1909	1618	1579	1519	1450	1931	0	1928
Q Serve(g_s), s	8.9	17.0	0.0	11.5	5.4	0.0	2.4	17.5	17.7	1.2	0.0	27.4
Cycle Q Clear(g_c), s	8.9	17.0	0.0	11.5	5.4	0.0	2.4	17.5	17.7	1.2	0.0	27.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		0.11
Lane Grp Cap(c), veh/h	251	264		182	191		362	854	815	462	0	1073
V/C Ratio(X)	0.48	0.87		0.83	0.41		0.17	0.39	0.40	0.09	0.00	0.55
Avail Cap(c_a), veh/h	440	462		325	341		485	854	815	623	0	1073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.2	58.7	0.0	61.9	59.1	0.0	15.4	17.2	17.3	13.7	0.0	19.8
Incr Delay (d2), s/veh	0.5	3.4	0.0	3.8	0.5	0.0	0.1	1.4	1.5	0.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	8.2	0.0	5.5	2.7	0.0	0.9	6.4	6.2	0.6	0.0	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	62.1	0.0	65.7	59.7	0.0	15.5	18.6	18.7	13.7	0.0	21.8
LnGrp LOS	E	E		E	E		B	B	B	B	A	C
Approach Vol, veh/h		350	A		231	A		724			630	
Approach Delay, s/veh		59.9			63.6			18.4			21.3	
Approach LOS		E			E			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	83.9		26.0	9.3	84.7		20.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	55.0	41.0		35.0	15.0	41.0		25.0				
Max Q Clear Time (g_c+I1), s	4.4	29.4		19.0	3.2	19.7		13.5				
Green Ext Time (p_c), s	0.1	1.8		1.0	0.0	2.3		0.5				

Intersection Summary

HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2023 No-Build Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive

Peak PM Hour
 03/03/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	22	14	599	380	10
Future Volume (vph)	15	22	14	599	380	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12
Grade (%)	5%			-7%	8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.921				0.997	
Flt Protected	0.980			0.999		
Satd. Flow (prot)	1592	0	0	1847	1655	0
Flt Permitted	0.980			0.999		
Satd. Flow (perm)	1592	0	0	1847	1655	0
Link Speed (mph)	30			40	40	
Link Distance (ft)	486			364	421	
Travel Time (s)	11.0			6.2	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	10%	10%	5%
Adj. Flow (vph)	17	24	16	666	422	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	0	682	433	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	0.96	0.92	1.05	1.05
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

2023 No-Build Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive

Peak PM Hour
 03/03/2021

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	15	22	14	599	380	10
Future Vol, veh/h	15	22	14	599	380	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	- None		- None		- None	
Storage Length	0	-	-	-	-	-
Veh in Median Storage#	-	-	0	0	-	-
Grade, %	5	-	-	-7	8	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	10	10	5
Mvmt Flow	17	24	16	666	422	11

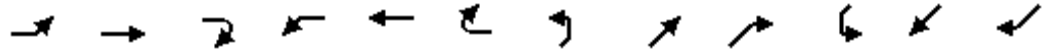
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1126	428	433	0	-	0
Stage 1	428	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Critical Hdwy	7.45	6.75	4.15	-	-	-
Critical Hdwy Stg 1	6.45	-	-	-	-	-
Critical Hdwy Stg 2	6.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	63	585	1111	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	159	585	1111	-	-	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	402	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay	20.1	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NB	EBLn1	SBT	SBR
Capacity (veh/h)	1111	-	280	-	-
HCM Lane V/C Ratio	0.014	-	0.147	-	-
HCM Control Delay (s)	8.3	0	20.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

2023 No-Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak PM Hour
 03/03/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	168	103	129	192	260	83	133	640	134	57	530	113
Future Volume (vph)	168	103	129	192	260	83	133	640	134	57	530	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	12	12	11	12	12	12	12	12	12
Grade (%)		2%			-1%			6%				-4%
Storage Length (ft)	140		110	150		230	125		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frnt			0.850			0.850		0.974			0.974	
Flt Protected	0.950	0.987		0.950			0.950			0.950		
Satd. Flow (prot)	1553	1614	1515	1778	1872	1538	1717	3239	0	1805	1793	0
Flt Permitted	0.950	0.987		0.950			0.137			0.290		
Satd. Flow (perm)	1553	1614	1515	1778	1872	1538	248	3239	0	551	1793	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134			117		19				8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		602			604			687				720
Travel Time (s)		13.7			13.7			15.6				16.4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	6%	2%
Adj. Flow (vph)	175	107	134	200	271	86	139	667	140	59	552	118
Shared Lane Traffic (%)	21%											
Lane Group Flow (vph)	138	144	134	200	271	86	139	807	0	59	670	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.06	0.99	0.99	1.04	1.04	1.04	1.04	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	1	2	2	1	2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83	0	83	83	0	83	83		83	83	
Trailing Detector (ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Size(ft)	40	40	0	40	40	0	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

2023 No-Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak PM Hour
 03/03/2021

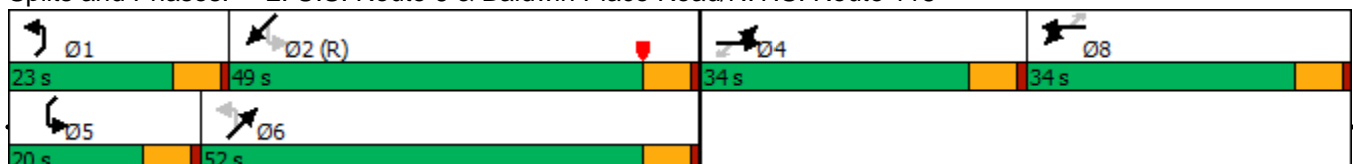


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.0	25.0		9.0	25.0	
Total Split (s)	34.0	34.0	34.0	34.0	34.0	34.0	23.0	52.0		20.0	49.0	
Total Split (%)	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	16.4%	37.1%		14.3%	35.0%	
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0	28.0	17.0	46.0		14.0	43.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0	12.0		12.0			12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
v/c Ratio	0.73	0.73	0.44	0.64	0.82	0.23	0.53	0.50		0.18	0.83	
Control Delay	79.9	79.5	12.7	62.4	75.3	4.4	23.9	27.2		18.1	45.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	79.9	79.5	12.7	62.4	75.3	4.4	23.9	27.2		18.1	45.9	
Queue Length 50th (ft)	129	134	0	171	241	0	56	253		23	523	
Queue Length 95th (ft)	196	204	59	243	325	22	115	394		56	#982	
Internal Link Dist (ft)		522			524			607			640	
Turn Bay Length (ft)	140		110	150		230	125					
Base Capacity (vph)	310	322	410	366	385	409	320	1620		425	807	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.45	0.45	0.33	0.55	0.70	0.21	0.43	0.50		0.14	0.83	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45.5 (33%), Referenced to phase 2:SWTL, Start of Yellow
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118



2023 No-Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak PM Hour
 03/03/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗↘		↖	↗	
Traffic Volume (veh/h)	168	103	129	192	260	83	133	640	134	57	530	113
Future Volume (veh/h)	168	103	129	192	260	83	133	640	134	57	530	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	1909	1909	1909	1658	1599	1599	2027	1967	1967
Adj Flow Rate, veh/h	141	155	0	200	271	0	139	667	140	59	552	118
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	6	2	6	6
Cap, veh/h	180	189		291	305		308	1343	282	378	800	171
Arrive On Green	0.10	0.10	0.00	0.16	0.16	0.00	0.06	0.54	0.54	0.03	0.51	0.51
Sat Flow, veh/h	1759	1847	1565	1818	1909	1618	1579	2500	524	1931	1571	336
Grp Volume(v), veh/h	141	155	0	200	271	0	139	405	402	59	0	670
Grp Sat Flow(s),veh/h/ln	1759	1847	1565	1818	1909	1618	1579	1519	1505	1931	0	1907
Q Serve(g_s), s	11.0	11.5	0.0	14.5	19.5	0.0	5.9	23.6	23.6	2.0	0.0	37.2
Cycle Q Clear(g_c), s	11.0	11.5	0.0	14.5	19.5	0.0	5.9	23.6	23.6	2.0	0.0	37.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		0.18
Lane Grp Cap(c), veh/h	180	189		291	305		308	816	808	378	0	970
V/C Ratio(X)	0.78	0.82		0.69	0.89		0.45	0.50	0.50	0.16	0.00	0.69
Avail Cap(c_a), veh/h	352	369		364	382		408	816	808	514	0	970
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.3	61.6	0.0	55.5	57.6	0.0	20.6	20.4	20.5	16.9	0.0	26.0
Incr Delay (d2), s/veh	2.8	3.4	0.0	2.3	16.4	0.0	0.4	2.2	2.2	0.1	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	5.6	0.0	6.9	10.8	0.0	2.2	8.8	8.8	0.9	0.0	17.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	65.0	0.0	57.8	74.0	0.0	21.0	22.6	22.6	17.0	0.0	30.0
LnGrp LOS	E	E		E	E		C	C	C	B	A	C
Approach Vol, veh/h		296	A		471	A		946			729	
Approach Delay, s/veh		64.6			67.1			22.4			29.0	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.1	77.2		20.3	10.1	81.2		28.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax),s	75.0	43.0		28.0	14.0	46.0		28.0				
Max Q Clear Time (g_c+I1),s	7.9	39.2		13.5	4.0	25.6		21.5				
Green Ext Time (p_c), s	0.2	1.1		0.8	0.1	2.9		0.9				

Intersection Summary

















HCM 6th Ctrl Delay	38.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2023 Build Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive/Site Access

Peak AM Hour
 03/02/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	0	20	20	0	11	41	184	8	4	464	37
Future Volume (vph)	17	0	20	20	0	11	41	184	8	4	464	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	13	12	12	12	12
Grade (%)		5%			0%			-7%			8%	
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
Flt		0.926			0.953			0.996			0.990	
Flt Protected		0.978			0.969			0.991				
Satd. Flow (prot)	0	1475	0	0	1671	0	0	1834	0	0	1648	0
Flt Permitted		0.978			0.969			0.991				
Satd. Flow (perm)	0	1475	0	0	1671	0	0	1834	0	0	1648	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		486			123			364			421	
Travel Time (s)		11.0			2.8			6.2			7.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	5%	2%	21%	5%	5%	5%	8%	10%	2%	5%	10%	5%
Adj. Flow (vph)	20	0	24	24	0	13	48	216	9	5	546	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	37	0	0	273	0	0	595	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.00	1.00	1.00	0.96	0.92	0.96	1.05	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

2023 Build Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive/Site Access

Peak AM Hour
 03/02/2021

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	0	20	20	0	11	41	184	8	4	464	37
Future Vol, veh/h	17	0	20	20	0	11	41	184	8	4	464	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	5	-	-	0	-	-	-7	-	-	8	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	5	2	21	5	5	5	8	10	2	5	10	5
Mvmt Flow	20	0	24	24	0	13	48	216	9	5	546	44

Major/Minor	Minor2	Minor1		Major1		Major2							
Conflicting Flow All	901	899	568	907	917	221	590	0	0	225	0	0	0
Stage 1	578	578	-	317	317	-	-	-	-	-	-	-	-
Stage 2	323	321	-	590	600	-	-	-	-	-	-	-	-
Critical Hdwy	8.15	7.52	6.91	7.15	6.55	6.25	4.18	-	-	4.15	-	-	-
Critical Hdwy Stg 1	7.15	6.52	-	6.15	5.55	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.15	6.52	-	6.15	5.55	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.018	3.489	3.545	4.045	3.345	2.272	-	-	2.245	-	-	-
Pot Cap-1 Maneuver	199	217	451	253	269	811	957	-	-	1326	-	-	-
Stage 1	423	427	-	688	649	-	-	-	-	-	-	-	-
Stage 2	624	596	-	489	485	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-	-
Mov Cap-1 Maneuver	186	203	451	228	252	811	957	-	-	1326	-	-	-
Mov Cap-2 Maneuver	186	203	-	228	252	-	-	-	-	-	-	-	-
Stage 1	399	424	-	649	612	-	-	-	-	-	-	-	-
Stage 2	579	562	-	461	482	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	20.7	18.4	1.6	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	957	-	-	273	306	1326	-	-
HCM Lane V/C Ratio	0.05	-	-	0.159	0.119	0.004	-	-
HCM Control Delay (s)	9	0	-	20.7	18.4	7.7	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.4	0	-	-

2023 Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

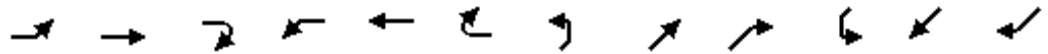
Peak AM Hour
 03/02/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	120	224	117	144	77	38	63	453	176	38	497	66
Future Volume (vph)	120	224	117	144	77	38	63	453	176	38	497	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	12	12	11	12	12	12	12	12	12
Grade (%)		2%			-1%			6%			-4%	
Storage Length (ft)	140		110	150		230	125		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frnt			0.850			0.850		0.958			0.983	
Flt Protected	0.950	0.997		0.950			0.950			0.950		
Satd. Flow (prot)	1553	1630	1515	1778	1872	1538	1717	3198	0	1805	1805	0
Flt Permitted	0.950	0.997		0.950			0.243			0.340		
Satd. Flow (perm)	1553	1630	1515	1778	1872	1538	439	3198	0	646	1805	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117			117		41			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		602			604			687			720	
Travel Time (s)		13.7			13.7			15.6			16.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	6%	2%
Adj. Flow (vph)	126	236	123	152	81	40	66	477	185	40	523	69
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	113	249	123	152	81	40	66	662	0	40	592	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.06	0.99	0.99	1.04	1.04	1.04	1.04	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	1	2	2	1	2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83	0	83	83	0	83	83		83	83	
Trailing Detector (ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Size(ft)	40	40	0	40	40	0	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

2023 Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak AM Hour
 03/02/2021

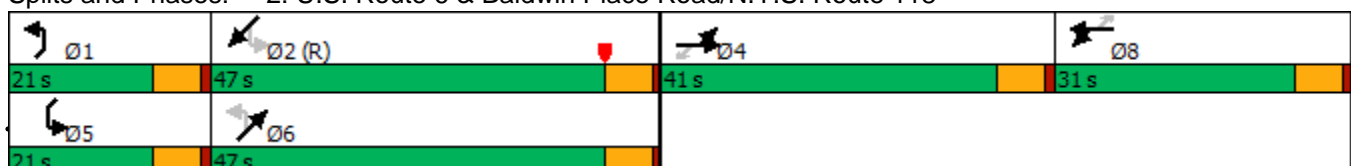


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0		9.0	9.0	
Total Split (s)	41.0	41.0	41.0	31.0	31.0	31.0	21.0	47.0		21.0	47.0	
Total Split (%)	29.3%	29.3%	29.3%	22.1%	22.1%	22.1%	15.0%	33.6%		15.0%	33.6%	
Maximum Green (s)	35.0	35.0	35.0	25.0	25.0	25.0	15.0	41.0		15.0	41.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0	12.0		12.0			12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
v/c Ratio	0.39	0.82	0.33	0.73	0.37	0.14	0.22	0.41		0.10	0.67	
Control Delay	52.5	75.9	10.7	79.0	60.4	1.1	18.5	24.5		17.8	35.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	52.5	75.9	10.7	79.0	60.4	1.1	18.5	24.5		17.8	35.0	
Queue Length 50th (ft)	96	232	5	136	69	0	26	188		15	408	
Queue Length 95th (ft)	149	314	56	204	117	0	63	302		43	#762	
Internal Link Dist (ft)		522			524			607			640	
Turn Bay Length (ft)	140		110	150		230	125					
Base Capacity (vph)	388	407	466	317	334	370	386	1611		490	886	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.29	0.61	0.26	0.48	0.24	0.11	0.17	0.41		0.08	0.67	

Intersection Summary

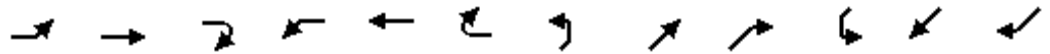
Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45.5 (33%), Referenced to phase 2:SWTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118



2023 Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak AM Hour
 03/02/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	120	224	117	144	77	38	63	453	176	38	497	66
Future Volume (veh/h)	120	224	117	144	77	38	63	453	176	38	497	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	1909	1909	1909	1658	1599	1599	2027	1967	1967
Adj Flow Rate, veh/h	126	236	0	152	81	0	66	477	185	40	523	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	6	2	6	6
Cap, veh/h	258	271		182	191		357	1196	461	458	938	124
Arrive On Green	0.15	0.15	0.00	0.10	0.10	0.00	0.03	0.56	0.56	0.02	0.55	0.55
Sat Flow, veh/h	1759	1847	1565	1818	1909	1618	1579	2144	826	1931	1702	225
Grp Volume(v), veh/h	126	236	0	152	81	0	66	337	325	40	0	592
Grp Sat Flow(s),veh/h/ln	1759	1847	1565	1818	1909	1618	1579	1519	1450	1931	0	1927
Q Serve(g_s), s	9.2	17.5	0.0	11.5	5.6	0.0	2.6	17.6	17.9	1.3	0.0	27.9
Cycle Q Clear(g_c), s	9.2	17.5	0.0	11.5	5.6	0.0	2.6	17.6	17.9	1.3	0.0	27.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		0.12
Lane Grp Cap(c), veh/h	258	271		182	191		357	848	810	458	0	1062
V/C Ratio(X)	0.49	0.87		0.83	0.42		0.18	0.40	0.40	0.09	0.00	0.56
Avail Cap(c_a), veh/h	440	462		325	341		478	848	810	619	0	1062
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.9	58.4	0.0	61.8	59.2	0.0	15.8	17.6	17.6	14.0	0.0	20.4
Incr Delay (d2), s/veh	0.5	4.2	0.0	3.8	0.6	0.0	0.1	1.4	1.5	0.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	8.5	0.0	5.5	2.7	0.0	0.9	6.5	6.3	0.6	0.0	13.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	62.7	0.0	65.6	59.7	0.0	15.9	19.0	19.1	14.0	0.0	22.5
LnGrp LOS	E	E		E	E		B	B	B	B	A	C
Approach Vol, veh/h		362	A		233	A		728			632	
Approach Delay, s/veh		60.2			63.6			18.7			21.9	
Approach LOS		E			E			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	83.2		26.5	9.3	84.1		20.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	55.0	41.0		35.0	15.0	41.0		25.0				
Max Q Clear Time (g_c+I1), s	4.6	29.9		19.5	3.3	19.9		13.5				
Green Ext Time (p_c), s	0.1	1.8		1.0	0.0	2.3		0.5				

Intersection Summary

HCM 6th Ctrl Delay	32.8
HCM 6th LOS	C

Notes

















User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2023 Build Traffic Volumes

Peak PM Hour

1: Baldwin Place Road & Grand Meadow Drive/Site Access

03/03/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	22	13	0	7	14	599	19	10	380	10
Future Volume (vph)	15	0	22	13	0	7	14	599	19	10	380	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	13	12	12	12	12
Grade (%)		5%			0%			-7%			8%	
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
Flt		0.921			0.951			0.996			0.997	
Flt Protected		0.980			0.969			0.999			0.999	
Satd. Flow (prot)	0	1592	0	0	1717	0	0	1844	0	0	1656	0
Flt Permitted		0.980			0.969			0.999			0.999	
Satd. Flow (perm)	0	1592	0	0	1717	0	0	1844	0	0	1656	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		486			167			364			421	
Travel Time (s)		11.0			3.8			6.2			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	2%	5%	2%	2%	2%	5%	10%	2%	2%	10%	5%
Adj. Flow (vph)	17	0	24	14	0	8	16	666	21	11	422	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	22	0	0	703	0	0	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.00	1.00	1.00	0.96	0.92	0.96	1.05	1.05	1.05
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

2023 Build Traffic Volumes
 1: Baldwin Place Road & Grand Meadow Drive/Site Access

Peak PM Hour
 03/03/2021

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	0	22	13	0	7	14	599	19	10	380	10
Future Vol, veh/h	15	0	22	13	0	7	14	599	19	10	380	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	5	-	-	0	-	-	-7	-	-	8	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	5	2	5	2	2	2	5	10	2	2	10	5
Mvmt Flow	17	0	24	14	0	8	16	666	21	11	422	11

Major/Minor	Minor2	Minor1		Major1		Major2						
Conflicting Flow	All1163	1169	428	1171	1164	677	433	0	0	687	0	0
Stage 1	450	450	-	709	709	-	-	-	-	-	-	-
Stage 2	713	719	-	462	455	-	-	-	-	-	-	-
Critical Hdwy	8.15	7.52	6.75	7.12	6.52	6.22	4.15	-	-	4.12	-	-
Critical Hdwy Stg 1	7.15	6.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.15	6.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.018	3.345	3.518	4.018	3.318	2.245	-	-	2.218	-	-
Pot Cap-1 Maneuver	123	140	585	170	194	453	1111	-	-	907	-	-
Stage 1	514	504	-	425	437	-	-	-	-	-	-	-
Stage 2	343	354	-	580	569	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	17	135	585	158	186	453	1111	-	-	907	-	-
Mov Cap-2 Maneuver	17	135	-	158	186	-	-	-	-	-	-	-
Stage 1	502	496	-	415	427	-	-	-	-	-	-	-
Stage 2	329	346	-	547	560	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	24.8	24.7	0.2	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1111	-	-	223	205	907	-	-
HCM Lane V/C Ratio	0.014	-	-	0.184	0.108	0.012	-	-
HCM Control Delay (s)	8.3	0	-	24.8	24.7	9	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.4	0	-	-

2023 Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak PM Hour
 03/03/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	171	107	135	192	266	83	142	640	134	57	530	118
Future Volume (vph)	171	107	135	192	266	83	142	640	134	57	530	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	12	12	11	12	12	12	12	12	12
Grade (%)		2%			-1%			6%				-4%
Storage Length (ft)	140		110	150		230	125		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frnt			0.850			0.850		0.974			0.973	
Flt Protected	0.950	0.988		0.950			0.950			0.950		
Satd. Flow (prot)	1553	1615	1515	1778	1872	1538	1717	3239	0	1805	1791	0
Flt Permitted	0.950	0.988		0.950			0.123			0.290		
Satd. Flow (perm)	1553	1615	1515	1778	1872	1538	222	3239	0	551	1791	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			141			117		19				8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		602			604			687				720
Travel Time (s)		13.7			13.7			15.6				16.4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	6%	2%
Adj. Flow (vph)	178	111	141	200	277	86	148	667	140	59	552	123
Shared Lane Traffic (%)	20%											
Lane Group Flow (vph)	142	147	141	200	277	86	148	807	0	59	675	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.06	0.99	0.99	1.04	1.04	1.04	1.04	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	1	2	2	1	2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83	0	83	83	0	83	83		83	83	
Trailing Detector (ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5	0	-5	-5	0	-5	-5		-5	-5	
Detector 1 Size(ft)	40	40	0	40	40	0	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

2023 Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak PM Hour
 03/03/2021

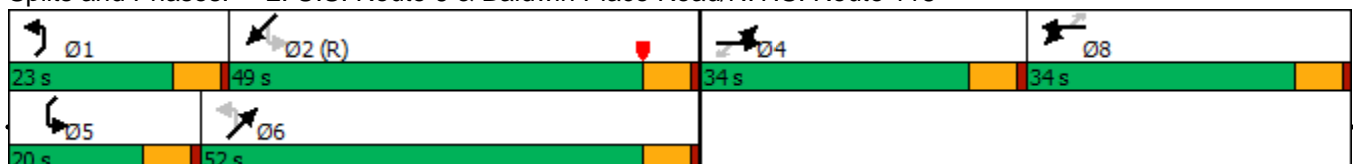


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.0	25.0		9.0	25.0	
Total Split (s)	34.0	34.0	34.0	34.0	34.0	34.0	23.0	52.0		20.0	49.0	
Total Split (%)	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	16.4%	37.1%		14.3%	35.0%	
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0	28.0	17.0	46.0		14.0	43.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0	12.0		12.0			12.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
v/c Ratio	0.74	0.73	0.45	0.63	0.83	0.23	0.58	0.50		0.18	0.85	
Control Delay	80.0	78.9	12.5	61.8	75.9	4.4	26.4	27.7		18.4	48.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	80.0	78.9	12.5	61.8	75.9	4.4	26.4	27.7		18.4	48.4	
Queue Length 50th (ft)	133	137	0	170	246	0	61	256		23	541	
Queue Length 95th (ft)	201	206	60	244	334	22	122	394		56	#994	
Internal Link Dist (ft)		522			524			607			640	
Turn Bay Length (ft)	140		110	150		230	125					
Base Capacity (vph)	310	323	415	366	385	409	307	1604		421	791	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.46	0.46	0.34	0.55	0.72	0.21	0.48	0.50		0.14	0.85	

Intersection Summary

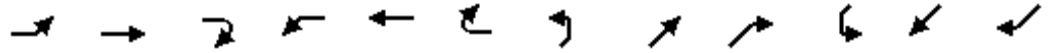
Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 45.5 (33%), Referenced to phase 2:SWTL, Start of Yellow
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118



2023 Build Traffic Volumes
 2: U.S. Route 6 & Baldwin Place Road/N.Y.S. Route 118

Peak PM Hour
 03/03/2021



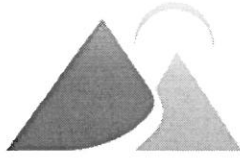
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗↘		↖	↗	
Traffic Volume (veh/h)	171	107	135	192	266	83	142	640	134	57	530	118
Future Volume (veh/h)	171	107	135	192	266	83	142	640	134	57	530	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1847	1847	1847	1909	1909	1909	1658	1599	1599	2027	1967	1967
Adj Flow Rate, veh/h	144	158	0	200	277	0	148	667	140	59	552	123
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	6	2	6	6
Cap, veh/h	183	192		296	311		301	1331	279	373	780	174
Arrive On Green	0.10	0.10	0.00	0.16	0.16	0.00	0.06	0.53	0.53	0.03	0.50	0.50
Sat Flow, veh/h	1759	1847	1565	1818	1909	1618	1579	2500	524	1931	1558	347
Grp Volume(v), veh/h	144	158	0	200	277	0	148	405	402	59	0	675
Grp Sat Flow(s),veh/h/ln	1759	1847	1565	1818	1909	1618	1579	1519	1505	1931	0	1905
Q Serve(g_s), s	11.2	11.7	0.0	14.5	19.9	0.0	6.3	23.8	23.9	2.1	0.0	38.3
Cycle Q Clear(g_c), s	11.2	11.7	0.0	14.5	19.9	0.0	6.3	23.8	23.9	2.1	0.0	38.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		0.18
Lane Grp Cap(c), veh/h	183	192		296	311		301	809	801	373	0	954
V/C Ratio(X)	0.79	0.82		0.68	0.89		0.49	0.50	0.50	0.16	0.00	0.71
Avail Cap(c_a), veh/h	352	369		364	382		397	809	801	509	0	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.2	61.5	0.0	55.1	57.4	0.0	21.5	20.9	20.9	17.4	0.0	27.0
Incr Delay (d2), s/veh	2.9	3.4	0.0	2.1	17.3	0.0	0.5	2.2	2.2	0.1	0.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	5.7	0.0	6.8	11.1	0.0	2.3	8.9	8.9	0.9	0.0	18.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.1	64.8	0.0	57.3	74.7	0.0	22.0	23.1	23.1	17.5	0.0	31.4
LnGrp LOS	E	E		E	E		C	C	C	B	A	C
Approach Vol, veh/h		302	A		477	A		955			734	
Approach Delay, s/veh		64.5			67.4			22.9			30.3	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.5	76.1		20.5	10.1	80.5		28.8				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax),s	75.0	43.0		28.0	14.0	46.0		28.0				
Max Q Clear Time (g_c+l1),s	8.8	40.3		13.7	4.1	25.9		21.9				
Green Ext Time (p_c), s	0.3	0.8		0.8	0.1	2.9		0.9				

Intersection Summary

HCM 6th Ctrl Delay	38.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



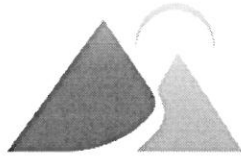
Payment in Lieu of Taxes (PILOT)

A Payment in Lieu of Taxes (PILOT) Agreement gives the municipality a reliable payment over an agreed upon number of years, usually 15, along with a guaranteed 2% annual escalation.

Without a PILOT agreement, developers of affordable housing projects may use the provisions of the law below to value the qualified project to determine real estate taxes based on net operating income (NOI). Affordable housing projects that are financed, in part, with state government subsidies, charge below market rents to keep the project affordable; therefore, net operating income is always limited. Payments under a PILOT agreement are higher initially than using a 581-A calculation and increase every year. Conversely, if the project has little or no NOI in a given year, the payment to the municipality can be very low.

Real Property Tax Law 581-A Assessment Of Residential Real Property

Notwithstanding any other provision of law, the assessed valuation of real property used for residential rental purposes where at least twenty percent of the residential units are subject to an agreement with a municipality, the state, the federal government, or an instrumentality thereof, which agreement restricts occupancy of those units to tenants who qualify in accordance with an income test, shall be determined using the income approach as applied to the actual net operating income, after deducting for reserves required by any federal, state or municipal programs. For the purposes of this section "net operating income" shall mean the actual or anticipated net income that remains after all operating expenses are deducted from effective gross income, but before mortgage debt service and book depreciation are deducted. The assessed valuation of real property used for such residential rental purposes shall be determined using the actual net operating income, and shall not include federal, state, or municipal income tax credits, subsidized mortgage financing, or project grants, where such subsidies are used to offset the project development cost in order to provide for lower initial rents as determined by regulations promulgated by the Division of Housing and Community Renewal.



Search for Change

Promoting Growth, Independence & Recovery

MEMORANDUM

TO: Town of Carmel Planning Board

FROM: Ashley Brody, Chief Executive Officer, Search for Change, Inc.

RE: Agency Operations

DATE: March 2, 2021

During a recent (February 24) meeting of the Town of Carmel Planning Board, Search for Change, Inc. (SFC) was asked to provide additional information concerning its current operations in Westchester and Putnam Counties.

In Putnam County, SFC operates a supervised residence program in the Town of Carmel. This program provides enhanced support services for individuals who require it in order to reside safely in the community. (It is substantially different from the housing development proposed for Fairhaven at Baldwin Place whose occupants are prepared to reside independently with basic and minimal support services.)

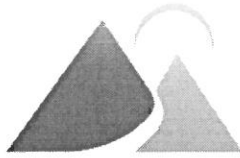
SFC operates a semi-supportive apartment program in and around the Village of Brewster that offers shared living accommodations (i.e., two- and three-bedroom apartments) for individuals who require an “intermediate” level of assistance from agency personnel. (This, too, is unlike the development envisioned for Fairhaven at Baldwin Place.)

SFC supports 61 individuals who reside independently throughout Putnam County. The agency receives funding to support 74 individuals in such arrangements, but a prohibitively priced rental market has made it exceedingly difficult to locate affordable units for eligible occupants. These occupants are similar to those who would reside in supportive housing units at Fairhaven at Baldwin Place, as they are capable of living with full independence and merely require some rental assistance and basic support services.

In Westchester County, SFC operates supervised residences in the Village of Larchmont, Town of Greenburgh, Village of Mamaroneck, and Village of Scarsdale.

SFC also operates a semi-supportive apartment program in several communities throughout the county that offers shared living accommodations (i.e., two- and three-bedroom apartments) for individuals who require an “intermediate” level of assistance from agency personnel.

SFC supports 112 individuals who reside independently throughout Westchester County. The agency receives funding to support 129 individuals in such arrangements but encounters the same obstacle (i.e., a prohibitively priced and inaccessible rental market) that precludes attainment of this goal.



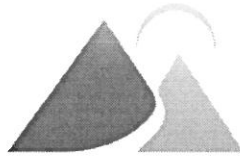
Search for Change
Promoting Growth, Independence & Recovery

If you have any questions or require additional information, please do not hesitate to contact me at (914) 428-5600 (x9228).

Sincerely,

Ashley Brody

Ashley Brody, MPA, CPRP
Chief Executive Officer
Search for Change, Inc.



Search for Change
Promoting Growth, Independence & Recovery

MEMORANDUM

TO: Adam Thyberg, Project Landscape Architect, Insite Engineering, Surveying & Landscape Architecture, P.C. and Town of Carmel Planning Board

FROM: Ashley Brody, Chief Executive Officer, Search for Change, Inc.

RE: Fairhaven at Baldwin Place (future school busing and related items)

DATE: February 23, 2021

Mr. Thyberg:

During a recent (February 11th) meeting of the Town of Carmel Planning Board, questions concerning school busing and the transportation needs of future occupants of Fairhaven at Baldwin Place (Fairhaven) were posed.

As described in other documents submitted to the Planning Board, the project sponsor, Search for Change, Inc. (SFC), proposes to retain a vehicle (owned and operated by SFC) on site in order to furnish transportation to residents. Agency personnel will also transport school children from the main entrance of the Fairhaven residence building to a designated school bus stop near the intersection of Baldwin Place Road and the access road to the site. This will mitigate any potential traffic hazards.

In addition, the agency will construct a bus shelter at this location with seating for 6 – 10 children in order to ensure their safety and comfort.

If you have any questions or require additional information, please contact me at (914) 428-5600 (x9228).

Sincerely,

Ashley Brody, MPA, CPRP
Chief Executive Officer
Search for Change, Inc.

**Fairhaven At Baldwin Place
Part of The Solution to A Pressing Problem**

1.) A Severe Housing Shortage

- Demand for rental housing is growing within New York's 18th Congressional District, of which Putnam County is a part. New housing development would meet emergent need and produce considerable economic benefits. For every 100 apartment units constructed in this District, the economy gains \$36.8 million and 138 jobs.¹
- According to a Community Health Assessment conducted by the Putnam County Department of Health, individuals who work in Putnam County identified the scarcity of housing as the primary area of need to which additional resources should be committed.²
- Only 15% of rental units available in Putnam are in multi-unit structures. This is significantly below the statewide average and compounds the local housing shortage.³

2.) Unsustainable Housing Costs

- A housing scarcity has led to increasing rental costs and associated financial strains for county residents. Approximately half our county's renters spend more than 35% of their income on rent, an unaffordable burden that leaves them with less income with which to purchase other goods and services within the local economy.⁴
- One in four of our Putnam's renters are "severely cost-burdened" according to a report of the Office of the New York State Comptroller.⁵
- Putnam County's 2021 Fair Market Rent of \$1,801 for a one-bedroom unit is higher than Westchester's, a neighboring county well known for a prohibitively priced rental market.⁶

"There is an overwhelming need to preserve and rehabilitate existing affordable rental housing and develop new affordable housing at all income levels..."

- Putnam County Housing Corporation Housing Needs Assessment, 2014.

"Creating local policy that encourages the development and preservation of housing that is affordable must be a high priority by local decision makers and planners. Putnam County is faced with limited choice and an insufficient supply of affordable and market rate rental housing."

- Putnam County Housing Corporation Housing Needs Assessment, 2014.

¹ National Multifamily Housing Council, 2020.

² Putnam County Department of Health Community Health Assessment – Community Health Improvement Plan, 2016-2018.

³ Ibid.

⁴ Ibid.

⁵ Office of the New York State Comptroller, 2019.

⁶ Department of Housing and Urban Development, 2021.

3.) An Aging Population

- Putnam County has a rapidly aging population, more so than most counties in New York State. A quarter (25%) of the county's residents are aged 55 or older and seniors now account for 18% of the population.⁷ In addition, younger residents with children find it increasingly difficult to secure affordable housing due to rapidly rising rental costs.
- Therefore, despite rapid population growth between 1970 and 2000, the county's population has remained largely flat and even decreased in recent years.⁸ An aging population, coupled with the loss of younger residents, threatens the long-term economic viability of the county.
- Additional data underscore this trend. The "Mature Labor Force" (i.e., workers between 45 and 64 years of age) is projected to decline by almost 8% during the period of 2014 - 2025. The population of residents of retirement age (i.e., those aged 65 and older) is expected to increase by 50% during the same period!⁹

4.) A Precipitous Decrease in School Enrollment

- An aging population coupled with the loss of younger residents has contributed to year-over-year decreases in school enrollment. In 2020, enrollment in Mahopac's public schools was 25% below its peak. (Its 2020 enrollment of 4,036 students was 25% off its peak enrollment of 5,377.) Similarly, enrollment in Carmel's public schools has decreased by 19% from its peak.
- Such losses may lead to school closures and the elimination of jobs in education and associated industries - at great cost to our community. Many "legacy costs" remain. School closures leave empty buildings that must be maintained at taxpayers' expense.
- Dwindling school enrollment suggests young single individuals and young families with children are vacating the community due, in large part, to prohibitively priced housing markets. Many young adults who were raised in Putnam do not return after college. These young adults would be vital members of our local labor force if they remained, and their loss constitutes a "brain drain" with grave economic repercussions.

⁷ Putnam County Department of Health Community Health Assessment – Community Health Improvement Plan, 2016-2018.

⁸ Putnam County Housing Corporation – Housing Needs Assessment, 2014.

⁹ Ibid.

Summary

The housing stock has remained stagnant in the Town of Carmel and Putnam County for many years, leading to unaffordable housing prices and an inability for those who would contribute to our economy (e.g., single professionals, young families with children, etc.) to establish residency. This affordability crisis might only worsen amidst the COVID-19 pandemic as people migrate from NYC and surrounding areas and compete for homes in our community.

The available stock of rental housing is also aging, not unlike the county's population. The loss of younger individuals and families, coupled with a growing senior population, has led to rapidly dwindling school enrollment. (Enrollment in the Mahopac and Carmel Central School Districts has declined significantly more than projected by knowledgeable authorities.)

These trends have compounded other economic problems, as seniors generally do not spend as much as younger cohorts. A rash of store closings across the Town and the general decimation of the retail industry may be attributed to this, at least in part.

Although efforts have been made to develop Senior Housing during the past 20 years, the same cannot be said of workforce housing that would be affordable to the many individuals who aspire to reside in and contribute to our community, if only such housing existed for them.

Zoning ordinances have not responded to the community's housing development needs. Onerous acreage requirements and unduly restrictive three-acre density restrictions make it virtually impossible to meet the Town of Carmel's housing needs. (For instance, younger families (i.e., Millennials) and others who would contribute to the economic vibrancy of the local economy generally do not desire older single-family homes situated on 1-3 acres of land.)

The impact of these regressive zoning practices is evident in the lack of development and the scarcity of new multi-family housing for people of all ages relative to other communities throughout New York State.

The long-term viability of our community requires nothing less than a renewed commitment to the housing needs of everyone including young individuals, families with children, professionals, and many others on whom our success depends.