



COURTROOM, CITY HALL
1 MUNICIPAL PLAZA
BEACON, NY 12508
THE ZONING BOARD OF
APPEALS WILL MEET AT 7:00
PM. A TRAINING WORK
SESSION WILL TAKE PLACE
AT 7:00 PM AND THE
REGULAR MEETING AND
PUBLIC HEARINGS WILL
BEGIN IMMEDIATELY
THEREAFTER, BUT NOT
LATER THAN 7:30 PM.

May 17, 2022

7:00 PM

Zoning Board of Appeals Agenda

Regular Meeting

1. Review and hold Public Hearing on application submitted by Scott Ramsey & Brian Donnelly, 18 North Walnut Street, Tax Grid No. 30-5954-28-912934-00, in the R1-5 Zoning District, for relief from Section 223-17(E) to construct an accessory structure (accessory apartment) which requires relief from section 223-17(E) to allow 858 sq. ft. of cumulative lot coverage (720 sq. ft. maximum cumulative lot coverage permitted)
2. Review and hold Public Hearing on application submitted by Thomas Butler, 97 Union Street, Tax Grid No. 30-6054-46-219567-00, in the R1-5 Zoning District, for relief from Section 223-17 to construct a 14' x 15'11" second story rear addition over a new deck and patio with an 8.3 ft. side yard setback (10 ft. required)

Miscellaneous Business

1113 Wolcott Avenue - SEQRA Review

June meeting date reminder - The June Zoning Board meeting will take place on Wednesday, June 22, due to the Juneteenth holiday being observed on Monday.

City of Beacon Zoning Board of Appeals Agenda
05/17/2022

Title:

Review and hold Public Hearing on application submitted by Scott Ramsey & Brian Donnelly, 18 North Walnut Street, Tax Grid No. 30-5954-28-912934-00, in the R1-5 Zoning District, for relief from Section 223-17(E) to construct an accessory structure (accessory apartment) which requires relief from section 223-17(E) to allow 858 sq. ft. of cumulative lot coverage (720 sq. ft. maximum cumulative lot coverage permitted)

ATTACHMENTS

[18 North Walnut Street Application.pdf](#)

[18 North Walnut Street Site Plan.pdf](#)

[18 North Walnut Street Recommendation.pdf](#)

[ZBA Draft Resolution 18 North Walnut.pdf](#)

ZONING BOARD OF APPEALS

City of Beacon, New York

APPLICATION FOR APPEAL

OWNER: SCOTT RAMSEY & BRIAN DANNALLY

ADDRESS: 18 N. WALNUT STREET

BEACON NY 12508

TELEPHONE: (646) 772-5871 ; (917) 476-0578

E-MAIL: SCOTTSCOTRAMSEY.NET ;

BMHD.NYC@GMAIL.COM

APPLICANT (if not owner): SAME AS ABOVE

ADDRESS: —

TELEPHONE: —

E-MAIL: —

REPRESENTED BY: —

ADDRESS: —

TELEPHONE: —

E-MAIL: —

PROPERTY LOCATION: 18 N. WALNUT ST

ZONING DISTRICT: R1-5

TAX MAP DESIGNATION: SECTION 5954

BLOCK 28 LOT 912934

Section of Zoning Code appealed from or Interpretation desired:

PER SECTION 223-17 (b) OF THE CODE OF CITY OF BEACON, MAX CUMULATIVE SQ. FOOTING FOR ACCESSORY BLDGS
IN THE R1-5 DISTRICT IS 720 SQ. FT. WE ARE REQUESTING A ZONING VARIANCE FOR PROPOSED CUMULATIVE
858 SQ. FT. OF PROPOSED ACCESSORY APARTMENT INCLUDING MODIFIED GARAGE.
Reason supporting request:

THE ACCESSORY APARTMENT IS BEING BUILT FOR MR. RAMSEY'S MOTHER TO DWELL IN.
PROPOSED PROJECT WILL COMPLY WITH THE ACCESSORY APARTMENT PROVISIONS INCLUDED IN
SECTION 223-24.1.

Supporting documents submitted herewith: Site Plan, Survey, etc. as required:

SITE PLAN & DATA TABLES, ACCESSORY BLDGS PLANS & ELEVATIONS

Date: 04.22.22

Scott Ramsey & Brian M. Dannally
Owner's Signature

Fee Schedule

AREA VARIANCE	<u>\$ 250</u>
USE VARIANCE	\$ 500
INTERPRETATION:	\$ 250

Applicant's Signature

****escrow fees may apply if required by Chairman****

FOR OFFICE USE ONLY
Application #

CITY OF BEACON
1 Municipal Plaza, Beacon, NY
Telephone (845) 838-5000 • <http://cityofbeacon.org/>

INDIVIDUAL DISCLOSURE FORM

(This form must accompany every land use application and every application for a building permit or certificate of occupancy submitted by any person(s))

Disclosure of the names and addresses of all persons) filing a land-use application with the City is required pursuant to Section 223-62 of the City Code of the City of Beacon. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

SECTION A

Name of Applicant: SOUTI RAMSEY & BRIAN DUNNELEY
 Address of Applicant: 18 N. WALNUT ST BEACON NY 12508
 Telephone Contact Information: (646) 772-5871 & (917) 476-0578

SECTION B. List all owners of record of the subject property or any part thereof.

Name	Residence or Business Address	Telephone Number	Date and Manner title was acquired	Date and place where the deed or document of conveyance was recorded or filed.
SOUTI RAMSEY BRIAN DUNNELEY	18 N. WALNUT ST BEACON NY 12508	(646) 772-5871 (917) 476-0578	06-08-2018 PURCHASED	RJ RAMBOLD, ATTY 621 RT 52

SECTION B. Is any owner of record an officer, elected or appointed, or employee of the City of Beacon or related, by marriage or otherwise, to a City Council member, planning board member, zoning board of appeals member or employee of the City of Beacon?

☐

YES

☒

NO

If yes, list every Board, Department, Office, agency or other position with the City of Beacon with which a party has a position, unpaid or paid, or relationship and identify the agency, title, and date of hire.

Agency	Title	Date of Hire, Date Elected, or Date Appointed	Position or Nature of Relationship

SECTION C. If the applicant is a contract vendee, a duplicate original or photocopy of the full and complete contract of purchase, including all riders, modification and amendments thereto, shall be submitted with the application.

SECTION D. Have the present owners entered into a contract for the sale of all or any part of the subject property and, if in the affirmative, please provide a duplicate original or photocopy of the fully and complete contract of sale, including all riders, modifications and amendments thereto.

☐

YES

☒

NO

SCOTT RAMSEY :
I, BRIAN DENNENBY being first duly sworn, according to law, deposes and says that the statements made herein are true, accurate, and complete.

(Print) SCOTT RAMSEY & BRIAN DENNENBY

(Signature)

Scott Ramsey & Brian Dennenby

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: SCOTT RAMSEY & BRIAN DUNNELLY

If owned by a corporation, partnership or organization, please list names of persons holding over 5% interest.

List all properties in the City of Beacon that you hold a 5% interest in:

18 N. WALNUT STREET

Applicant Address: 18 N. WALNUT ST BEACON NY 12508

Project Address: 18 N. WALNUT ST BEACON NY 12508

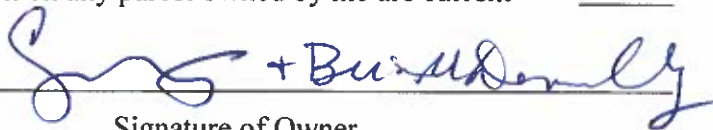
Project Tax Grid # 5954 - 28 - 912934

Type of Application BUILD OF ACCESSORY APARTMENT / SPECIAL USE PERMIT

Please note that the property owner is the applicant. "Applicant" is defined as any individual who owns at least five percent (5%) interest in a corporation or partnership or other business.

I, SCOTT RAMSEY & BRIAN DUNNELLY, the undersigned owner of the above referenced property, hereby affirm that I have reviewed my records and verify that the following information is true.

1. No violations are pending for ANY parcel owned by me situated within the City of Beacon ✓
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon
3. ALL tax payments due to the City of Beacon are current ✓
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current ✓


Signature of Owner

Title if owner is corporation

Office Use Only:

Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)

NO

YES

Initial

X

AC

ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)

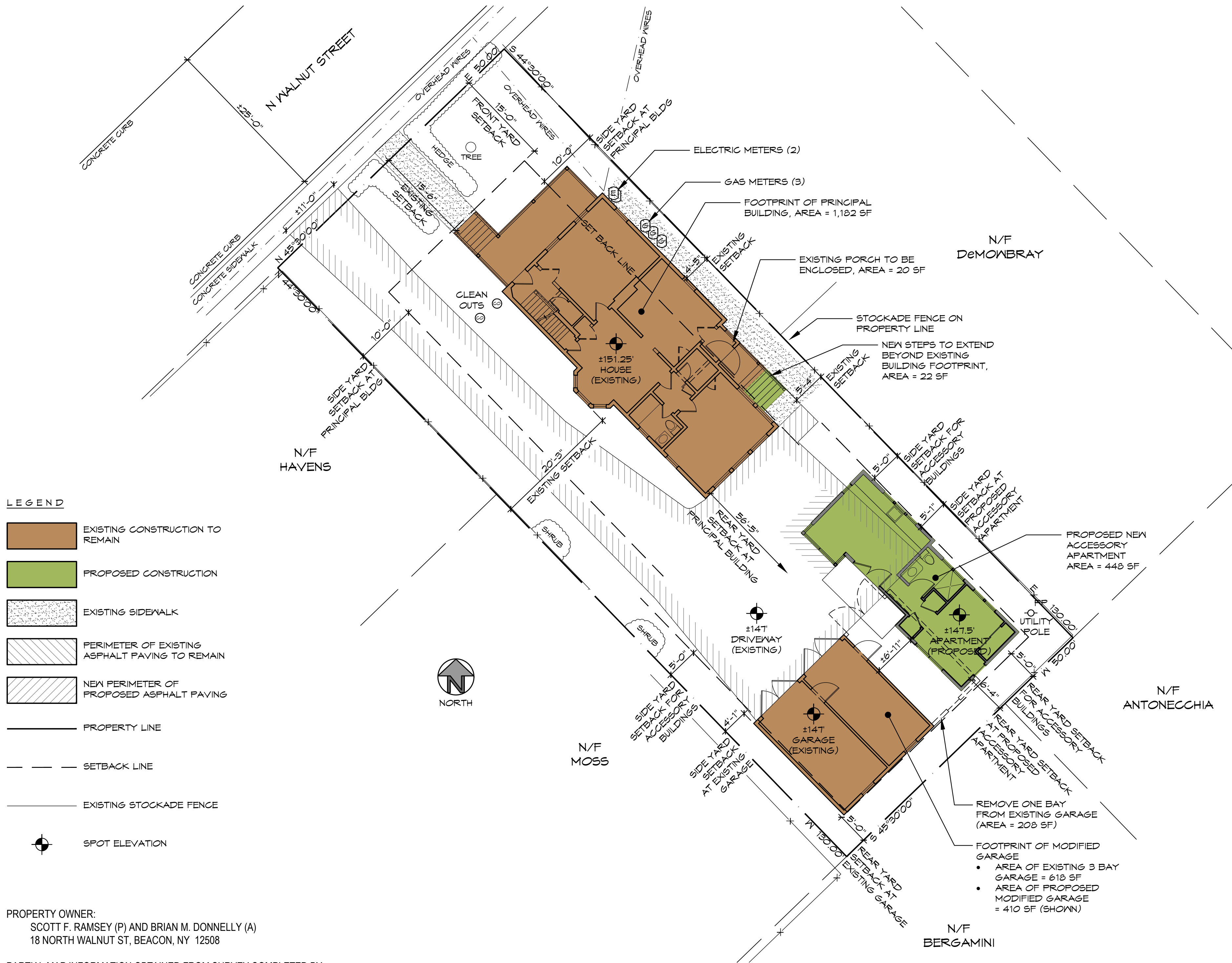
X

AC

ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)

X

AC



- LEGEND
- EXISTING CONSTRUCTION TO REMAIN
 - PROPOSED CONSTRUCTION
 - EXISTING SIDEWALK
 - PERIMETER OF EXISTING ASPHALT PAVING TO REMAIN
 - NEW PERIMETER OF PROPOSED ASPHALT PAVING
 - PROPERTY LINE
 - SETBACK LINE
 - EXISTING STOCKADE FENCE
 - SPOT ELEVATION

PROPERTY OWNER:
SCOTT F. RAMSEY (P) AND BRIAN M. DONNELLY (A)
18 NORTH WALNUT ST, BEACON, NY 12508

PARTIAL MAP INFORMATION OBTAINED FROM SURVEY COMPLETED BY:
ROBERT F. OICLE, PLS
946 ROUTE 376, UNIT 10, WAPPINGERS FALLS, NY 12590
845-293-0831
DATED MARCH 20, 2021

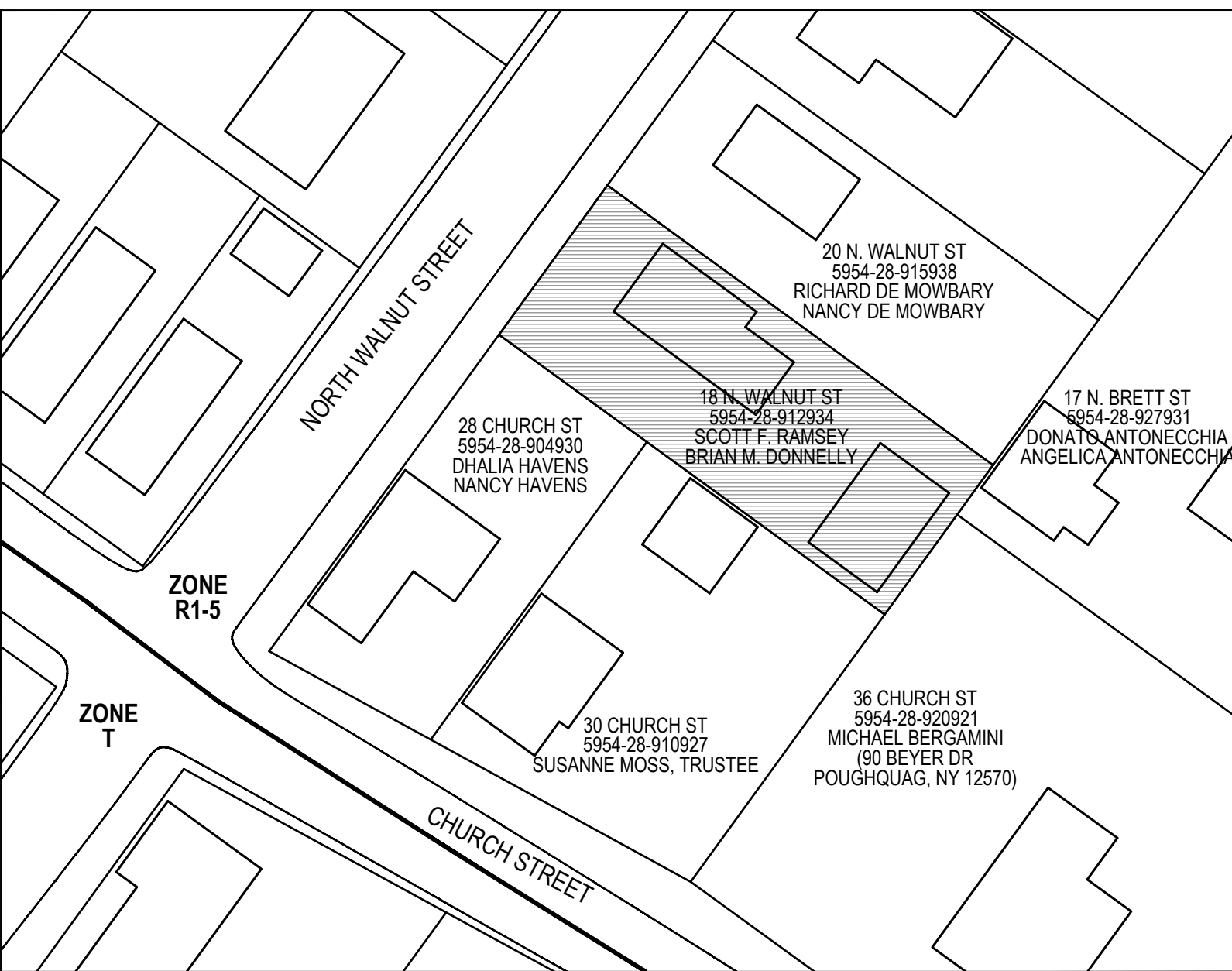
1 SITE PLAN
SP-1 1" = 10'-0"

ZONING INFORMATION

CITY OF BEACON DUTCHESS COUNTY, NY ZONE: R1-5 (ZONING MAP DATE 7/13/2020)	18 NORTH WALNUT STREET, 12508 LOT AREA = 0.149 ACRES (6,500 SQUARE FEET)	SECTION: 5954 BLOCK: 28 LOT: 912934	EXISTING HOUSE FOOTPRINT = 1,160 SF EXISTING GARAGE FOOTPRINT = 618 SF	PROPOSED HOUSE FOOTPRINT = 1,182 SF PROPOSED GARAGE FOOTPRINT = 410 SF PROPOSED ACCESSORY APARTMENT FOOTPRINT = 448 SF
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LOT AND PRINCIPAL BUILDING													
	LOT AREA	MIN. LOT PER UNIT	MIN. LOT WIDTH	MIN. LOT DEPTH	MIN. FRONT YARD SETBACK	MIN. SIDE YARD SETBACK	MIN. REAR YARD SETBACK	MIN DISTANCE BTWN BLDGS ON LOT	MAX. HEIGHT MAIN BLDG	MAX. % BLDG COVERAGE	MAX. # OF UNITS PER BLDG	MIN. OPEN SPACE	OFF STREET PARKING SPACES
ORDINANCE REQUIREMENT:	5,000 SF, MIN	5,000 S.F.	50'-0"	100'-0"	15'-0"	10'-0"	20'-0"	NR	2.5 ST / 35'-0"	30%	1	NR	3 (SEE NOTE d)
EXISTING:	6,500 SF		50'-0"	130'-0"	15'-6"	4'-5"	56'-5"	NA	2 ST / 26'-7"	27.4% _a	NC	NR	4
PROPOSED:	NC		NC	NC	NC	NC	NC	NA	NC / NC	31.4% _b	NC	NR	4
ACCESSORY BUILDINGS													
			MIN. FRONT YARD SETBACK _c	MIN. SIDE YARD SETBACK	MIN. REAR YARD SETBACK	STRUCTURE HEIGHT	STRUCTURE FOOTPRINT	MAX CUMULATIVE SF FOR ALL ACCESSORY BLDGS	MAX SF FOR EACH ACCESSORY BLDG (BASED ON FOOTPRINT OF PRINCIPAL BLDG PER §223-17(E))				MAX # OF SHEDS
ORDINANCE REQUIREMENT:			NA	5'-0"	5'-0"	-	-	720 SF	40%				1
EXISTING GARAGE:			NA	4'-1"	5'-0"	9'-4"	618 SF	618 SF	464 SF				0
MODIFIED GARAGE:			NA	NC	NC	NC	410 SF	858 SF	473 SF				0
PROPOSED ACCESSORY APARTMENT:			NA	5'-0"	6'-4"	11'-8"	448 SF		473 SF				0

- NA - NOT APPLICABLE
NC - NO CHANGE
NR - NO REQUIREMENT
X - NOT PERMITTED
- a - [EXISTING HOUSE + GARAGE FOOTPRINTS] / LOT AREA
b - [PROPOSED HOUSE + GARAGE + APARTMENT FOOTPRINTS] / LOT AREA
c - ACCESSORY BUILDINGS NOT PERMITTED IN FRONT YARDS
d - TWO (2) PARKING SPACES FOR 1-FAMILY DWELLING PLUS ONE (1) PARKING SPACE FOR APARTMENT PER §223-26(F)



2 LOCATION PLAN
SP-1 1" = 40'-0"

PROJECT SUMMARY :

- THE PROJECT HAS THREE PARTS:
- RECENTLY THE CURRENT OWNERS HAVE APPLIED TO THE CITY OF BEACON TO CONVERT THE PRINCIPAL BUILDING FROM A TWO-FAMILY HOME TO SINGLE-FAMILY HOME. INTERIOR RENOVATIONS RELATED TO THIS CHANGE ARE PROPOSED. AN EXISTING PORCH WILL BE ENCLOSED WHICH SHALL INCREASE THE BUILDING FOOTPRINT.
 - AN ACCESSORY APARTMENT IS PROPOSED. THE APARTMENT SHALL COMPLY WITH THE PROVISIONS INCLUDED IN SECTION 223-24.1.
 - ONE BAY SHALL BE REMOVED FROM THE EXISTING THREE-BAY DETACHED GARAGE. THE GARAGE EXTERIOR WILL BE RENOVATED TO COORDINATE WITH THE EXTERIOR OF THE PROPOSED APARTMENT.

ZONING NOTES :

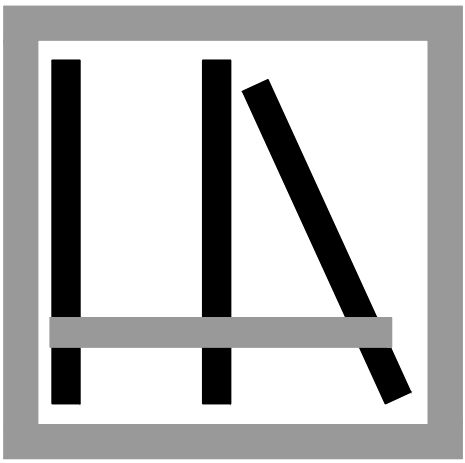
- PER SECTION 223-17(E) OF THE CODE OF THE CITY OF BEACON, THE MAXIMUM CUMULATIVE SQUARE FOOTAGE FOR ALL ACCESSORY BUILDINGS IN THE R1-5 DISTRICT IS 720 SQUARE FEET. REQUESTING AREA VARIANCE FOR PROPOSED CUMULATIVE 858 SQUARE FOOT OF PROPOSED ACCESSORY APARTMENT AND MODIFIED DETACHED GARAGE.
- PER SECTION 223-17 OF THE CODE OF THE CITY OF BEACON, THE MAXIMUM PERCENT BUILDING COVERAGE IN THE R1-5 DISTRICT IS 30%. REQUESTING COVERAGE VARIANCE FOR BUILDING COVERAGE OF 31.4%.

PLANNING NOTES :

- CURRENT OWNERS HAVE CONVERTED THE HOUSE FROM A TWO-FAMILY HOME TO SINGLE-FAMILY HOME. UTILITY METERS ON THE EAST EXTERIOR WALL SERVED THE HOUSE AND FORMER APARTMENT ON THE HOUSE'S SECOND FLOOR.
- THE PROPOSED PROJECT WILL COMPLY WITH THE ACCESSORY APARTMENT PROVISIONS INCLUDED IN SECTION 223-24.1. THE EXISTING HOUSE WILL REMAIN A SINGLE-FAMILY HOME. A PROPERTY OWNER WILL OCCUPY ONE OF THE DWELLING UNITS.
- THE SITE HAS NO OUTSTANDING NATURAL CHARACTERISTICS. TREE IN FRONT YARD TO REMAIN. HEDGES IN FRONT YARD AND ALONG DRIVEWAY TO REMAIN.
- CURB CUT TO REMAIN AS-IS. NO WORK IN STREET OR SIDEWALK IS ANTICIPATED.
- ROOF DRAINS FOR PROPOSED ACCESSORY APARTMENT SHALL BE RUN UNDERGROUND AND CONNECTED TO CITY STORM SEWER SYSTEM.
- ALL NEW WATER AND SEWER LINES SHALL BE RUN BETWEEN THE EXISTING RESIDENCE TO THE ACCESSORY APARTMENT.
- ALL NEW POWER AND TELEPHONE LINES SHALL BE RUN UNDERGROUND. NEW LINES SHALL RUN FROM THE EXISTING RESIDENCE TO THE ACCESSORY BUILDINGS. FINAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE CONSTRUCTION CONTRACTOR AND PROPERTY OWNER.
- PROPOSED ACCESSORY APARTMENT SHALL BE SLAB-ON-GRADE CONSTRUCTION. MINIMAL EXCAVATION SHALL BE REQUIRED.
- EXISTING LANDSCAPING TO BE MAINTAINED. NO NEW LANDSCAPING IS PROPOSED.

DRAWING LIST :

- SP-1 - SITE PLAN AND DATA TABLES
A-1 - HOUSE PLANS
A-2 - HOUSE ELEVATIONS
A-3 - ACCESSORY BLDGS PLANS & ELEVS



HIGHLANDS
ARCHITECTURE
pllc

3212 ROUTE 9
COLD SPRING, NY 10516
845.809.5976 OFFICE
highlandsarchitecture.com

ALTERATIONS TO EXISTING:
RAMSEY - DONNELLY RESIDENCE
18 NORTH WALNUT STREET
BEACON, NY 12508

ZONING BOARD OF APPEALS REVIEW

SITE PLAN
AND DATA TABLES

SP-1

DATE: 25 APRIL 2022

REVISIONS:

REVISIONS:

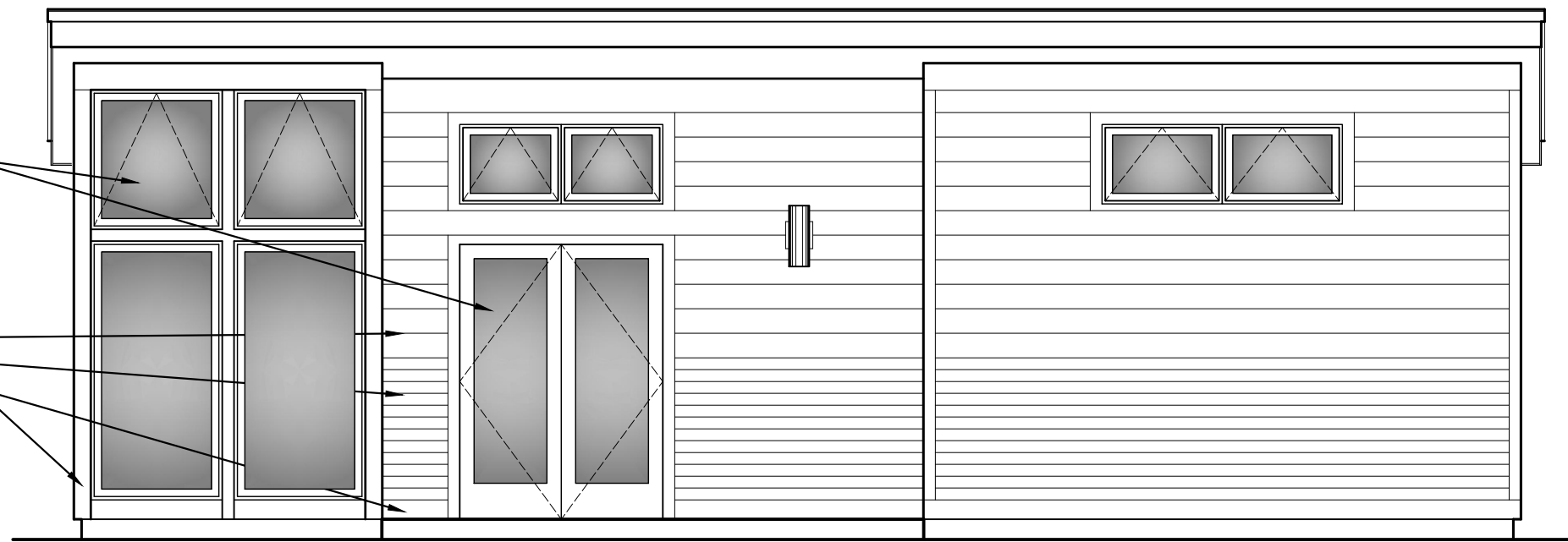
REVISIONS:

DRAWN BY: EN

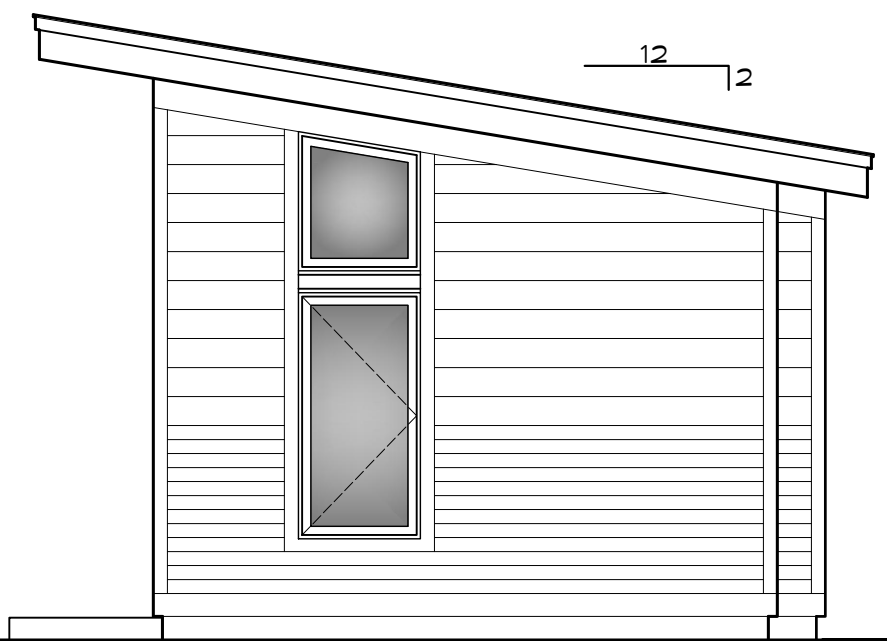
PROJECT NUMBER: 2108

ANDERSON 400 SERIES WINDOWS
& EXTERIOR DOOR

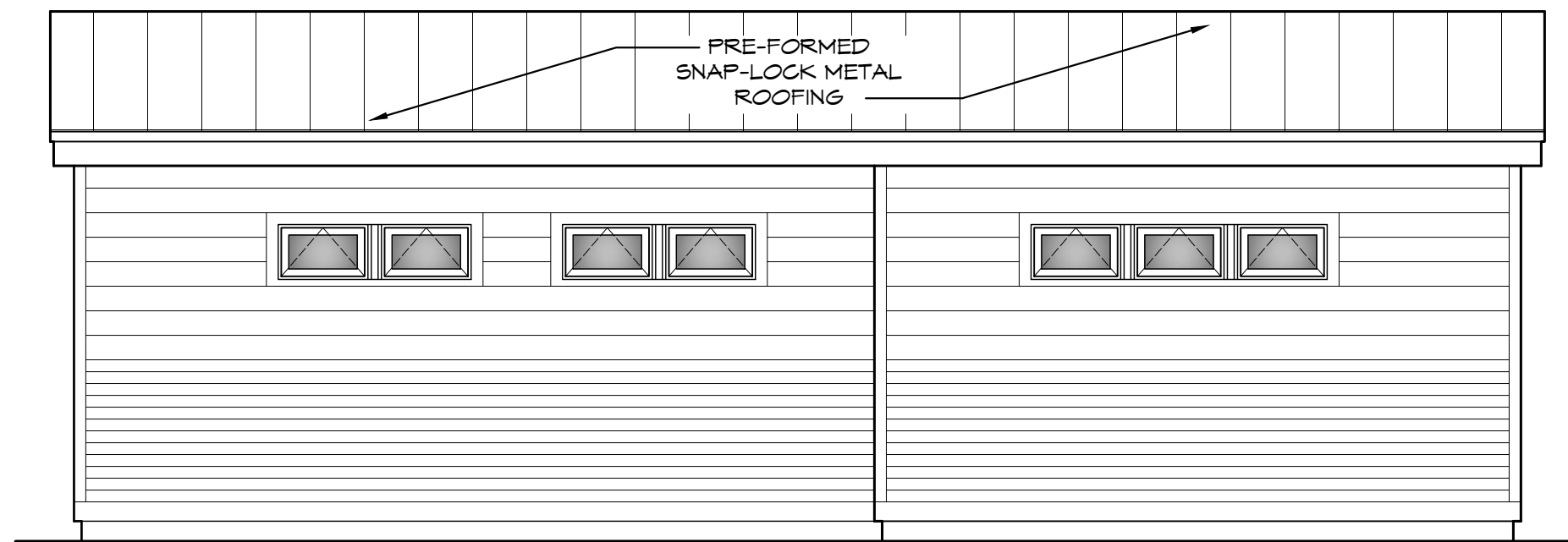
TRU-EXTERIOR POLY-ASH SIDING
& TRIM SIDING: NICKEL GAP
PROFILE
- 1x8 W/ SMOOTH FACE (HIGH)
- 1x4 W/ TEXTURED FACE (LOW)
- TRIM: 5/4xVARIES



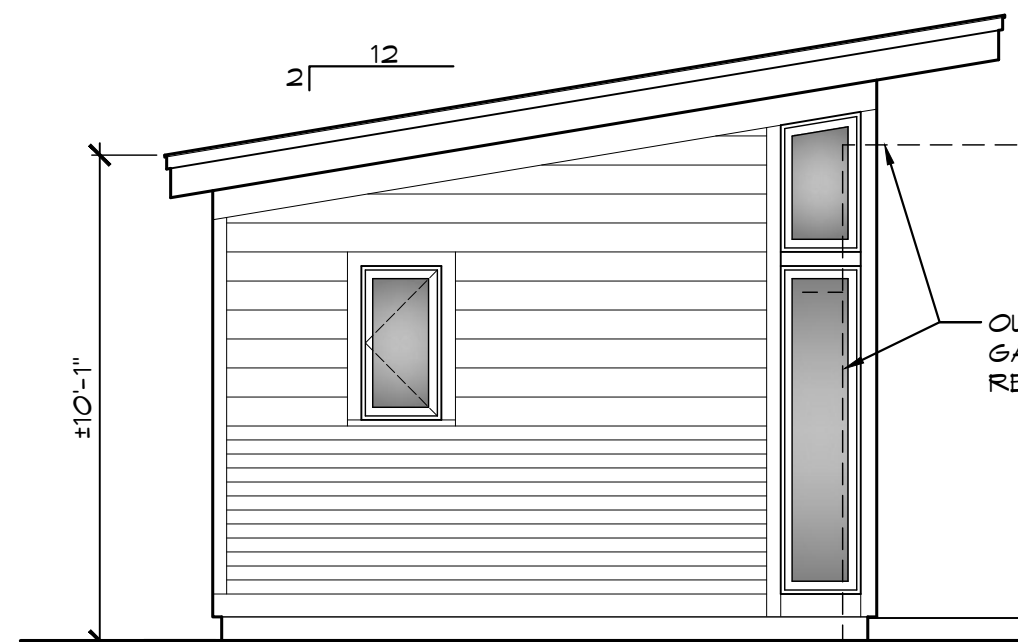
2 APARTMENT ELEVATION - FRONT (SOUTH)
SCALE: 1/4" = 1'-0"



3 APARTMENT ELEV - SIDE (EAST)
SCALE: 1/4" = 1'-0"



4 APARTMENT ELEVATION - REAR (NORTH)
SCALE: 1/4" = 1'-0"

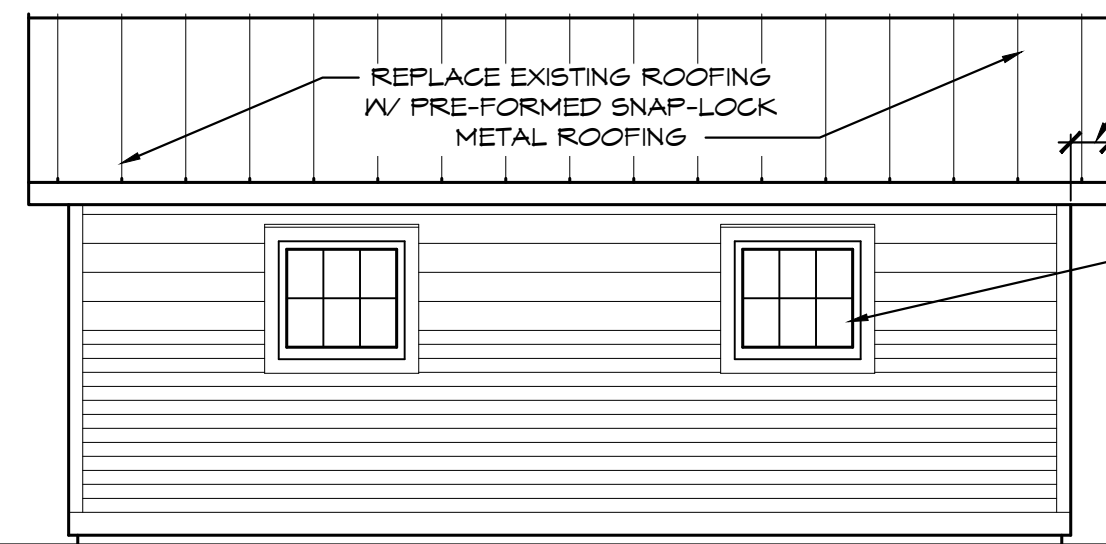


5 APARTMENT ELEV - SIDE (WEST)
SCALE: 1/4" = 1'-0"



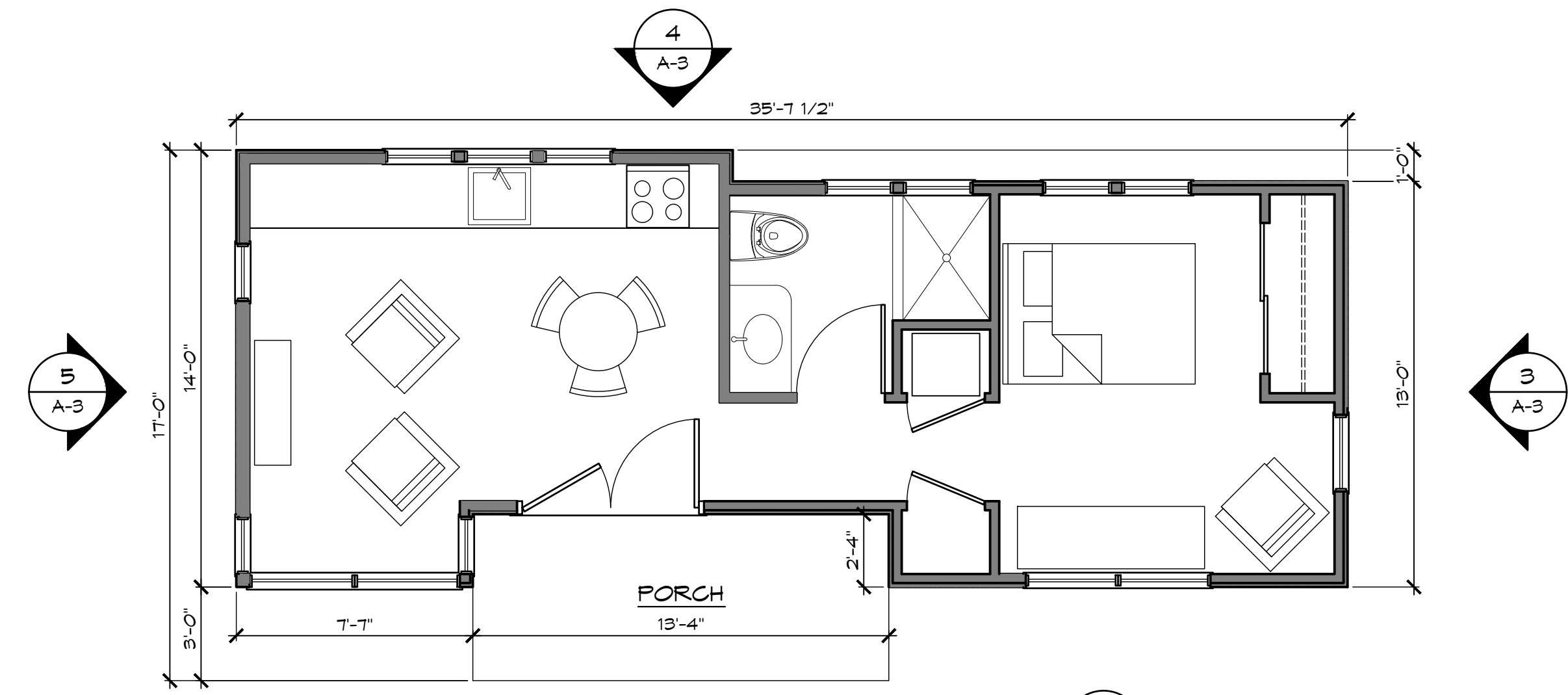
6 GARAGE ELEVATION - FRONT (WEST)
SCALE: 1/4" = 1'-0"

REPLACE SIDING W/ TRU-EXTERIOR POLY-ASH SIDING & TRIM SIDING: NICKEL GAP PROFILE
- 1x8 W/ SMOOTH FACE (HIGH)
- 1x4 W/ TEXTURED FACE (LOW)
TRIM: 5/4xVARIES
RESTORE EXISTING GARAGE DOORS & HARDWARE AS REQUIRED

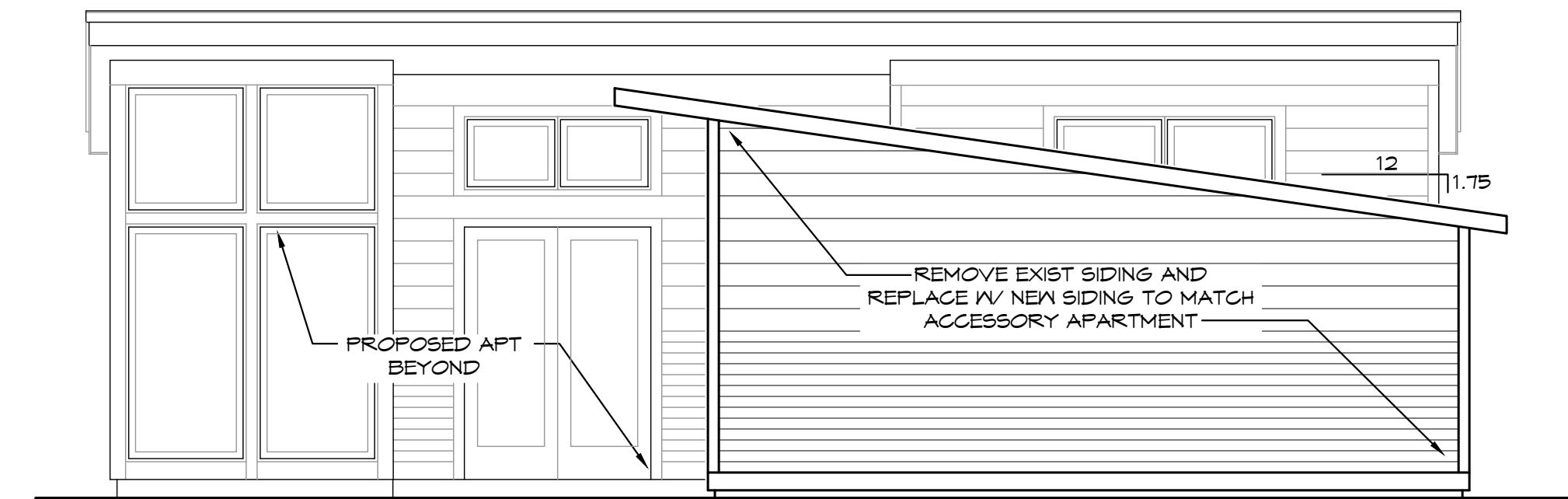


8 GARAGE ELEVATION - REAR (EAST)
SCALE: 1/4" = 1'-0"

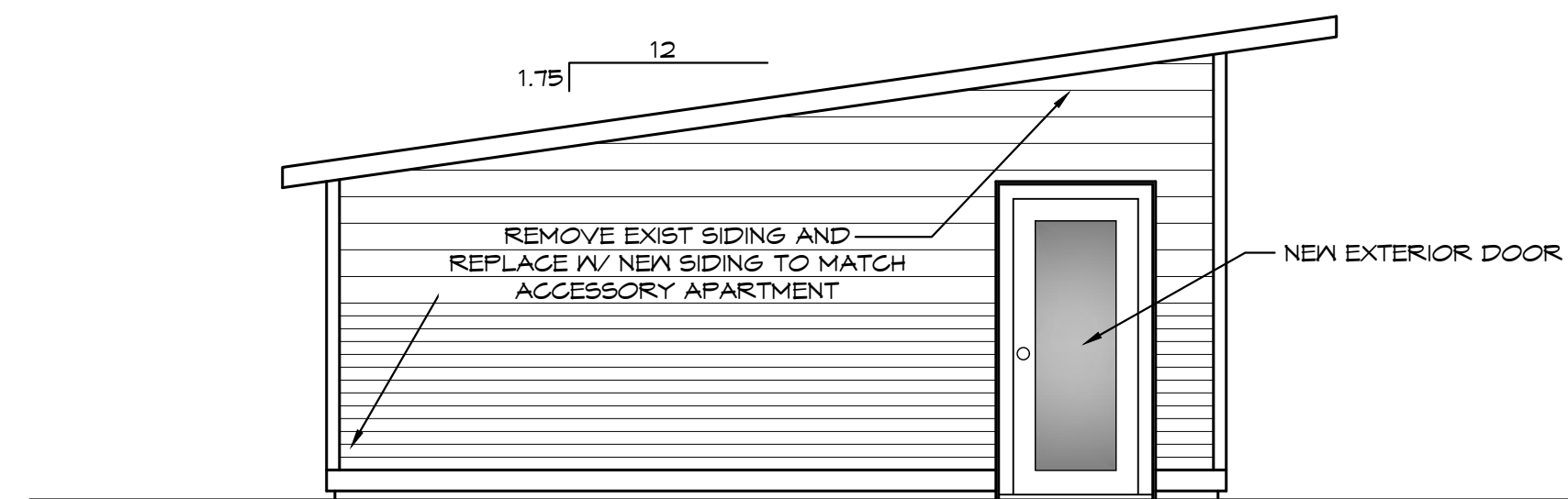
REPLACE EXISTING ROOFING W/ PRE-FORMED SNAP-LOCK METAL ROOFING
DEPTH OF SIDE ROOF OVERHANG TO REMAIN (MATCH NEW APT PROFILE AND FINISHES)
RESTORE EXISTING WINDOWS AS REQUIRED (TRIM WITH POLY-ASH)



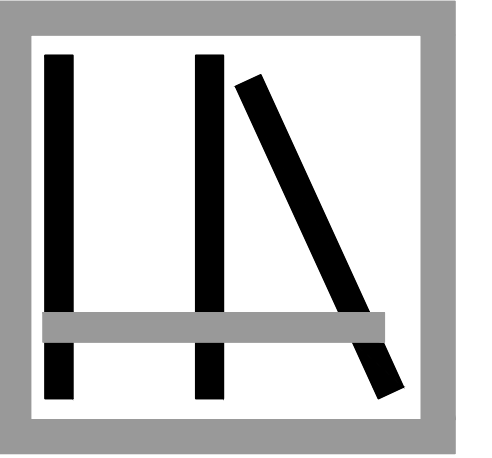
1 PROPOSED ACCESSORY APARTMENT & MODIFIED GARAGE PLANS
SCALE: 1/4" = 1'-0"



7 GARAGE ELEVATION - SIDE (SOUTH)
SCALE: 1/4" = 1'-0"



9 GARAGE ELEVATION - SIDE (NORTH)
SCALE: 1/4" = 1'-0"



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ALTERATIONS TO EXISTING:
RAMSEY - DONNELLY RESIDENCE
18 NORTH WALNUT STREET
BEACON, NY 12508

ZONING BOARD OF APPEALS REVIEW

ACCESSORY BLDGS
PLANS & ELEV

A-3

DATE: 25 APRIL 2022

REVISIONS:

REVISIONS:

REVISIONS:

DRAWN BY: JK, EN

PROJECT NUMBER: 2108

© HIGHLANDS ARCHITECTURE 2022



Memorandum

Planning Board

TO: Zoning Board Chairman Dunne and Zoning Board Members

FROM: Planning Board Chairman Gunn and Planning Board Members

RE: Advisory Opinion
18 North Walnut Street
Applicants: Brian Donnelly & Scott Ramsey

DATE: April 13, 2022

At their last meeting, the Planning Board reviewed an application for a Special Use Permit and Site Plan Approval for an accessory apartment at 18 North Walnut Street submitted by Brian Donnelly and Scott Ramsey.

The applicants propose to do a partial demolition of an existing garage and construct a 448 sq. ft. accessory apartment in the back yard of their single-family house. Section 223-17(E) of the City Zoning Code permits 720 square feet of maximum cumulative square footage and the applicant is proposing 858 sq. ft. Board members reviewed the proposal and after careful consideration of the variance needed, voted unanimously to send a positive recommendation to the Zoning Board of Appeals.

As always the final decision will be based on your review of the application but the Planning Board felt the aforementioned factors should be offered as an advisory viewpoint.

CITY OF BEACON
ZONING BOARD OF APPEALS

RESOLUTION
Parcel ID# 5954-28-912934

WHEREAS, an application has been made to the City of Beacon Zoning Board of Appeals by **Scott Ramsey & Brian Donnelly** (the “Applicants”) for a 138 square foot cumulative lot coverage variance where the maximum permitted cumulative lot coverage for an accessory structure is 720 square feet pursuant to City Code §§ 223-17(E) and 223 Attachment 3 in connection with the construction of an 858 square foot accessory structure (accessory apartment) on property located at 18 North Walnut Street in the R1-5 Zoning District. Said premises being known and designated on the tax map of the City of Beacon as **Parcel ID# 5954-28-912934** (the “Property”); and

WHEREAS, a duly advertised public hearing on the application was held on May 17, 2022, at which time all those wishing to be heard on the application were given such opportunity; and

WHEREAS, the Board closed the public hearing on May 17, 2022; and

WHEREAS, the proposed action is a Type II Action pursuant to the New York State Environmental Quality Review Act, and accordingly, no further environmental review is required; and

WHEREAS, the Board considered the benefit to the Applicants if the variance are granted, as weighed against the detriment to the health, safety and welfare of the neighborhood or community by such grant.

NOW, THEREFORE, BE IT RESOLVED, that the Board, from the application, considered each of the factors set forth at Section 81-b(4)(b) of the General City Law and found, with respect to those considerations, as follows:

- 1) As to whether an undesirable change will be produced in the character of the neighborhood or a detriment to nearby properties will be created by the granting of the area variance, the Board found that...

- 2) As to whether the benefit the Applicants seek can be achieved through another method, feasible for the Applicants to pursue, that does not require the area variance, the Board found that ...
- 3) As to whether the requested variance is substantial, the Board found that ...
- 4) As to whether the proposed variance will have an adverse effect or impact on the physical or environmental conditions in the neighborhood or district, the Board found that ...
- 5) As to whether the alleged difficulty is self-created, the Board found ...

BE IT FURTHER RESOLVED, that the Board finds that the requested variance [IS/IS NOT] the minimum variance necessary and adequate to preserve and protect the character of the neighborhood and the health, safety and welfare of the community.

BE IT FURTHER RESOLVED, that said application for a 138 square foot cumulative lot coverage variance where the maximum permitted cumulative lot coverage for an accessory structure is 720 square feet pursuant to City Code §§ 223-17(E) and 223 Attachment 3 in connection with the construction of an 858 square foot accessory structure (accessory apartment) on property located at 18 North Walnut Street, is hereby [GRANTED/DENIED], subject to the following conditions:

1. No permit or certificate of occupancy shall be issued until the Applicants have paid in full all application and consultant fees incurred by the City in connection with the review of this application.
2. The variance shall be void if the Applicants fail to (i) obtain a building permit within six months from the date of this Resolution; (ii) commence construction within six months following the date of issuance of the building permit; or (iii) complete construction and obtain a certificate of occupancy within 24 months after the date of issuance of said building permit.

BE IT FURTHER RESOLVED, that the Zoning Board of Appeals may grant a six month extension of the variance provided that a written request for an extension is submitted before the variance expire. Such extension shall only be granted upon a showing

by the Applicants that the circumstances and conditions upon which the variance were originally granted have not substantially changed.

Dated: May 17, 2022

Mr. David Jensen, Chairman

Chairman Jensen called the roll:

Motion	Second	Zoning Board Member	Aye	Nay
		David Jensen		
		Judy Smith		
		Montos Vakirtzis		
		Jordan Haug		
		Elaine Ciaccio		
		Motion Carried		

City of Beacon Zoning Board of Appeals Agenda
05/17/2022

Title:

Review and hold Public Hearing on application submitted by Thomas Butler, 97 Union Street, Tax Grid No. 30-6054-46-219567-00, in the R1-5 Zoning District, for relief from Section 223-17 to construct a 14' x 15'11" second story rear addition over a new deck and patio with an 8.3 ft. side yard setback (10 ft. required)

ATTACHMENTS

[97 Union Application.pdf](#)

[97 Union Street Site Plan.pdf](#)

[97 Union EAF.pdf](#)

[ZBA Draft Resolution 97 Union Street.pdf](#)

ZONING BOARD OF APPEALS

City of Beacon, New York

APPLICATION FOR APPEAL

OWNER: THOMAS BUTLER

ADDRESS: 97 UNION STREET

BEACON, NY

TELEPHONE: 917-518-7444

E-MAIL: SQUIREBUTLER71@GMAIL.COM

APPLICANT (if not owner): _____

ADDRESS: _____

TELEPHONE: _____

E-MAIL: _____

REPRESENTED BY: STEPHEN WHAUGL, R.A.

ADDRESS: 1141 ROUTE 55, SUITE A

LAGRANGEVILLE, NY 12540

TELEPHONE: 845-337-4331

E-MAIL: SW@WHAUGLARCHITECTURE.COM

PROPERTY LOCATION: 97 UNION STREET

ZONING DISTRICT: R-1-E

TAX MAP DESIGNATION: SECTION 605A

BLOCK 46 LOT 219567

Section of Zoning Code appealed from or Interpretation desired:

223-17 SCHEDULE OF DIMENSIONAL REGULATIONS.

Reason supporting request:

PART OF THE EXISTING LEFT SIDE OF THE HOUSE IS +/- 1.9' FROM THE
PROPERTY LINE WHERE 10'-0" IS REQUIRED.

Supporting documents submitted herewith: Site Plan, Survey, etc. as required:

SITE PLANS, FLOOR PLANS, EXTERIOR ELEVATIONS.

Date: 4/25/22



Owner's Signature



Applicant's Signature

Fee Schedule

AREA VARIANCE	\$ 250
USE VARIANCE	\$ 500
INTERPRETATION:	\$ 250

****escrow fees may apply if required by Chairman****

FOR OFFICE USE ONLY

Application #

CITY OF BEACON

1 Municipal Plaza, Beacon, NY

Telephone (845) 838-5000 • <http://cityofbeacon.org/>

INDIVIDUAL DISCLOSURE FORM

(This form must accompany every land use application and every application for a building permit or certificate of occupancy submitted by any person(s))

Disclosure of the names and addresses of all persons) filing a land-use application with the City is required pursuant to Section 223-62 of the City Code of the City of Beacon. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

SECTION A

Name of Applicant: THOMAS BUTLERAddress of Applicant: 97 UNION STREET, BEACON, NY.Telephone Contact Information: 917-518-7444

SECTION B. List all owners of record of the subject property or any part thereof.

Name	Residence or Business Address	Telephone Number	Date and Manner title was acquired	Date and place where the deed or document of conveyance was recorded or filed.
THOMAS BUTLER	97 UNION ST	917-518-7444		DUTCHESS COUNTY CLERKS OFFICE

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: THOMAS BUTLER

If owned by a corporation, partnership or organization, please list names of persons holding over 5% interest.

N/A

List all properties in the City of Beacon that you hold a 5% interest in:

N/AApplicant Address: 97 UNION STREET, BEACON, NYProject Address: 97 UNION STREET, BEACON, NY.Project Tax Grid # 605A-46-219567Type of Application RESIDENTIAL

Please note that the property owner is the applicant. "Applicant" is defined as any individual who owns at least five percent (5%) interest in a corporation or partnership or other business.

I, THOMAS BUTLER, the undersigned owner of the above referenced property, hereby affirm that I have reviewed my records and verify that the following information is true.

1. No violations are pending for ANY parcel owned by me situated within the City of Beacon ✓
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon
3. ALL tax payments due to the City of Beacon are current ✓
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current

THOMAS BUTLER

Signature of Owner

Title if owner is corporation

Office Use Only:

Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)

NO

YES

Initial

X AC

ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)

 XAC

ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)

 XAC

TOWNSHIP: BEACON, NY SECTION: BLOCK, LOT: 654.46,219567 ZONE: R1-5									
	MIN. LOT AREA	WIDTH	DEPTH	FRONT YD.	SIDE YD.	SIDE YD.	REAR YD.	MAX BLDG. HGT (STORIES / FT)	MAX BLDG. COVERAGE
ORDINANCE REQUIREMENT:	5,000 SF	50 FT	100 FT	15 FT	10 FT	10 FT	20 FT	2.5 / 35'	12 %
EXISTING:	8,459 SF	43.0' FT	221.83' FT	34.2' FT	1.9' FT	14.3' FT	126.9' FT	2 / 26'	11.5 %
PROPOSED:	8,459 SF	43.0' FT *	221.83' FT	34.2' FT	1.9' FT **	14.3' FT	126.9' FT	2 / 26'	11.5 %

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ARCHITECTURE pllc
1141 ROUTE 55, SUITE A, LAGRANGEVILLE, NY 12540
(845) 337-4331 WHALENARCHITECTURE.COM

[illegible]

EXISTING & PROPOSED SITE PLANS, ZONING INFO

DRAWING TITLE:

DRAWN BY: SW	SHEET: 3 OF 9
DATE: 4/21/21	SCALE: As indicated

DRAWING NO.:

3SP1.0

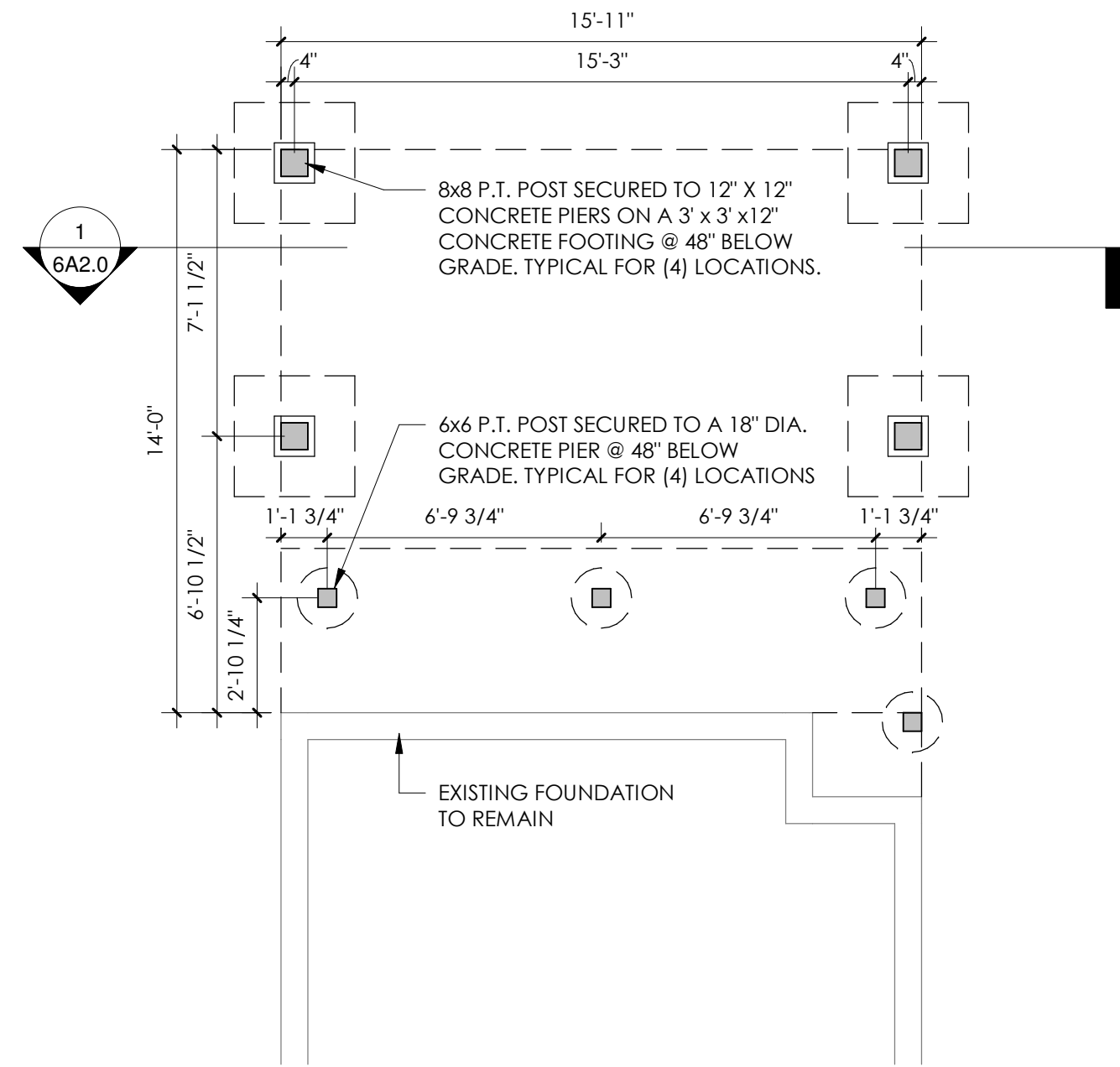
PROJECT PHASE:

CD



ALL SITE PLAN INFORMATION WAS TAKEN FROM A SURVEY
AS PREPARED BY: OICLE LAND SURVEYING, P.C.
946 ROUTE 376, UNIT 10
WAPPINGERS FALLS, NY 12590
SURVEY DATE 4/11/21





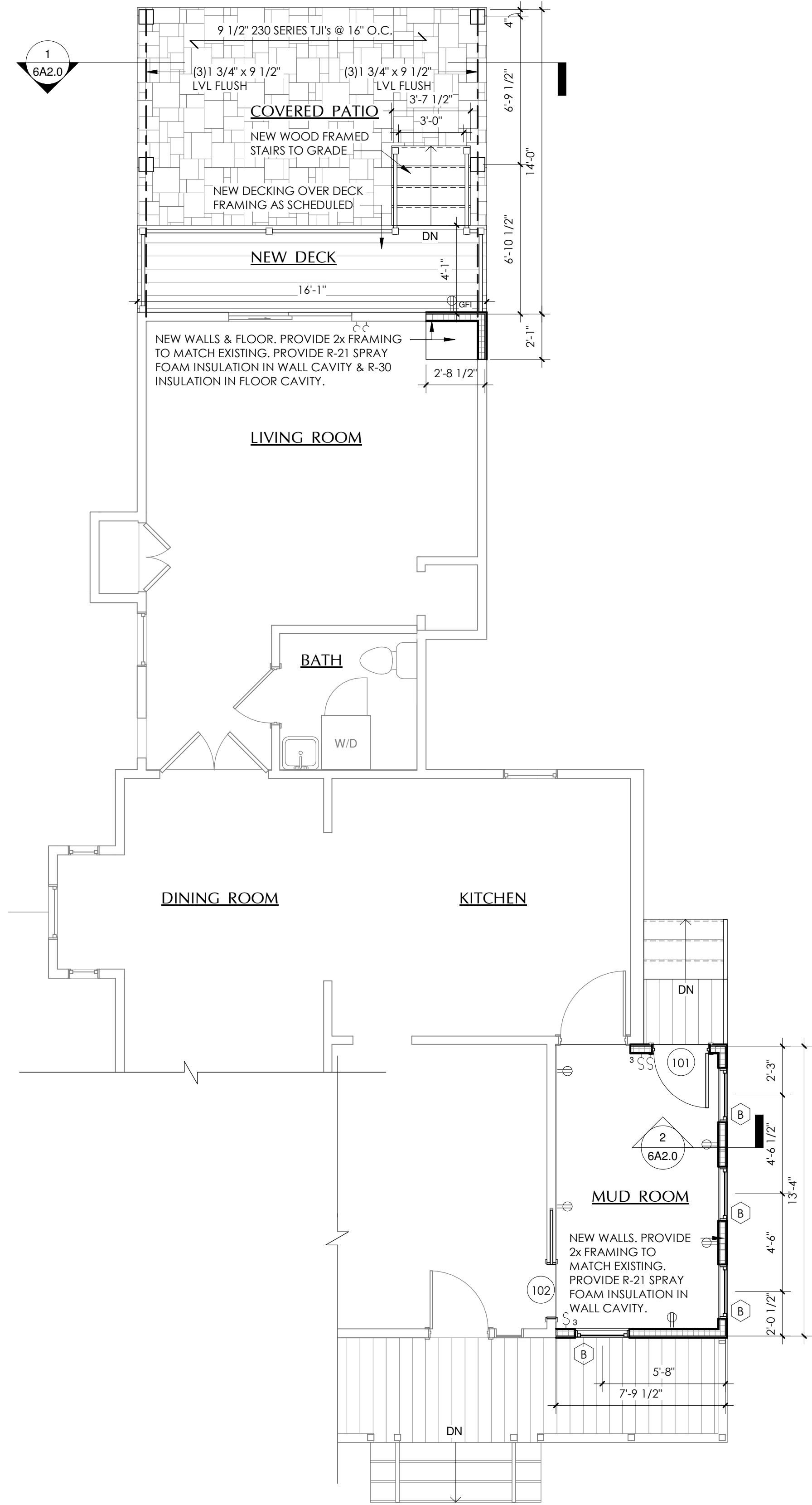
1 FOUNDATION PLAN
5A1.0 1/4" = 1'-0"

WINDOW SCHEDULE				
TAG	WIDTH	HEIGHT	TYPE	NOTES
A	2' - 6"	4' - 0"	DOUBLE HUNG	
B	2' - 6"	3' - 4"	DOUBLE HUNG	
C	1' - 6"	1' - 6"	FIXED - CIRCULAR	
D	3' - 2"	4' - 10"	DOUBLE HUNG	EGRESS

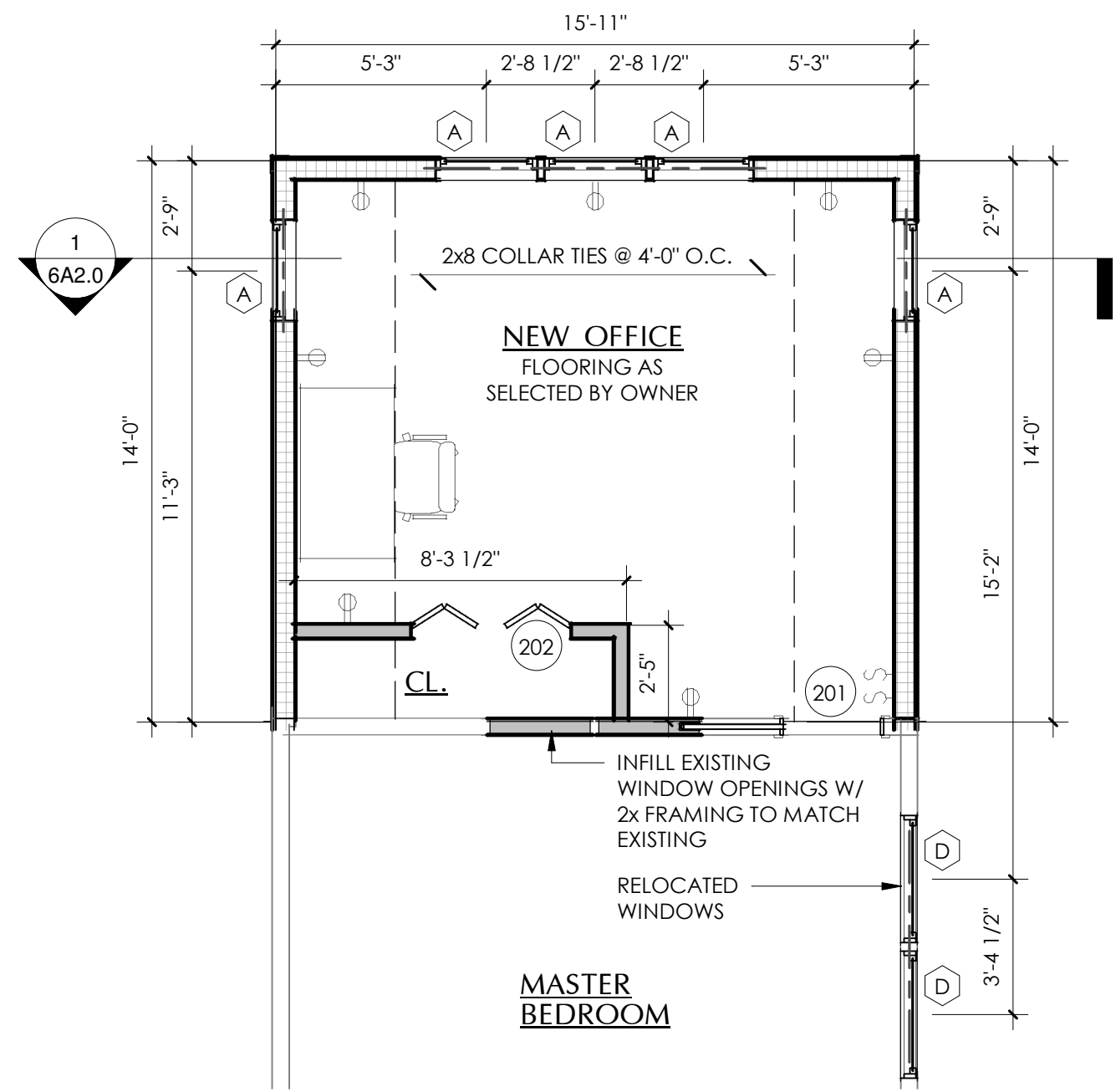
EGRESS - THIS WINDOW IS AN EGRESS WINDOW SINCE IT MEETS OR EXCEEDS THE CLEAR OPENING OF 5.7 SQUARE FEET, 20" CLEAR OPENING WIDTH, AND 24" CLEAR OPENING HEIGHT.

WINDOW NOTES:
- ALL WINDOWS TO BE SELECTED BY OWNER.
- ALL NEW WINDOWS TO HAVE LOW-E, ARGON FILLED INSULATED GLASS AND ENERGY STAR RATED.
- PROVIDE WINDOW HARDWARE TO MATCH EXISTING STYLE AND COLOR.
- PRIME AND PAINT INTERIOR SIDE OF ALL WINDOWS, FINISH ALL BATHROOM WINDOWS WITH MARINE GRADE PAINT.
- PROVIDE INTERIOR TRIM ON ALL WINDOWS TO MATCH EXISTING.
- ON EXTERIOR PROVIDE & INSTALL 3 1/2" WIDE WINDOW TRIM AS MANUFACTURED BY THE WINDOW MANUFACTURER ON JAMBS AND HEADS OF ALL WINDOWS.

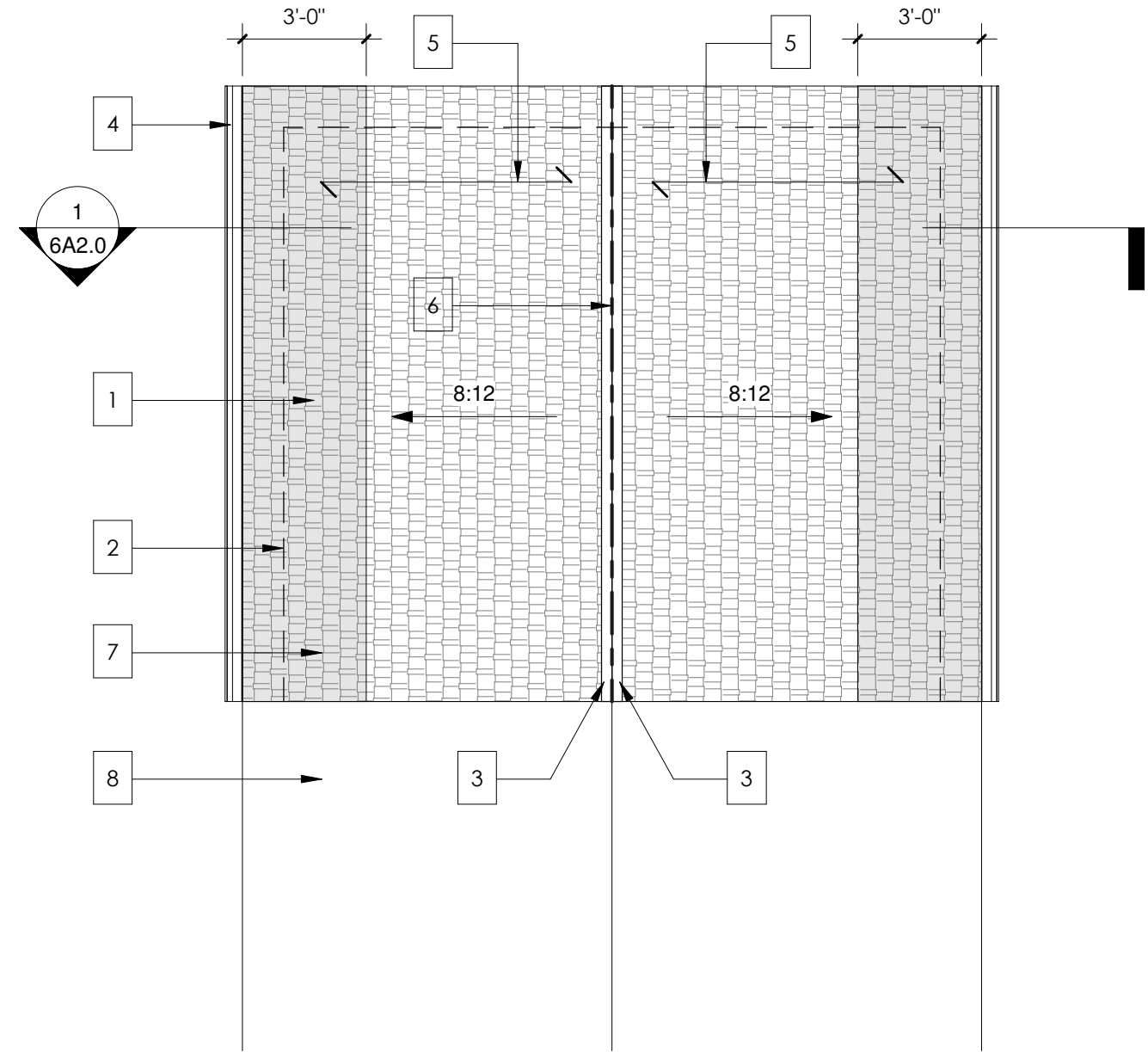
DOOR SCHEDULE				
TAG	WIDTH	HEIGHT	TYPE	NOTES
101	2' - 6"	6' - 8"	SWINGING DOOR	
102	2' - 6"	6' - 8"	POCKET DOOR	
201	2' - 6"	6' - 8"	POCKET DOOR	
202	4' - 0"	6' - 8"	BI-FOLD DOOR	



2 PROPOSED 1st FLOOR PLAN
5A1.0 1/4" = 1'-0"



3 PROPOSED 2nd FLOOR PLAN
5A1.0 1/4" = 1'-0"



- ROOF KEY NOTES:
- 1 ASPHALT ROOF SHINGLES OVER 5/8" ZIP ROOF SHEATHING OVER 2x10 ROOF RAFTERS @ 16" O.C.
 - 2 LINE OF EXTERIOR WALL BELOW.
 - 3 INSTALL COBRA VENTED RIDGE VENT W/ SHINGLE CAPS.
 - 4 NEW METAL GUTTERS AND DOWNSPOUTS. REVIEW DOWNSPOUT LOCATIONS IN FIELD W/ OWNER AND ARCHITECT.
 - 5 2x10 RAFTERS @ 16" O.C.
 - 6 NEW 1 3/4" x 11 7/8" LVL RIDGE.
 - 7 INSTALL 3'-0" WIDE ICE & WATER MEMBRANE AT ROOF EAVES.
 - 8 EXISTING ROOF TO REMAIN.

4 ROOF PLAN
5A1.0 1/4" = 1'-0"

NOT FOR CONSTRUCTION
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1141 ROUTE 55, SUITE A, LAGRANGEVILLE, NY 12540
(845) 337-4331
WHALENARCHITECTURE.COM

REVISIONS / ISSUE DATES		PROJECT NAME:	
NO.	DESCRIPTION	Renovations & Addition to the: Butler Residence 97 Union Street Beacon, NY	
	ISSUED FOR REVIEW	PROPOSED FLOOR PLANS	
	ISSUED FOR REVIEW		
	ISSUED FOR REVIEW		
	ISSUED FOR REVIEW		

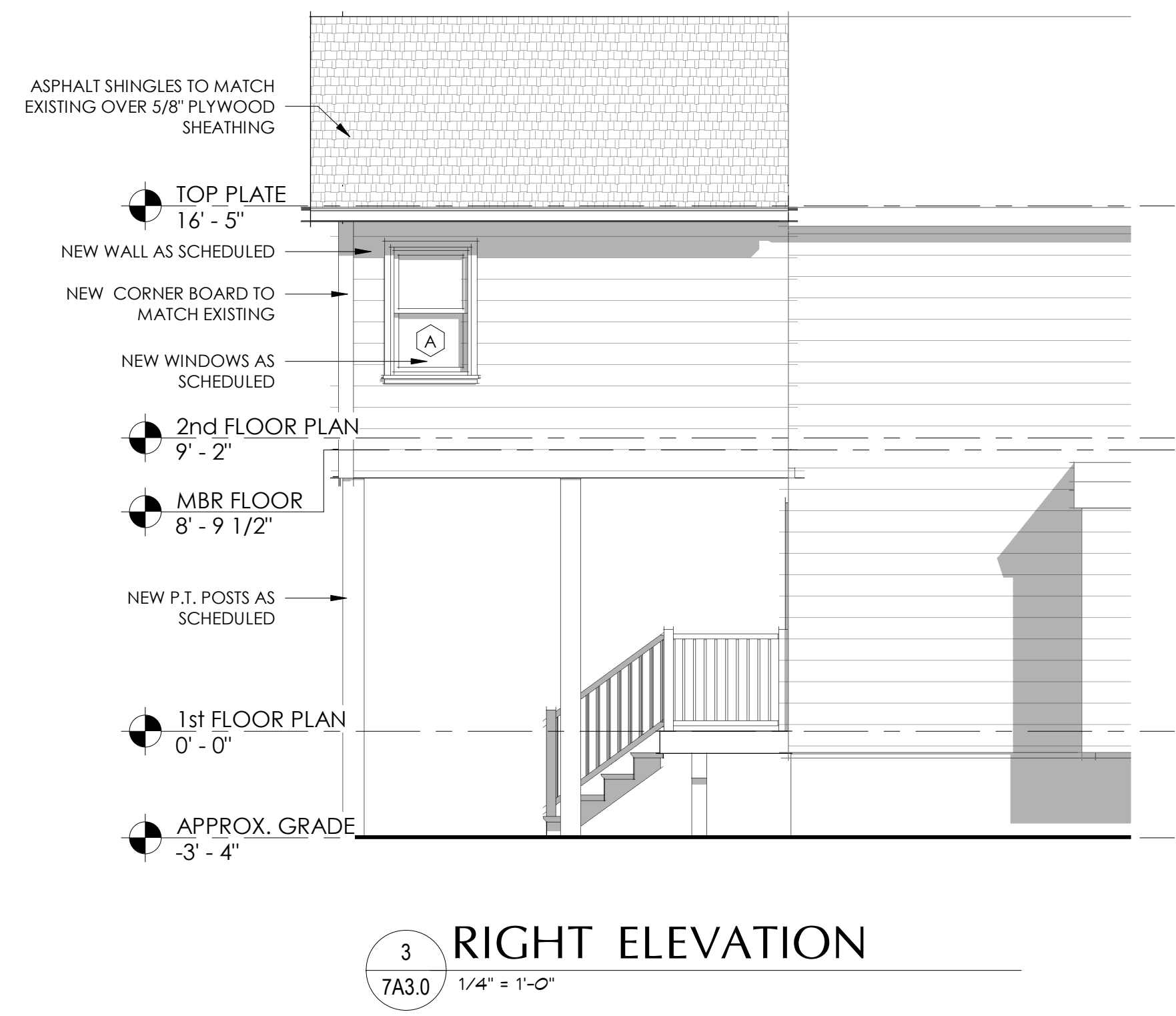
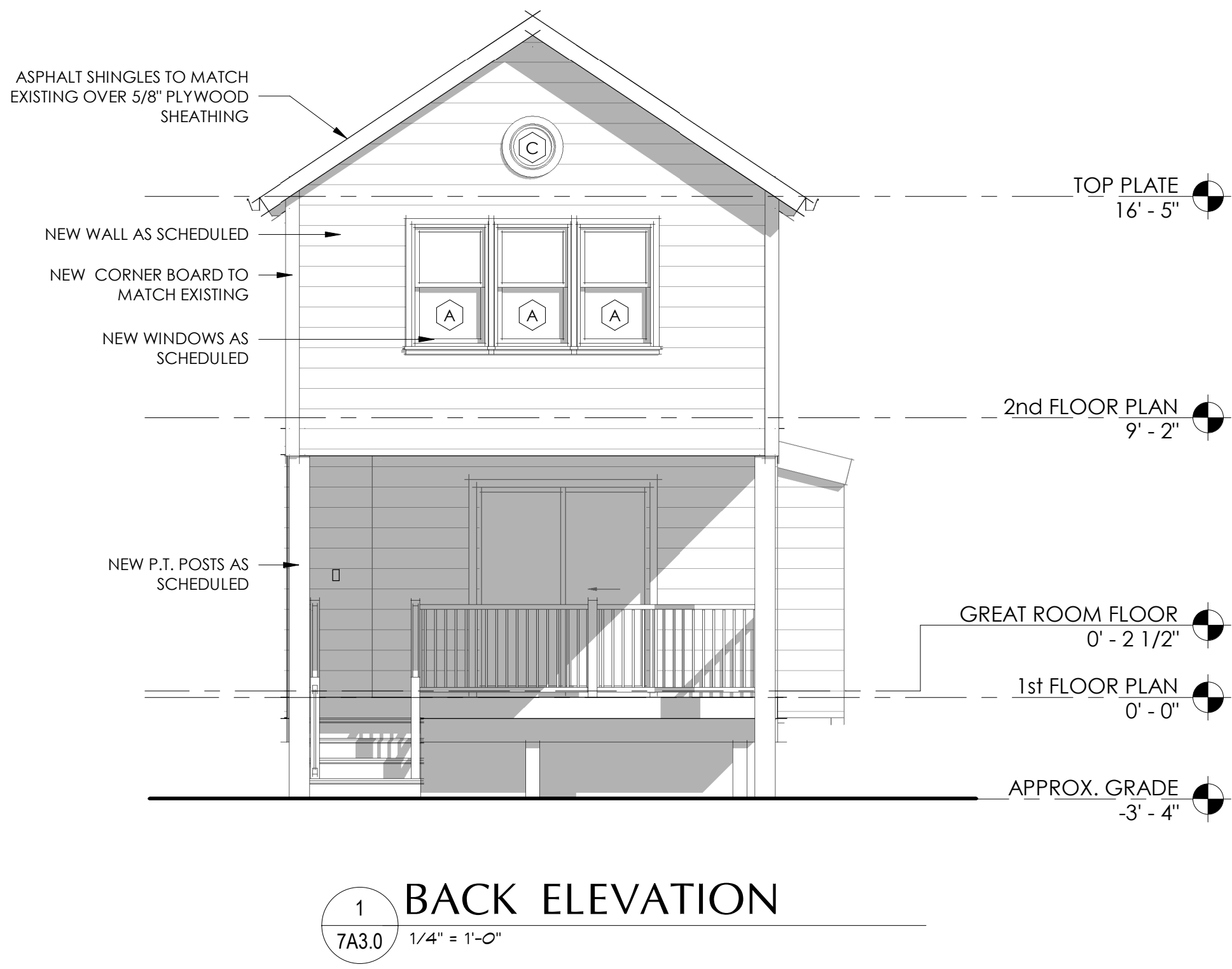
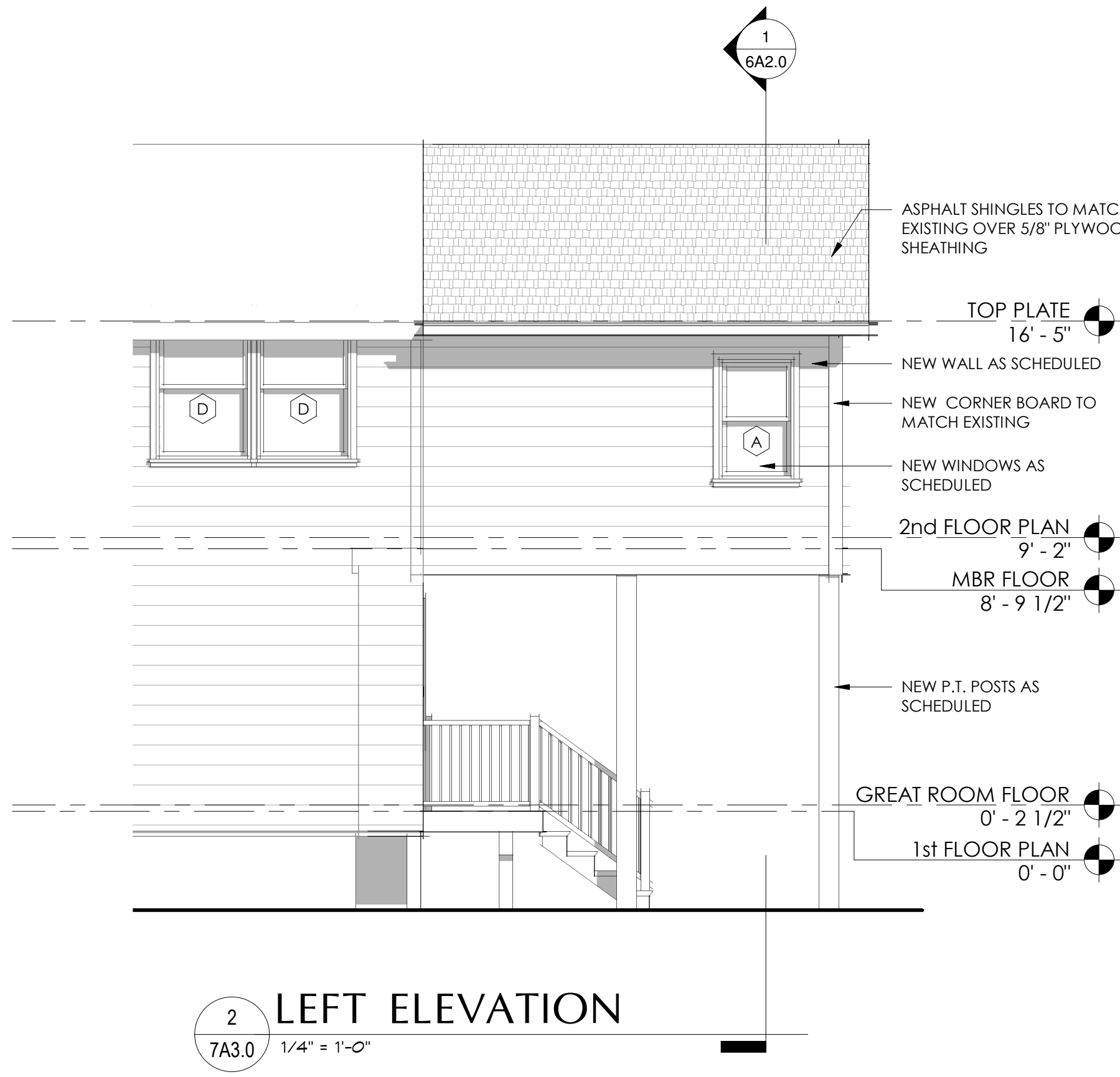
DRAWN BY: SW	SHEET: 5 OF 9
DATE: 4/21/21	SCALE: 1/4" = 1'-0"

DRAWING NO:
5A1.0

PROJECT PHASE:
CD

THESE DRAWINGS ARE INSUFFICIENT FOR CONSTRUCTION WITHOUT THE SEAL AND SIGNATURE OF THE ARCHITECT OF RECORD

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(845) 337-4331
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REVISIONS / ISSUE DATES

NO.	DESCRIPTION	BY	DATE
	ISSUED FOR REVIEW	SW	5/4/21
	ISSUED FOR REVIEW	SW	5/7/21
	ISSUED FOR REVIEW	SW	6/4/21
	ISSUED FOR REVIEW	SW	12/1/21

PROJECT NAME:
Renovations & Addition to the:
Butler Residence
97 Union Street
Beacon, NY

DRAWING TITLE:
EXTERIOR ELEVATIONS

DRAWN BY:
SW

DATE:
4/21/21

SHEET:
7 OF 9

SCALE:
1/4" = 1'-0"

DRAWING NO.:
7A3.0

PROJECT PHASE:
CD

NOT FOR CONSTRUCTION
FOR PRICING PURPOSES ONLY

19

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

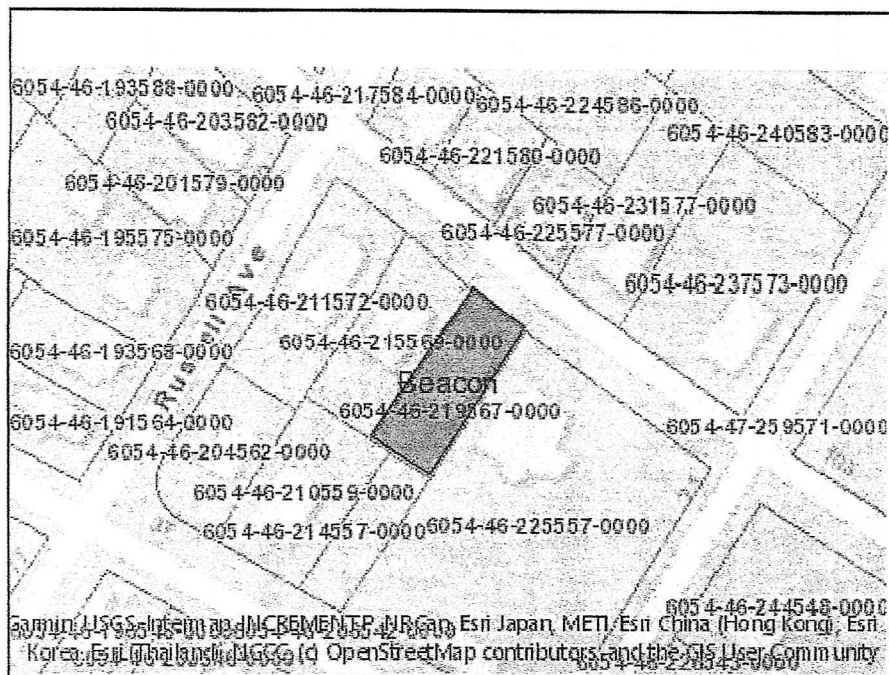
Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

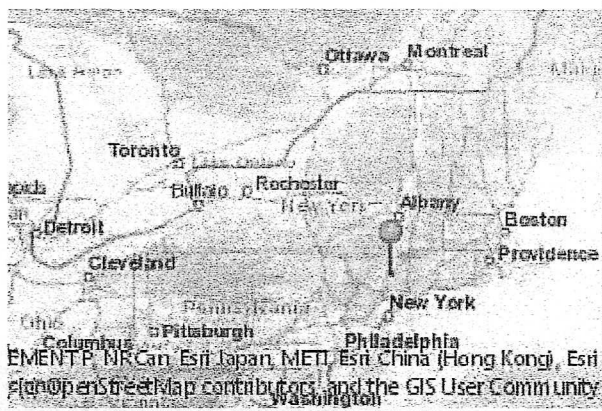
Part 1 – Project and Sponsor Information			
Name of Action or Project: Butler Residence			
Project Location (describe, and attach a location map): 97 UNION STREET, BEACON, N.Y.			
Brief Description of Proposed Action: Construct a new 2nd story addition on the back of the existing residence.			
Name of Applicant or Sponsor: Thomas M Butler		Telephone: 917-518-7444 E-Mail: SQUIRE BUTLER 71 ~~squirebutler71@gmail.com~~	
Address: 97 Union Street			
City/PO: Beacon		State: NY	Zip Code: 12508
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO ☒	YES ☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Zoning Board, Building Department		NO ☐	YES ☒
3. a. Total acreage of the site of the proposed action?		.19 acres	
b. Total acreage to be physically disturbed?		.01 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		0.19 acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☒ Residential (suburban)			
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):			
☐ Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	☐	☒	☐
b. Consistent with the adopted comprehensive plan?	☐	☒	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☐	☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
If Yes, identify: _____	☒	☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	☒	☐	
b. Are public transportation services available at or near the site of the proposed action?	☐	☒	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☒	
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies:			
<u>The addition will meet the 2020 New York State Energy Conservation Code</u>	☐	☒	
10. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water: _____	☒	☐	
No new plumbing is planned for this project.			
11. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment: _____	☒	☐	
No new plumbing is planned for this project.			
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO	YES	
	☒	☐	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☐	☒	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	☒	☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☒	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____			

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☐ Urban ☒ Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES
	☒	☐
16. Is the project site located in the 100-year flood plan?	NO	YES
	☒	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes,	NO	YES
a. Will storm water discharges flow to adjacent properties?	☒	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe:	☐	☒
Stormwater will be discharged from gutters and downspouts to splash blocks and rip rap.		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	NO	YES
	☒	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	NO	YES
	☒	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	NO	YES
Further information forthcoming.	☐	☒
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: <u>STEPHEN A. WHALEY, R.A., LEED AP</u> Date: <u>4/25/22</u> Signature: <u>[Signature]</u> Title: <u>PRINCIPAL</u>		



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	No
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	Yes

Project:

Date:

Short Environmental Assessment Form

Part 2 - Impact Assessment

Part 2 is to be completed by the Lead Agency.

Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

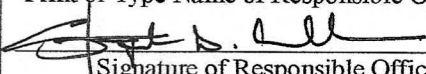
	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	☒	☐
2. Will the proposed action result in a change in the use or intensity of use of land?	☒	☐
3. Will the proposed action impair the character or quality of the existing community?	☒	☐
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	☒	☐
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	☒	☐
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	☒	☐
7. Will the proposed action impact existing:	☒	☐
a. public / private water supplies?	☒	☐
b. public / private wastewater treatment utilities?	☒	☐
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	☒	☐
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	☒	☐
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☒	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☒	☐

Project: Date:

Short Environmental Assessment Form

Part 3 Determination of Significance

For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

☐	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
☒	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
<u>WHALEN ARCHITECTURE, PLLC</u> Name of Lead Agency	<u>4/25/22</u> Date
<u>STEPHEN A. WHALEN, R.A., LEED AP</u> Print or Type Name of Responsible Officer in Lead Agency	<u>PRINCIPAL</u> Title of Responsible Officer
 Signature of Responsible Officer in Lead Agency	 Signature of Preparer (if different from Responsible Officer)

CITY OF BEACON
ZONING BOARD OF APPEALS

RESOLUTION
Parcel ID# 6054-46-219567

WHEREAS, an application has been made to the City of Beacon Zoning Board of Appeals by **Thomas Butler** (the “Applicant”) for a 1.7 foot side yard setback variance where the minimum required side yard setback is 10 feet pursuant to City Code §§ 223-17(D) and 223 Attachment 1 in connection with the construction of 14 foot x 15 foot 11 inch second story rear addition over a new deck and patio with an 8.3 foot side yard setback on property located at 97 Union Street in the R1-5 Zoning District. Said premises being known and designated on the tax map of the City of Beacon as **Parcel ID# 6054-46-219567**(the “Property”); and

WHEREAS, a duly advertised public hearing on the application was held on May 17, 2022, at which time all those wishing to be heard on the application were given such opportunity; and

WHEREAS, the Board closed the public hearing on May 17, 2022; and

WHEREAS, the proposed action is a Type II Action pursuant to the New York State Environmental Quality Review Act, and accordingly, no further environmental review is required; and

WHEREAS, the Board considered the benefit to the Applicant if the variance are granted, as weighed against the detriment to the health, safety and welfare of the neighborhood or community by such grant.

NOW, THEREFORE, BE IT RESOLVED, that the Board, from the application, considered each of the factors set forth at Section 81-b(4)(b) of the General City Law and found, with respect to those considerations, as follows:

- 1) As to whether an undesirable change will be produced in the character of the neighborhood or a detriment to nearby properties will be created by the granting of the area variance, the Board found that...

- 2) As to whether the benefit the Applicant seeks can be achieved through another method, feasible for the Applicant to pursue, that does not require the area variance, the Board found that ...
- 3) As to whether the requested variance is substantial, the Board found that ...
- 4) As to whether the proposed variance will have an adverse effect or impact on the physical or environmental conditions in the neighborhood or district, the Board found that ...
- 5) As to whether the alleged difficulty is self-created, the Board found ...

BE IT FURTHER RESOLVED, that the Board finds that the requested variance [IS/IS NOT] the minimum variance necessary and adequate to preserve and protect the character of the neighborhood and the health, safety and welfare of the community.

BE IT FURTHER RESOLVED, that said application for a 138 square foot cumulative lot coverage variance where the maximum permitted cumulative lot coverage for an accessory structure is 720 square feet pursuant to City Code §§ 223-17(E) and 223 Attachment 3 in connection with the construction of an 858 square foot accessory structure (accessory apartment) on property located at 18 North Walnut Street, is hereby [GRANTED/DENIED], subject to the following conditions:

1. No permit or certificate of occupancy shall be issued until the Applicant has paid in full all application and consultant fees incurred by the City in connection with the review of this application.
2. The variance shall be void if the Applicant fails to (i) obtain a building permit within six months from the date of this Resolution; (ii) commence construction within six months following the date of issuance of the building permit; or (iii) complete construction and obtain a certificate of occupancy within 24 months after the date of issuance of said building permit.

BE IT FURTHER RESOLVED, that the Zoning Board of Appeals may grant a six month extension of the variance provided that a written request for an extension is submitted before the variance expire. Such extension shall only be granted upon a showing

by the Applicant that the circumstances and conditions upon which the variance were originally granted have not substantially changed.

Dated: May 17, 2022

Mr. David Jensen, Chairman

Chairman Jensen called the roll:

Motion	Second	Zoning Board Member	Aye	Nay
		David Jensen		
		Judy Smith		
		Montos Vakirtzis		
		Jordan Haug		
		Elaine Ciaccio		
		Motion Carried		

City of Beacon Zoning Board of Appeals Agenda
05/17/2022

Title:

1113 Wolcott Avenue - SEQRA Review

ATTACHMENTS

[1113 Wolcott Avenue Supplemental ZBA Submission Cover Letter.pdf](#)

[1113 Wolcott Response to Comments Memorandum.pdf](#)

[1113 Wolcott Traffic & Parking Management Plan.pdf](#)

[1113 Wolcott Sheet 1 Site Plan.pdf](#)

[1113 Wolcott Sheet 2 Full Site Plan.pdf](#)



445 Hamilton Avenue, 14th Floor
White Plains, New York 10601
T 914 761 1300
F 914 761 5372
cuddyfeder.com

Taylor M. Palmer
tpalmer@cuddyfeder.com

April 26, 2022

VIA E-MAIL
AND HAND DELIVERY

Chairperson David Jensen
and Members of Zoning Board of Appeals
City of Beacon
1 Municipal Plaza
Beacon, New York 12508

Re: Planning Board SEQRA Referral – Additional Responses to Comments
Supplemental ZBA Submission – Application for Site Plan & Special Permit Approval
Premises: 1113 Wolcott Avenue, Beacon, New York 12508

Chairperson Jensen and Members of the Zoning Board of Appeals:

On behalf of Prophecy Theater, LLC (the “Applicant”), the owner of the above-referenced Premises, we respectfully submit this letter and referenced enclosures in connection with the Applicant’s pending Application proposing to redevelop the Premises, which includes the preservation of the historic church, for a proposed hotel and customary incidental accessory conference/event center and dining facility uses on the Premises (the “Application” or “Project”).

The details contained herein are prepared to address comments from this Board at its April 19th meeting Agenda and in further support that the Project as proposed *does not* have any potentially significant environmental impacts. The Applicant looks forward to its continued SEQRA review of the proposed adaptive re-use Project at the Board’s May 17th regular meeting Agenda.

RESPONSE TO NYS DOT COMMENTS AND THE REVISED TRAFFIC & PARKING MANAGEMENT PLAN:

As an update to our presentation at the ZBA’s April 19th meeting Agenda, based on the NYS DOT’s comments contained in its April 7, 2022 letter to the Applicant, the Applicant now proposes to gate the northerly exit only driveway during typical operations. This driveway will be managed by the Applicant to only be utilized for emergency access and during events. During events the gate will be opened, and the onsite circulation will be managed by on-site staff to enforce a one-way clockwise circulation with all vehicles entering at the southerly driveway and exiting at the northerly driveway. As identified in the revised Traffic & Parking Management Plan, which is enclosed as **Exhibit B**, temporary one-way signage will be provided at the main driveway during events to further indicate the one-way nature of the driveway.

In an effort to prevent any event attendees from crossing Route 9D – except at the designated crosswalks – and to further mitigate any potential traffic along Route 9D, a third on-site attendant



April 26, 2022

Page -2-

is now proposed to be posted at the entrance to the Premises during events to direct traffic entering the site for drop-off/pick-up. If additional attendants are required onsite to ensure efficient traffic flow, the Applicant will provide them as needed.¹ Further, the Applicant will agree to post temporary signage indicating “No Event Parking, Residents Only” at the driveways to the River Ridge and West End Lofts developments if agreed to by those neighboring developments. In addition, if acceptable to the City, temporary “Event Parking” signs will also be posted at the Municipal Plaza and Tompkins Lots to direct patrons to these lots. Notably, this will not restrict those City parking areas to event parking – of course the general public may otherwise use the parking spaces in those City lots, but it will help advertise that the parking area is indeed available for use including during occasional larger events. These signs are now included in the revised Traffic & Parking Management Plan with an indication that they are subject to approval by the City of Beacon and the neighboring residential developments. *See Exhibit B.* It is respectfully submitted that these additional site circulation, traffic and other parking-management related improvements will also reduce any potential impacts on the community character in the area.

We would also note that, in an abundance of caution, and in an effort to mitigate any and all potential traffic impacts, the Applicant is proposing additional monitoring (commonly referred to as “post-approval monitoring”) of the event conditions within a 6-12 month period after initial occupancy of the event space to ensure the Traffic & Parking Management Plan is achieving its goals and also agreeing to incorporate further refinements at that time if necessary. This monitoring will be worked into the Project approvals with the City of Beacon Planning Board. *See Exhibit B.*

TRAFFIC & PARKING SENSITIVITY ANALYSIS:

In order to provide this Board with an understanding of how the site could realistically operate and as recommended by the City’s Traffic Consultant, the Applicant’s traffic consultant, Colliers Engineering, has prepared the enclosed Traffic & Parking Sensitivity Analysis to further assess potential traffic and parking effects of the Project. *See Exhibit A – Response to Comments Memorandum* prepared by Colliers Engineering & Design, P.C., dated April 25, 2022, providing responses to the Traffic Comments Memorandum and enclosing the DOT Response Letter and Traffic and Parking Sensitivity Analysis. The Sensitivity Analysis focuses on the traffic and parking impacts of planned maximum attendance events, totaling 350 persons for limited events, to be held within the Church building. As part of this Traffic and Parking Sensitivity Analysis, the traffic and parking demand for employees and for the planned off-site parking locations is further accounted for within the traffic volume and parking demand projections for the Project.

¹ **Note:** The driveway provides approximately 160-170 feet of stacking distance between the drop-off/pick-up location and Route 9D, which can accommodate 7-8 passenger car vehicles in a single queue. It is not anticipated that a queue exceeding this storage distance will occur, but in the event that the storage distance is exceeded for any reason, there is sufficient width in the entry driveway to form two (2) queues if necessary.



April 26, 2022

Page -3-

As is further detailed therein, the results of the traffic analyses are generally consistent with the analysis results provided in the Traffic & Parking Study that was submitted to this Board, which concluded that the Project is not anticipated to have a significant impact on traffic conditions in the vicinity of the Project site. Further, using the Sensitivity Analysis assumptions and accounting for the 32 parking spaces provided on-site, the total required off-site parking spaces to accommodate these events is 78 parking spaces, which parking is sufficiently accounted for by the public parking in the vicinity of the site, including the Tompkins Lot, the Municipal Plaza Lot and Beekman Street on-street metered parking. **See Exhibit A.**

ADDITIONAL RESPONSES TO THE BOARD'S COMMENTS:

Based on our discussion with the ZBA at its April 19th meeting Agenda, we respectfully submit the following additional responses to comments:

1. **Comment:** Explain how the Applicant will protect existing businesses that are also relying on municipal parking spaces in the area.

- a. **Response:** *As was detailed in our previously submitted Traffic and Parking Study (the "Parking Study") prepared by Colliers Engineering ("Colliers"), dated February 21, 2022, the Applicant has thoroughly considered the available parking and present need of other businesses in the vicinity. As an initial matter, although there is on-street public parking along Main Street within this distance from the Project, as this parking is known to have limited availability, it has been discounted from the Parking Study's analysis. In order assess the availability of parking in each of these location during the anticipated peak event periods, Colliers conducted multiple observations of public parking areas over the course of five (5) months.*

Importantly, these Parking Study observations demonstrated that the Tomkins Firehouse Parking Lot, City of Beacon Municipal Plaza parking lot, and on street parking along Beekman Street, which are all nearest the Project, each appear to have sufficient availability to accommodate the excess parking demand of the Project while still leaving additional available parking for other public uses as well. Indeed, the Tomkins Firehouse Parking Lot was observed to be significantly underutilized during all time periods with five (5) vehicles or less parked at any one time, while the City of Beacon Municipal Plaza parking lot was observed to be significantly underutilized outside of Beacon City Hall business hours with less than fifteen (15) vehicles parked at any one time including municipal vehicles. The on-street parking along Beekman Street was observed to be significantly underutilized during all time periods. It should also be noted that all proposed events are limited timeframe events that will utilize these parking spaces during

the events only and these parking spaces would be available during all other times of the day.

Furthermore, the provision of a dedicated off-site parking location through an agreement with the nearby funeral home will lessen the projects dependence on existing public parking during the planned events. Other strategies are also proposed to be employed as outlined in the Parking Study and the Traffic & Parking Management Plan to try to reduce the Project attendees' reliance on personal vehicles to the greatest extent practicable, including the use of shuttles, public transportation options, etc. In addition, it is likely that there will be some shared parking between the proposed Project and other existing businesses during events given the proximity of the Project to Main Street. As an example, event attendees may park in the Tompkins Lot or Municipal Plaza lot, walk to visit nearby business on Main Street and walk back to the site for an event leaving their vehicle in the same location.

Accordingly, the Applicant respectfully submits that the use of the public parking spaces and lots will not have a detrimental impact on surrounding businesses also utilizing the lots because each of the public areas noted above are significantly underutilized, the provision of a private off-site parking location will lessen use of the public lots.

2. **Comment:** Describe how the number of off-street parking spaces the Applicant requires relief from is not substantial and will not have a negative environmental or community impact.

- a. **Response:** *As this Board is aware, substantiality is one (1) of the five (5) factors a zoning board may consider when weighing the benefit to the applicant if a variance is granted against the detriment to the health, safety, and welfare of the neighborhood or community by such grant. Contrary to this Board's comments at the April 19th meeting date, the substantiality of a variance cannot be judged solely by a comparison of the percentage deviation from the mandated requirements of the City's Zoning Code. Instead, the overall effect of granting the relief is the appropriate inquiry.²*

² In considering whether a variance is substantial, a zoning board of appeals shall examine the totality of the circumstances within an application. *See, e.g., Riklis v. Bd. of Zoning Appeals of Town of Hempstead*, 243 A.D.2d 482, 482, 662 N.Y.S.2d 602, 602 (2d Dep't 1997); *Schaller v. New Paltz Zoning Bd. of Appeals*, 108 A.D.3d 821, 824, 968 N.Y.S.2d 702, 705 (3rd Dep't 2013). Indeed, "[s]ubstantiality cannot be judged in the abstract; rather, the totality of relevant circumstances must be evaluated in determining whether the variance sought is, in actuality, a substantial one." *Lodge Hotel v. Town of Erwin Zoning Bd. of Appeals*, 2007 WL 5649523 No. 94817 (Jan. 24, 2007) *1, *affirmed*, 43 A.D.3d 1447, 843 N.Y.S.2d 744 (4th Dep't 2007).

Although the Applicant is before this Board in connection with its SEQRA review and has not formally submitted a variance application concerning the required number of off-street parking spaces at this time, the Applicant respectfully submits that the number of off-street parking spaces required for the Project, whether the capacity is 350 or 300 individuals, for example, is not substantial. The proper inquiry for this determination does not depend upon any percent deviation but must instead rely upon consideration of the facts and circumstances of this situation, which the Applicant submits proves that an off-street parking variance for 104 spaces, the number the Building Inspector determined was required for occasional events a 350-person maximum occupancy, is not substantial.³

As the Applicant has discussed in prior submissions to this Board, the proposed maximum capacity for the occasional weekend events at the accessory conference/event space is necessary to foster the most sustainable and financially sound scenario for operating a business that adaptively re-uses the currently existing structures and restores and maintains the historic cemetery, which cemetery has been abandoned for close to 100 years and encompasses nearly half of the property. This proposal and the traffic and parking studies and the revised Traffic & Parking Management Plan were also designed to have the least potential environmental impact to the community, as the Project has already been reduced from 420 people to a 350-person maximum for the occasional weekend conferences/events.

Indeed, as was more fully detailed in the previously submitted Parking Study, the Project is not anticipated to have a significant impact on traffic conditions in the vicinity of the Project and there is enough public parking in the vicinity to accommodate the excess parking demand associated with the permitted accessory conference center/event and café dining area spaces. A combination of public parking lots and other potential mitigation measures including private agreements with nearby property owners for off-street parking will permit sufficient parking and traffic circulation for the Project without creating any potentially significant environmental impacts. Moreover, proposed occupancy number coupled with the use and schedule for events aligns with the surrounding uses and with similar sites in cities and towns in the Hudson Valley and, importantly here, the use and occupancy will not significantly stray from that of an active church going community in a building of this size. Accordingly, the

³ **Note:** The Building Inspector issued a determination that notwithstanding the 1964 parking exception that could be applied to the Premises and proposed uses if the parking requirement for the proposal only required 86 parking spaces (i.e. 25% more than the 69 spaces required for the Church use in 1964), the present proposal with occasional events of 350 people requires 136 spaces, and thus a parking variance for 104 spaces (the total number of spaces not provided on-site) is required.



April 26, 2022

Page -6-

Applicant respectfully submits that a variance request for 104 parking spaces is not substantial based on the unique facts and circumstances of this property, and the proposed adaptive reuse of the existing site development.

3. **Comment:** Explain how the Applicant will account for potentially losing access to some of the public parking areas noted above.

- a. **Response:** *It is understood that there are potential future proposals for additional development by the City that may reduce public parking availability in the vicinity of the site. Conversely, there are also potential future proposals to offset the potential losses of parking including providing additional on-street parking along Wolcott Avenue, providing additional parking at the Beacon Center Lot and more remotely constructing a parking garage at the Eliza Street lot. Regardless of these potential parking solutions, the Applicant is working towards providing dedicated off-site parking location through an agreement with the nearby funeral home will lessen the projects dependence on existing public parking during the planned events. Furthermore, the Parking Study does identify additional available parking within the Beacon Metro-North trains station parking lots. In the event that parking availability in the vicinity of the site is reduced due to potential future developments, the Applicant could implement the use of a shuttle to transport attendees to and from the train station to make parking this area more desirable to event attendees.*

CONCLUSION:

For the reasons set forth herein, as well as in prior submissions and appearances before this Board and to the Planning Board during the SEQRA review of the Project, it is respectfully submitted that the record demonstrates that there are no potentially significant adverse environmental impacts from the Project and that a negative declaration should be issued by the Planning Board.

INDEX OF ENCLOSURES:

In support of this supplemental submission, please find enclosed five (5) sets of the instant letter with the following materials:

Exhibit A: Response to Comments Memorandum prepared by Colliers Engineering & Design, P.C., dated April 25, 2022, providing responses to the Traffic Comments Memorandum and enclosing the DOT Response Letter and Traffic and Parking Sensitivity Analysis; and

Exhibit B: Revised Traffic and Parking Management Plan prepared by Colliers Engineering & Design P.C., dated April 25, 2022.



April 26, 2022

Page -7-

In further support of this Application, we respectfully submit the revised site plan sheets from the site plan set entitled "Special Use Permit Application", prepared by Hudson Land Design Professional Engineering, P.C. and Aryeh Siegal, Architect, dated June 29, 2021, last revised April 26, 2022, numbered and titled as follows:

- Sheet 1 of 14 Site Plan; and
- Sheet 2 of 14 Full Site Plan.

We look forward to appearing at the Zoning Board of Appeal's May 17th regular meeting to continue review of this Application and to address any further SEQRA questions or comments that the Board may have at this time.

In the meantime, should this Board or City Staff have any questions or comments with regard to the foregoing, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read 'TP', is written over a horizontal line.

Taylor M. Palmer

Enclosures

cc: Jennifer L. Gray, Esq.
 Drew Gamils, Esq.
 Aryeh J. Siegel Architect
 Richard D'Andrea, P.E. PTOE – Colliers Engineering & Design CT, P.C.
 Michael A. Bodendorf, P.E. – Hudson Land Design Professional Engineering, P.C.
 Prophecy Theater, LLC
 Allison Fausner, Esq.

April 25, 2022

Chairman John Gunn
Beacon Planning Board
City of Beacon City Hall
1 Municipal Plaza
Beacon, NY 12508

1113 Wolcott Avenue – Prophecy Theater LLC
City of Beacon, Dutchess County, New York
Colliers Engineering & Design Project No. 21004333A

Dear Chairman Gunn and Members of the Planning Board:

We have reviewed the most recent comments received from Creighton Manning's (CM) letter dated March 7, 2022. The following provides detailed responses to each of these items. It should also be noted that comments were received by the Applicant from NYSDOT on April 7, 2022. These comments are attached for the Boards information along with a separate response letter addressing the specific NYSDOT comments.

As part of the NYSDOT comments it is important to note that NYSDOT has indicated their preference to not have two exit driveways to NYS Route 9D due to potential safety concerns. In order to address this, it is now proposed for the northerly exit only driveway to be gated and only be used during events and for emergency access and deliveries during typical operations.

Site Plan

1. On-site vehicular circulation should be clarified. We have the following questions:

- CM Review #4 Follow-Up Comment: The proposed signs on the plan are appropriate for the north driveway's configuration. CM continues to recommend that "Stop" (R1-1) signs be located at both of the proposed driveways. The driveway design, configuration, signing, and striping are subject to review and approval by the NYSDOT.

Response: Stop signs and Stop bars are now proposed at both the main driveway exit lane and the northerly exit driveway location.

- CM Review #4 Follow-Up Comment: Upon review of the plans, the driveway openings at the roadway edge appear overly large. CM recommends that the applicant seek a contextually appropriate driveway design and width to maximize pedestrian safety. The driveway should be appropriate for the design vehicle, but potentially not as large as other commercial driveways that experience heavy vehicle traffic. CM notes that the northerly egress-only driveway could be reduced in width since it does not need to accommodate right-turn ingress movements. Ultimately, the driveway design, configuration, signing, and striping are subject to review and approval by the NYSDOT.

Response: The driveway configurations have been modified to reduce the driveway openings to the greatest exit practicable while still being able to accommodate the anticipated largest vehicles accessing the site. The northerly exit only driveway opening width has been significantly reduced, as suggested, by limiting the northern radius since this driveway will not need to accommodate right turn entering vehicles.

2. Please provide intersection and stopping sight distances for the existing driveway.

- CM Review #4 Follow-Up Comment: CM reviewed the sight distance table provided in the Traffic Impact Study. The available intersection and stopping sight distances meet or exceed the recommended AASHTO sight distance for the proposed movements. CM has no further comments.

Response: No further response required

Traffic Impact & Parking Study

3. CM reviewed the trip generation methodology:

- CM Review #4 Follow-Up Comment: CM understands that the applicant does not have a definitive operations plan at this time. In order to provide the City with an understanding of how the site could realistically operate, CM recommends that a sensitivity analysis be performed that considers a typical/reasonable number of vendors and staff for an event; trip generation can then be recalculated based on a vehicle occupancy of 1.0 for the assumed number of vendors and staff. The sensitivity analysis should be performed to assess both traffic and parking impacts. Furthermore, CM recommends that the sensitivity analysis also consider a scenario where only 50% of the hotel rooms are occupied by the event attendees.

Response: See attached Traffic & Parking Sensitivity Analysis Technical Appendix.

- CM Review #3 Follow-Up Comment: CM agrees with the 10% credit being taken for non-vehicular traffic. The level of service reports provided by Colliers indicate that the reduction in credit being taken results in minor increases in delay.
- CM Review #4 Follow-Up Comment: CM has no further comments.

Response: No further response required

5. CM Review #3 Follow-Up Comment: Based on CM's understanding of Colliers' calculations, the 52 parking spaces required off-site was determined by:

- i. Using the City of Beacon Zoning Code, the event space requires 88 spaces and the hotel requires 31 spaces for a total of 119 spaces.
- ii. Colliers assumes that the parking requirements for the hotel can be omitted as 100% of the hotel will be occupied by event occupants. Thus, the required parking would be 89 spaces (88 for the 350-person event space and 1 for the hotel employee).

- iii. Colliers then reduced the 89 spaces by the spaces provided on-site to arrive at the number of spaces required off-site, 58.
- iv. Colliers then reduced the spaces required off-site by 10% to take credit for event occupants not arriving by personal car. Thus, they state that 52 spaces are required off-site.
- CM disagrees with the how Colliers considers the internal capture for the hotel use. Colliers' method assumes that one hotel room would be used by four event occupants and those four occupants would be arriving in one vehicle. Rather, CM proposes that the development requires 72 spaces off- site. Below is a detailed explanation on how that number was arrived upon:
 - i. 10% of event occupants will arrive via non-vehicular modes. Therefore: $350 - (350 \times 0.10) = 315$ event occupants will arrive via personal vehicles.
 - ii. 100% of the hotel rooms will be occupied by event occupants. Assuming two (2) event occupants per room there will be 255 event occupants arriving via personal vehicles.
 - iii. Utilizing the City of Beacon Zoning Code for a Conference Center (1 space for each 4 seats), remaining 255 event occupants will require 64 parking spaces. Because the internal capture for hotel occupants was accounted for in ii., the 30 spaces intended for the hotel cannot be credited to the 64 parking spaces. Therefore, 64 spaces will need to be identified off-site.
- CM Review #4 Follow-Up Comment: CM notes that the site now proposed 32 off-street parking spaces. Is this to accommodate two hotel employees?

Response: There is no specific designation for this additional off-street parking space, but if necessary, it could be designated as an employee only space to accommodate café employees. Note the Applicant maintains that the Hotel will only have one employee on-site at any time.
- 6. CM Review #3 Follow-Up Comment: Based on the off-site parking requirements calculated by CM, 64, the Tompkins lot would be 98% utilized. When the lot capacity is reduced by the anticipated 14+ spaces, the lot will be over capacity. In this case, the municipal lot could provide the necessary supply to meet the demand.

CM notes that the Café/Restaurant/Bar will require 17 parking spaces. In conjunction with the hotel use, the site will require 48 parking spaces in a typical non-event scenario. In this scenario, 17 spaces will be sourced off-site. If sourced from the Tompkins lot, they would require 25% of its capacity. Based on the future condition, where the lot's capacity is reduced by 14+, they would require 30% of the lot's capacity.

- **CM Review #4 Follow-Up Comment:** The applicant is proposing to utilize available public parking supplies to satisfy the majority of its parking requirement. While this is an acceptable practice, it underscores the question of how long the public parking supply will be available and what would happen in the event a reduction in supply or an increase in demand from another source transpires. In order to mitigate this potential issue, the applicant should consider formulating a contingency plan—for example, with a nearby private entity able to provide a supply of off-street parking—and sharing the same with the Planning Board.

Response: The Applicant is in the process of finalizing an agreement with the nearby Riverview Funeral Home located at 2 Beekman Street, near the Wolcott Avenue/Beekman Street intersection, which will allow for the use of 46 parking spaces during the on-site events. This will reduce the total need for the use of offsite public parking from 88 spaces to 42 spaces. The details of this agreement at being finalized and will be provided to the Board upon completion.

Draft Traffic & Parking Management Plan

1. CM recommends that the entrance sign be changed to read “NO EVENT PARKING, DROP-OFF/PICK-UP ONLY.”

Response: The temporary entrance signage wording has been adjusted as suggested.

2. CM recommends that a third traffic attendant be posted at roadside between the Main Driveway and north driveway intersections. This attendant could help screen cars prior to entering the site. This attendant could also help create gaps to allow vehicles to exit the site thus mitigating the potential for internal gridlock.

Response: Posting of a third traffic attendant roadside along Route 9D would seem to cause potential for queuing of vehicles along Route 9D which would be a concern of the NYSDOT. If additional attendants are required onsite to ensure efficient traffic flow, the Applicant will provide them as needed.

3. Cones should be placed along the parallel parking spaces on the north side of the hotel building.

Response: Cones have been added to the parallel parking spaces on the north side of hotel building.

4. CM recommends that signing be implemented at off-site locations. These off-site signs such as directional signs to potential parking lots like the Tompkins Lot and Municipal Plaza Lot. Additionally, signs should be located at the entrances to the neighboring residential developments indicating "NO EVENT PARKING, RESIDENTS ONLY."

Response: The Applicant will agree to post temporary signage indicating "No Event Parking, Residents Only" at the driveways to the River Ridge and West End Lofts developments if agreed to by those neighboring developments. In addition, if acceptable to the City, temporary "Event Parking" signs will also be posted at the Municipal Plaza and Tompkins Lots to direct patrons to these lots. These signs are now included in the Traffic & Parking Management Plan with an indication that they are subject to approval by the City of Beacon and the neighboring residential developments.

Sincerely,

Colliers Engineering & Design CT, P.C.

Richard D'Andrea, P.E., PTOE
Assistant Department Manager

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Technical Appendix

NYSDOT Letter April 7, 2022



April 7, 2022

Richard D'Andrea, P.E., PTOE
Colliers Engineering & Design
400 Columbus Avenue Suite 180E
Valhalla, New York 10595

**Re: NYSDOT SEQRA# 21-214
1113 Wolcott Avenue
City of Beacon
Dutchess County**

Dear Mr. D'Andrea,

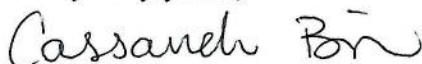
The New York State Department of Transportation (NYSDOT) has reviewed the submitted plans dated June 29, 2021 and Traffic & Parking Study dated February 21, 2022 for the 1113 Wolcott Avenue project on Route 9D located in the City of Beacon. Below we offer the following comments:

1. Having two exits onto Route 9D poses for a safety concern. NYSDOT recommends either designing for a "circular" driving pattern, where the southern driveway will be an entrance only and the northern driveway will be an exit only or eliminating the exit only altogether. Please look at possible designs where this could work.
2. There is concern for when large events occur, people will be crossing Route 9D not at the designated crosswalks and there could be potential accidents with pedestrian and cars making turns. Please try to refigure a drop off location so cars can make a turn around.
3. Please provide us with how you plan on mitigating the traffic backup on Route 9D during events so that it does not adversely affect normal traffic.
4. For off street parking, have the owners of the parking lots been in contact and have given a written agreement that they would allow the parking during the 350 persons event?
5. A Perm 32 – Highway Work Permit Application for Utility Work will be required for the proposed sewer and water connections.
6. Please provide a drainage study verifying that all drainage will be staying on site and not entering the NYSDOT drainage system.
7. Please include sign details on the plans meeting all MUTCD requirements.

8. Please include the existing pavement striping on the vehicle maneuvering plan.
9. Please include a Work Zone Traffic Control Plan.
10. Please clarify the limits at which the sidewalk is being replaced.
11. Please update your pavement restoration details to reflect the information below:
 - 1 ½" Top Course Item 402.1261013
 - 2 ½" Binder Course Item 402.256903
 - 8" Base Course Item 402.376903 (2 4" lifts)
 - 12" Subbase Course Item 304.11000008
12. Please include a stop bar and stop sign at all exits onto Route 9D meeting NYSDOT standards and specifications.

Please let me know if you have any questions on any of the above items or if I can be of any assistance.

Very truly yours,



Cassandra Bibbo, EIT
Permit Engineer, Residency 8-3

New York State Department of Transportation, Hudson Valley
106 Ludingtonville Road, Holmes, NY 12531
(845) 878-6363 | Cassandra.Bibbo@dot.ny.gov | www.dot.ny.gov



Technical Appendix

NYSDOT Comment Response Letter

April 25, 2022

Ms. Cassandra Bibbo, EIT
Permit Engineer, Residency 8-3
New York State Department of Transportation
106 Lundingtonville Road
Holmes, NY 12531

SEQRA # 21-214 - 1113 Wolcott Avenue
City of Beacon, Dutchess County, New York
Colliers Engineering & Design Project No. 21004333A

Dear Ms. Bibbo:

The following items are in response to comments in your letter dated April 7, 2022, regarding the 1113 Wolcott Avenue project in the City of Beacon, Dutchess County, New York. The items are numbered according to your review comments for ease of review.

1. Having two exits onto Route 9D poses for a safety concern. NYSDOT recommends either designing for a "circular" driving pattern, where the southern driveway will be an entrance only and the northern driveway will be an exit only or eliminating the exit only altogether. Please look at possible designs where this could work.

Response: *The Project now proposes to gate the northerly exit only driveway during typical operations. This driveway will be managed by the Project to only be utilized for emergency access and during events. During events the gate will be opened, and the onsite circulation will be managed by on-site staff to enforce a one-way clockwise circulation with all vehicles entering at the southerly driveway and exiting at the northerly driveway. As identified in the revised Traffic & Parking Management plan, which is attached, temporary one-way signage will be provided at the Main Entry driveway during events to further indicate the one-way nature of the driveway.*

2. There is concern for when large events occur, people will be crossing Route 9D not at the designated crosswalks and there could be potential accidents with pedestrian and cars making turns. Please try to refigure a drop off location so cars can make a tum around.

Response: *The on-site circulation is setup for drop-off/pick-up operations to occur on-site. As now specified in the Traffic & Parking Management plan a 3rd on-site attendant is now proposed to be posted at the entrance during events to direct traffic entering the site for drop-off/pick-up. Furthermore, the information to be disseminated regarding available parking in the vicinity of Site is intended to reduce the need for drop-off/pick-up on the Site. The primary parking locations identified for the events a located north and south of the site along Route 9D at the Tompkins Lot, the City of Beacon Municipal*

Plaza Lot and as discussed further below the Riverview Funeral Home. Only the Tompkins lot is located on the opposite side of Route 9D from the project site. The most logical location for pedestrians to cross Route 9D to the Site from this lot is at the existing RRFB Crosswalk located at the north end of the Site.

3. Please provide us with how you plan on mitigating the traffic backup on Route 9D during events so that it does not adversely affect normal traffic.

Response: As note previously, and identified in the Traffic & Parking Management Plan, a 3rd on-site attendant is now proposed to be posted at the entrance during events to direct traffic entering the site for drop-off/pick-up. Furthermore, the driveway provides approximately 160-170 ft. of stacking distance between the drop-off/pick-up location and Route 9D which can accommodate 7-8 passenger car vehicles in a single queue before backing onto Route 9D. It is not anticipated that a queue exceeding this storage distance will occur, but in the event that the storage distance is exceeded, there is sufficient width in the entry driveway to form two queues if necessary.

It should also be noted that the Traffic & Parking Management plan now includes a provision for monitoring of the event conditions within a 6-12 month period after initial occupancy of the event space to ensure there the Traffic & Parking Management Plan is achieving this goals and to incorporate further refinements at that time if necessary. This monitoring will be worked into the Project approvals with the City of Beacon.

4. For off street parking, have the owners of the parking lots been in contact and have given a written agreement that they would allow the parking during the 350 persons event?

Response: Each of the parking lots identified in the Traffic & Parking Study for use during on-site events are public parking areas owned and operated by the City of Beacon. The City of Beacon Metro-North Train Station parking lot, which is publicly available metered parking, has a potential parking area.

In addition to those locations identified in the Traffic & Parking Study, the Applicant is also working on finalizing an agreement with the nearby Riverview Funeral Home located at 2 Beekman Street, near the Wolcott Avenue/Beekman Street intersection, which will allow for the use of 46 parking spaces during the on-site events.

5. A Perm 32 - Highway Work Permit Application for Utility Work will be required for the proposed sewer and water connections.

Response: Comment noted. A PERM 32 Permit Application will be included with the overall Highway Work Permit Application. It is noted that a Use & Occupancy Permit will also be required for these utility connections with the NYSDOT Right-of-Way. An application for the U&O Permit will also be provided to the Department.

6. Please provide a drainage study verifying that all drainage will be staying on site and not entering the NYSDOT drainage system.

Response: A drainage study is currently be prepared by the Site Engineer, Hudson Land Design, and will be provided to the Department for review once complete.

7. Please include sign details on the plans meeting all MUTCD requirements.

Response: Sign details including MUTCD Sign Numbers, Sign Sizes and locations in accordance with the MUTCD have been added to the Site Plans, which are enclosed.

8. Please include the existing pavement striping on the vehicle maneuvering plan.

Response: Existing pavement striping along NYS Route 9D has been added to the vehicle maneuvering plans.

9. Please include a Work Zone Traffic Control Plan.

Response: Work Zone Traffic Control Plans for the proposed driveway, sidewalk and utility installations work within the NYSDOT will be provided as part of the Highway Work Permit Application, to be submitted at a later date.

10. Please clarify the limits at which the sidewalk is being replaced.

Response: The limits of sidewalk replacement have been clarified on the Plans.

11. Please update your pavement restoration details to reflect the information below:

½" Top Course Item 402.1261013
½" Binder Course Item 402.256903
8" Base Course Item 402.376903 (2 4" lifts)
12" Subbase Course Item 304.11000008

Response: These items numbers are now reflected on the pavement restoration details. However, it is our understanding that the Department is transitioning to the use of Warm Mix Asphalt (404 Items). Please confirm whether Hot Mix Asphalt or Warm Mix Asphalt items should be specified for this Project.

12. Please include a stop bar and stop sign at all exits onto Route 9D meeting NYSDOT standards and specifications.

Response: Stop bars and Stop signs have been added to both the Main Driveway exit lane and the northerly gated exit driveway at NYS Route 9D.

Sincerely,

Colliers Engineering & Design CT, P.C.



Richard D'Andrea, P.E., PTOE
Assistant Department Manager

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Technical Appendix

Traffic & Parking Sensitivity Analysis

Traffic & Parking Sensitivity Analysis

Based on discussions with the City of Beacon Planning Board as well as comments from the City's Traffic Consultant, Creighton Manning, a Traffic & Parking Sensitivity Analysis has been conducted for the 1113 Wolcott Avenue Project to further assess the potential traffic and parking impacts of the Project. This sensitivity analysis focuses on the traffic and parking impacts of planned maximum attendance events, totaling 350 persons, to be held within the Church. As part of this analysis, it was requested that the traffic and parking demand for employees be further accounted for within the traffic volume and parking demand projections for the Project. In addition, the traffic analysis has been updated to account for traffic destined to and from the planned off-site parking locations identified to accommodate the parking needs of the planned events. The details of these sensitivity analyses are discussed further below.

Traffic Sensitivity Analysis

Site Generated Traffic Volumes

It has been estimated by the Applicant that a typical 350-person event will be staffed by approximately 10 employees/vendors. As indicated in the Traffic & Parking Study dated February 21, 2022, the maximum on-site occupancy including staff & vendors will be 350 persons so the actual event attendance accounting for these 10 employees will be reduced to 340 persons.

Based on the above, traffic generation estimates were developed for the event conditions for each of the peak hours. The event conditions estimates were developed for the Friday PM and Saturday Peak Hour Entry Periods as well as the Friday PM and Saturday Peak Hour Exit Periods. During events it is anticipated that the Café use will be a non-simultaneous use, meaning that the café area will be fully accessory to the events and therefore will not generate any traffic of its own. It is anticipated that the Hotel will be fully occupied during events and as much as 100% of hotel guests will also be attending the events. However, for the purposes of the analysis it has been assumed that only 50% of the Hotel traffic generation will be attributable to the events. The same Hotel traffic generated as indicated under the Typical conditions has been assumed for the event conditions periods, although it is unlikely that the peak hour of hotel generation will actually overlap with the event periods.

Consistent with the Traffic & Parking Study, for the purposes of the analysis a 2.75 persons per vehicle car occupancy has been utilized for event attendees, which is at the low end of the anticipated vehicle occupancy for the events. In addition, a vehicle car occupancy of 1.0 persons per vehicle has been utilized for the employees/vendors. Applying this to the anticipated maximum occupancy of 350 persons, including 10 employees/vendors, for the larger weekend events results in the anticipated peak entering and exiting traffic volumes as summarized in Table No. 1-S. It has been conservatively assumed that all traffic will either enter or exit during a one-hour period. The sensitivity analysis also accounts for a 10% credit to account for event attendees that are anticipated to arrive to the events via non-vehicular transportation.

Sensitivity Analysis Arrival/Departure Distributions & Build Conditions Traffic Volumes

In order to account for the fact that all event parking will be accommodated by offsite parking locations, modified arrival and departure distributions for the event conditions have been established accounting for traffic destined to and from the anticipated off-site parking locations. These locations primarily include the Tompkins Lot, the City of Beacon Municipal Plaza Lot, on-street metered parking along Beekman Street and the Riverview Funeral Home at which the Applicant is currently finalizing an agreement to utilize 46 parking spaces during the on-site events. These sensitivity analysis arrival and departure distributions are summarized on Figures No. 12S and 13S, attached.

The event conditions site generated traffic volumes summarized in Table No. 1-S were assigned to the roadway network based on the arrival and departure distributions referenced above. The resulting event conditions site generated traffic volumes for the Friday PM Event Entry Period and Friday PM Event Exit Period are identified on Figures No. 16S and 17S, while the site generated traffic volumes for the Saturday Event Entry and Event Exit Period are identified on Figures No. 18S and 19S. The site generated traffic volumes were then added to the 2024 No-Build Traffic Volumes to obtain the 2024 Build Traffic Volumes. The resulting Year 2024 Build Traffic Volumes for the sensitivity analysis are shown on Figures No. 22S through 25S.

Results of Analysis

Capacity analyses were recomputed utilizing the Build Conditions Sensitivity Analysis traffic volumes for each of the study area intersections consistent with the procedures identified in the Traffic & Parking Study. Table No. 2S, attached summarizes the results of the capacity analysis for the 2021 Existing, 2024 No-Build and 2024 Build Event Conditions. The results of these analyses are generally consistent with the analysis results provided in the Traffic & Parking Study which concluded that the Project is not anticipated to have a significant impact on traffic conditions in the vicinity of the Project site. However as previously indicated, recommendations for traffic signal phasing and timing modifications at the intersection of Wolcott Avenue (Route 9D) and Beekman Street should be explored regardless of the proposed Project in order to reduce delays on the eastbound Beekman Street approach. These modifications would require the review and approval of the NYSDOT who owns and maintains the traffic signal at that location.

Parking Sensitivity Analysis

The City of Beacon Zoning Code's (the "Zoning Code") Schedule Off-Street Parking Requirements (§223-26.F) indicates the required number of off-street parking spaces to be provided for the Project. Based the Zoning Code, Table No. 3 of the Traffic & Parking Study indicated a total need parking requirement of 119 parking spaces. However, the Café use is proposed to be a non-simultaneous use with the Event Space. Therefore, the calculation of total required parking spaces for the Project is based on the critical event periods during which times the Café will be used as a complimentary space to the Event space and no additional persons outside of those attending the events will be permitted in the Café during these times.

As indicated above, it has been estimated by the Applicant that a typical 350-person event will be staffed by approximately 10 employees/vendors. As indicated in the Traffic & Parking Study dated February 21, 2022, the maximum on-site occupancy including staff & vendors will be 350 persons so the actual event attendance accounting for these 10 employees will be reduced to 340 persons. However, as part of this sensitivity analysis, employee/vendor parking will be accounted for separately at a rate of 1.0 parking spaces per employee/vendor.

Consistent with the parking analysis conducted in the Traffic & Parking Study it is also assumed that 10% of event attendees will arrive via non-vehicular modes of transportation and therefore will not generate any additional parking demand. Applying this 10% reduction, the total number of event occupants arriving by personal vehicle would be 306 occupants (*340 occupants X 0.90% non-vehicular = 315 Occupants*). In addition, it is also anticipated that the uses within the proposed development would permit for some amount of “Shared Parking” resulting from hotel guests frequenting the Café and also the events held in the Church building. For the purposes of the sensitivity analysis, it is assumed that 50% of the hotel guests will also be attending an event in the Church building. Assuming a room occupancy of two (2) persons per room this would reduce the total occupants arriving at events by personal vehicle to 276 occupants (*15 rooms X 2 persons/room = 30 occupants in Hotel also attending events, 306 – 30 = 276 occupants by personal vehicle*)

The below provides a summary of the anticipated parking demand based on the City of Beacon Code parking requirements and accounting for the credits identified above. In addition, as indicated previously the table also provides for 10 spaces for employees/vendors.

Table No. 3S – Event Conditions Sensitivity Anticipated Parking Demand

Proposed Use	Size	City of Beacon Code Requirement	Required Spaces
Hotel	30 Rooms 1 Employee	1 Space/Room +1 Space/Employee	31 Spaces
Event Space	276 Persons (Seats)	1 Space/4 seats	69 Spaces
Event Space	10 Employees/ Vendors ¹	1 Space/4 seats	10 Spaces
Total Anticipated Parking Demand			110 Spaces
On-Site Parking Provided			32 Spaces
Total Required Off-Site Parking Spaces			78 Spaces

As noted in the table above the anticipated parking demand for the project during the largest events is 110 spaces using the sensitivity analysis assumptions identified above. Accounting for the 32 parking spaces provided on-site, the total required off-site parking spaces to accommodate these events is 78 parking spaces.

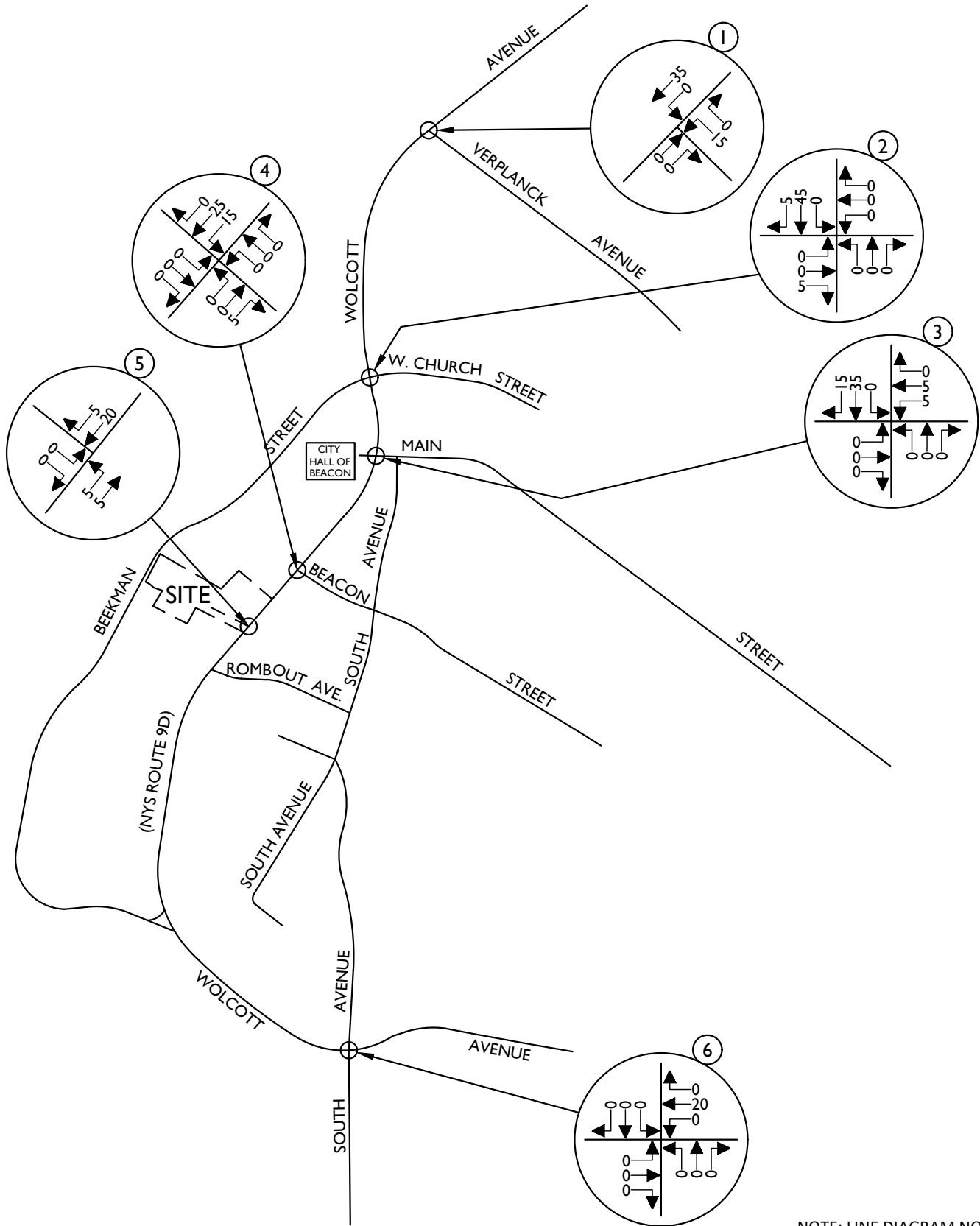
The Traffic & Parking Study had identified sufficient public parking in the vicinity of the site within the nearest public parking locations including the Tompkins Lot, the Municipal Plaza Lot and Beekman Street on-street metered parking to accommodate the parking needs of the Project during these maximum attendance events. To further supplement this parking, the Applicant is currently finalizing an agreement with the Riverview Funeral Home located at 2 Beekman Street to utilize 46 parking spaces during the on-site events. Further information will be provided to the City regarding this agreement will be provided once completed.

Table No. 1-S
Hourly Trip Generation Rates (HTGR) and
Anticipated Site Generated Traffic Volumes

1113 Wolcott Avenue City of Beacon, New York	Entry			Exit			Total Trips
	HTGR ¹	Volume	New Trips ²	HTGR1	HTGR ¹	New Trips ²	
Event Conditions							
Weekday Peak Event Entry Hour							
Hotel (30 Rooms)	0.37	11	6	0.40	12	8	14
Event (340 Attendees)	0.99	124	107	0.20	25	19	125
Event (10 Employees/Vendors)	1.00	10	10	0.00	0	0	10
Total	-	145	123	-	37	27	149
Weekday Peak Event Exit Hour							
Hotel (30 Rooms)	0.37	11	6	0.40	12	8	14
Event (340 Attendees)	0.20	25	18	0.99	124	108	125
Event (10 Employees/Vendors)	0.00	0	0	1.00	10	10	10
Total	-	36	24	-	146	126	149
Saturday Peak Event Entry Hour							
Hotel (30 Rooms)	0.50	15	8	0.40	12	6	14
Event (340 Attendees)	0.99	124	105	0.20	25	17	121
Event (10 Employees/Vendors)	1.00	10	10	0.00	0	0	10
Total	-	149	123	-	37	23	145
Saturday Peak Event Exit Hour							
Hotel (30 Rooms)	0.50	15	8	0.40	12	6	14
Event (340 Attendees)	0.20	25	16	0.99	124	106	121
Event (10 Employees/Vendors)	0.00	0	0	0.00	0	0	0
Total	-	40	24	-	136	112	135

NOTES:

- 1) The Hotel and Café 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 - 310 - Hotel and Land Use - 932 - High-Turnover (Sit-Down) Restaurant. The Event traffic generation is based on a 2.75 Persons per Vehicle car occupancy ratio for attendees and 1.0 Persons per Vehicle car occupancy ratio for Employees/Vendors. It is assumed that all guests & employees/vendors will enter in a one hour period prior to the event and exit in a one hour period following the event.



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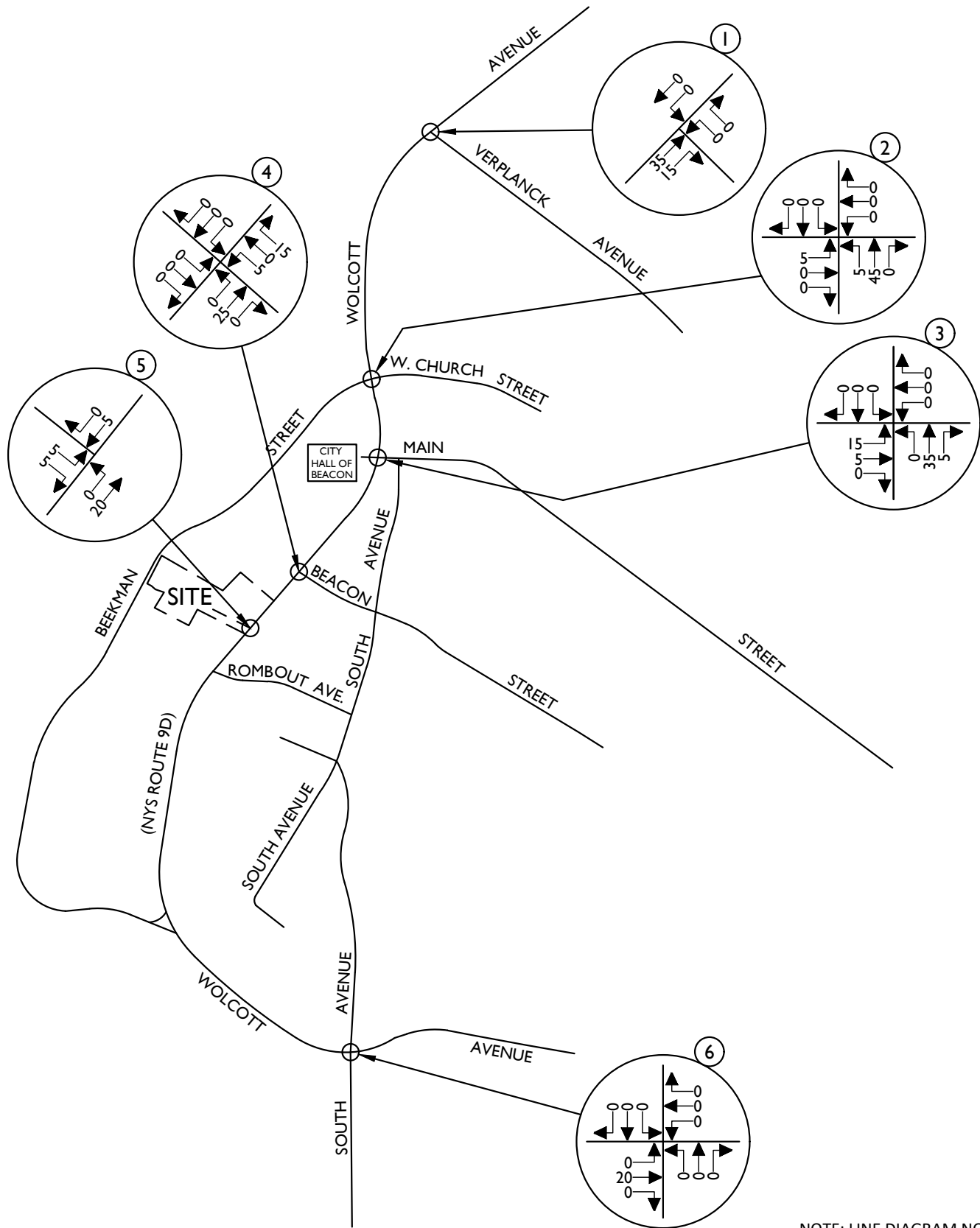
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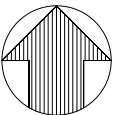
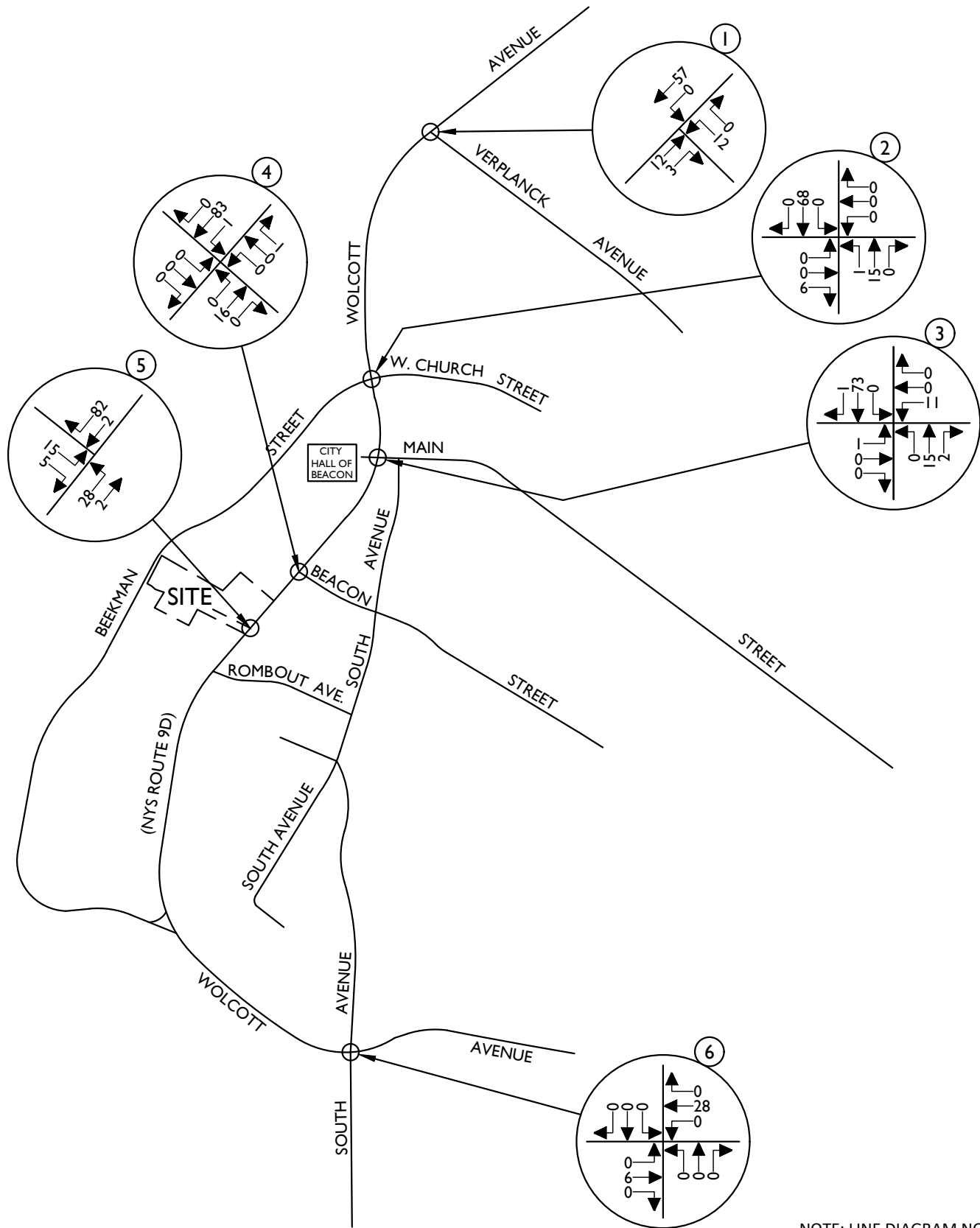
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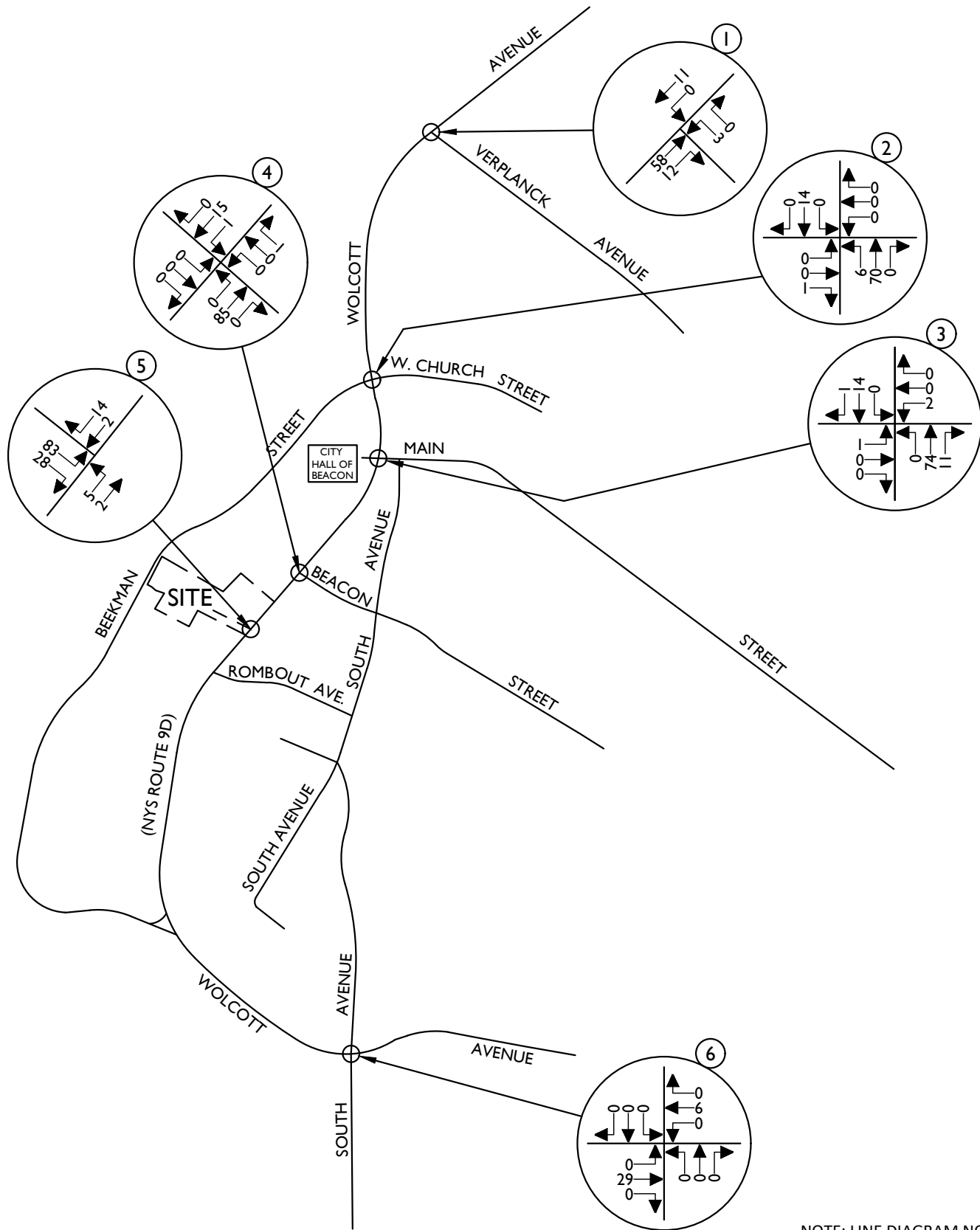
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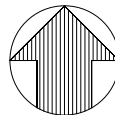
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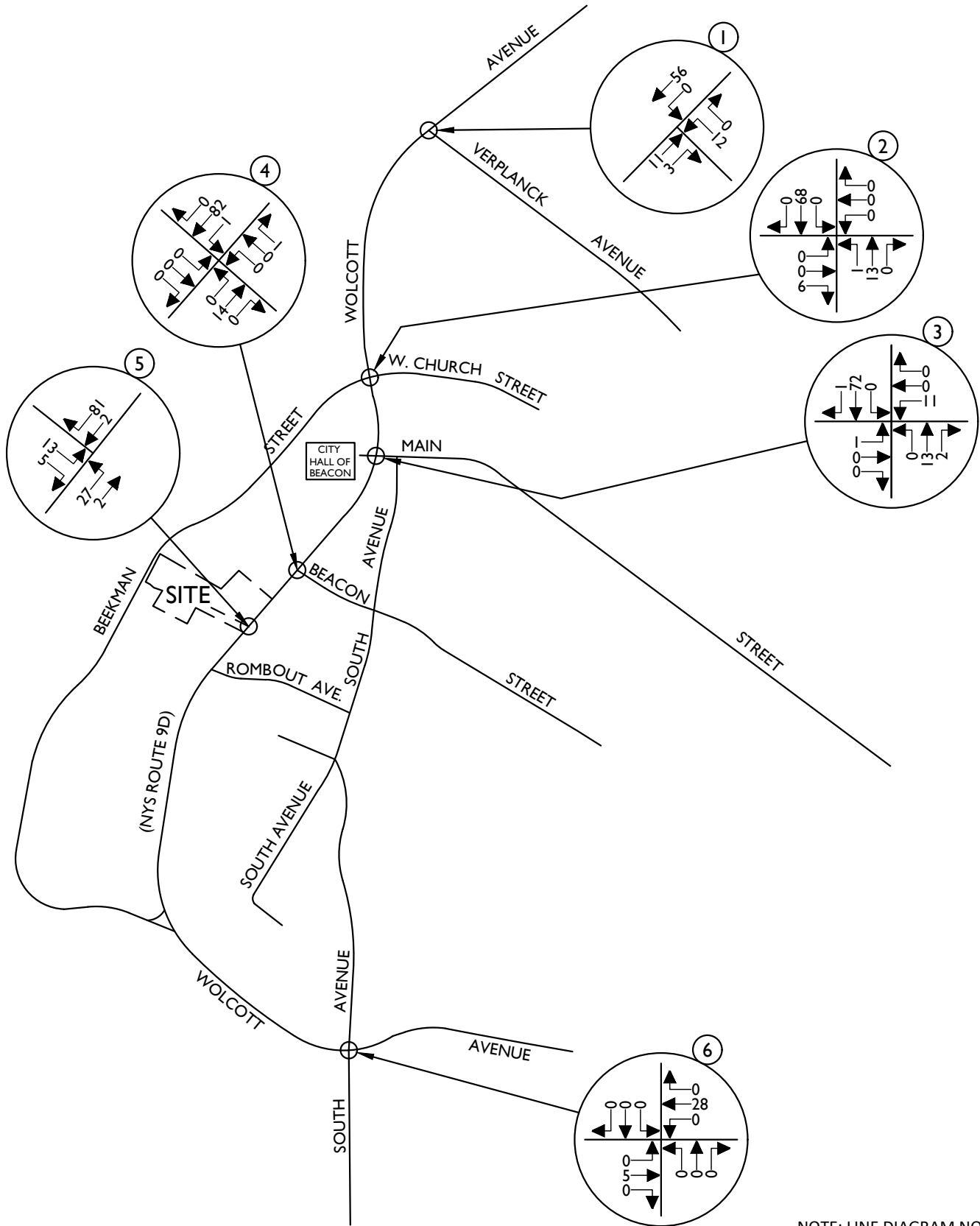
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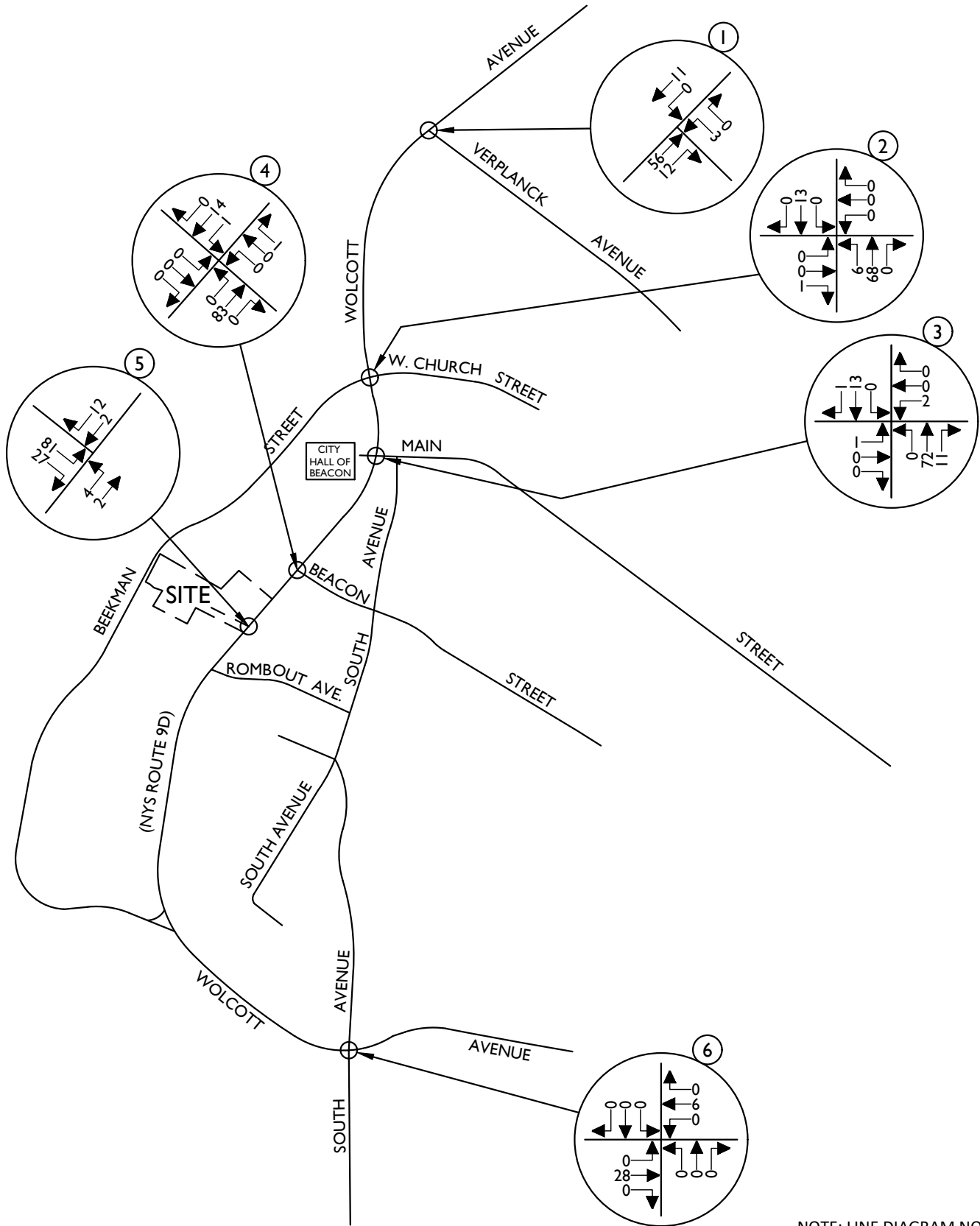
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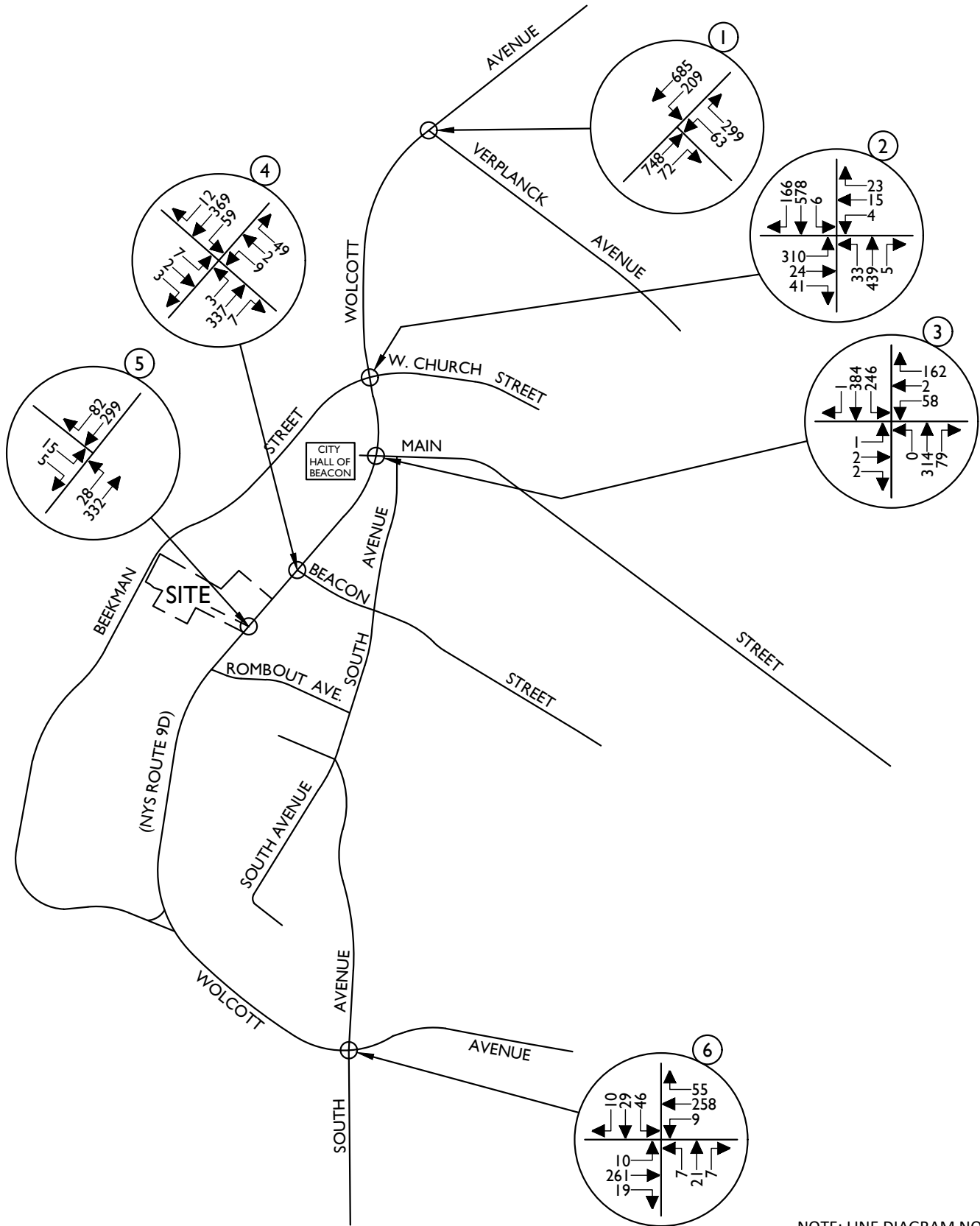
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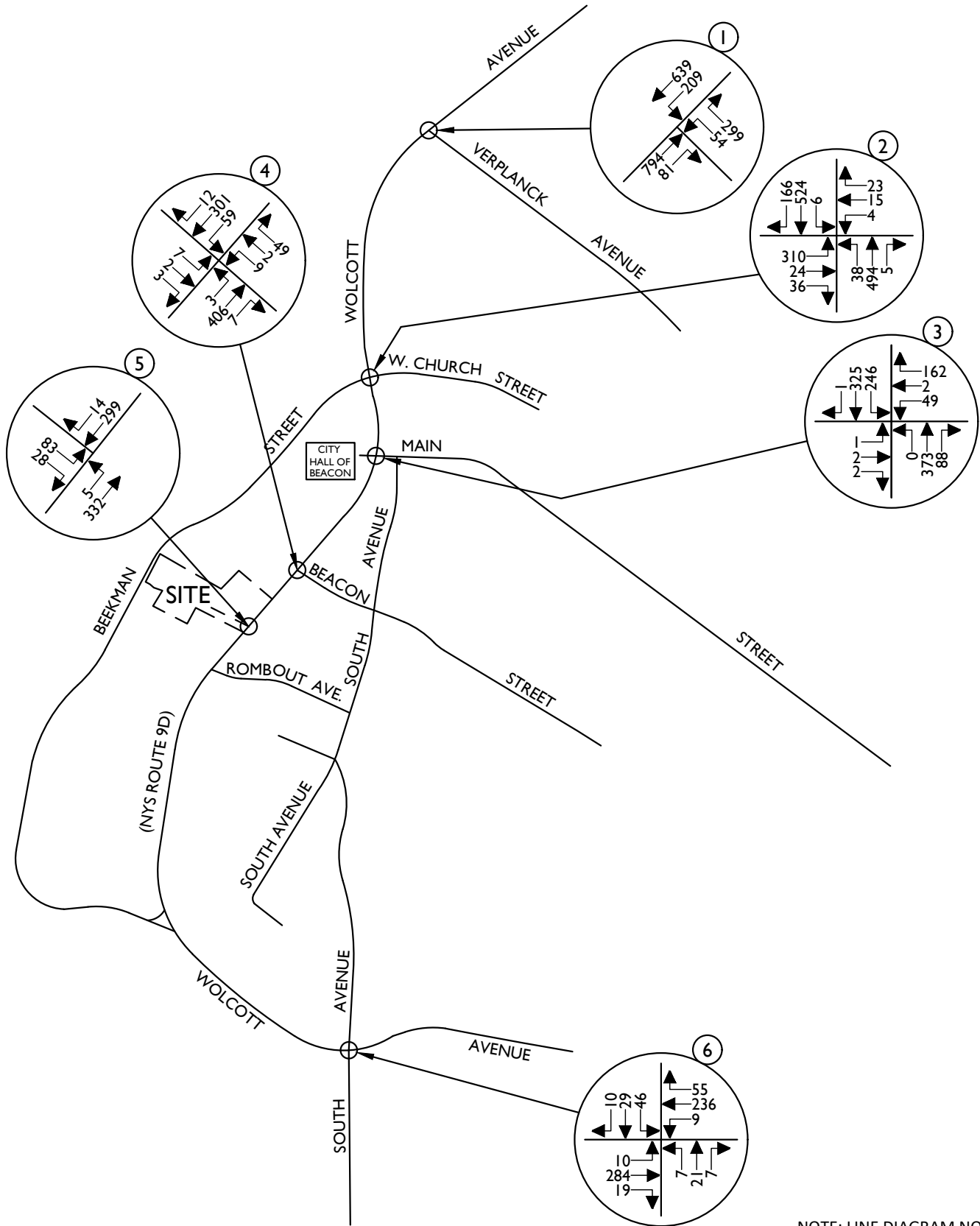
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FRIDAY PM PEAK HOUR**

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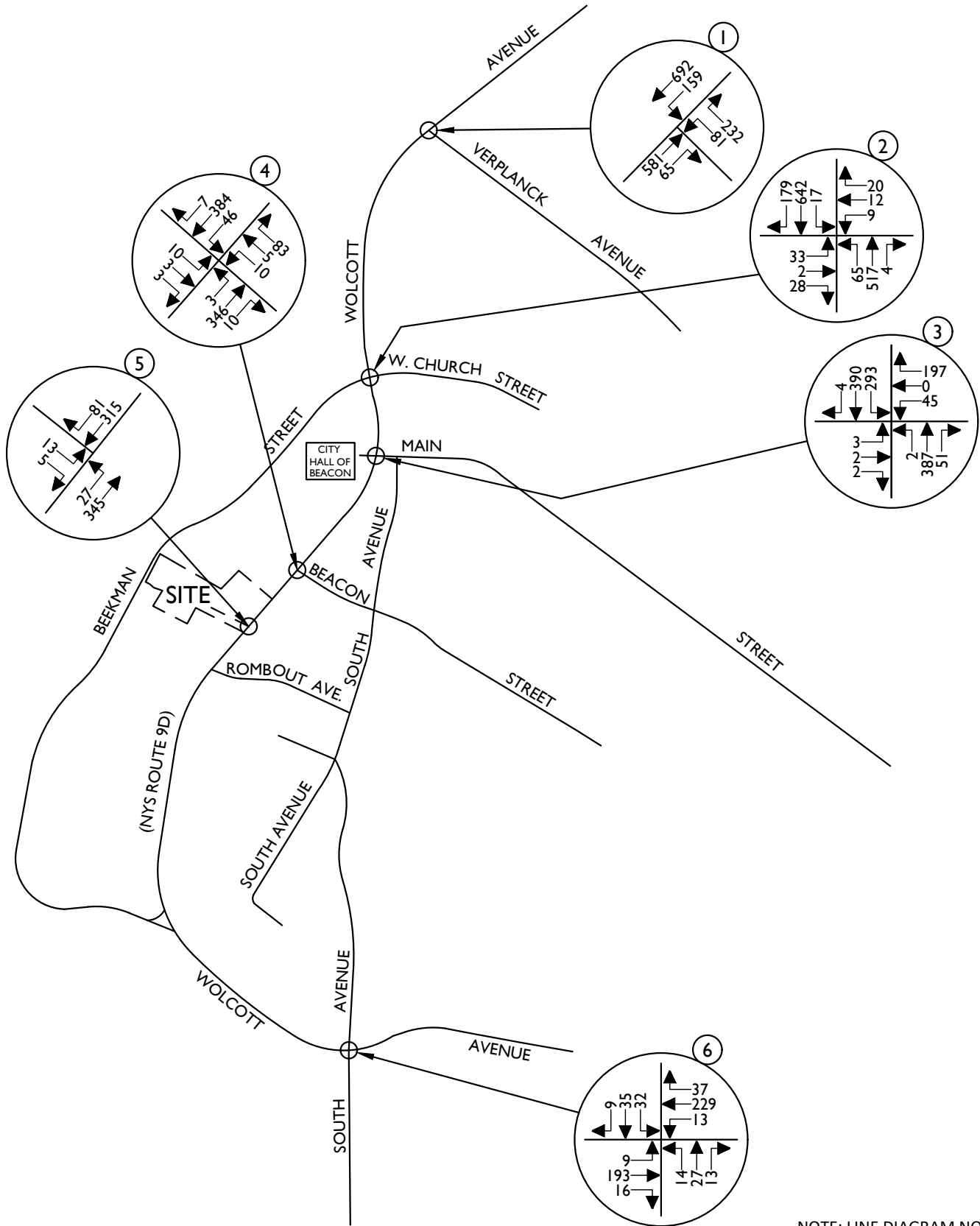
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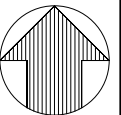
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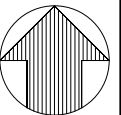
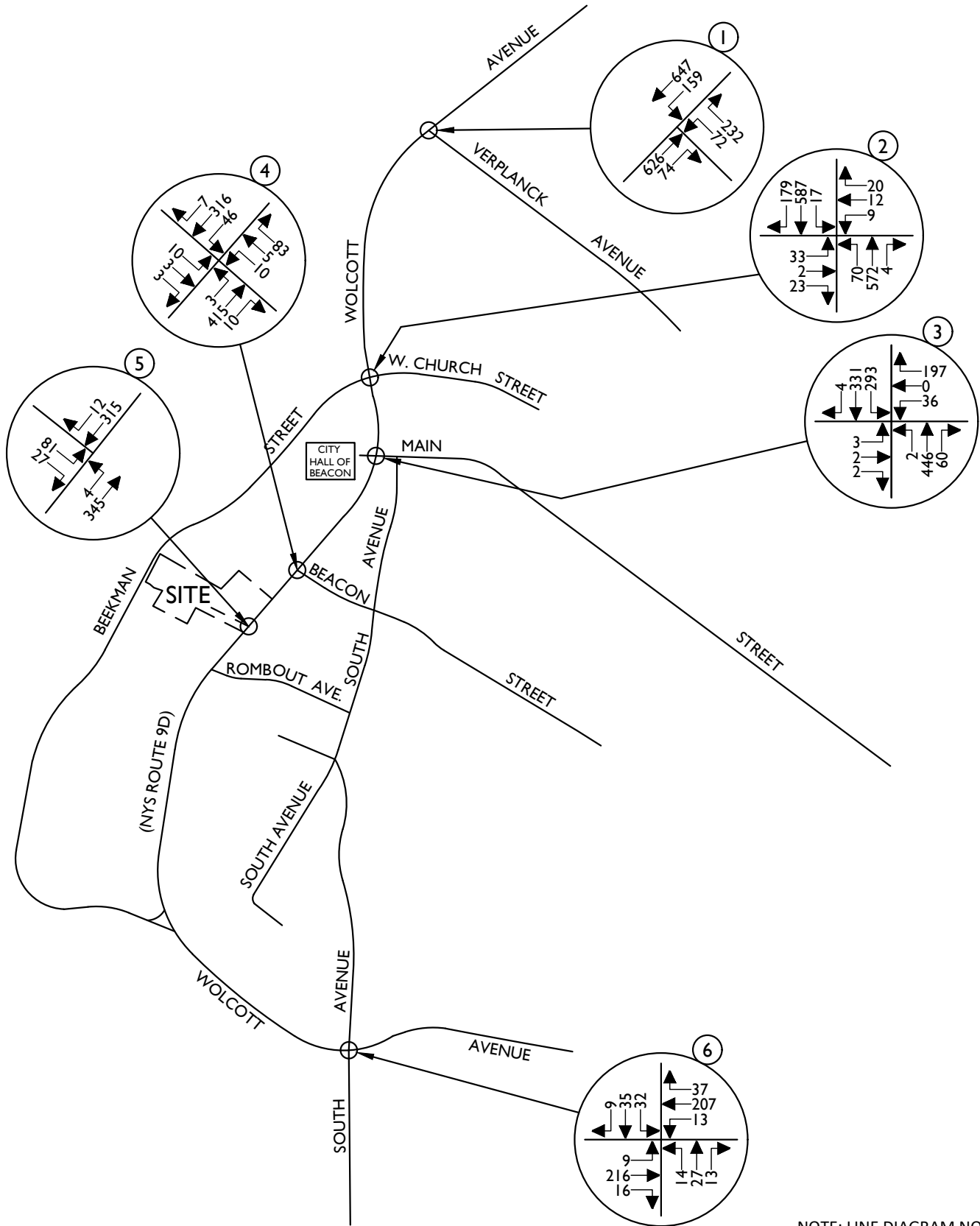
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COLLIERS ENGINEERING & DESIGN CT, P.C.
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TRAFFIC IMPACT STUDY

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	3/30/22	R.H.	P.J.G.
PROJECT NUMBER:	21004333A	DRAWING NAME:	220330RH_FIGURE-ALT

SHEET TITLE:	EVENT EXIT 2024 BUILD TRAFFIC VOLUMES SATURDAY PEAK HOUR
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SHEET NUMBER:	255
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Table No. 25
Level of Service Summary Table
Friday PM Peak Hour

				2021 Existing			2024 No-Build			2024 Build Typical Conditions			2024 Build Event Entry Conditions			2024 Build Event Exit Conditions		
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay
1	NYS Route 9D & Verplanck Avenue	Signalized																
			Verplanck Avenue WB L	0.14	D	39.6	0.16	D	40.8	0.16	D	39.9	0.20	D	40.5	0.17	D	40.1
			R	0.53	D	36.4	0.64	D	41.1	0.63	D	39.6	0.67	D	41.4	0.67	D	41.4
			WB Approach		D	36.9		D	41.0		D	39.6		D	41.2		D	41.2
			NYS Route 9D NB TR	0.83	C	30.8	0.88	D	35.2	0.91	D	38.5	0.92	D	40.1	0.98	D	51.9
			NB Approach		C	30.8		D	35.2		D	38.5		D	40.1		D	51.9
			NYS Route 9D SB L	0.54	C	25.3	0.63	C	31.9	0.66	C	34.6	0.66	D	36.2	0.76	D	52.7
			T	0.46	A	8.8	0.51	A	9.3	0.52	A	9.6	0.55	A	10.0	0.51	A	9.4
			SB Approach		B	13.0		B	14.9		B	15.8		B	16.1		C	20.1
			Overall		C	24.4		C	27.7		C	29.1		C	30.0		D	37.1
2	NYS Route 9D & Beekman Street/W. Church Street	Unsignalized																
			Beekman Street EB LT	2.17	F	573.4	2.33	F	647.2	2.33	F	648.2	2.35	F	656.0	2.36	F	658.8
			R	0.08	B	17.1	0.08	B	17.2	0.09	B	17.3	0.10	B	17.4	0.09	B	17.4
			EB Approach		F	520.9		F	587.9		F	585.5		F	586.0		F	596.2
			W. Church Street WB LTR	0.09	B	18.4	0.12	B	18.5	0.12	B	18.5	0.11	B	18.4	0.11	B	18.5
			WB Approach		B	18.4		B	18.5		B	18.5		B	18.4		B	18.5
			NYS Route 9D NB L	0.16	B	17.1	0.21	B	19.0	0.23	B	19.6	0.27	C	21.0	0.25	B	19.9
			TR	0.54	B	19	0.60	C	20.2	0.61	C	20.6	0.56	B	19.2	0.63	C	20.7
			NB Approach		B	18.9		C	20.1		C	20.5		B	19.4		C	20.6
			NYS Route 9D SB L	0.01	B	14.4	0.02	B	14.7	0.02	B	14.8	0.02	B	14.5	0.02	B	15.0
			TR	0.83	C	31.3	0.92	D	40.6	0.94	D	44.0	1.02	F	62.2	0.95	D	46.4
			SB Approach		C	31.2		D	40.4		D	43.7		E	61.8		D	46.2
			Overall		F	172.5		F	191.1		F	189.6		F	193.5		F	186.8
			<u>With Signal Timing & Phasing Modifications</u>															
			Beekman Street EB LT	-	-	-	-	-	-	1.23	F	152.5	1.31	F	188.8	1.26	F	166.0
			R	-	-	-	-	-	-	0.15	C	22.1	0.18	C	24.0	0.15	C	22.5
			EB Approach	-	-	-	-	-	-		F	139.8		F	170.7		F	151.8
			W. Church Street WB LTR	-	-	-	-	-	-	0.83	E	59.6	0.76	D	52.6	0.75	D	50.0
			WB Approach	-	-	-	-	-	-		E	59.6		D	52.6		D	50.0
			NYS Route 9D NB L	-	-	-	-	-	-	0.20	B	16.1	0.21	B	17.0	0.22	B	16.2
			TR	-	-	-	-	-	-	0.61	B	15.1	0.53	B	13.7	0.61	B	15.2
			NB Approach	-	-	-	-	-	-		B	15.2		B	13.9		B	15.2
			NYS Route 9D SB L	-	-	-	-	-	-	0.02	B	12.2	0.02	B	11.4	0.02	B	12.3
			TR	-	-	-	-	-	-	0.93	C	33.4	0.95	D	38.8	0.93	C	34.5
			SB Approach	-	-	-	-	-	-		C	33.2		D	38.6		C	34.3
			Overall	-	-	-	-	-	-		E	58.5		E	68.2		E	60.3
3	NYS Route 9D & Main Street/City Hall	Signalized																
			City Hall EB LTR	0.02	C	23.7	0.03	C	23.7	0.03	C	23.7	0.03	C	23.7	0.03	C	23.7
			EB Approach		C	23.7		C	23.7		C	23.7		C	23.7		C	23.7
			Main Street WB LT	0.13	C	24.5	0.18	C	24.8	0.19	C	24.9	0.20	C	24.8	0.17	C	24.6
			R	0.56	C	24.2	0.59	C	24.5	0.59	C	24.5	0.52	C	23.6	0.52	C	23.6
			WB Approach		C	24.2		C	24.6		C	24.6		C	23.9		C	23.8
			NYS Route 9D NB L	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0
			TR	0.41	A	8.8	0.47	A	9.5	0.49	A	9.8	0.46	A	9.3	0.54	B	10.3
			NB Approach		A	8.8		A	9.5		A	9.8		A	9.3		B	10.3
			NYS Route 9D SB L	0.38	B	10.8	0.47	B	13.0	0.48	B	13.7	0.48	B	13.1	0.53	B	15.7
			TR	0.30	A	7.7	0.34	A	8.1	0.36	A	8.2	0.42	A	8.9	0.36	A	8.3
			SB Approach		A	9.0		B	10.2		B	10.6		B	10.6		B	11.5
			Overall		B	11.6		B	12.5		B	12.7		B	12.4		B	13.1

Table No. 25
Level of Service Summary Table
Friday PM Peak Hour

					2021 Existing			2024 No-Build			2024 Build			2024 Build			2024 Build		
					v/c	LOS	Delay	v/c	LOS	Delay	Typical Conditions			Event Entry Conditions			Event Exit Conditions		
4	NYS Route 9D & Beacon Street/West End Lofts				Unsignalized														
		West End Lofts	EB	LTR	0.04	C	17.9	0.06	C	20.4	0.07	C	21.9	0.07	C	23.8	0.08	C	24.8
		Beacon Street	WB	LTR	0.15	B	12.5	0.18	B	13.8	0.19	B	14.3	0.20	B	14.7	0.22	C	15.9
		NYS Route 9D	NB	LTR	0.00	A	7.8	0.00	A	7.9	0.00	A	8.0	0.00	A	8.1	0.00	A	7.9
		NYS Route 9D	SB	LTR	0.52	A	8.3	0.06	A	8.5	0.06	A	8.6	0.06	A	8.6	0.07	A	9.0
5	NYS Route 9D & Site Access				Unsignalized														
			EB	LR	-	-	-	-	-	-	0.05	B	12.0	0.04	B	12.5	0.22	B	13.5
			NB	LT	-	-	-	-	-	-	0.01	A	8.0	0.03	A	8.2	0.00	A	8.0
6	NYS Route 9D & South Avenue				Signalized														
		NYS Route 9D	EB	LTR	0.33	C	23.4	0.37	C	24.0	0.37	C	24.1	0.41	C	24.9	0.44	C	25.6
		NYS Route 9D	WB	LTR	0.37	C	24.1	0.41	C	24.8	0.42	C	24.9	0.41	C	24.6	0.38	C	24.1
		South Avenue	NB	LTR	0.03	B	19.1	0.05	B	19.4	0.05	B	19.4	0.05	B	19.4	0.05	B	19.4
		South Avenue	SB	LTR	0.11	C	20.1	0.15	C	20.6	0.15	C	20.6	0.16	C	20.8	0.16	C	20.8
		Overall				C	23.2		C	23.7		C	23.8		C	24.0		C	24.1

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. 25
Level of Service Summary Table
Saturday Peak Hour

				2021 Existing			2024 No-Build			2024 Build Typical Conditions			2024 Build Event Entry Conditions			2024 Build Event Exit Conditions		
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay
1	NYS Route 9D & Verplanck Avenue	Signalized																
			Verplanck Avenue WB L	0.20	D	40.4	0.21	D	40.6	0.22	D	40.8	0.26	D	41.5	0.23	D	41.0
			R	0.41	C	33.3	0.49	D	35.2	0.49	D	35.2	0.52	D	36.1	0.52	D	36.1
			WB Approach		D	35.1		D	36.4		D	36.5		D	37.5		D	37.3
			NYS Route 9D NB TR	0.64	C	22.6	0.70	C	24.6	0.72	C	25.2	0.73	C	25.6	0.79	C	28.4
			NB Approach		C	22.6		C	24.6		C	25.2		C	25.6		C	28.4
			NYS Route 9D SB L	0.31	B	13.3	0.36	B	15.7	0.37	B	16.4	0.37	B	16.5	0.40	B	19.5
			T	0.47	A	8.8	0.52	A	9.6	0.53	A	9.7	0.56	B	10.1	0.52	A	9.5
			SB Approach		A	9.7		B	10.8		B	11.0		B	11.3		B	11.5
			Overall		B	18.7		C	20.3		C	20.7		C	20.9		C	22.4
2	NYS Route 9D & Beekman Street/W. Church Street	Unsignalized																
			Beekman Street EB LT	0.17	C	25.0	0.19	C	25.1	0.18	C	25.0	0.19	C	25.0	0.19	C	25.1
			R	0.22	C	25.4	0.24	C	25.5	0.27	C	25.8	0.30	C	26.0	0.25	C	25.7
			EB Approach		C	25.2		C	25.2		C	25.3		C	25.5		C	25.3
			W. Church Street WB LTR	0.17	C	24.9	0.24	C	25.3	0.24	C	25.3	0.22	C	25.1	0.22	C	25.2
			WB Approach		C	24.9		C	25.3		C	25.3		C	25.1		C	25.2
			NYS Route 9D NB L	0.14	A	5.9	0.17	A	7.1	0.18	A	7.4	0.18	A	8.5	0.18	A	7.4
			TR	0.40	A	6.0	0.44	A	6.5	0.45	A	6.6	0.41	A	6.2	0.46	A	6.5
			NB Approach		A	6.0		A	6.5		A	6.7		A	6.4		A	6.6
			NYS Route 9D SB L	0.03	A	4.3	0.03	A	4.5	0.03	A	4.6	0.03	A	4.5	0.03	A	4.6
			TR	0.66	B	10.6	0.74	B	12.6	0.76	B	13.2	0.81	B	15.5	0.76	B	13.5
			SB Approach		B	10.4		B	12.4		B	13.1		B	15.3		B	13.3
			Overall		A	9.8		B	11.2		B	11.6		B	12.8		B	11.5
3	NYS Route 9D & Main Street/City Hall	Signalized																
			City Hall EB LTR	0.01	C	23.6	0.03	C	23.7	0.03	C	23.7	0.04	C	23.7	0.04	C	23.7
			EB Approach		C	23.6		C	23.7		C	23.7		C	23.7		C	23.7
			Main Street WB LT	0.09	C	24.1	0.13	C	24.3	0.14	C	24.4	0.16	C	24.5	0.12	C	24.3
			R	0.66	C	25.5	0.70	C	26.2	0.70	C	26.1	0.63	C	24.7	0.63	C	24.7
			WB Approach		C	25.4		C	25.9		C	25.9		C	24.7		C	24.7
			NYS Route 9D NB L	0.00	A	6.4	0.00	A	6.9	0.00	A	7.1	0.00	A	7.9	0.00	A	7.1
			TR	0.40	A	8.7	0.46	A	9.4	0.49	A	9.7	0.46	A	9.2	0.53	B	10.1
			NB Approach		A	8.7		A	9.4		A	9.7		A	9.2		B	10.1
			NYS Route 9D SB L	0.44	B	11.4	0.53	B	13.9	0.55	B	14.7	0.54	B	14.0	0.59	B	16.6
			TR	0.29	A	7.7	0.33	A	8.1	0.35	A	8.3	0.41	A	8.9	0.35	A	8.2
			SB Approach		A	9.5		B	10.9		B	11.2		B	11.0		B	12.1
			Overall		B	12.2		B	13.2		B	13.4		B	13.0		B	13.6
4	NYS Route 9D & Beacon Street/West End Lofts	Unsignalized																
			West End Lofts EB LTR	0.07	C	18.4	0.11	C	21.5	0.12	C	23.3	0.13	D	25.1	0.13	D	25.5
			Beacon Street WB LTR	0.17	B	12.1	0.21	B	13.3	0.21	B	13.7	0.22	B	13.9	0.23	B	14.8
			NYS Route 9D NB LTR	0.00	A	7.8	0.00	A	7.9	0.00	A	8.0	0.03	A	8.2	0.00	A	8.0
			NYS Route 9D SB LTR	0.04	A	8.1	0.04	A	8.3	0.04	A	8.3	0.04	A	8.3	0.05	A	8.6

Table No. 25
Level of Service Summary Table
Saturday Peak Hour

					2021 Existing			2024 No-Build			2024 Build Typical Conditions			2024 Build Event Entry Conditions			2024 Build Event Exit Conditions		
					v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay
5	NYS Route 9D & Site Access	Unsignalized																	
		EB	LR		-	-	-	-	-	-	0.06	B	12.3	0.04	B	12.5	0.22	B	13.7
		NB	LT		-	-	-	-	-	-	0.01	A	8.1	0.03	A	8.3	0.00	A	8.0
6	NYS Route 9D & South Avenue	Signalized																	
		NYS Route 9D	EB	LTR	0.27	C	22.4	0.30	C	22.9	0.31	C	23.1	0.34	C	23.6	0.37	C	24.2
		NYS Route 9D	WB	LTR	0.31	C	23.0	0.34	C	23.5	0.35	C	23.7	0.34	C	23.5	0.32	C	23.1
		South Avenue	NB	LTR	0.08	B	19.7	0.12	C	20.2	0.12	C	20.2	0.12	C	20.2	0.12	C	20.2
		South Avenue	SB	LTR	0.08	B	19.7	0.13	C	20.3	0.13	C	20.3	0.13	C	20.4	0.13	C	20.4
		Overall				C	22.1		C	22.5		C	22.6		C	22.7		C	22.8

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.

2024 Build Traffic Volumes - Sensitivity
1: NYS Route 9D & Verplanck Avenue

Friday PM Build Event Entry
03/31/2022

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	63	299	748	72	209	685
Future Volume (vph)	63	299	748	72	209	685
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.988			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1813	0	1778	1872
Flt Permitted	0.950				0.077	
Satd. Flow (perm)	1725	1544	1813	0	144	1872
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	325	813	78	227	745
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	325	891	0	227	745
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Minimum Split (s)	21.0	9.0	15.0		9.0	15.0
Total Split (s)	30.0	20.0	70.0		20.0	90.0
Total Split (%)	25.0%	16.7%	58.3%		16.7%	75.0%
Maximum Green (s)	25.0	15.0	65.0		15.0	85.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Walk Time (s)	5.0		5.0			
Flash Dont Walk (s)	11.0		11.0			
Pedestrian Calls (#/hr)	0		0			
v/c Ratio	0.19	0.56	0.91		0.74	0.56
Control Delay	40.9	34.3	39.3		38.9	10.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	40.9	34.3	39.3		38.9	10.5
Queue Length 50th (ft)	44	197	597		99	250
Queue Length 95th (ft)	86	293	#891		#211	344

2024 Build Traffic Volumes - Sensitivity 11:38 am 11/29/2021 Friday PM Build Event Entry
RGD

Synchro 11 Report
Page 1



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	359	579	982		306	1326
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.19	0.56	0.91		0.74	0.56

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NET and 6:SWTL, Start of Green

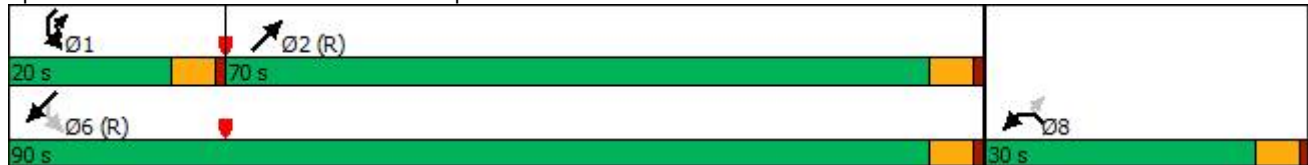
Natural Cycle: 80

Control Type: Pretimed

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



2024 Build Traffic Volumes - Sensitivity
1: NYS Route 9D & Verplanck Avenue

Friday PM Build Event Entry
03/31/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	63	299	748	72	209	685
Future Volume (veh/h)	63	299	748	72	209	685
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1909
Adj Flow Rate, veh/h	68	325	813	78	227	745
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	342	487	884	85	343	1352
Arrive On Green	0.21	0.21	0.54	0.54	0.13	0.71
Sat Flow, veh/h	1641	1460	1633	157	1818	1909
Grp Volume(v), veh/h	68	325	0	891	227	745
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1789	1818	1909
Q Serve(g_s), s	4.1	22.9	0.0	54.6	6.3	22.4
Cycle Q Clear(g_c), s	4.1	22.9	0.0	54.6	6.3	22.4
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	342	487	0	969	343	1352
V/C Ratio(X)	0.20	0.67	0.00	0.92	0.66	0.55
Avail Cap(c_a), veh/h	342	487	0	969	343	1352
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	39.2	34.3	0.0	25.1	26.5	8.4
Incr Delay (d2), s/veh	1.3	7.1	0.0	15.0	9.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	9.0	0.0	26.0	4.5	8.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.5	41.4	0.0	40.1	36.2	10.0
LnGrp LOS	D	D	A	D	D	A
Approach Vol, veh/h	393		891			972
Approach Delay, s/veh	41.2		40.1			16.1
Approach LOS	D		D			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.0	70.0			90.0	30.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	15.0	65.0			85.0	25.0
Max Q Clear Time (g_c+I1), s	0.0	0.0			0.0	0.0
Green Ext Time (p_c), s	0.0	0.0			0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			30.0			
HCM 6th LOS			C			

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	310	24	41	4	15	23	33	439	5	6	578	166
Future Volume (vph)	310	24	41	4	15	23	33	439	5	6	578	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor			0.98		0.97			1.00			0.99	
Frt			0.850		0.925			0.998			0.967	
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1760	1599	0	1737	0	1805	1915	0	1778	1780	0
Flt Permitted		0.709			0.966		0.100			0.325		
Satd. Flow (perm)	0	1306	1562	0	1684	0	190	1915	0	608	1780	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		25			1			19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		584			328			388			335	
Travel Time (s)		13.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)			2			13			1			6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.84	0.84	0.84	0.98	0.98	0.98
Heavy Vehicles (%)	2%	4%	0%	0%	7%	0%	3%	2%	0%	0%	1%	1%
Adj. Flow (vph)	437	34	58	4	16	25	39	523	6	6	590	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	471	58	0	45	0	39	529	0	6	759	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83		83	6		83	6	
Trailing Detector (ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	43	43	20	43		43	6		43	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40	40		40		40			40		
Detector 2 Size(ft)		43	43		43		43			43		
Detector 2 Type		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		
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

2024 Build Traffic Volumes - Sensitivity 11:38 am 11/29/2021 Friday PM Build Event Entry
RGD

Synchro 11 Report
Page 4

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	16.0		4.0	16.0	
Minimum Split (s)	20.0	20.0	20.0	21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	35.0	35.0	35.0	35.0	35.0		15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Walk Time (s)				5.0	5.0							
Flash Dont Walk (s)				11.0	11.0							
Pedestrian Calls (#/hr)				0	0							
v/c Ratio		0.99	0.09		0.07		0.17	0.57		0.02	0.98	
Control Delay		67.7	2.7		11.7		11.3	18.6		9.5	55.0	
Queue Delay		0.0	0.0		0.0		0.0	4.5		0.0	0.0	
Total Delay		67.7	2.7		11.7		11.3	23.1		9.5	55.0	
Queue Length 50th (ft)		~282	0		7		9	172		1	~447	
Queue Length 95th (ft)		#318	5		30		22	306		7	#677	
Internal Link Dist (ft)		504			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		478	626		632		294	931		444	771	
Starvation Cap Reductn		0	0		0		0	320		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.99	0.09		0.07		0.13	0.87		0.01	0.98	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 82.3

Natural Cycle: 90

Control Type: Semi Act-Uncoord

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: NYS Route 9D & Beekman Street/W. Church Street

 Ø1	 Ø2	 Ø4
15 s	40 s	35 s
 Ø5	 Ø6	 Ø8
15 s	40 s	35 s

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Entry
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	24	41	4	15	23	33	439	5	6	578	166
Future Volume (veh/h)	310	24	41	4	15	23	33	439	5	6	578	166
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		0.96	1.00		0.98	1.00		0.97
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	1817	1876	2293	2188	2293	2091	2106	2136	1847	1832	1832
Adj Flow Rate, veh/h	437	34	58	4	16	25	39	523	6	6	590	169
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.84	0.84	0.84	0.98	0.98	0.98
Percent Heavy Veh, %	2	4	0	0	7	0	3	2	0	0	1	1
Cap, veh/h	192	8	578	48	162	202	145	929	11	324	578	165
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.03	0.45	0.45	0.01	0.42	0.42
Sat Flow, veh/h	296	23	1586	0	444	555	1991	2077	24	1759	1360	389
Grp Volume(v), veh/h	471	0	58	45	0	0	39	0	529	6	0	759
Grp Sat Flow(s),veh/h/ln	319	0	1586	999	0	0	1991	0	2101	1759	0	1749
Q Serve(g_s), s	0.0	0.0	2.0	0.0	0.0	0.0	0.9	0.0	15.3	0.2	0.0	35.0
Cycle Q Clear(g_c), s	30.0	0.0	2.0	30.0	0.0	0.0	0.9	0.0	15.3	0.2	0.0	35.0
Prop In Lane	0.93		1.00	0.09		0.56	1.00		0.01	1.00		0.22
Lane Grp Cap(c), veh/h	200	0	578	412	0	0	145	0	940	324	0	743
V/C Ratio(X)	2.35	0.00	0.10	0.11	0.00	0.00	0.27	0.00	0.56	0.02	0.00	1.02
Avail Cap(c_a), veh/h	200	0	578	412	0	0	329	0	940	527	0	743
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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	17.3	18.3	0.0	0.0	20.0	0.0	16.8	14.5	0.0	23.7
Incr Delay (d2), s/veh	623.5	0.0	0.1	0.1	0.0	0.0	1.0	0.0	2.4	0.0	0.0	38.5
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	38.7	0.0	0.7	0.5	0.0	0.0	0.4	0.0	7.5	0.1	0.0	21.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	656.0	0.0	17.4	18.4	0.0	0.0	21.0	0.0	19.2	14.5	0.0	62.2
LnGrp LOS	F	A	B	B	A	A	C	A	B	B	A	F
Approach Vol, veh/h		529			45			568			765	
Approach Delay, s/veh		586.0			18.4			19.4			61.8	
Approach LOS		F			B			B			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	41.8		35.0	7.4	40.0		35.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.2	17.3		32.0	2.9	37.0		32.0				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			193.5									
HCM 6th LOS			F									

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Friday PM Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	2	58	2	162	0	314	79	246	384	1
Future Volume (vph)	1	2	2	58	2	162	0	314	79	246	384	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor		0.98				0.96		0.98			1.00	
Frt		0.949				0.850		0.970				
Flt Protected		0.988			0.954					0.950		
Satd. Flow (prot)	0	1742	0	0	1885	1647	1928	1794	0	1743	1853	0
Flt Permitted		0.894			0.743					0.406		
Satd. Flow (perm)	0	1576	0	0	1468	1587	1928	1794	0	745	1853	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			693			388	
Travel Time (s)		3.0			8.0			15.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	2	3	3	64	2	178	0	397	100	280	436	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	66	178	0	497	0	280	437	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83		20	83	83	83	6		83	6	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	0		-5	0	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	0		-5	0	
Detector 1 Size(ft)	20	43		20	43	43	43	6		43	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40			40	40	40			40		
Detector 2 Size(ft)		43			43	43	43			43		
Detector 2 Type		CI+Ex			CI+Ex	CI+Ex	CI+Ex			CI+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0			0.0		
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

2024 Build Traffic Volumes - Sensitivity 11:38 am 11/29/2021 Friday PM Build Event Entry
RGD

Synchro 11 Report
Page 7

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Friday PM Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		8.0	8.0	4.0	4.0	31.0		4.0	35.0	
Minimum Split (s)	21.0	21.0		21.0	21.0	9.0	9.0	36.0		9.0	40.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
v/c Ratio		0.04			0.31	0.47		0.49		0.38	0.28	
Control Delay		22.4			30.9	21.7		12.6		6.1	3.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.3	
Total Delay		22.4			30.9	21.7		12.6		6.1	3.7	
Queue Length 50th (ft)		2			26	54		131		29	49	
Queue Length 95th (ft)		8			60	100		190		59	95	
Internal Link Dist (ft)		53			270			613			308	
Turn Bay Length (ft)						70				120		
Base Capacity (vph)		760			706	397		1007		757	1537	
Starvation Cap Reductn		0			0	0		0		0	521	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.01			0.09	0.45		0.49		0.37	0.43	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 63.4

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 3: NYS Route 9D & Beacon City Hall/Main Street

 Ø2	 Ø1	 Ø4
40 s	15 s	35 s
 Ø6	 Ø5	 Ø8
40 s	15 s	35 s

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Friday PM Build Event Entry
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	2	2	58	2	162	0	314	79	246	384	1
Future Volume (veh/h)	1	2	2	58	2	162	0	314	79	246	384	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.94	0.97		0.94	1.00		0.96	1.00		0.99
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	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	2	3	3	64	2	178	0	397	100	280	436	1
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	96	106	78	315	9	341	681	859	216	587	1034	2
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.00	0.57	0.57	0.06	0.57	0.57
Sat Flow, veh/h	184	833	610	1573	67	1744	1922	1518	382	1731	1827	4
Grp Volume(v), veh/h	8	0	0	66	0	178	0	0	497	280	0	437
Grp Sat Flow(s),veh/h/ln	1627	0	0	1640	0	1744	1922	0	1901	1731	0	1831
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	1.4	0.0	0.0	9.5	0.0	0.0	8.4
Cycle Q Clear(g_c), s	0.3	0.0	0.0	2.2	0.0	1.4	0.0	0.0	9.5	0.0	0.0	8.4
Prop In Lane	0.25		0.37	0.97		1.00	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	280	0	0	324	0	341	681	0	1075	587	0	1036
V/C Ratio(X)	0.03	0.00	0.00	0.20	0.00	0.52	0.00	0.00	0.46	0.48	0.00	0.42
Avail Cap(c_a), veh/h	822	0	0	905	0	964	868	0	1075	755	0	1036
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	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	0.0	24.5	0.0	22.4	0.0	0.0	7.9	12.5	0.0	7.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	1.2	0.0	0.0	1.4	0.6	0.0	1.3
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	0.1	0.0	0.0	0.9	0.0	2.3	0.0	0.0	3.5	2.6	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	0.0	24.8	0.0	23.6	0.0	0.0	9.3	13.1	0.0	8.9
LnGrp LOS	C	A	A	C	A	C	A	A	A	B	A	A
Approach Vol, veh/h		8			244			497			717	
Approach Delay, s/veh		23.7			23.9			9.3			10.6	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	40.0		12.9	9.0	40.0		12.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	11.5		2.3	0.0	10.4		4.2				
Green Ext Time (p_c), s	0.9	1.4		0.0	0.0	1.1		1.4				
Intersection Summary												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									

2024 Build Traffic Volumes - Sensitivity
4: NYS Route 9D & Beacon Street/West End Lofts

Friday PM Build Event Entry
03/31/2022

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	7	2	3	9	2	49	3	337	7	59	369	12
Future Volume (vph)	7	2	3	9	2	49	3	337	7	59	369	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-3%			-4%			4%	
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
Ped Bike Factor												
Frt		0.964			0.890			0.997			0.996	
Flt Protected		0.971			0.992						0.993	
Satd. Flow (prot)	0	1778	0	0	1703	0	0	1843	0	0	1806	0
Flt Permitted		0.971			0.992						0.993	
Satd. Flow (perm)	0	1778	0	0	1703	0	0	1843	0	0	1806	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		162			281			312			693	
Travel Time (s)		3.7			6.4			7.1			15.8	
Confl. Peds. (#/hr)			2			4			3			2
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.81	0.81	0.81	0.66	0.66	0.66	0.69	0.69	0.69	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	5%	0%	2%	2%	0%
Adj. Flow (vph)	9	2	4	14	3	74	4	488	10	64	401	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	91	0	0	502	0	0	478	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	0.98	0.98	0.98	0.97	0.97	0.97	1.03	1.03	1.03
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											

Intersection

Int Delay, s/veh 2.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	7	2	3	9	2	49	3	337	7	59	369	12
Future Vol, veh/h	7	2	3	9	2	49	3	337	7	59	369	12
Conflicting Peds, #/hr	0	0	2	0	0	4	0	0	3	0	0	2
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, %	-	0	-	-	-3	-	-	-4	-	-	4	-
Peak Hour Factor	81	81	81	66	66	66	69	69	69	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	5	0	2	2	0
Mvmt Flow	9	2	4	14	3	74	4	488	10	64	401	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1082	1047	412	1045	1048	500	416	0	0	501	0	0
Stage 1	538	538	-	504	504	-	-	-	-	-	-	-
Stage 2	544	509	-	541	544	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	6.5	5.9	5.9	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	5.5	4.9	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	5.5	4.9	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	197	230	644	248	273	599	1154	-	-	1063	-	-
Stage 1	531	526	-	602	592	-	-	-	-	-	-	-
Stage 2	527	541	-	579	572	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	159	210	642	228	249	596	1152	-	-	1060	-	-
Mov Cap-2 Maneuver	159	210	-	228	249	-	-	-	-	-	-	-
Stage 1	527	483	-	598	588	-	-	-	-	-	-	-
Stage 2	455	537	-	527	526	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	23.8	14.7	0.1	1.2
HCM LOS	C	B		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1152	-	-	463	206	1060	-
HCM Lane V/C Ratio	0.004	-	-	0.196	0.072	0.061	-
HCM Control Delay (s)	8.1	0	-	14.7	23.8	8.6	0
HCM Lane LOS	A	A	-	B	C	A	A
HCM 95th %tile Q(veh)	0	-	-	0.7	0.2	0.2	-



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	15	5	28	332	299	82
Future Volume (vph)	15	5	28	332	299	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.968				0.971	
Flt Protected	0.963			0.996		
Satd. Flow (prot)	1736	0	0	1855	1809	0
Flt Permitted	0.963			0.996		
Satd. Flow (perm)	1736	0	0	1855	1809	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	176			499	312	
Travel Time (s)	4.0			11.3	7.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	5	30	361	325	89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	391	414	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 0.6

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	15	5	28	332	299	82
Future Vol, veh/h	15	5	28	332	299	82
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, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	5	30	361	325	89

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	791	370	414
Stage 1	370	-	-
Stage 2	421	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	358	676	1145
Stage 1	699	-	-
Stage 2	662	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	346	676	1145
Mov Cap-2 Maneuver	463	-	-
Stage 1	676	-	-
Stage 2	662	-	-

Approach	SE	NE	SW
HCM Control Delay, s	12.5	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NETSELn1	SWT	SWR
Capacity (veh/h)	1145	-	503	-
HCM Lane V/C Ratio	0.027	-	0.043	-
HCM Control Delay (s)	8.2	0	12.5	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-

2024 Build Traffic Volumes - Sensitivity
6: South Avenue & NYS Route 9D

Friday PM Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	261	19	9	258	55	7	21	7	46	29	10
Future Volume (vph)	10	261	19	9	258	55	7	21	7	46	29	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		6%			-6%			-1%			3%	
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
Ped Bike Factor								1.00			0.99	
Frt		0.991			0.977			0.974			0.984	
Flt Protected		0.998			0.999			0.990			0.974	
Satd. Flow (prot)	0	1823	0	0	1845	0	0	1841	0	0	1696	0
Flt Permitted		0.984			0.988			0.961			0.842	
Satd. Flow (perm)	0	1797	0	0	1824	0	0	1779	0	0	1466	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			11			8			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			516			194			303	
Travel Time (s)		5.5			11.7			4.4			6.9	
Confl. Peds. (#/hr)							6					6
Peak Hour Factor	0.90	0.90	0.90	0.83	0.83	0.83	0.85	0.85	0.85	0.79	0.79	0.79
Heavy Vehicles (%)	0%	0%	0%	12%	4%	0%	0%	0%	0%	2%	12%	0%
Adj. Flow (vph)	11	290	21	11	311	66	8	25	8	58	37	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	322	0	0	388	0	0	41	0	0	108	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	1.04	1.04	1.04	0.96	0.96	0.96	0.99	0.99	0.99	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	65.0	65.0		65.0	65.0		65.0	65.0		65.0	65.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	60.0	60.0		60.0	60.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
v/c Ratio		0.39			0.46			0.05			0.16	
Control Delay		24.4			25.3			16.5			19.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		24.4			25.3			16.5			19.8	
Queue Length 50th (ft)		172			212			15			48	
Queue Length 95th (ft)		248			270			34			74	

2024 Build Traffic Volumes - Sensitivity 11:38 am 11/29/2021 Friday PM Build Event Entry
RGD

Synchro 11 Report
Page 14

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		161			436			114			223	
Turn Bay Length (ft)												
Base Capacity (vph)		831			847			825			680	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.39			0.46			0.05			0.16	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Splits and Phases: 6: South Avenue & NYS Route 9D

 Ø2 (R)	 Ø4
65 s	65 s
 Ø6 (R)	 Ø8
65 s	65 s

2024 Build Traffic Volumes - Sensitivity
6: South Avenue & NYS Route 9D

Friday PM Build Event Entry
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	261	19	9	258	55	7	21	7	46	29	10
Future Volume (veh/h)	10	261	19	9	258	55	7	21	7	46	29	10
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		0.99	0.99		0.99
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	1688	1688	1688	1956	2076	2136	1939	1939	1939	1817	1669	1847
Adj Flow Rate, veh/h	11	290	21	11	311	66	8	25	8	58	37	13
Peak Hour Factor	0.90	0.90	0.90	0.83	0.83	0.83	0.85	0.85	0.85	0.79	0.79	0.79
Percent Heavy Veh, %	0	0	0	12	4	0	0	0	0	2	12	0
Cap, veh/h	39	701	50	39	754	157	169	519	159	372	229	76
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	23	1518	108	23	1634	340	294	1124	344	714	497	166
Grp Volume(v), veh/h	322	0	0	388	0	0	41	0	0	108	0	0
Grp Sat Flow(s),veh/h/ln	1649	0	0	1997	0	0	1762	0	0	1376	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0
Cycle Q Clear(g_c), s	16.7	0.0	0.0	16.7	0.0	0.0	1.6	0.0	0.0	5.6	0.0	0.0
Prop In Lane	0.03		0.07	0.03		0.17	0.20		0.20	0.54		0.12
Lane Grp Cap(c), veh/h	790	0	0	950	0	0	846	0	0	678	0	0
V/C Ratio(X)	0.41	0.00	0.00	0.41	0.00	0.00	0.05	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	790	0	0	950	0	0	846	0	0	678	0	0
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.4	0.0	0.0	23.3	0.0	0.0	19.3	0.0	0.0	20.3	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	1.3	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.0
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	6.9	0.0	0.0	8.3	0.0	0.0	0.7	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	0.0	0.0	24.6	0.0	0.0	19.4	0.0	0.0	20.8	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	B	A	A	C	A	A
Approach Vol, veh/h		322			388			41			108	
Approach Delay, s/veh		24.9			24.6			19.4			20.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.0		65.0		65.0		65.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		60.0		60.0		60.0		60.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				24.0								
HCM 6th LOS				C								

2024 Build Traffic Volumes With Improvements - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Entry
04/04/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	310	24	41	4	15	23	33	439	5	6	578	166
Future Volume (vph)	310	24	41	4	15	23	33	439	5	6	578	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor			0.97		0.96			1.00			0.99	
Frt			0.850		0.925			0.998			0.967	
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1760	1599	0	1713	0	1805	1915	0	1778	1780	0
Flt Permitted		0.956			0.996		0.104			0.355		
Satd. Flow (perm)	0	1760	1557	0	1713	0	198	1915	0	664	1780	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145		25			1			19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		584			328			388			335	
Travel Time (s)		13.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)			2			13			1			6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.84	0.84	0.84	0.98	0.98	0.98
Heavy Vehicles (%)	2%	4%	0%	0%	7%	0%	3%	2%	0%	0%	1%	1%
Adj. Flow (vph)	437	34	58	4	16	25	39	523	6	6	590	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	471	58	0	45	0	39	529	0	6	759	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83		83	6		83	6	
Trailing Detector (ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	43	43	20	43		43	6		43	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40	40		40		40			40		
Detector 2 Size(ft)		43	43		43		43			43		
Detector 2 Type		CI+Ex	CI+Ex		CI+Ex		CI+Ex			CI+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0			0.0		
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	16.0		4.0	16.0	
Minimum Split (s)	20.0	20.0	20.0	9.0	9.0		9.0	21.0		9.0	21.0	
Total Split (s)	20.0	20.0	20.0	15.0	15.0		15.0	40.0		15.0	40.0	
Total Split (%)	22.2%	22.2%	22.2%	16.7%	16.7%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	15.0	15.0	15.0	10.0	10.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Min		None	Min	
v/c Ratio		1.30	0.13		0.25		0.15	0.51		0.01	0.88	
Control Delay		185.0	0.6		25.0		9.9	15.2		9.0	35.1	
Queue Delay		0.0	0.0		0.0		0.0	1.7		0.0	0.0	
Total Delay		185.0	0.6		25.0		9.9	16.9		9.0	35.1	
Queue Length 50th (ft)		~345	0		10		8	155		1	~380	
Queue Length 95th (ft)		#399	0		41		21	301		7	#670	
Internal Link Dist (ft)		504			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		362	435		256		332	1038		518	864	
Starvation Cap Reductn		0	0		0		0	333		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		1.30	0.13		0.18		0.12	0.75		0.01	0.88	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 75.1

Natural Cycle: 90

Control Type: Semi Act-Uncoord

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: NYS Route 9D & Beekman Street/W. Church Street

 Ø1	 Ø2	 Ø4	 Ø8
15 s	40 s	20 s	15 s
 Ø5	 Ø6		
15 s	40 s		

2024 Build Traffic Volumes With Improvements - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Entry
04/04/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	24	41	4	15	23	33	439	5	6	578	166
Future Volume (veh/h)	310	24	41	4	15	23	33	439	5	6	578	166
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		0.86	1.00		0.98	1.00		0.97
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	1817	1876	2293	2188	2293	2091	2106	2136	1847	1832	1832
Adj Flow Rate, veh/h	437	34	58	4	16	25	39	523	6	6	590	169
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.84	0.84	0.84	0.98	0.98	0.98
Percent Heavy Veh, %	2	4	0	0	7	0	3	2	0	0	1	1
Cap, veh/h	333	26	327	5	21	33	189	996	11	373	620	177
Arrive On Green	0.21	0.21	0.21	0.03	0.03	0.03	0.03	0.48	0.48	0.01	0.46	0.46
Sat Flow, veh/h	1611	125	1582	160	642	1002	1991	2077	24	1759	1360	389
Grp Volume(v), veh/h	471	0	58	45	0	0	39	0	529	6	0	759
Grp Sat Flow(s),veh/h/ln	1737	0	1582	1804	0	0	1991	0	2101	1759	0	1749
Q Serve(g_s), s	15.0	0.0	2.2	1.8	0.0	0.0	0.7	0.0	12.7	0.1	0.0	30.3
Cycle Q Clear(g_c), s	15.0	0.0	2.2	1.8	0.0	0.0	0.7	0.0	12.7	0.1	0.0	30.3
Prop In Lane	0.93		1.00	0.09		0.56	1.00		0.01	1.00		0.22
Lane Grp Cap(c), veh/h	358	0	327	59	0	0	189	0	1007	373	0	797
V/C Ratio(X)	1.31	0.00	0.18	0.76	0.00	0.00	0.21	0.00	0.53	0.02	0.00	0.95
Avail Cap(c_a), veh/h	358	0	327	248	0	0	403	0	1012	604	0	842
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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	23.8	34.9	0.0	0.0	16.5	0.0	13.2	11.4	0.0	19.0
Incr Delay (d2), s/veh	160.0	0.0	0.3	17.8	0.0	0.0	0.5	0.0	0.5	0.0	0.0	19.8
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	21.8	0.0	0.8	1.1	0.0	0.0	0.3	0.0	5.5	0.0	0.0	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	188.8	0.0	24.0	52.6	0.0	0.0	17.0	0.0	13.7	11.4	0.0	38.8
LnGrp LOS	F	A	C	D	A	A	B	A	B	B	A	D
Approach Vol, veh/h		529			45			568			765	
Approach Delay, s/veh		170.7			52.6			13.9			38.6	
Approach LOS		F			D			B			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	39.8		20.0	7.2	38.1		7.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		15.0	10.0	35.0		10.0				
Max Q Clear Time (g_c+I1), s	2.1	14.7		17.0	2.7	32.3		3.8				
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	0.8		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			68.2									
HCM 6th LOS			E									

2024 Build Traffic Volumes - Sensitivity
1: NYS Route 9D & Verplanck Avenue

Friday PM Build Event Exit
03/31/2022

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	54	299	794	81	209	639
Future Volume (vph)	54	299	794	81	209	639
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.988			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1813	0	1778	1872
Flt Permitted	0.950				0.057	
Satd. Flow (perm)	1725	1544	1813	0	107	1872
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	325	863	88	227	695
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	325	951	0	227	695
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Minimum Split (s)	21.0	9.0	15.0		9.0	15.0
Total Split (s)	30.0	20.0	70.0		20.0	90.0
Total Split (%)	25.0%	16.7%	58.3%		16.7%	75.0%
Maximum Green (s)	25.0	15.0	65.0		15.0	85.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Walk Time (s)	5.0		5.0			
Flash Dont Walk (s)	11.0		11.0			
Pedestrian Calls (#/hr)	0		0			
v/c Ratio	0.16	0.56	0.97		0.80	0.52
Control Delay	40.4	34.3	49.4		51.1	9.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	40.4	34.3	49.4		51.1	9.9
Queue Length 50th (ft)	38	197	681		119	223
Queue Length 95th (ft)	76	293	#991		#247	307

2024 Build Traffic Volumes - Sensitivity 11:40 am 11/29/2021 Friday PM Build Event Exit
RGD

Synchro 11 Report
Page 1



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	359	579	982		284	1326
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.16	0.56	0.97		0.80	0.52

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NET and 6:SWTL, Start of Green

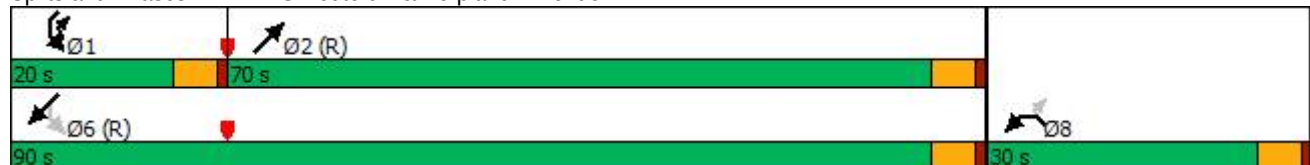
Natural Cycle: 90

Control Type: Pretimed

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



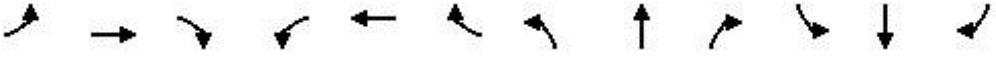
2024 Build Traffic Volumes - Sensitivity
1: NYS Route 9D & Verplanck Avenue

Friday PM Build Event Exit
03/31/2022

						
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	54	299	794	81	209	639
Future Volume (veh/h)	54	299	794	81	209	639
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1909
Adj Flow Rate, veh/h	59	325	863	88	227	695
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	342	487	879	90	300	1352
Arrive On Green	0.21	0.21	0.54	0.54	0.13	0.71
Sat Flow, veh/h	1641	1460	1622	165	1818	1909
Grp Volume(v), veh/h	59	325	0	951	227	695
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1788	1818	1909
Q Serve(g_s), s	3.5	22.9	0.0	62.5	9.5	20.0
Cycle Q Clear(g_c), s	3.5	22.9	0.0	62.5	9.5	20.0
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	342	487	0	968	300	1352
V/C Ratio(X)	0.17	0.67	0.00	0.98	0.76	0.51
Avail Cap(c_a), veh/h	342	487	0	968	300	1352
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	39.0	34.3	0.0	26.9	36.4	8.0
Incr Delay (d2), s/veh	1.1	7.1	0.0	24.9	16.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	9.0	0.0	31.9	4.9	8.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.1	41.4	0.0	51.9	52.7	9.4
LnGrp LOS	D	D	A	D	D	A
Approach Vol, veh/h	384		951			922
Approach Delay, s/veh	41.2		51.9			20.1
Approach LOS	D		D			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.0	70.0			90.0	30.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	15.0	65.0			85.0	25.0
Max Q Clear Time (g_c+I1), s	0.0	0.0			0.0	0.0
Green Ext Time (p_c), s	0.0	0.0			0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			37.1			
HCM 6th LOS			D			

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Exit
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	310	24	36	4	15	23	38	494	5	6	524	166
Future Volume (vph)	310	24	36	4	15	23	38	494	5	6	524	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor			0.98		0.97			1.00			0.99	
Frt			0.850		0.925			0.998			0.964	
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1760	1599	0	1737	0	1805	1915	0	1778	1774	0
Flt Permitted		0.709			0.966		0.103			0.266		
Satd. Flow (perm)	0	1306	1562	0	1684	0	196	1915	0	498	1774	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		25			1			21	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		584			328			388			335	
Travel Time (s)		13.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)			2			13			1			6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.84	0.84	0.84	0.98	0.98	0.98
Heavy Vehicles (%)	2%	4%	0%	0%	7%	0%	3%	2%	0%	0%	1%	1%
Adj. Flow (vph)	437	34	51	4	16	25	45	588	6	6	535	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	471	51	0	45	0	45	594	0	6	704	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83		83	6		83	6	
Trailing Detector (ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	43	43	20	43		43	6		43	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40	40		40		40			40		
Detector 2 Size(ft)		43	43		43		43			43		
Detector 2 Type		CI+Ex	CI+Ex		CI+Ex		CI+Ex			CI+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0			0.0		
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

2024 Build Traffic Volumes - Sensitivity 11:40 am 11/29/2021 Friday PM Build Event Exit
RGD

Synchro 11 Report
Page 4

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Exit
03/31/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	16.0		4.0	16.0	
Minimum Split (s)	20.0	20.0	20.0	21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	35.0	35.0	35.0	35.0	35.0		15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Walk Time (s)				5.0	5.0							
Flash Dont Walk (s)				11.0	11.0							
Pedestrian Calls (#/hr)				0	0							
v/c Ratio		0.99	0.08		0.07		0.19	0.64		0.02	0.92	
Control Delay		68.2	2.1		11.8		11.6	20.2		9.7	42.2	
Queue Delay		0.0	0.0		0.0		0.0	9.7		0.0	0.0	
Total Delay		68.2	2.1		11.8		11.6	29.9		9.7	42.2	
Queue Length 50th (ft)		~283	0		7		11	203		1	360	
Queue Length 95th (ft)		#319	1		30		24	356		7	#611	
Internal Link Dist (ft)		504			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		477	624		631		296	933		402	769	
Starvation Cap Reductn		0	0		0		0	306		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.99	0.08		0.07		0.15	0.95		0.01	0.92	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 82.5

Natural Cycle: 90

Control Type: Semi Act-Uncoord

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: NYS Route 9D & Beekman Street/W. Church Street

15 s	40 s	35 s
15 s	40 s	35 s

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Exit
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	24	36	4	15	23	38	494	5	6	524	166
Future Volume (veh/h)	310	24	36	4	15	23	38	494	5	6	524	166
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		0.96	1.00		0.98	1.00		0.97
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	1817	1876	2293	2188	2293	2091	2106	2136	1847	1832	1832
Adj Flow Rate, veh/h	437	34	51	4	16	25	45	588	6	6	535	169
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.84	0.84	0.84	0.98	0.98	0.98
Percent Heavy Veh, %	2	4	0	0	7	0	3	2	0	0	1	1
Cap, veh/h	191	8	576	47	161	202	177	934	10	286	561	177
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.03	0.45	0.45	0.01	0.42	0.42
Sat Flow, veh/h	296	23	1586	0	444	555	1991	2080	21	1759	1324	418
Grp Volume(v), veh/h	471	0	51	45	0	0	45	0	594	6	0	704
Grp Sat Flow(s),veh/h/ln	319	0	1586	999	0	0	1991	0	2102	1759	0	1743
Q Serve(g_s), s	0.0	0.0	1.7	0.0	0.0	0.0	1.0	0.0	17.9	0.2	0.0	32.2
Cycle Q Clear(g_c), s	30.0	0.0	1.7	30.0	0.0	0.0	1.0	0.0	17.9	0.2	0.0	32.2
Prop In Lane	0.93		1.00	0.09		0.56	1.00		0.01	1.00		0.24
Lane Grp Cap(c), veh/h	200	0	576	410	0	0	177	0	943	286	0	739
V/C Ratio(X)	2.36	0.00	0.09	0.11	0.00	0.00	0.25	0.00	0.63	0.02	0.00	0.95
Avail Cap(c_a), veh/h	200	0	576	410	0	0	356	0	943	488	0	739
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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	0.0	17.3	18.4	0.0	0.0	19.2	0.0	17.5	15.0	0.0	23.0
Incr Delay (d2), s/veh	626.2	0.0	0.1	0.1	0.0	0.0	0.7	0.0	3.2	0.0	0.0	23.4
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	38.8	0.0	0.6	0.6	0.0	0.0	0.5	0.0	8.9	0.1	0.0	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	658.8	0.0	17.4	18.5	0.0	0.0	19.9	0.0	20.7	15.0	0.0	46.4
LnGrp LOS	F	A	B	B	A	A	B	A	C	B	A	D
Approach Vol, veh/h		522			45			639			710	
Approach Delay, s/veh		596.2			18.5			20.6			46.2	
Approach LOS		F			B			C			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	42.1		35.0	7.6	40.0		35.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.2	19.9		32.0	3.0	34.2		32.0				
Green Ext Time (p_c), s	0.0	1.5		0.0	0.1	0.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			186.8									
HCM 6th LOS			F									

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Friday PM Build Event Exit
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	2	49	2	162	0	373	88	246	325	1
Future Volume (vph)	1	2	2	49	2	162	0	373	88	246	325	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor		0.98				0.96		0.99			1.00	
Frt		0.949				0.850		0.971				
Flt Protected		0.988			0.954					0.950		
Satd. Flow (prot)	0	1742	0	0	1885	1647	1928	1798	0	1743	1853	0
Flt Permitted		0.897			0.786					0.343		
Satd. Flow (perm)	0	1582	0	0	1553	1587	1928	1798	0	629	1853	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			693			388	
Travel Time (s)		3.0			8.0			15.8			8.8	
Confl. Peds. (#/hr)			9			15			21			12
Confl. Bikes (#/hr)			1						1			
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	5%	2%	1%	0%
Adj. Flow (vph)	2	3	3	54	2	178	0	472	111	280	369	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	56	178	0	583	0	280	370	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83		20	83	83	83	6		83	6	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	0		-5	0	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	0		-5	0	
Detector 1 Size(ft)	20	43		20	43	43	43	6		43	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40			40	40	40			40		
Detector 2 Size(ft)		43			43	43	43			43		
Detector 2 Type		CI+Ex			CI+Ex	CI+Ex	CI+Ex			CI+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0			0.0		
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	

2024 Build Traffic Volumes - Sensitivity 11:40 am 11/29/2021 Friday PM Build Event Exit
RGD

Synchro 11 Report
Page 7

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Friday PM Build Event Exit
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		8.0	8.0	4.0	4.0	31.0		4.0	35.0	
Minimum Split (s)	21.0	21.0		21.0	21.0	9.0	9.0	36.0		9.0	40.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
v/c Ratio		0.04			0.26	0.47		0.58		0.42	0.24	
Control Delay		22.6			29.9	22.0		13.7		7.4	3.1	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.2	
Total Delay		22.6			29.9	22.0		13.7		7.4	3.3	
Queue Length 50th (ft)		2			22	54		162		28	38	
Queue Length 95th (ft)		8			53	100		228		56	75	
Internal Link Dist (ft)		53			270			613			308	
Turn Bay Length (ft)						70				120		
Base Capacity (vph)		765			750	391		1013		685	1544	
Starvation Cap Reductn		0			0	0		0		0	552	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.01			0.07	0.46		0.58		0.41	0.37	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 63.1

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 3: NYS Route 9D & Beacon City Hall/Main Street

														
40 s			15 s			35 s			35 s			35 s		
														
40 s			15 s			35 s			35 s			35 s		

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Friday PM Build Event Exit
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	2	2	49	2	162	0	373	88	246	325	1
Future Volume (veh/h)	1	2	2	49	2	162	0	373	88	246	325	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.94	0.97		0.94	1.00		0.96	1.00		0.99
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	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	2	3	3	54	2	178	0	472	111	280	369	1
Peak Hour Factor	0.60	0.60	0.60	0.91	0.91	0.91	0.79	0.79	0.79	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	2	0	2	5	2	1	0
Cap, veh/h	96	106	78	313	10	341	738	873	205	530	1034	3
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.00	0.57	0.57	0.06	0.57	0.57
Sat Flow, veh/h	183	834	610	1564	79	1744	1922	1543	363	1731	1826	5
Grp Volume(v), veh/h	8	0	0	56	0	178	0	0	583	280	0	370
Grp Sat Flow(s),veh/h/ln	1627	0	0	1642	0	1744	1922	0	1905	1731	0	1831
Q Serve(g_s), s	0.0	0.0	0.0	1.6	0.0	1.4	0.0	0.0	11.8	0.0	0.0	6.8
Cycle Q Clear(g_c), s	0.3	0.0	0.0	1.8	0.0	1.4	0.0	0.0	11.8	0.0	0.0	6.8
Prop In Lane	0.25		0.37	0.96		1.00	1.00		0.19	1.00		0.00
Lane Grp Cap(c), veh/h	280	0	0	323	0	341	738	0	1078	530	0	1036
V/C Ratio(X)	0.03	0.00	0.00	0.17	0.00	0.52	0.00	0.00	0.54	0.53	0.00	0.36
Avail Cap(c_a), veh/h	822	0	0	906	0	965	925	0	1078	698	0	1036
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	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	0.0	24.3	0.0	22.4	0.0	0.0	8.4	14.9	0.0	7.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	1.2	0.0	0.0	1.9	0.8	0.0	1.0
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	0.1	0.0	0.0	0.7	0.0	2.3	0.0	0.0	4.4	3.0	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	0.0	24.6	0.0	23.6	0.0	0.0	10.3	15.7	0.0	8.3
LnGrp LOS	C	A	A	C	A	C	A	A	B	B	A	A
Approach Vol, veh/h		8			234			583			650	
Approach Delay, s/veh		23.7			23.8			10.3			11.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	40.0		12.9	9.0	40.0		12.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	13.8		2.3	0.0	8.8		3.8				
Green Ext Time (p_c), s	0.9	1.6		0.0	0.0	0.9		1.4				
Intersection Summary												
HCM 6th Ctrl Delay			13.1									
HCM 6th LOS			B									

2024 Build Traffic Volumes - Sensitivity
4: NYS Route 9D & Beacon Street/West End Lofts

Friday PM Build Event Exit
03/31/2022

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	7	2	3	9	2	49	3	406	7	59	301	12
Future Volume (vph)	7	2	3	9	2	49	3	406	7	59	301	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-3%			-4%			4%	
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
Ped Bike Factor												
Frt		0.964			0.890			0.998			0.996	
Flt Protected		0.971			0.992						0.992	
Satd. Flow (prot)	0	1778	0	0	1703	0	0	1844	0	0	1805	0
Flt Permitted		0.971			0.992						0.992	
Satd. Flow (perm)	0	1778	0	0	1703	0	0	1844	0	0	1805	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		162			281			312			693	
Travel Time (s)		3.7			6.4			7.1			15.8	
Confl. Peds. (#/hr)			2			4			3			2
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.81	0.81	0.81	0.66	0.66	0.66	0.69	0.69	0.69	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	5%	0%	2%	2%	0%
Adj. Flow (vph)	9	2	4	14	3	74	4	588	10	64	327	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	91	0	0	602	0	0	404	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	0.98	0.98	0.98	0.97	0.97	0.97	1.03	1.03	1.03
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											

Intersection

Int Delay, s/veh 2.2

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	7	2	3	9	2	49	3	406	7	59	301	12
Future Vol, veh/h	7	2	3	9	2	49	3	406	7	59	301	12
Conflicting Peds, #/hr	0	0	2	0	0	4	0	0	3	0	0	2
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, %	-	0	-	-	-3	-	-	-4	-	-	4	-
Peak Hour Factor	81	81	81	66	66	66	69	69	69	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	5	0	2	2	0
Mvmt Flow	9	2	4	14	3	74	4	588	10	64	327	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1108	1073	338	1071	1074	600	342	0	0	601	0	0
Stage 1	464	464	-	604	604	-	-	-	-	-	-	-
Stage 2	644	609	-	467	470	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	6.5	5.9	5.9	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	5.5	4.9	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	5.5	4.9	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	189	222	709	239	265	531	1228	-	-	976	-	-
Stage 1	582	567	-	540	543	-	-	-	-	-	-	-
Stage 2	465	488	-	627	609	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	150	202	707	219	241	528	1226	-	-	974	-	-
Mov Cap-2 Maneuver	150	202	-	219	241	-	-	-	-	-	-	-
Stage 1	578	520	-	536	539	-	-	-	-	-	-	-
Stage 2	394	485	-	570	558	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	24.8	15.9	0.1	1.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1226	-	-	422	197	974	-
HCM Lane V/C Ratio	0.004	-	-	0.215	0.075	0.066	-
HCM Control Delay (s)	7.9	0	-	15.9	24.8	9	0
HCM Lane LOS	A	A	-	C	C	A	A
HCM 95th %tile Q(veh)	0	-	-	0.8	0.2	0.2	-



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	83	28	5	332	299	14
Future Volume (vph)	83	28	5	332	299	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966				0.994	
Flt Protected	0.964			0.999		
Satd. Flow (prot)	1735	0	0	1861	1852	0
Flt Permitted	0.964			0.999		
Satd. Flow (perm)	1735	0	0	1861	1852	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	176			499	312	
Travel Time (s)	4.0			11.3	7.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	90	30	5	361	325	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	0	366	340	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 2

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	83	28	5	332	299	14
Future Vol, veh/h	83	28	5	332	299	14
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, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	30	5	361	325	15

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	704	333	340
Stage 1	333	-	-
Stage 2	371	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	403	709	1219
Stage 1	726	-	-
Stage 2	698	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	401	709	1219
Mov Cap-2 Maneuver	507	-	-
Stage 1	722	-	-
Stage 2	698	-	-

Approach	SE	NE	SW
HCM Control Delay, s	13.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NETSELn1	SWT	SWR
Capacity (veh/h)	1219	-	546	-
HCM Lane V/C Ratio	0.004	-	0.221	-
HCM Control Delay (s)	8	0	13.5	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0	-	0.8	-

2024 Build Traffic Volumes - Sensitivity
6: South Avenue & NYS Route 9D

Friday PM Build Event Exit
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	284	19	9	236	55	7	21	7	46	29	10
Future Volume (vph)	10	284	19	9	236	55	7	21	7	46	29	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		6%			-6%			-1%			3%	
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
Ped Bike Factor								1.00			0.99	
Frt		0.992			0.975			0.974			0.984	
Flt Protected		0.998			0.998			0.990			0.974	
Satd. Flow (prot)	0	1825	0	0	1840	0	0	1841	0	0	1696	0
Flt Permitted		0.986			0.987			0.961			0.842	
Satd. Flow (perm)	0	1803	0	0	1819	0	0	1779	0	0	1466	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			12			8			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			516			194			303	
Travel Time (s)		5.5			11.7			4.4			6.9	
Confl. Peds. (#/hr)							6					6
Peak Hour Factor	0.90	0.90	0.90	0.83	0.83	0.83	0.85	0.85	0.85	0.79	0.79	0.79
Heavy Vehicles (%)	0%	0%	0%	12%	4%	0%	0%	0%	0%	2%	12%	0%
Adj. Flow (vph)	11	316	21	11	284	66	8	25	8	58	37	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	348	0	0	361	0	0	41	0	0	108	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	1.04	1.04	1.04	0.96	0.96	0.96	0.99	0.99	0.99	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	65.0	65.0		65.0	65.0		65.0	65.0		65.0	65.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	60.0	60.0		60.0	60.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
v/c Ratio		0.42			0.43			0.05			0.16	
Control Delay		25.1			24.6			16.5			19.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		25.1			24.6			16.5			19.8	
Queue Length 50th (ft)		190			193			15			48	
Queue Length 95th (ft)		271			247			34			74	

2024 Build Traffic Volumes - Sensitivity 11:40 am 11/29/2021 Friday PM Build Event Exit
RGD

Synchro 11 Report
Page 14

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		161			436			114			223	
Turn Bay Length (ft)												
Base Capacity (vph)		833			846			825			680	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.42			0.43			0.05			0.16	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Splits and Phases: 6: South Avenue & NYS Route 9D

 Ø2 (R)	 Ø4
65 s	65 s
 Ø6 (R)	 Ø8
65 s	65 s

2024 Build Traffic Volumes - Sensitivity
6: South Avenue & NYS Route 9D

Friday PM Build Event Exit
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	284	19	9	236	55	7	21	7	46	29	10
Future Volume (veh/h)	10	284	19	9	236	55	7	21	7	46	29	10
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		0.99	0.99		0.99
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	1688	1688	1688	1956	2076	2136	1939	1939	1939	1817	1669	1847
Adj Flow Rate, veh/h	11	316	21	11	284	66	8	25	8	58	37	13
Peak Hour Factor	0.90	0.90	0.90	0.83	0.83	0.83	0.85	0.85	0.85	0.79	0.79	0.79
Percent Heavy Veh, %	0	0	0	12	4	0	0	0	0	2	12	0
Cap, veh/h	38	707	46	40	739	168	169	519	159	372	229	76
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	21	1532	100	25	1602	364	294	1124	344	714	497	166
Grp Volume(v), veh/h	348	0	0	361	0	0	41	0	0	108	0	0
Grp Sat Flow(s),veh/h/ln	1653	0	0	1991	0	0	1762	0	0	1376	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0
Cycle Q Clear(g_c), s	18.4	0.0	0.0	15.3	0.0	0.0	1.6	0.0	0.0	5.6	0.0	0.0
Prop In Lane	0.03		0.06	0.03		0.18	0.20		0.20	0.54		0.12
Lane Grp Cap(c), veh/h	791	0	0	947	0	0	846	0	0	678	0	0
V/C Ratio(X)	0.44	0.00	0.00	0.38	0.00	0.00	0.05	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	791	0	0	947	0	0	846	0	0	678	0	0
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.8	0.0	0.0	23.0	0.0	0.0	19.3	0.0	0.0	20.3	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0	1.2	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.0
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	7.7	0.0	0.0	7.6	0.0	0.0	0.7	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	0.0	0.0	24.1	0.0	0.0	19.4	0.0	0.0	20.8	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	B	A	A	C	A	A
Approach Vol, veh/h		348			361			41			108	
Approach Delay, s/veh		25.6			24.1			19.4			20.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.0		65.0		65.0		65.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		60.0		60.0		60.0		60.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				24.1								
HCM 6th LOS				C								

2024 Build Traffic Volumes With Improvements - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Exit
04/04/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	310	24	37	4	15	23	39	494	5	6	524	166
Future Volume (vph)	310	24	37	4	15	23	39	494	5	6	524	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor			0.97		0.96			1.00			0.99	
Frt			0.850		0.925			0.998			0.964	
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1760	1599	0	1713	0	1805	1915	0	1778	1774	0
Flt Permitted		0.956			0.996		0.134			0.294		
Satd. Flow (perm)	0	1760	1557	0	1713	0	255	1915	0	550	1774	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145		25			1			21	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		584			328			388			335	
Travel Time (s)		13.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)			2			13			1			6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.84	0.84	0.84	0.98	0.98	0.98
Heavy Vehicles (%)	2%	4%	0%	0%	7%	0%	3%	2%	0%	0%	1%	1%
Adj. Flow (vph)	437	34	52	4	16	25	46	588	6	6	535	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	471	52	0	45	0	46	594	0	6	704	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83		83	6		83	6	
Trailing Detector (ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	43	43	20	43		43	6		43	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40	40		40		40			40		
Detector 2 Size(ft)		43	43		43		43			43		
Detector 2 Type		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		
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	

2024 Build Traffic Volumes With Improvements - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Exit
04/04/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	16.0		4.0	16.0	
Minimum Split (s)	20.0	20.0	20.0	9.0	9.0		9.0	21.0		9.0	21.0	
Total Split (s)	20.0	20.0	20.0	15.0	15.0		15.0	40.0		15.0	40.0	
Total Split (%)	22.2%	22.2%	22.2%	16.7%	16.7%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	15.0	15.0	15.0	10.0	10.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Min		None	Min	
v/c Ratio		1.27	0.12		0.24		0.16	0.58		0.02	0.84	
Control Delay		169.5	0.5		25.0		9.8	16.6		9.0	31.5	
Queue Delay		0.0	0.0		0.0		0.0	2.1		0.0	0.0	
Total Delay		169.5	0.5		25.0		9.8	18.7		9.0	31.5	
Queue Length 50th (ft)		~346	0		10		10	182		1	334	
Queue Length 95th (ft)		#400	0		42		24	351		7	#602	
Internal Link Dist (ft)		504			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		372	444		263		360	1068		469	887	
Starvation Cap Reductn		0	0		0		0	319		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		1.27	0.12		0.17		0.13	0.79		0.01	0.79	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 73.8

Natural Cycle: 90

Control Type: Semi Act-Uncoord

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: NYS Route 9D & Beekman Street/W. Church Street

 Ø1	 Ø2	 Ø4	 Ø8
15 s	40 s	20 s	15 s
 Ø5	 Ø6		
15 s	40 s		

2024 Build Traffic Volumes With Improvements - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Friday PM Build Event Exit
04/04/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	24	37	4	15	23	39	494	5	6	524	166
Future Volume (veh/h)	310	24	37	4	15	23	39	494	5	6	524	166
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		0.86	1.00		0.98	1.00		0.97
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	1817	1876	2293	2188	2293	2091	2106	2136	1847	1832	1832
Adj Flow Rate, veh/h	437	34	52	4	16	25	46	588	6	6	535	169
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.84	0.84	0.84	0.98	0.98	0.98
Percent Heavy Veh, %	2	4	0	0	7	0	3	2	0	0	1	1
Cap, veh/h	346	27	340	5	21	34	210	956	10	315	572	181
Arrive On Green	0.21	0.21	0.21	0.03	0.03	0.03	0.03	0.46	0.46	0.01	0.43	0.43
Sat Flow, veh/h	1611	125	1583	161	644	1006	1991	2080	21	1759	1324	418
Grp Volume(v), veh/h	471	0	52	45	0	0	46	0	594	6	0	704
Grp Sat Flow(s),veh/h/ln	1737	0	1583	1811	0	0	1991	0	2102	1759	0	1743
Q Serve(g_s), s	15.0	0.0	1.9	1.7	0.0	0.0	0.9	0.0	14.9	0.1	0.0	26.9
Cycle Q Clear(g_c), s	15.0	0.0	1.9	1.7	0.0	0.0	0.9	0.0	14.9	0.1	0.0	26.9
Prop In Lane	0.93		1.00	0.09		0.56	1.00		0.01	1.00		0.24
Lane Grp Cap(c), veh/h	373	0	340	60	0	0	210	0	966	315	0	753
V/C Ratio(X)	1.26	0.00	0.15	0.75	0.00	0.00	0.22	0.00	0.61	0.02	0.00	0.93
Avail Cap(c_a), veh/h	373	0	340	259	0	0	427	0	1052	555	0	873
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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.5	0.0	22.3	33.5	0.0	0.0	15.7	0.0	14.2	12.3	0.0	18.9
Incr Delay (d2), s/veh	138.6	0.0	0.2	16.5	0.0	0.0	0.5	0.0	0.9	0.0	0.0	15.6
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	20.2	0.0	0.7	1.0	0.0	0.0	0.4	0.0	6.5	0.0	0.0	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	166.0	0.0	22.5	50.0	0.0	0.0	16.2	0.0	15.2	12.3	0.0	34.5
LnGrp LOS	F	A	C	D	A	A	B	A	B	B	A	C
Approach Vol, veh/h		523			45			640			710	
Approach Delay, s/veh		151.8			50.0			15.2			34.3	
Approach LOS		F			D			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	37.1		20.0	7.4	35.2		7.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		15.0	10.0	35.0		10.0				
Max Q Clear Time (g_c+I1), s	2.1	16.9		17.0	2.9	28.9		3.7				
Green Ext Time (p_c), s	0.0	1.5		0.0	0.1	1.3		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			60.3									
HCM 6th LOS			E									

2024 Build Traffic Volumes - Sensitivity
1: NYS Route 9D & Verplanck Avenue

Saturday Build Event Entry
03/31/2022

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	81	232	581	65	159	692
Future Volume (vph)	81	232	581	65	159	692
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.986			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1809	0	1778	1872
Flt Permitted	0.950				0.198	
Satd. Flow (perm)	1725	1544	1809	0	371	1872
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	88	252	632	71	173	752
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	252	703	0	173	752
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Minimum Split (s)	21.0	9.0	15.0		9.0	15.0
Total Split (s)	30.0	20.0	70.0		20.0	90.0
Total Split (%)	25.0%	16.7%	58.3%		16.7%	75.0%
Maximum Green (s)	25.0	15.0	65.0		15.0	85.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Walk Time (s)	5.0		5.0			
Flash Dont Walk (s)	11.0		11.0			
Pedestrian Calls (#/hr)	0		0			
v/c Ratio	0.25	0.44	0.72		0.39	0.57
Control Delay	41.8	31.0	25.8		8.4	10.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	41.8	31.0	25.8		8.4	10.6
Queue Length 50th (ft)	57	144	391		39	254
Queue Length 95th (ft)	106	222	544		62	349

2024 Build Traffic Volumes - Sensitivity 11:40 am 11/29/2021 Saturday Build Event Entry
RGD

Synchro 11 Report
Page 1



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	359	579	979		438	1326
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.25	0.44	0.72		0.39	0.57

Intersection Summary

Area Type: Other

Cycle Length: 120

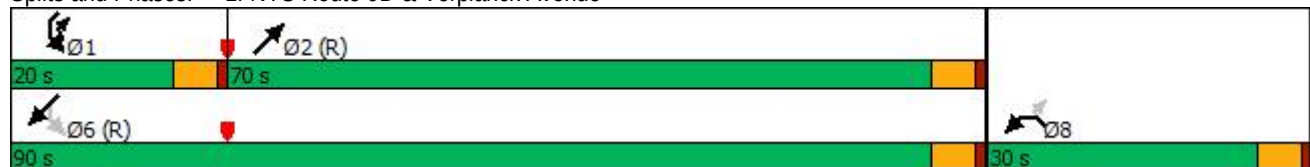
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



2024 Build Traffic Volumes - Sensitivity
1: NYS Route 9D & Verplanck Avenue

Saturday Build Event Entry
03/31/2022

						
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	81	232	581	65	159	692
Future Volume (veh/h)	81	232	581	65	159	692
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1909
Adj Flow Rate, veh/h	88	252	632	71	173	752
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	342	487	869	98	473	1352
Arrive On Green	0.21	0.21	0.54	0.54	0.13	0.71
Sat Flow, veh/h	1641	1460	1605	180	1818	1909
Grp Volume(v), veh/h	88	252	0	703	173	752
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1785	1818	1909
Q Serve(g_s), s	5.4	16.7	0.0	35.7	4.0	22.7
Cycle Q Clear(g_c), s	5.4	16.7	0.0	35.7	4.0	22.7
Prop In Lane	1.00	1.00		0.10	1.00	
Lane Grp Cap(c), veh/h	342	487	0	967	473	1352
V/C Ratio(X)	0.26	0.52	0.00	0.73	0.37	0.56
Avail Cap(c_a), veh/h	342	487	0	967	473	1352
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	39.7	32.2	0.0	20.8	14.3	8.4
Incr Delay (d2), s/veh	1.8	3.9	0.0	4.8	2.2	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	6.4	0.0	15.6	2.0	9.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.5	36.1	0.0	25.6	16.5	10.1
LnGrp LOS	D	D	A	C	B	B
Approach Vol, veh/h	340		703			925
Approach Delay, s/veh	37.5		25.6			11.3
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.0	70.0			90.0	30.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	15.0	65.0			85.0	25.0
Max Q Clear Time (g_c+I1), s	0.0	0.0			0.0	0.0
Green Ext Time (p_c), s	0.0	0.0			0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			20.9			
HCM 6th LOS			C			

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Saturday Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	2	28	9	12	20	65	517	4	17	642	179
Future Volume (vph)	33	2	28	9	12	20	65	517	4	17	642	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor			0.96		0.98			1.00			0.99	
Frt			0.850		0.934			0.999			0.967	
Flt Protected		0.955			0.989		0.950			0.950		
Satd. Flow (prot)	0	1780	1599	0	1815	0	1771	1936	0	1778	1775	0
Flt Permitted		0.699			0.911		0.174			0.433		
Satd. Flow (perm)	0	1303	1533	0	1672	0	324	1936	0	810	1775	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		27						18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		584			328			388			335	
Travel Time (s)		13.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)			12			4			1			10
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.73	0.73	0.73	0.75	0.75	0.75	0.94	0.94	0.94	0.95	0.95	0.95
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	5%	1%	0%	0%	1%	2%
Adj. Flow (vph)	45	3	38	12	16	27	69	550	4	18	676	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	38	0	55	0	69	554	0	18	864	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83		83	6		83	6	
Trailing Detector (ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	43	43	20	43		43	6		43	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40	40		40		40			40		
Detector 2 Size(ft)		43	43		43		43			43		
Detector 2 Type		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		
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

2024 Build Traffic Volumes - Sensitivity 11:40 am 11/29/2021 Saturday Build Event Entry
RGD

Synchro 11 Report
Page 4

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Saturday Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	16.0		4.0	16.0	
Minimum Split (s)	20.0	20.0	20.0	21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	35.0	35.0	35.0	35.0	35.0		15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Walk Time (s)				5.0	5.0							
Flash Dont Walk (s)				11.0	11.0							
Pedestrian Calls (#/hr)				0	0							
v/c Ratio		0.29	0.14		0.23		0.17	0.39		0.03	0.74	
Control Delay		30.4	2.4		18.8		4.0	6.5		3.3	17.9	
Queue Delay		0.0	0.0		0.0		0.0	0.5		0.0	0.0	
Total Delay		30.4	2.4		18.8		4.0	6.9		3.3	17.9	
Queue Length 50th (ft)		18	0		10		6	63		2	267	
Queue Length 95th (ft)		37	0		30		17	219		6	#562	
Internal Link Dist (ft)		504			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		648	805		845		480	1416		748	1165	
Starvation Cap Reductn		0	0		0		0	430		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.07	0.05		0.07		0.14	0.56		0.02	0.74	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 61

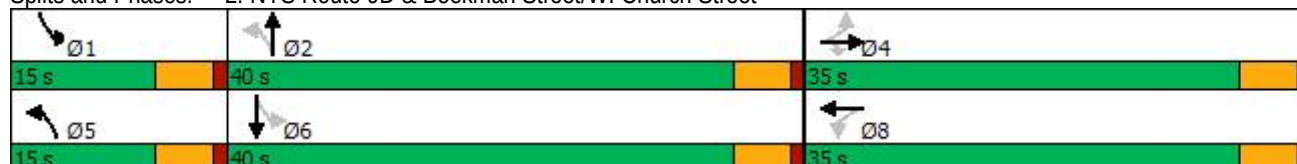
Natural Cycle: 75

Control Type: Semi Act-Uncoord

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: NYS Route 9D & Beekman Street/W. Church Street



2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Saturday Build Event Entry
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	2	28	9	12	20	65	517	4	17	642	179
Future Volume (veh/h)	33	2	28	9	12	20	65	517	4	17	642	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.90	0.95		0.98	1.00		1.00	1.00		0.99
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	1862	1876	1876	2293	2293	2293	2061	2121	2136	1847	1832	1817
Adj Flow Rate, veh/h	45	3	38	12	16	27	69	550	4	18	676	188
Peak Hour Factor	0.73	0.73	0.73	0.75	0.75	0.75	0.94	0.94	0.94	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	0	0	0	0	5	1	0	0	1	2
Cap, veh/h	239	12	127	100	65	86	374	1335	10	581	834	232
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.05	0.63	0.63	0.02	0.61	0.61
Sat Flow, veh/h	1342	138	1434	273	730	967	1963	2103	15	1759	1377	383
Grp Volume(v), veh/h	48	0	38	55	0	0	69	0	554	18	0	864
Grp Sat Flow(s),veh/h/ln	1481	0	1434	1970	0	0	1963	0	2118	1759	0	1759
Q Serve(g_s), s	0.0	0.0	1.4	0.0	0.0	0.0	0.7	0.0	7.5	0.2	0.0	22.0
Cycle Q Clear(g_c), s	1.5	0.0	1.4	1.4	0.0	0.0	0.7	0.0	7.5	0.2	0.0	22.0
Prop In Lane	0.94		1.00	0.22		0.49	1.00		0.01	1.00		0.22
Lane Grp Cap(c), veh/h	252	0	127	250	0	0	374	0	1344	581	0	1066
V/C Ratio(X)	0.19	0.00	0.30	0.22	0.00	0.00	0.18	0.00	0.41	0.03	0.00	0.81
Avail Cap(c_a), veh/h	840	0	744	1073	0	0	623	0	1344	855	0	1066
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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	24.7	24.7	0.0	0.0	8.3	0.0	5.2	4.4	0.0	8.8
Incr Delay (d2), s/veh	0.4	0.0	1.3	0.4	0.0	0.0	0.2	0.0	0.9	0.0	0.0	6.7
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	0.6	0.0	0.5	0.7	0.0	0.0	0.3	0.0	2.6	0.1	0.0	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.0	0.0	26.0	25.1	0.0	0.0	8.5	0.0	6.2	4.5	0.0	15.5
LnGrp LOS	C	A	C	C	A	A	A	A	A	A	A	B
Approach Vol, veh/h		86			55			623			882	
Approach Delay, s/veh		25.5			25.1			6.4			15.3	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	41.7		10.1	7.7	40.0		10.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.2	9.5		3.5	2.7	24.0		3.4				
Green Ext Time (p_c), s	0.0	1.5		0.4	0.1	2.4		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Saturday Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	2	2	45	0	197	2	387	51	293	390	4
Future Volume (vph)	3	2	2	45	0	197	2	387	51	293	390	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor		0.98				0.97		0.98			1.00	
Frt		0.959				0.850		0.983			0.999	
Flt Protected		0.980			0.950		0.950			0.950		
Satd. Flow (prot)	0	1746	0	0	1877	1663	1832	1819	0	1760	1851	0
Flt Permitted		0.847			0.800		0.487			0.386		
Satd. Flow (perm)	0	1509	0	0	1581	1619	939	1819	0	715	1851	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			693			388	
Travel Time (s)		3.0			8.0			15.8			8.8	
Confl. Peds. (#/hr)			14			6			48			11
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	2%	5%	1%	1%	0%
Adj. Flow (vph)	4	3	3	51	0	221	2	440	58	318	424	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	51	221	2	498	0	318	428	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83		20	83	83	83	6		83	6	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	0		-5	0	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	0		-5	0	
Detector 1 Size(ft)	20	43		20	43	43	43	6		43	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40			40	40	40			40		
Detector 2 Size(ft)		43			43	43	43			43		
Detector 2 Type		CI+Ex			CI+Ex	CI+Ex	CI+Ex			CI+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0			0.0		
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		

2024 Build Traffic Volumes - Sensitivity 11:40 am 11/29/2021 Saturday Build Event Entry
RGD

Synchro 11 Report
Page 7

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Saturday Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		8.0	8.0	4.0	4.0	31.0		4.0	35.0	
Minimum Split (s)	21.0	21.0		21.0	21.0	9.0	9.0	36.0		9.0	40.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
v/c Ratio		0.05			0.23	0.57	0.00	0.49		0.44	0.29	
Control Delay		23.6			29.4	24.7	3.5	12.2		7.2	5.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.2	
Total Delay		23.6			29.4	24.7	3.5	12.2		7.2	6.1	
Queue Length 50th (ft)		3			20	69	0	129		32	46	
Queue Length 95th (ft)		12			49	121	2	217		65	183	
Internal Link Dist (ft)		53			270			613			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		727			761	395	821	1021		731	1465	
Starvation Cap Reductn		0			0	0	0	0		0	440	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.01			0.07	0.56	0.00	0.49		0.44	0.42	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 63.2

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 3: NYS Route 9D & Beacon City Hall/Main Street

 Ø2	 Ø1	 Ø4
40 s	15 s	35 s
 Ø6	 Ø5	 Ø8
40 s	15 s	35 s

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Saturday Build Event Entry
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2	2	45	0	197	2	387	51	293	390	4
Future Volume (veh/h)	3	2	2	45	0	197	2	387	51	293	390	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.95		0.98	1.00		0.96	0.99		0.99
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	1894	1894	1894	2215	2215	2200	2018	1988	1943	1832	1832	1847
Adj Flow Rate, veh/h	4	3	3	51	0	221	2	440	58	318	424	4
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	2	5	1	1	0
Cap, veh/h	130	89	59	321	0	353	686	967	127	591	1024	10
Arrive On Green	0.13	0.13	0.13	0.13	0.00	0.13	0.06	0.57	0.57	0.06	0.57	0.57
Sat Flow, veh/h	383	692	461	1597	0	1821	1922	1710	225	1745	1812	17
Grp Volume(v), veh/h	10	0	0	51	0	221	2	0	498	318	0	428
Grp Sat Flow(s),veh/h/ln	1536	0	0	1597	0	1821	1922	0	1936	1745	0	1829
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	2.8	0.0	0.0	9.3	0.0	0.0	8.2
Cycle Q Clear(g_c), s	0.3	0.0	0.0	1.7	0.0	2.8	0.0	0.0	9.3	0.0	0.0	8.2
Prop In Lane	0.40		0.30	1.00		1.00	1.00		0.12	1.00		0.01
Lane Grp Cap(c), veh/h	278	0	0	321	0	353	686	0	1094	591	0	1034
V/C Ratio(X)	0.04	0.00	0.00	0.16	0.00	0.63	0.00	0.00	0.46	0.54	0.00	0.41
Avail Cap(c_a), veh/h	786	0	0	884	0	1002	872	0	1094	760	0	1034
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	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	0.0	24.3	0.0	22.9	7.9	0.0	7.9	13.2	0.0	7.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	1.8	0.0	0.0	1.4	0.8	0.0	1.2
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	0.1	0.0	0.0	0.7	0.0	2.9	0.0	0.0	3.5	3.2	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	0.0	24.5	0.0	24.7	7.9	0.0	9.2	14.0	0.0	8.9
LnGrp LOS	C	A	A	C	A	C	A	A	A	B	A	A
Approach Vol, veh/h		10			272			500			746	
Approach Delay, s/veh		23.7			24.7			9.2			11.0	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	40.0		12.9	9.0	40.0		12.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	11.3		2.3	2.0	10.2		4.8				
Green Ext Time (p_c), s	1.0	1.3		0.0	0.0	1.1		1.6				
Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

2024 Build Traffic Volumes - Sensitivity
4: NYS Route 9D & Beacon Street/West End Lofts

Saturday Build Event Entry
03/31/2022

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	10	3	3	10	5	83	3	346	10	46	384	7
Future Volume (vph)	10	3	3	10	5	83	3	346	10	46	384	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-3%			-4%			4%	
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
Ped Bike Factor												
Frt		0.974			0.886			0.996			0.998	
Flt Protected		0.970			0.995						0.995	
Satd. Flow (prot)	0	1638	0	0	1646	0	0	1853	0	0	1813	0
Flt Permitted		0.970			0.995						0.995	
Satd. Flow (perm)	0	1638	0	0	1646	0	0	1853	0	0	1813	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		162			281			312			693	
Travel Time (s)		3.7			6.4			7.1			15.8	
Confl. Peds. (#/hr)			4			19			2			3
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.61	0.61	0.61	0.88	0.88	0.88	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	0%	50%	0%	11%	25%	1%	0%	4%	11%	2%	2%	0%
Adj. Flow (vph)	16	5	5	11	6	94	4	407	12	50	417	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	0	0	111	0	0	423	0	0	475	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	0.98	0.98	0.98	0.97	0.97	0.97	1.03	1.03	1.03
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											

Intersection												
Int Delay, s/veh	2.6											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	3	3	10	5	83	3	346	10	46	384	7
Future Vol, veh/h	10	3	3	10	5	83	3	346	10	46	384	7
Conflicting Peds, #/hr	0	0	4	0	0	19	0	0	2	0	0	3
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, %	-	0	-	-	-3	-	-	-4	-	-	4	-
Peak Hour Factor	61	61	61	88	88	88	85	85	85	92	92	92
Heavy Vehicles, %	0	50	0	11	25	1	0	4	11	2	2	0
Mvmt Flow	16	5	5	11	6	94	4	407	12	50	417	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1014	953	428	953	951	434	428	0	0	421	0	0
Stage 1	524	524	-	423	423	-	-	-	-	-	-	-
Stage 2	490	429	-	530	528	-	-	-	-	-	-	-
Critical Hdwy	7.1	7	6.2	6.61	6.15	5.91	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	6	-	5.61	5.15	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	6	-	5.61	5.15	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.45	3.3	3.599	4.225	3.309	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	219	216	631	270	279	647	1142	-	-	1138	-	-
Stage 1	540	459	-	635	590	-	-	-	-	-	-	-
Stage 2	564	510	-	564	537	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	171	202	627	249	261	636	1139	-	-	1136	-	-
Mov Cap-2 Maneuver	171	202	-	249	261	-	-	-	-	-	-	-
Stage 1	536	431	-	631	586	-	-	-	-	-	-	-
Stage 2	466	506	-	519	505	-	-	-	-	-	-	-
Approach	SE		NW		NE		SW					
HCM Control Delay, s	25.1		13.9		0.1		0.9					
HCM LOS	D		B									
Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	SELn1	SWL	SWT	SWR					
Capacity (veh/h)	1139	-	-	516	205	1136	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.216	0.128	0.044	-	-				
HCM Control Delay (s)	8.2	0	-	13.9	25.1	8.3	0	-				
HCM Lane LOS	A	A	-	B	D	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.8	0.4	0.1	-	-				



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	13	5	27	345	315	81
Future Volume (vph)	13	5	27	345	315	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.964				0.972	
Flt Protected	0.964			0.996		
Satd. Flow (prot)	1731	0	0	1855	1811	0
Flt Permitted	0.964			0.996		
Satd. Flow (perm)	1731	0	0	1855	1811	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	176			499	312	
Travel Time (s)	4.0			11.3	7.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	5	29	375	342	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	0	404	430	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.6

Movement SEL SER NEL NET SWT SWR

Lane Configurations	W			W	W	
Traffic Vol, veh/h	13	5	27	345	315	81
Future Vol, veh/h	13	5	27	345	315	81
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, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	5	29	375	342	88

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	819	386	430	0	-	0
Stage 1	386	-	-	-	-	-
Stage 2	433	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	345	662	1129	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	334	662	1129	-	-	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	654	-	-	-	-	-

Approach SE NE SW

HCM Control Delay, s	12.5	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt NEL NETSELn1 SWT SWR

Capacity (veh/h)	1129	-	497	-	-
HCM Lane V/C Ratio	0.026	-	0.039	-	-
HCM Control Delay (s)	8.3	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

2024 Build Traffic Volumes - Sensitivity
6: South Avenue & NYS Route 9D

Saturday Build Event Entry
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	193	16	13	229	37	14	27	13	32	35	9
Future Volume (vph)	9	193	16	13	229	37	14	27	13	32	35	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		6%			-6%			-1%			3%	
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
Ped Bike Factor								0.99			0.99	
Frt		0.990			0.982			0.967			0.984	
Flt Protected		0.998			0.998			0.987			0.979	
Satd. Flow (prot)	0	1821	0	0	1847	0	0	1822	0	0	1686	0
Flt Permitted		0.983			0.981			0.926			0.866	
Satd. Flow (perm)	0	1794	0	0	1816	0	0	1700	0	0	1491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			8			17			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			516			194			303	
Travel Time (s)		5.5			11.7			4.4			6.9	
Confl. Peds. (#/hr)							6					6
Peak Hour Factor	0.82	0.82	0.82	0.85	0.85	0.85	0.55	0.55	0.55	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	12%	4%	0%	0%	0%	0%	2%	12%	0%
Adj. Flow (vph)	11	235	20	15	269	44	25	49	24	39	43	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	266	0	0	328	0	0	98	0	0	93	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	1.04	1.04	1.04	0.96	0.96	0.96	0.99	0.99	0.99	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	65.0	65.0		65.0	65.0		65.0	65.0		65.0	65.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	60.0	60.0		60.0	60.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
v/c Ratio		0.32			0.39			0.12			0.13	
Control Delay		23.1			24.1			17.0			19.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.1			24.1			17.0			19.2	
Queue Length 50th (ft)		137			173			38			41	
Queue Length 95th (ft)		180			232			39			67	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		161			436			114			223	
Turn Bay Length (ft)												
Base Capacity (vph)		830			842			793			691	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.32			0.39			0.12			0.13	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Splits and Phases: 6: South Avenue & NYS Route 9D

 Ø2 (R)	 Ø4
65 s	65 s
 Ø6 (R)	 Ø8
65 s	65 s

2024 Build Traffic Volumes - Sensitivity
6: South Avenue & NYS Route 9D

Saturday Build Event Entry
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	193	16	13	229	37	14	27	13	32	35	9
Future Volume (veh/h)	9	193	16	13	229	37	14	27	13	32	35	9
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		0.99	1.00		0.99
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	1688	1688	1688	1956	2076	2136	1939	1939	1939	1817	1669	1847
Adj Flow Rate, veh/h	11	235	20	15	269	44	25	49	24	39	43	11
Peak Hour Factor	0.82	0.82	0.82	0.85	0.85	0.85	0.55	0.55	0.55	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	12	4	0	0	0	0	2	12	0
Cap, veh/h	43	688	57	49	779	124	215	415	193	298	316	77
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	30	1490	124	43	1688	268	390	900	418	560	684	167
Grp Volume(v), veh/h	266	0	0	328	0	0	98	0	0	93	0	0
Grp Sat Flow(s),veh/h/ln	1643	0	0	1999	0	0	1708	0	0	1411	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	13.3	0.0	0.0	13.5	0.0	0.0	3.9	0.0	0.0	4.3	0.0	0.0
Prop In Lane	0.04		0.08	0.05		0.13	0.26		0.24	0.42		0.12
Lane Grp Cap(c), veh/h	787	0	0	952	0	0	823	0	0	690	0	0
V/C Ratio(X)	0.34	0.00	0.00	0.34	0.00	0.00	0.12	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	787	0	0	952	0	0	823	0	0	690	0	0
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.4	0.0	0.0	22.5	0.0	0.0	19.9	0.0	0.0	20.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	1.0	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0
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	5.5	0.0	0.0	6.7	0.0	0.0	1.8	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	0.0	0.0	23.5	0.0	0.0	20.2	0.0	0.0	20.4	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		266			328			98			93	
Approach Delay, s/veh		23.6			23.5			20.2			20.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.0		65.0		65.0		65.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		60.0		60.0		60.0		60.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				22.7								
HCM 6th LOS				C								

2024 Build Traffic Volumes - Sensitivity
1: NYS Route 9D & Verplanck Avenue

Saturday Build Event Exit
03/31/2022

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	72	232	626	74	159	647
Future Volume (vph)	72	232	626	74	159	647
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.986			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1809	0	1778	1872
Flt Permitted	0.950				0.161	
Satd. Flow (perm)	1725	1544	1809	0	301	1872
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	427		462			529
Travel Time (s)	9.7		10.5			12.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	78	252	680	80	173	703
Shared Lane Traffic (%)						
Lane Group Flow (vph)	78	252	760	0	173	703
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.03	1.03	1.02	1.02	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Minimum Split (s)	21.0	9.0	15.0		9.0	15.0
Total Split (s)	30.0	20.0	70.0		20.0	90.0
Total Split (%)	25.0%	16.7%	58.3%		16.7%	75.0%
Maximum Green (s)	25.0	15.0	65.0		15.0	85.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Walk Time (s)	5.0		5.0			
Flash Dont Walk (s)	11.0		11.0			
Pedestrian Calls (#/hr)	0		0			
v/c Ratio	0.22	0.44	0.78		0.44	0.53
Control Delay	41.3	31.0	28.6		9.2	10.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	41.3	31.0	28.6		9.2	10.0
Queue Length 50th (ft)	51	144	446		39	227
Queue Length 95th (ft)	96	222	620		62	312

2024 Build Traffic Volumes - Sensitivity 11:41 am 11/29/2021 Saturday Build Event Exit
RGD

Synchro 11 Report
Page 1



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	359	579	979		397	1326
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.22	0.44	0.78		0.44	0.53

Intersection Summary

Area Type: Other

Cycle Length: 120

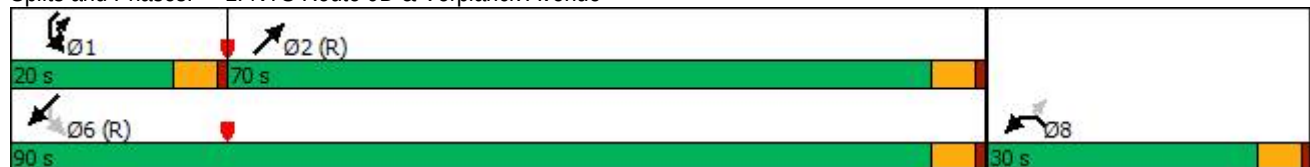
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NET and 6:SWTL, Start of Green

Natural Cycle: 65

Control Type: Pretimed

Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



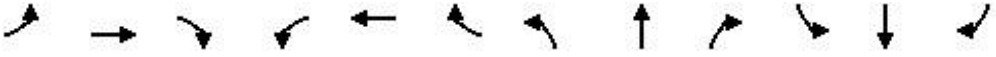
2024 Build Traffic Volumes - Sensitivity
1: NYS Route 9D & Verplanck Avenue

Saturday Build Event Exit
03/31/2022

						
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	72	232	626	74	159	647
Future Volume (veh/h)	72	232	626	74	159	647
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1909
Adj Flow Rate, veh/h	78	252	680	80	173	703
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	342	487	864	102	432	1352
Arrive On Green	0.21	0.21	0.54	0.54	0.13	0.71
Sat Flow, veh/h	1641	1460	1596	188	1818	1909
Grp Volume(v), veh/h	78	252	0	760	173	703
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1784	1818	1909
Q Serve(g_s), s	4.7	16.7	0.0	40.8	4.0	20.4
Cycle Q Clear(g_c), s	4.7	16.7	0.0	40.8	4.0	20.4
Prop In Lane	1.00	1.00		0.11	1.00	
Lane Grp Cap(c), veh/h	342	487	0	966	432	1352
V/C Ratio(X)	0.23	0.52	0.00	0.79	0.40	0.52
Avail Cap(c_a), veh/h	342	487	0	966	432	1352
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	39.5	32.2	0.0	22.0	16.7	8.1
Incr Delay (d2), s/veh	1.5	3.9	0.0	6.4	2.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.4	0.0	18.1	2.4	8.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.0	36.1	0.0	28.4	19.5	9.5
LnGrp LOS	D	D	A	C	B	A
Approach Vol, veh/h	330		760			876
Approach Delay, s/veh	37.3		28.4			11.5
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.0	70.0			90.0	30.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	15.0	65.0			85.0	25.0
Max Q Clear Time (g_c+I1), s	0.0	0.0			0.0	0.0
Green Ext Time (p_c), s	0.0	0.0			0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			22.4			
HCM 6th LOS			C			

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Saturday Build Event Exit
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	2	23	9	12	20	70	572	4	17	587	179
Future Volume (vph)	33	2	23	9	12	20	70	572	4	17	587	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-6%			3%	
Storage Length (ft)	0		95	0		0	75		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor			0.96		0.98			1.00			0.99	
Frt			0.850		0.934			0.999			0.965	
Flt Protected		0.955			0.989		0.950			0.950		
Satd. Flow (prot)	0	1780	1599	0	1815	0	1771	1936	0	1778	1770	0
Flt Permitted		0.824			0.911		0.223			0.402		
Satd. Flow (perm)	0	1536	1533	0	1672	0	416	1936	0	752	1770	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		27						20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		584			328			388			335	
Travel Time (s)		13.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)			12			4			1			10
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.73	0.73	0.73	0.75	0.75	0.75	0.94	0.94	0.94	0.95	0.95	0.95
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	5%	1%	0%	0%	1%	2%
Adj. Flow (vph)	45	3	32	12	16	27	74	609	4	18	618	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	32	0	55	0	74	613	0	18	806	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.01	1.01	1.01	0.94	0.94	0.94	0.96	0.96	0.96	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2		2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83		83	6		83	6	
Trailing Detector (ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	-5	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	43	43	20	43		43	6		43	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40	40		40		40			40		
Detector 2 Size(ft)		43	43		43		43			43		
Detector 2 Type		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		
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	

2024 Build Traffic Volumes - Sensitivity 11:41 am 11/29/2021 Saturday Build Event Exit
RGD

Synchro 11 Report
Page 4

2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Saturday Build Event Exit
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	16.0		4.0	16.0	
Minimum Split (s)	20.0	20.0	20.0	21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	35.0	35.0	35.0	35.0	35.0		15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Walk Time (s)				5.0	5.0							
Flash Dont Walk (s)				11.0	11.0							
Pedestrian Calls (#/hr)				0	0							
v/c Ratio		0.24	0.12		0.23		0.15	0.40		0.03	0.63	
Control Delay		28.3	0.9		19.0		3.5	6.1		3.3	14.2	
Queue Delay		0.0	0.0		0.0		0.0	0.3		0.0	0.0	
Total Delay		28.3	0.9		19.0		3.5	6.4		3.3	14.2	
Queue Length 50th (ft)		18	0		10		6	72		2	234	
Queue Length 95th (ft)		37	0		31		18	253		6	#506	
Internal Link Dist (ft)		504			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		815	853		900		565	1541		756	1275	
Starvation Cap Reductn		0	0		0		0	412		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.06	0.04		0.06		0.13	0.54		0.02	0.63	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 58.7

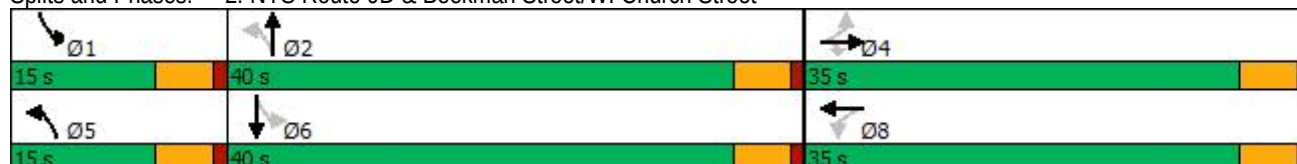
Natural Cycle: 70

Control Type: Semi Act-Uncoord

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: NYS Route 9D & Beekman Street/W. Church Street



2024 Build Traffic Volumes - Sensitivity
2: NYS Route 9D & Beekman Street/W. Church Street

Saturday Build Event Exit
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	2	23	9	12	20	70	572	4	17	587	179
Future Volume (veh/h)	33	2	23	9	12	20	70	572	4	17	587	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.90	0.94		0.98	1.00		1.00	1.00		0.99
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	1862	1876	1876	2293	2293	2293	2061	2121	2136	1847	1832	1817
Adj Flow Rate, veh/h	45	3	32	12	16	27	74	609	4	18	618	188
Peak Hour Factor	0.73	0.73	0.73	0.75	0.75	0.75	0.94	0.94	0.94	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	0	0	0	0	5	1	0	0	1	2
Cap, veh/h	238	12	126	100	64	85	419	1338	9	544	814	248
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.05	0.64	0.64	0.02	0.60	0.60
Sat Flow, veh/h	1343	139	1433	274	729	968	1963	2105	14	1759	1345	409
Grp Volume(v), veh/h	48	0	32	55	0	0	74	0	613	18	0	806
Grp Sat Flow(s),veh/h/ln	1481	0	1433	1971	0	0	1963	0	2118	1759	0	1754
Q Serve(g_s), s	0.0	0.0	1.2	0.0	0.0	0.0	0.8	0.0	8.6	0.2	0.0	19.4
Cycle Q Clear(g_c), s	1.5	0.0	1.2	1.4	0.0	0.0	0.8	0.0	8.6	0.2	0.0	19.4
Prop In Lane	0.94		1.00	0.22		0.49	1.00		0.01	1.00		0.23
Lane Grp Cap(c), veh/h	250	0	126	249	0	0	419	0	1347	544	0	1061
V/C Ratio(X)	0.19	0.00	0.25	0.22	0.00	0.00	0.18	0.00	0.46	0.03	0.00	0.76
Avail Cap(c_a), veh/h	839	0	743	1073	0	0	664	0	1347	818	0	1061
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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	24.6	24.7	0.0	0.0	7.2	0.0	5.4	4.6	0.0	8.4
Incr Delay (d2), s/veh	0.4	0.0	1.1	0.4	0.0	0.0	0.2	0.0	1.1	0.0	0.0	5.1
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	0.6	0.0	0.4	0.7	0.0	0.0	0.2	0.0	3.0	0.1	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	25.7	25.2	0.0	0.0	7.4	0.0	6.5	4.6	0.0	13.5
LnGrp LOS	C	A	C	C	A	A	A	A	A	A	A	B
Approach Vol, veh/h		80			55			687			824	
Approach Delay, s/veh		25.3			25.2			6.6			13.3	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	41.8		10.1	7.8	40.0		10.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.2	10.6		3.5	2.8	21.4		3.4				
Green Ext Time (p_c), s	0.0	1.7		0.4	0.1	2.3		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			11.5									
HCM 6th LOS			B									

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Saturday Build Event Exit
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	2	2	36	0	197	2	446	60	293	331	4
Future Volume (vph)	3	2	2	36	0	197	2	446	60	293	331	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			3%	
Storage Length (ft)	0		0	0		70	65		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
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
Ped Bike Factor		0.98				0.97		0.98			1.00	
Frt		0.959				0.850		0.982			0.998	
Flt Protected		0.980			0.950		0.950			0.950		
Satd. Flow (prot)	0	1746	0	0	1877	1663	1832	1817	0	1760	1849	0
Flt Permitted		0.903					0.544			0.335		
Satd. Flow (perm)	0	1608	0	0	1976	1619	1049	1817	0	621	1849	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			693			388	
Travel Time (s)		3.0			8.0			15.8			8.8	
Confl. Peds. (#/hr)			14			6			48			11
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	2%	5%	1%	1%	0%
Adj. Flow (vph)	4	3	3	40	0	221	2	507	68	318	360	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	40	221	2	575	0	318	364	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.01	1.01	1.01	0.95	0.95	0.95	0.98	0.98	0.98	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	1		2	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	83		20	83	83	83	6		83	6	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	0		-5	0	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	0		-5	0	
Detector 1 Size(ft)	20	43		20	43	43	43	6		43	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		40			40	40	40			40		
Detector 2 Size(ft)		43			43	43	43			43		
Detector 2 Type		CI+Ex			CI+Ex	CI+Ex	CI+Ex			CI+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0			0.0		
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		

2024 Build Traffic Volumes - Sensitivity 11:41 am 11/29/2021 Saturday Build Event Exit
RGD

Synchro 11 Report
Page 7

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Saturday Build Event Exit
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		8.0	8.0	4.0	4.0	31.0		4.0	35.0	
Minimum Split (s)	21.0	21.0		21.0	21.0	9.0	9.0	36.0		9.0	40.0	
Total Split (s)	35.0	35.0		35.0	35.0	15.0	15.0	40.0		15.0	40.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%	16.7%	16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0	10.0	10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
v/c Ratio		0.05			0.15	0.61	0.00	0.54		0.45	0.23	
Control Delay		23.3			26.7	27.1	3.0	11.7		7.4	4.8	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		23.3			26.7	27.1	3.0	11.7		7.4	4.8	
Queue Length 50th (ft)		2			12	69	0	82		0	0	
Queue Length 95th (ft)		12			40	122	2	258		62	148	
Internal Link Dist (ft)		53			270			613			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		807			990	361	919	1063		700	1566	
Starvation Cap Reductn		0			0	0	0	0		0	72	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.01			0.04	0.61	0.00	0.54		0.45	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 60.6

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 3: NYS Route 9D & Beacon City Hall/Main Street

 Ø2	 Ø1	 Ø4
40 s	15 s	35 s
 Ø6	 Ø5	 Ø8
40 s	15 s	35 s

2024 Build Traffic Volumes - Sensitivity
3: NYS Route 9D & Beacon City Hall/Main Street

Saturday Build Event Exit
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2	2	36	0	197	2	446	60	293	331	4
Future Volume (veh/h)	3	2	2	36	0	197	2	446	60	293	331	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.95		0.98	0.99		0.96	0.99		0.99
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	1894	1894	1894	2215	2215	2200	2018	1988	1943	1832	1832	1847
Adj Flow Rate, veh/h	4	3	3	40	0	221	2	507	68	318	360	4
Peak Hour Factor	0.71	0.71	0.71	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	1	0	2	5	1	1	0
Cap, veh/h	130	89	59	321	0	353	739	965	129	540	1022	11
Arrive On Green	0.13	0.13	0.13	0.13	0.00	0.13	0.06	0.57	0.57	0.06	0.57	0.57
Sat Flow, veh/h	383	692	461	1597	0	1821	1922	1706	229	1745	1808	20
Grp Volume(v), veh/h	10	0	0	40	0	221	2	0	575	318	0	364
Grp Sat Flow(s),veh/h/ln	1536	0	0	1597	0	1821	1922	0	1935	1745	0	1828
Q Serve(g_s), s	0.0	0.0	0.0	1.0	0.0	2.8	0.0	0.0	11.4	0.0	0.0	6.7
Cycle Q Clear(g_c), s	0.3	0.0	0.0	1.3	0.0	2.8	0.0	0.0	11.4	0.0	0.0	6.7
Prop In Lane	0.40		0.30	1.00		1.00	1.00		0.12	1.00		0.01
Lane Grp Cap(c), veh/h	278	0	0	321	0	353	739	0	1094	540	0	1034
V/C Ratio(X)	0.04	0.00	0.00	0.12	0.00	0.63	0.00	0.00	0.53	0.59	0.00	0.35
Avail Cap(c_a), veh/h	786	0	0	884	0	1002	926	0	1094	710	0	1034
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	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	0.0	24.1	0.0	22.9	7.1	0.0	8.3	15.6	0.0	7.3
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	1.8	0.0	0.0	1.8	1.0	0.0	0.9
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	0.1	0.0	0.0	0.5	0.0	2.9	0.0	0.0	4.3	3.6	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	0.0	24.3	0.0	24.7	7.1	0.0	10.1	16.6	0.0	8.2
LnGrp LOS	C	A	A	C	A	C	A	A	B	B	A	A
Approach Vol, veh/h		10			261			577			682	
Approach Delay, s/veh		23.7			24.7			10.1			12.1	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	40.0		12.9	9.0	40.0		12.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	35.0		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	13.4		2.3	2.0	8.7		4.8				
Green Ext Time (p_c), s	1.0	1.6		0.0	0.0	0.9		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				13.6								
HCM 6th LOS				B								

2024 Build Traffic Volumes - Sensitivity
4: NYS Route 9D & Beacon Street/West End Lofts

Saturday Build Event Exit
03/31/2022

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	10	3	3	10	5	83	3	415	10	46	316	7
Future Volume (vph)	10	3	3	10	5	83	3	415	10	46	316	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-3%			-4%			4%	
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
Ped Bike Factor												
Frt		0.974			0.886			0.997			0.997	
Flt Protected		0.970			0.995						0.994	
Satd. Flow (prot)	0	1638	0	0	1646	0	0	1855	0	0	1810	0
Flt Permitted		0.970			0.995						0.994	
Satd. Flow (perm)	0	1638	0	0	1646	0	0	1855	0	0	1810	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		162			281			312			693	
Travel Time (s)		3.7			6.4			7.1			15.8	
Confl. Peds. (#/hr)			4			19			2			3
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.61	0.61	0.61	0.88	0.88	0.88	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	0%	50%	0%	11%	25%	1%	0%	4%	11%	2%	2%	0%
Adj. Flow (vph)	16	5	5	11	6	94	4	488	12	50	343	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	0	0	111	0	0	504	0	0	401	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	0.98	0.98	0.98	0.97	0.97	0.97	1.03	1.03	1.03
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											

Intersection

Int Delay, s/veh 2.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	10	3	3	10	5	83	3	415	10	46	316	7
Future Vol, veh/h	10	3	3	10	5	83	3	415	10	46	316	7
Conflicting Peds, #/hr	0	0	4	0	0	19	0	0	2	0	0	3
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, %	-	0	-	-	-3	-	-	-4	-	-	4	-
Peak Hour Factor	61	61	61	88	88	88	85	85	85	92	92	92
Heavy Vehicles, %	0	50	0	11	25	1	0	4	11	2	2	0
Mvmt Flow	16	5	5	11	6	94	4	488	12	50	343	8

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	1021	960	354	960
Stage 1	450	450	-	504
Stage 2	571	510	-	456
Critical Hdwy	7.1	7	6.2	6.61
Critical Hdwy Stg 1	6.1	6	-	5.61
Critical Hdwy Stg 2	6.1	6	-	5.15
Follow-up Hdwy	3.5	4.45	3.3	3.599
Pot Cap-1 Maneuver	217	214	694	267
Stage 1	592	498	-	581
Stage 2	509	466	-	612
Platoon blocked, %				
Mov Cap-1 Maneuver	167	200	690	246
Mov Cap-2 Maneuver	167	200	-	246
Stage 1	588	468	-	577
Stage 2	412	463	-	564

Approach	SE	NW	NE	SW
HCM Control Delay, s	25.5	14.8	0.1	1.1
HCM LOS	D	B		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1SELn1	SWL	SWT	SWR
Capacity (veh/h)	1213	-	-	480	202	1060
HCM Lane V/C Ratio	0.003	-	-	0.232	0.13	0.047
HCM Control Delay (s)	8	0	-	14.8	25.5	8.6
HCM Lane LOS	A	A	-	B	D	A
HCM 95th %tile Q(veh)	0	-	-	0.9	0.4	0.1



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	81	27	4	345	315	12
Future Volume (vph)	81	27	4	345	315	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.967				0.995	
Flt Protected	0.964			0.999		
Satd. Flow (prot)	1736	0	0	1861	1853	0
Flt Permitted	0.964			0.999		
Satd. Flow (perm)	1736	0	0	1861	1853	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	176			499	312	
Travel Time (s)	4.0			11.3	7.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	88	29	4	375	342	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	117	0	0	379	355	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 1.9

Movement SEL SER NEL NET SWT SWR

Lane Configurations 

Traffic Vol, veh/h 81 27 4 345 315 12

Future Vol, veh/h 81 27 4 345 315 12

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, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 88 29 4 375 342 13

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 732 349 355 0 - 0

Stage 1 349 - - - - -

Stage 2 383 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 388 694 1204 - - -

Stage 1 714 - - - - -

Stage 2 689 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 386 694 1204 - - -

Mov Cap-2 Maneuver 495 - - - - -

Stage 1 711 - - - - -

Stage 2 689 - - - - -

Approach SE NE SW

HCM Control Delay, s 13.7 0.1 0

HCM LOS B

Minor Lane/Major Mvmt NEL NETSELn1 SWT SWR

Capacity (veh/h) 1204 - 533 - -

HCM Lane V/C Ratio 0.004 - 0.22 - -

HCM Control Delay (s) 8 0 13.7 - -

HCM Lane LOS A A B - -

HCM 95th %tile Q(veh) 0 - 0.8 - -

2024 Build Traffic Volumes - Sensitivity
6: South Avenue & NYS Route 9D

Saturday Build Event Exit
03/31/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	216	16	13	207	37	14	27	13	32	35	9
Future Volume (vph)	9	216	16	13	207	37	14	27	13	32	35	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		6%			-6%			-1%			3%	
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
Ped Bike Factor								0.99			0.99	
Frt		0.991			0.980			0.967			0.984	
Flt Protected		0.998			0.998			0.987			0.979	
Satd. Flow (prot)	0	1823	0	0	1844	0	0	1822	0	0	1686	0
Flt Permitted		0.985			0.978			0.926			0.866	
Satd. Flow (perm)	0	1799	0	0	1807	0	0	1700	0	0	1491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			9			17			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			516			194			303	
Travel Time (s)		5.5			11.7			4.4			6.9	
Confl. Peds. (#/hr)							6					6
Peak Hour Factor	0.82	0.82	0.82	0.85	0.85	0.85	0.55	0.55	0.55	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	12%	4%	0%	0%	0%	0%	2%	12%	0%
Adj. Flow (vph)	11	263	20	15	244	44	25	49	24	39	43	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	294	0	0	303	0	0	98	0	0	93	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	1.04	1.04	1.04	0.96	0.96	0.96	0.99	0.99	0.99	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	65.0	65.0		65.0	65.0		65.0	65.0		65.0	65.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	60.0	60.0		60.0	60.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
v/c Ratio		0.35			0.36			0.12			0.13	
Control Delay		23.7			23.4			17.0			19.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.7			23.4			17.0			19.2	
Queue Length 50th (ft)		154			157			38			41	
Queue Length 95th (ft)		199			213			39			67	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		161			436			114			223	
Turn Bay Length (ft)												
Base Capacity (vph)		832			838			793			691	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.35			0.36			0.12			0.13	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed

Splits and Phases: 6: South Avenue & NYS Route 9D

 Ø2 (R)	 Ø4
65 s	65 s
 Ø6 (R)	 Ø8
65 s	65 s

2024 Build Traffic Volumes - Sensitivity
6: South Avenue & NYS Route 9D

Saturday Build Event Exit
03/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	216	16	13	207	37	14	27	13	32	35	9
Future Volume (veh/h)	9	216	16	13	207	37	14	27	13	32	35	9
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		0.99	1.00		0.99
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	1688	1688	1688	1956	2076	2136	1939	1939	1939	1817	1669	1847
Adj Flow Rate, veh/h	11	263	20	15	244	44	25	49	24	39	43	11
Peak Hour Factor	0.82	0.82	0.82	0.85	0.85	0.85	0.55	0.55	0.55	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	12	4	0	0	0	0	2	12	0
Cap, veh/h	40	698	52	51	763	133	215	415	193	298	316	77
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	25	1512	112	48	1652	289	390	900	418	560	684	167
Grp Volume(v), veh/h	294	0	0	303	0	0	98	0	0	93	0	0
Grp Sat Flow(s),veh/h/ln	1650	0	0	1990	0	0	1708	0	0	1411	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	15.0	0.0	0.0	12.3	0.0	0.0	3.9	0.0	0.0	4.3	0.0	0.0
Prop In Lane	0.04		0.07	0.05		0.15	0.26		0.24	0.42		0.12
Lane Grp Cap(c), veh/h	790	0	0	947	0	0	823	0	0	690	0	0
V/C Ratio(X)	0.37	0.00	0.00	0.32	0.00	0.00	0.12	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	790	0	0	947	0	0	823	0	0	690	0	0
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.9	0.0	0.0	22.2	0.0	0.0	19.9	0.0	0.0	20.0	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.9	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0
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	6.2	0.0	0.0	6.1	0.0	0.0	1.8	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	0.0	0.0	23.1	0.0	0.0	20.2	0.0	0.0	20.4	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		294			303			98			93	
Approach Delay, s/veh		24.2			23.1			20.2			20.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.0		65.0		65.0		65.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		60.0		60.0		60.0		60.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				22.8								
HCM 6th LOS				C								



Engineering
& Design

Traffic & Parking Management Plan

April 25, 2022

1113 Wolcott Avenue

City of Beacon

Dutchess County, New York

Prepared for:

Prophecy Theatre LLC
369 Main Street, Unit 493 Beacon,
NY 12508

Prepared by:

A handwritten signature in black ink, appearing to read "Richard G. D'Andrea".

Richard G. D'Andrea, P.E., PTOE
New York Professional Engineer
License No. 090241

Colliers Engineering & Design

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Valhalla New York 10595
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Project No. 21004333A

Table of contents

Introduction and Background	1
On-Site Parking and Circulation	3
Off-Site Parking	4
Off-Site Parking Locations.....	4
Temporary Off-Site Signage	6
Dissemination of Information	7
Parking Information.....	7
Public Transportation Information	9
Shuttles	9
Pedestrian and Bicycle Access	9
Ongoing Monitoring and Coordination	11

Introduction and Background

The 1113 Wolcott Avenue Project ("the Project") is a proposed redevelopment of the property located at 1113 Wolcott Avenue (NYS Route 9D) in the City of Beacon, Dutchess County, New York. The former rectory building and church, which was most recently occupied by the Reformed Church of Beacon, are proposed to be redeveloped as a 30-room hotel contained in an expanded rectory building along with accessory conference center and dining facility (café/restaurant/bar) uses within the church building. In addition, the existing cemetery located behind (west of) the church and rectory building will be restored to be opened as a public park including a walking path from Beekman Street to Wolcott avenue.

The hotel will operate 365 days per year, and the dining facilities will be situated in the rear of the existing church. The dining facilities will serve as a reception for guests of the hotel and offer breakfast, lunch and dinner to the hotel guests, as well as members of the public. In addition, it will operate as a bar for hotel guests and for accessory conference center programming and events. The dining facilities are expected to operate seven (7) days a week in support of the hotel operations and guests with a maximum capacity of 50 seats including deck seating.

The conference center accessory use will operate less frequently, utilizing the former church building for various cultural, educational, or professional programs, including weddings, conferences, art exhibitions, performances, lectures, seminars and workshops. The expected maximum capacity for the occasional weekend programming for the hotel conference center is a maximum of 350 people including required staff to support these events, however these larger programs, which will occur on weekends, will typically have fewer people, ranging between 125-200 people. Furthermore, smaller functions, such as seminars, workshops or retreats with attendance ranging between 50 to 200 people will occur on weekdays generally Wednesday – Friday.

Access to the Project is proposed via an existing access connection from Wolcott Avenue that will provide access to the main parking area. A secondary, exit only driveway is also proposed at the northern property line of the Site, which will be a reestablishment of the existing driveway in this location. As discussed further herein, It is proposed that this secondary driveway will be gated and will only be available for use during event periods as well as for emergency access. A total of 32 off-street parking spaces will be provided primarily for use by hotel guests and employees. The existing Site is also provided a third driveway connection to Wolcott Avenue south of the existing church building. This existing southern driveway is proposed to be eliminated as part of the Project.

During events, all event related parking will be required to be accommodated by off-site public parking in the vicinity of the Project. This is anticipated to create a need for the management of on-site drop-off and pick-up operations. In addition, it was determined that specific parking strategies were needed to ensure event parking occurs in desired locations, to reduce parking as practicable and manage on-site parking.

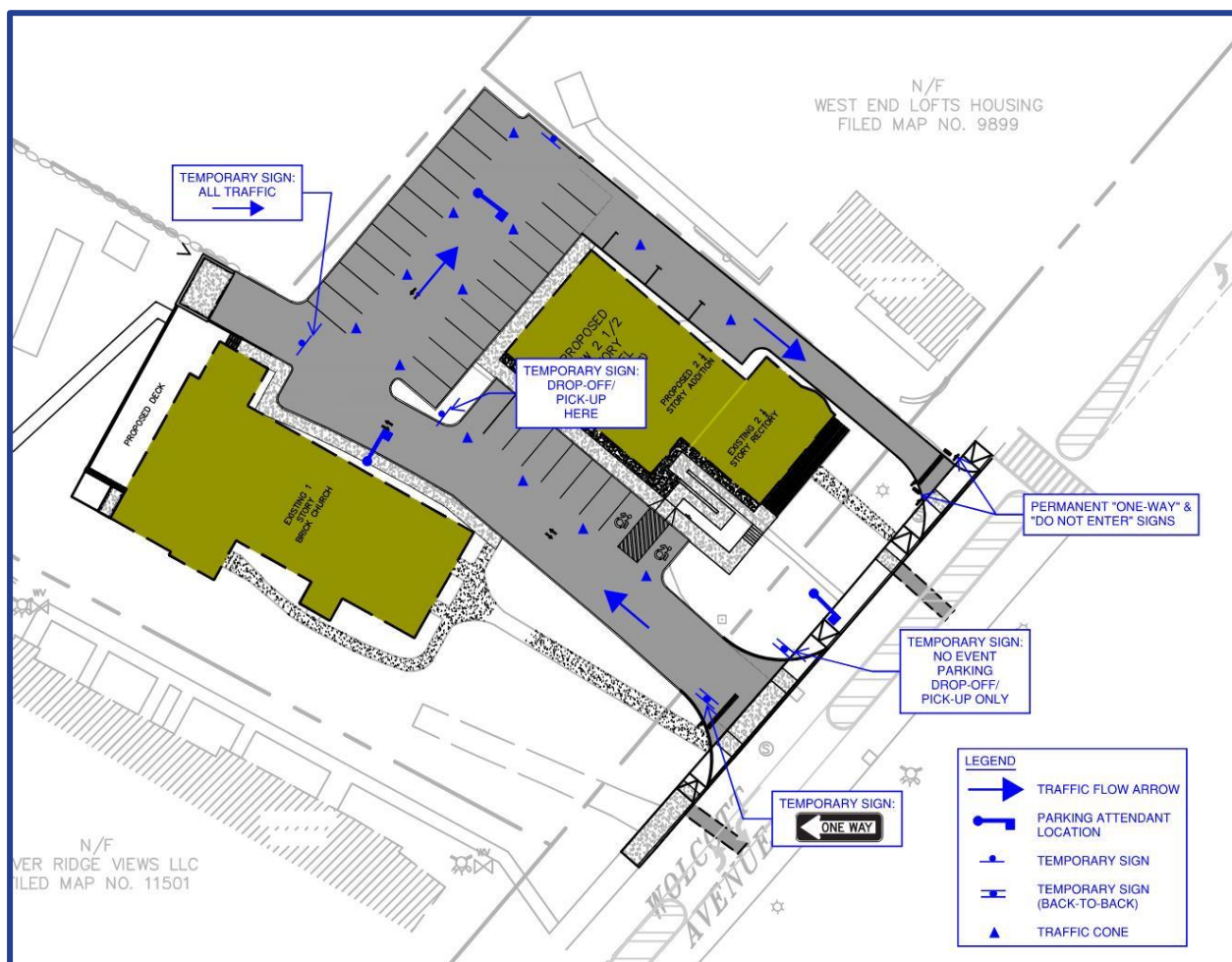
Based on the above, and associated with the review of the Project by the City of Beacon Planning Board and its consultants, this Traffic & Parking Management Plan has been prepared in order to provide an efficient and ongoing method of managing traffic flows, on-site and off-site parking, and other transportation related aspects of the Project. The purpose of this plan is to allow input and coordination with other agencies, including the New York State Department of Transportation (NYSDOT) and the City of Beacon and allow for ongoing revisions to this plan upon implementation of the Project.

On-Site Parking and Circulation

The Project site will provide a total of 32 parking spaces. These spaces will primarily be designated for the use of the Hotel guests. Therefore, during Event Conditions all additional parking needs will need to be accommodated by off-site public parking in the area. It is anticipated that this will result in a need for drop-off/pick-up operations within the Site.

In order to manage these drop-off/pick-up operations the Applicant will provide staff within the on-site driveways and parking area to ensure efficient flow of traffic within the Site. Exhibit No. 1 below indicates the drop-off/pick-up location as well as locations of staff for traffic direction and anticipated directional signage.

Exhibit No. 1 - Event Site Circulation Plan



As indicated previously, the Main (southerly) access driveway will be a two-way driveway. However, during events it is proposed that Site will function as under a one-way clockwise circulation pattern with all vehicles entering at the Main access driveway and exiting at the northerly exit only driveway.

This is also indicated on the diagram below. Temporary signage is also proposed to indicate this flow pattern within the Site as indicated on Exhibit No. 1 above. A temporary One-Way sign will also be posted at the Main access driveway indicating this flow pattern to vehicles approaching the Site.

A total of three parking attendants will be provided on-site during events. The first will be provided near the Main entry driveway, the second at the intended drop-off/pick-up location and the third within the main parking area behind the hotel. The parking attendant near the Main entry driveway will assist with traffic flow entering the Site and monitoring of the queue of vehicles on the entry driveway to ensure no disruption of normal traffic flows along Route 9D. The driveway provides stacking for approximately 7-8 passenger car vehicles which is anticipated accommodate the vehicle queues during the drop-off/pick-up operations. However, in the unlikely event that this storage area is exceeded by the queue, there is sufficient space within the driveway to queue vehicles in two queues, which the parking attendants can adjust as necessary.

The parking attendant at the drop-off/pick-up location will be tasked with managing the drop-off/pick-up of event attendees as well as monitoring the queue of vehicles. The last parking attendant within the main parking area behind the hotel will be tasked with monitoring this parking area and maintaining the flow of exiting traffic. All three attendants will be able to provide information to vehicles on the nearby offsite parking locations as discussed further below.

The on-site parking during events will be reserved for the exclusive use of hotel guests and employees of the Project only. These parking spaces will be coned off during events. In the event that hotel guests desire to enter or exit during the event times, they will be assisted by on-site staff with entering and exiting the parking spaces. Hotel guests will also be provided with printed parking passes or tags to signify their ability to park in these spaces. It is anticipated that majority, if not all, of the hotel guests will also be attendees of the events limiting amount of hotel related entries and exits during the event periods.

As discussed further below, event parking attendants will also be provided with information regarding parking areas to be utilized by event attendees.

Off-Site Parking

Off-Site Parking Locations

The Project proposes to provide 32 off-street parking spaces on the Site primarily for the use of Hotel guests and employees as required by the City of Beacon code for that use. All additional parking required for event attendees will be accommodated by off-site public parking in the vicinity of the Site. The closest public parking in the area include the below listed locations in order of proximity to the Project:

- **Tomkins Firehouse Parking Lot** – 68± Parking Spaces
- **City of Beacon Municipal Plaza (City Hall) Parking Lots** – 76 Parking Spaces
- **Beekman Street Metro North on-street parking between Railroad Drive and Wolcott Avenue** - 70± on-street metered parking spaces

This parking is operated by LAZ parking, parking can be paid electronically via LAZgo Parking App.

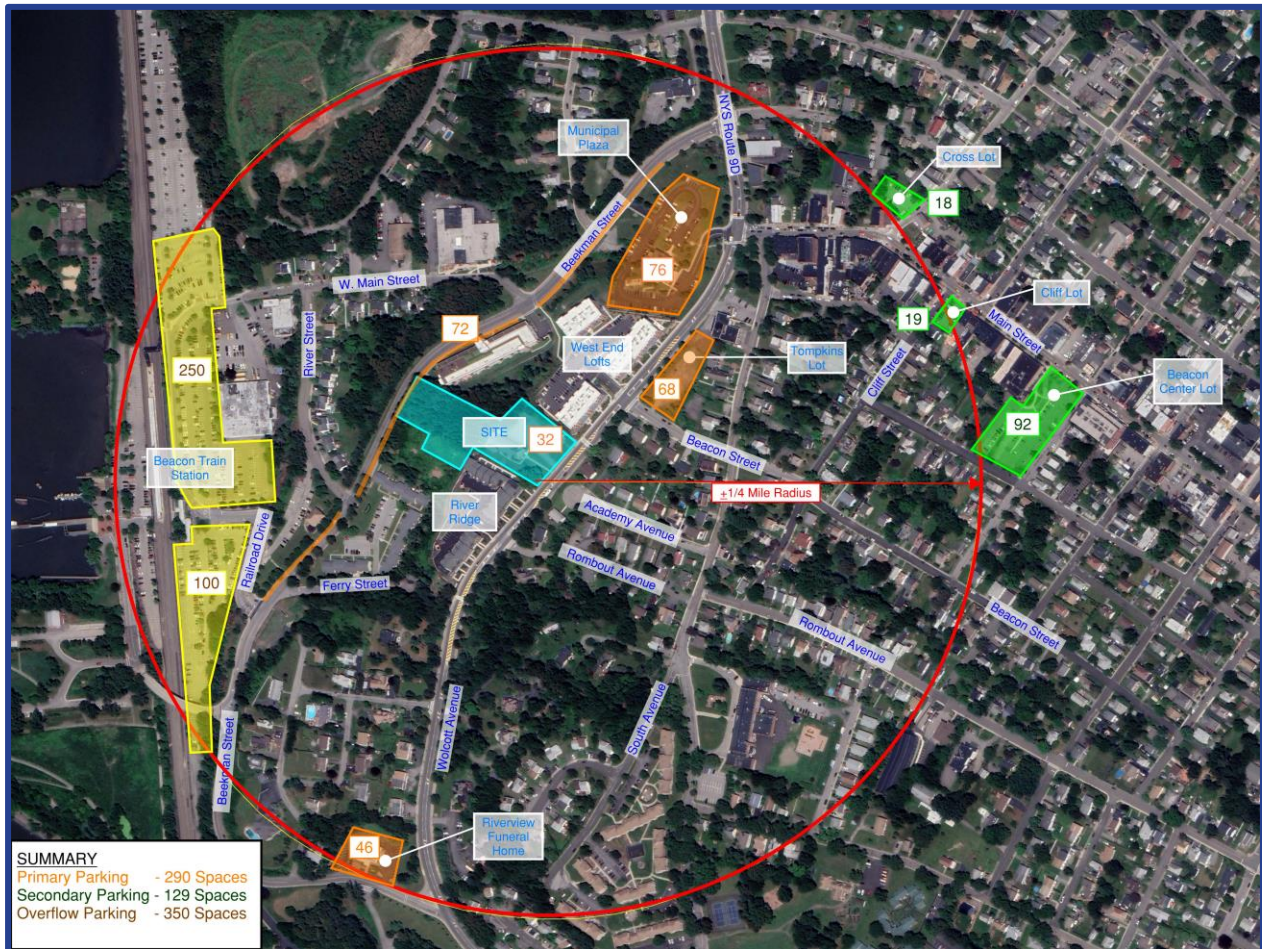
- **Cross Lot** – 18 Parking Spaces (24 Hour Free Parking – City Lot)
- **Cliff Lot** – 19 Parking Spaces (24 Hour Free Parking – City Lot)
- **Beacon Center Lot** – 92 Parking Spaces (24 Hour Free Parking – City Lot)
- **Beacon Metro North Train Station Parking lots metered parking spaces**

This parking is operated by LAZ parking, parking can be paid electronically via LAZgo Parking App.

In addition to the above parking locations, the Applicant is currently in the process of securing a license agreement with the nearby Riverview Funeral Home located at 2 Beekman Street, near the Wolcott Avenue/Beekman Street intersection, which will allow for the use of 46 parking spaces during the on-site events in an effort to reduce the Project's dependency on available public parking in the vicinity of the Site.

Exhibit No. 2 below identifies the locations of parking within 1/3 of mile of the Project location.

Exhibit No. 2 – Off-Site Parking Locations



The Tomkins Firehouse and City of Beacon Municipal Plaza parking lots are within 500 and 1,000 ft. respectively of the Project Site making these the most accessible public parking for the Project. As previously noted, a walkway connection to Beekman Street is proposed to be provided through the Site as part of the Project with signage at Beekman Street directing patrons to the Site. This will provide more convenient access to the Beekman Street on-street metered parking spaces of which the nearest spaces will be within the 350 ft. of the Hotel and Café/Event spaces with the more remote spaces approximately 1,200 ft. from these buildings. This pathway will also provide more convenient access to parking available at the Beacon Metro north station, however these metered spaces are more remote, in excess of 2,000 ft. from the Project site, and less likely to be utilized. The Cross Street lot, Cliff Lot and Beacon Center Lot are more remote parking locations located within 1,500 – 1,900 ft. from the Project site.

In total there are approximately 343 total parking spaces within 2,000 ft. walking distance of the Project site which can be utilized to accommodate the parking needs of the Project under the event conditions. Each of the identified areas of public parking were observed during the anticipated peak event periods to determine the parking availability in the area. These observations indicated that there is sufficient public parking within the Tomkins Lot, the Municipal Plaza Lot and along Beekman Street to accommodate the parking needs of the Project Event conditions.

Temporary Off-Site Signage

The installation of temporary off-site signage is also recommended during events to alert attendees of preferred parking areas and areas where parking is not permitted. As identified in Exhibit No. 3 below temporary signage is recommended to be installed along Route 9D at the entrance to the Municipal Plaza and at Beacon Street to direct attendees to both the Municipal Plaza and Tompkins Lots. The installation of these temporary signs is subject to approval by the City of Beacon.

In addition, temporary signage indicated "No Event Parking" is recommended to be installed at the entrance to the River Ridge and West End Lofts residential developments. The temporary installation of these signs will also be subject to approval by the City of Beacon as well as the residents/owners of those specific private developments.

Exhibit No. 3 – Off-Site Signage



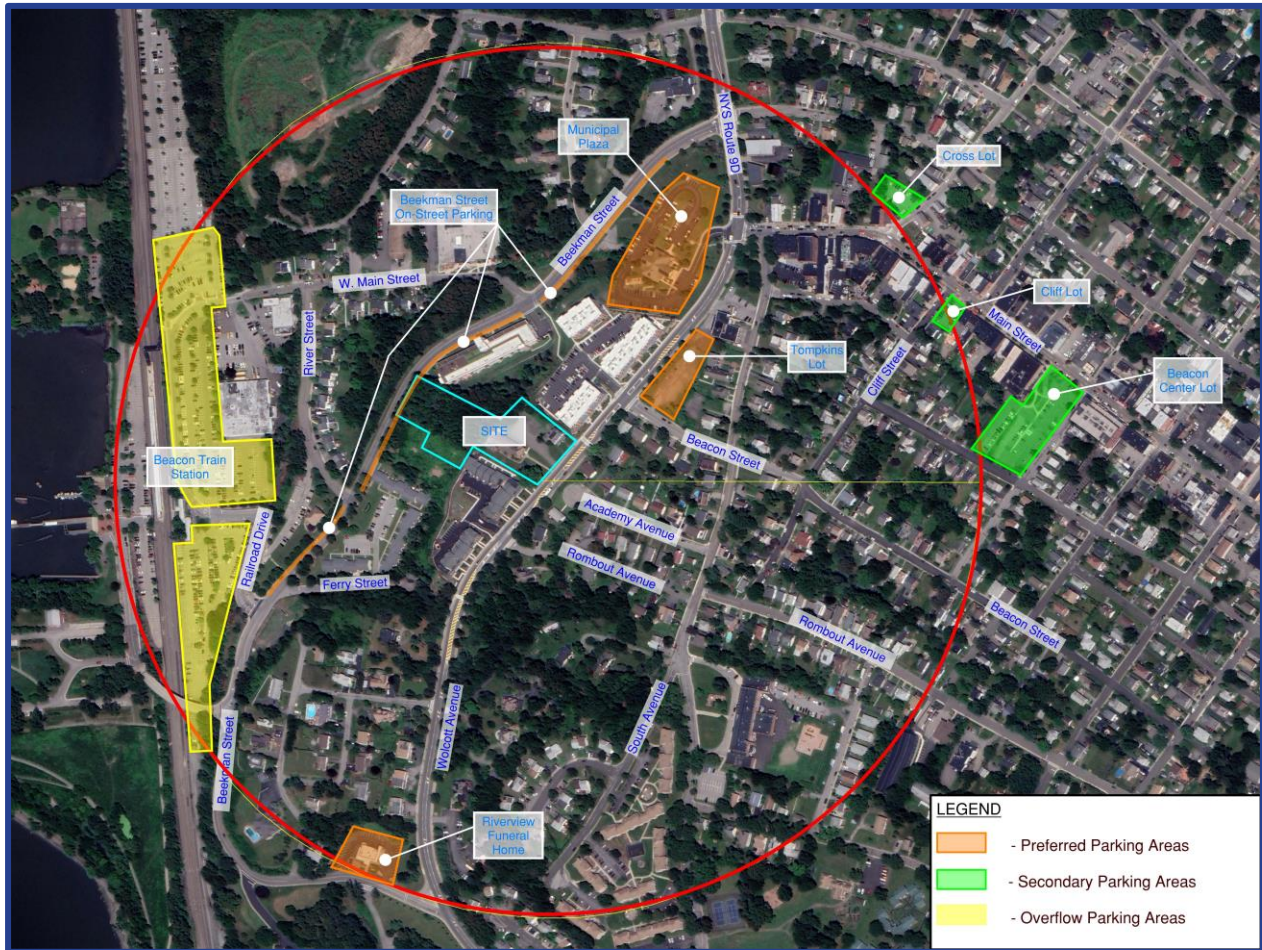
Dissemination of Information

Parking Information

Prophecy Theater, LLC as owners of the Project will be responsible to disseminate parking information to Event attendees to identify appropriate available parking areas. This will be accomplished in several ways.

The Project's website will provide parking information including a map indicating the preferred areas of public parking. These will include the Tompkins Lot, the Municipal Plaza Lot and the on-street metered parking along Beekman Street. This map will be similar to that provided in Exhibit 4 below. In addition, the map will indicate other more remote parking locations as identified above.

Exhibit No. 4 - Preferred Parking Area Map



This map will also be distributed electronically to all event attendees for ticketed events. Distribution of this map for other non-ticketed events will be can be done via the Event representative or coordinator for those specific events.

On the day of the event the on-site parking attendants will be provided with copies of this map which can be provided to any attendees that may enter the Site for drop-off and/or looking for parking.

It should be noted that this map does not include reference to other areas of on-street parking, specifically those that may be located within residential neighborhoods near the Project in an effort to prevent attendees from parking along these roadways.

Public Transportation Information

Similar to the above, the Project owners will also disseminate and encourage the use of public transportation by event attendees in order to reduce the overall parking demand of the Project, as well as the Project traffic generation. This will include links to information on available metro-north train schedules, Dutchess County bus schedules and any other relevant public transportation information to be provided through the Project's website. This information map will also be distributed electronically to all event attendees for ticketed events as well as for other non-ticketed events by the Event representative or coordinator for those events.

Shuttles

Events such as conferences or weddings may allow for the use of shuttle buses for attendees arriving from other area hotels. The use of shuttles will be strongly encouraged by the Project owners. Information on available area shuttle bus companies will be provided to event coordinators at the start of the event planning process to assist in this effort. The use of shuttles for attendees arriving from other consolidated locations will reduce the overall parking needs for certain types of events.

Pedestrian and Bicycle Access

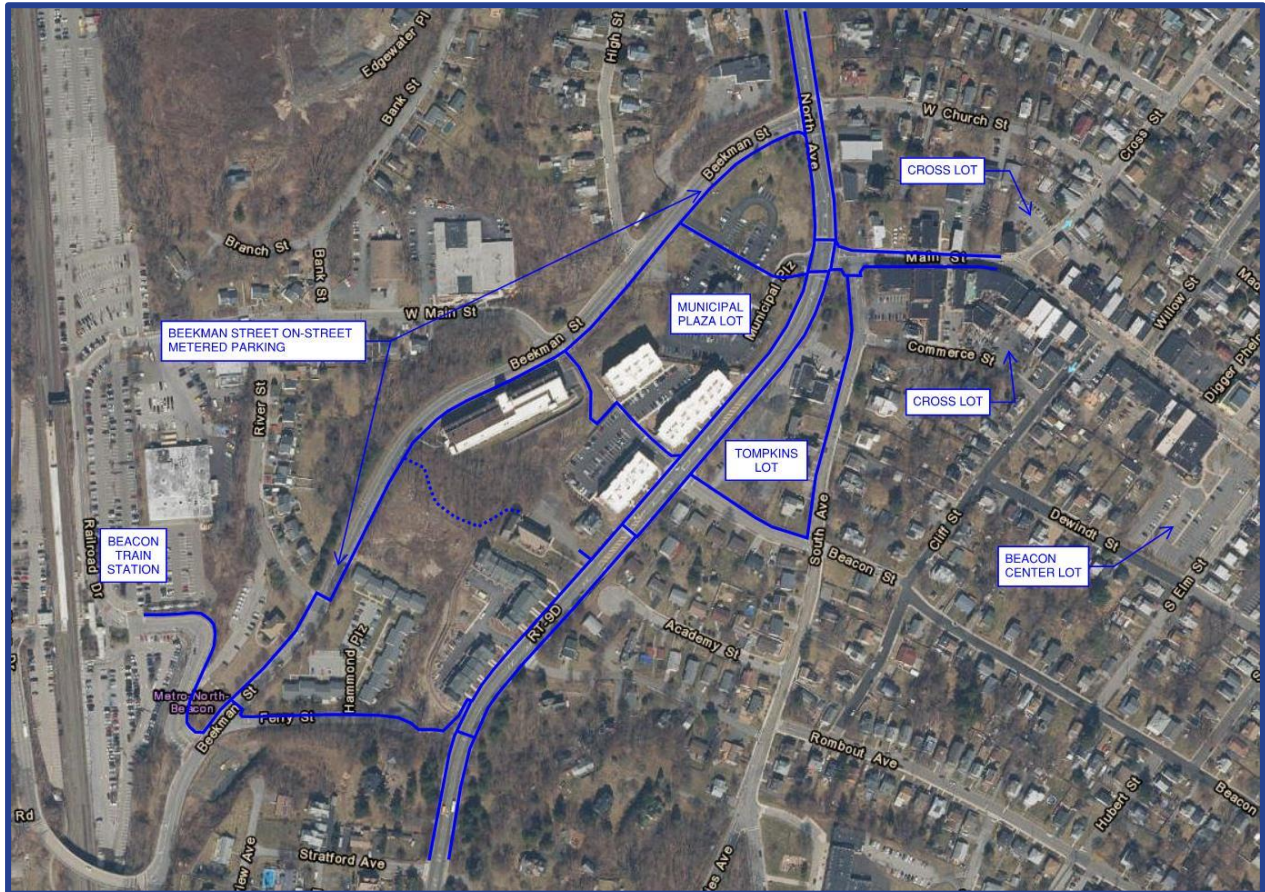
Access to the Project by pedestrians, including event attendees parking off-site, is provided in several manners. There are existing sidewalks along all area roadways surrounding the Project that can be utilized to access various parking areas or pedestrians arriving from other destinations. There are existing signalized crosswalks of Wolcott Avenue both at its signalized intersections with Beekman Street and Main Street providing signalized pedestrian access from the east side of Wolcott Avenue to the west side where the Project site is located. In addition, there are existing crosswalks crossing Wolcott Avenue that are supplemented with pedestrian activated Rectangular Rapid Flashing Beacon (RRFB) signs located at the northern property line of the Project site as well as at a location approximately 150 ft. south of Rombout Avenue at approximately the southern property line of the River Ridge property. Any patrons utilizing the public parking available at the Tompkins lot on the east side of Wolcott Avenue would be likely to use the RRFB crosswalk at the northern property line of the Project site to cross Wolcott Avenue. Similarly, any pedestrians coming from the Main Street area would be likely to utilize either the signalized pedestrian crossing at the Wolcott Avenue/Main Street intersection or the RRFB crosswalk at the northern property line to cross to the west side of the roadway.

Pedestrians arriving from the Beacon Train Station or utilizing parking along Beekman Street would also be provided several opportunities to access the Project site. There are existing public pedestrian pathway connections between Beekman Street and Wolcott Avenue through the River Ridge and West End Lofts developments that could be utilized. In addition to these pathways, the Project also proposes to provide a pedestrian pathway between Beekman Street and Wolcott Avenue for direct access to the Project Site. Signage is proposed to be provided at the connection of the on-site path with Beekman Street to direct patrons to the Site. Exhibit No. 5 below provides a

map of the existing and future pedestrian accommodations in the vicinity of the Project that would be anticipated to be utilized by Event attendees.

Bicycle racks are also proposed to be provided on the Site for any event attendees that may arrive via bicycle.

Exhibit No. 5 – Existing & Proposed Pedestrian Pathways



Ongoing Monitoring and Coordination

This Traffic & Parking Management Plan is meant to be a living document that can regularly be referred to and updated by the operators of the Project. This document provides the basis for managing and directing traffic and parking for the anticipated Events to be held at the facility. This document may be updated and modified based on the future needs of the Project and in coordination with the City of Beacon to best serve the Project and the City as traffic and parking conditions in the vicinity of the Project may change over time.

In order to ensure that the Traffic & Parking Management Plan is achieving the goals set forth herein the Applicant agrees to conduct a monitoring of the event conditions within a 6 to 12-month period after initial occupancy of the event space. This monitoring will be utilized to incorporate further refinements to this plan at that time if determined to be necessary, which will be determined in consultation with the City of Beacon. This monitoring will be worked into the Project approvals with the City of Beacon.



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Infrastructure • Geotechnical/Environmental • Telecommunications • Utilities/Energy*



REVISIONS:			
NO.	DATE	DESCRIPTION	BY
1	08/31/21	ADDED PER PLANNING BOARD COMMENTS	AJS
2	09/28/21	REVISED PER PLANNING BOARD COMMENTS	AJS
3	11/30/21	REVISED PER PLANNING BOARD COMMENTS	AJS
4	12/28/21	REVISED PER PLANNING BOARD COMMENTS	AJS
5	01/25/22	REVISED PER PLANNING BOARD COMMENTS	AJS
6	02/22/22	REVISED PER PLANNING BOARD COMMENTS	AJS
7	04/26/22	REVISED PER PLANNING BOARD COMMENTS	AJS

Site Plan
Scale: 1" = 30'

Special Use Permit Application

Sheet 2 of 14 - Full Site Plan

Owner:
Prophecy Theater, LLC
36 South Brett Street
Beacon, NY 12508

Architect:
Aryeh Siegel, Architect
84 Mason Circle
Beacon, New York 12508

Site / Civil Engineer:
Hudson Land Design
174 Main Street
Beacon, New York 12508

Surveyor:
Robert Oswald
175 WALSH ROAD PO BOX 1
LAGRANGEVILLE, NEW YORK 12540

Landscape Designer:
Landscape Restorations
7 Creek Drive
Beacon, New York 12508

1113 Wolcott Avenue
Beacon, New York
Scale: 1" = 30'
June 29, 2021

City of Beacon Zoning Board of Appeals Agenda
05/17/2022

Title:

June meeting date reminder - The June Zoning Board meeting will take place on Wednesday, June 22, due to the Juneteenth holiday being observed on Monday.

ATTACHMENTS