COURTROOM
1 MUNICIPAL PLAZA
BEACON, NY 12508

Len Warner
Karen Quiana
Kevin Byrne
Donna Francis
J. Randall Williams
David Jensen
Chair John Gunn

December 12, 2023
7:00 PM
Planning Board Agenda

The Planning Board will meet on Tuesday, December 12, 2023, at 7:00 PM, in the Municipal Center Courtroom. A work session will take place at 7:00 PM, for a training workshop, discussion of agenda items and/or topics of interest to the Planning Board. The regular meeting will begin immediately thereafter, but not later than 7:30 PM.

Minutes
Approval of November 14, 2023, minutes

Regular Meeting

1. Continued public hearing of application for Site Plan Approval and Special Use Permit, personal wireless service facility, 375 Washington Avenue, submitted by Verizon Wireless of the East, LP (dba Verizon Wireless).
2. Review application for Site Plan and Subdivision approval, Mixed-Use Commercial and Residential, 45 Beekman Street, High Street, and High Street, submitted by Beekman Arts Center LLC and Bay Ridge Studios LLC.
3. Review application for Site Plan Approval, place of worship, 409 Fishkill Avenue, Fishkill Avenue, and Mead Avenue, submitted by Soka Gakkai International â€“ USA.

Architectural Review

1. Certificate of Appropriateness - 177 Main Street; Facade
2. Certificate of Appropriateness - 146 Main Street, #2; Sign

Miscellaneous Business

1. Consider request for one 90-day extension of Site Plan and Subdivision Approval, 37 units, "Beacon Views Townhouses" at Conklin Street, submitted by Beacon Views LLC.
2. City Council request to review proposed Local Law to amend parking requirements in the City of Beacon.

City of Beacon Planning Board Agenda
12/12/2023

Title:

Continued public hearing of application for Site Plan Approval and Special Use Permit, personal wireless service facility, 375 Washington Avenue, submitted by Verizon Wireless of the East, LP (dba Verizon Wireless).

ATTACHMENTS

Verizon 375 Washington PB 10.11.23, 11.14.23, 12.12.23 ResponseToComments_20230822.pdf

Verizon 375 Washington PB 10.11.23, 11.14.23, 12.12.23 20231005Supplemental_#1_RFEngineeringReport (1).pdf

Verizon 375 Washington PB 10.11.23, 11.14.23, 12.12.23 ENC - RF Zoning 08142023.pdf

Verizon 375 Washington PB 10.11.23, 11.14.23, 12.12.23 Hedgewood - RF Zoning 10022023.pdf

Verizon 375 Washington PB 10.11.23, 11.14.23, 12.12.23 TectonicVRE_20230727.pdf

Verizon 375 Washington PB 12.12.23 Hedgewood_supplemtal letter_20231205.pdf

Lanc Tully review Verizon - Fairview Cemetery 12-07-23.pdf

John Clarke review PB 375 Washington Comm Tower 12.8.23.pdf

Young / Sommer LLC

ATTORNEYS AT LAW

EXECUTIVE WOODS, FIVE PALISADES DRIVE, ALBANY, NY 12205
Phone: 518-438-9907 • Fax: 518-438-9914

www.youngsommer.com

Writer's Telephone Extension: 258
solson@youngsommer.com

August 22, 2023

Via Federal Express
Planning Board
City of Beacon
One Municipal Plaza
Suite One
Beacon NY 12508

Re: Application of Verizon Wireless for a Personal Wireless Service Facility at 375 Washington Avenue (SBL 6055-04-+713005)

Dear Chairman Gunn and Members of the Planning Board:

Enclosed are fifteen (15) copies of the following documents with respect to the above-referenced application:

1. Redacted copy of Land Lease Agreement between The Fairview Cemetery Association and Verizon Wireless;
2. Tectonic Engineering letter dated August 18, 2023 in response to the comments of John Clarke Planning and Design;
3. Tectonic Engineering letter dated August 18, 2023 in response to the comments of Lanc & Tully P.C.; and
4. The revised site plans last dated August 18, 2023.

Very truly yours,

Scott P. Olson

Encl.
cc: Jackie Bartolotta, Tectonic (via email, w/ encl.)

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SITE NAME: Hedgewood
MDG ID: 5000349173
ATTY/DATE: Y/S March 29, 2023

LAND LEASE AGREEMENT

This Land Lease Agreement (the "Agreement") made this _____ day of Apr 28, 2023, 2023, between **The Fairview Cemetery Association**, with its principal offices located at 375 Washington Avenue, Beacon, New York 12508, hereinafter designated LESSOR and **Verizon Wireless of the East LP d/b/a Verizon Wireless** with its principal offices at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920, hereinafter designated LESSEE. LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party."

WITNESSETH

In consideration of the mutual covenants contained herein and intending to be legally bound hereby, the Parties hereto agree as follows:

1. GRANT. In accordance with this Agreement, LESSOR hereby grants to LESSEE the right to install, maintain and operate communications equipment ("Use") upon the Premises (as hereinafter defined), which are a part of that real property owned, leased or controlled by LESSOR at 375 Washington Avenue, City of Beacon, Dutchess County, New York, Tax Map No. 6055-04-713005 (the "Property"). The Property is legally described on Exhibit "A" attached hereto and made a part hereof. The Premises are a portion of the Property and are approximately 10,000 square feet and are shown in detail on Exhibit "B" attached hereto and made a part hereof. LESSEE may survey the Premises. Upon completion, the survey shall replace Exhibit "B" in its entirety.

2. INITIAL TERM. This Agreement shall be effective as of the date of execution by both Parties ("Effective Date"). The initial term of the Agreement shall be for 5 years beginning on the Commencement Date (as hereinafter defined). The "Commencement Date" shall be the earlier of: (i) the first day of the month after LESSEE begins installation of LESSEE's communications equipment; (ii) eighteen months from the date of full execution of this Agreement. The parties agree to acknowledge the Commencement Date in writing.

3. EXTENSIONS.

(a) This Agreement shall automatically be extended for four (4) additional five (5) year terms unless LESSEE terminates it at the end of the then current term by giving LESSOR written notice of the intent to terminate at least three (3) months prior to the end of the then current term. The initial term and all extensions shall be collectively referred to herein as the "Term".

(b) EXTENSION RENTALS. The annual rental for each such five (5) year extension term shall be equal to one hundred two percent (102%) of the annual rental payable with respect to the prior year.

4. RENTAL.

(a) Rental payments shall begin on the Commencement Date and be due at a total annual rental of _____ to be paid in equal monthly installments on the first day of the month, in advance, to LESSOR at PO Box 157, Glenham, New York 12527 or to such other person, firm, or place as LESSOR may, from time to time, designate in writing at least 30 days in advance of any rental payment date by notice given in accordance with Paragraph 20 below. LESEE shall pay LESSOR, within ninety (90)

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days of full execution of this Agreement, a one-time signing bonus, as additional rent, in the sum of $6,000.00. LESSOR and LESSEE acknowledge and agree that the initial rental payment and signing bonus may not be delivered by LESSEE until at least 90 days after the Commencement Date. Upon agreement of the Parties, LESSEE may pay rent by electronic funds transfer and in such event, LESSOR agrees to provide to LESSEE bank routing information for such purpose upon request of LESSEE.

(b) For any party to whom rental payments are to be made, LESSOR or any successor in interest of LESSOR hereby agrees to provide to LESSEE (i) a completed, current version of Internal Revenue Service Form W-9, or equivalent; (ii) complete and fully executed state and local withholding forms if required; and (iii) other documentation to verify LESSOR's or such other party's right to receive rental as is reasonably requested by LESSEE. Rental shall accrue in accordance with this Agreement, but LESSEE may not deliver rental payments for up to 90 days after the requested documentation has been received by LESSEE.

5. ACCESS. LESSEE shall have the non-exclusive right of ingress and egress from a public right-of-way, 7 days a week, 24 hours a day, over the Property to and from the Premises for the purpose of installation, operation and maintenance of LESSEE's communications equipment over or along a 30+/- foot wide right-of-way ("Easement"), which shall be depicted on Exhibit "B". LESSEE may use the Easement for the installation, operation and maintenance of wires, cables, conduits and pipes for all necessary electrical, telephone, fiber and other similar support services. In the event it is necessary, LESSOR agrees to grant LESSEE or the provider the right to install such services on, through, over and/or under the Property, provided the location of such services shall be reasonably approved by LESSOR. Notwithstanding anything to the contrary, the Premises shall include such additional space sufficient for LESSEE's radio frequency signage and/or barricades as are necessary to ensure LESSEE's compliance with Laws (as defined in Paragraph 27).

6. CONDITION OF PROPERTY.

(a) LESSOR shall deliver the Premises to LESSEE in a condition ready for LESSEE's Use and clean and free of debris. LESSOR represents and warrants to LESSEE that as of the Effective Date, the Premises is (a) in compliance with all Laws; and (b) in compliance with all EH&S Laws (as defined in Paragraph 24).

(b) In no event shall funerals, ceremonies, the sale of graves, crypts, niches or other burial places, the burial of remains or cremains, the installation of markers or memorials, visits to burial places, maintenance of Cemetery grounds, or any activity falling within the normal operation of the Cemetery, be deemed to adversely affect or interfere with LESSEE's improvements, the operation of LESSEE, or the rights of LESSEE under this Agreement. LESSEE acknowledges that LESSOR does not regularly plow, shovel, or otherwise remove snow or ice from the access road or from any other path to the Premises, and LESSEE agrees that in no event shall any failure by LESSOR to plow, shovel, or otherwise remove snow or ice be deemed to adversely affect or interfere with LESSEE's use of the Premises, the operation of LESSEE, or the rights of LESSEE under this Agreement, or constitute a breach by LESSOR of any provision of this Agreement. The maintenance and repair, including snow or ice removal from any and all such access roads or paths to the Premises or consisting of the Premises, shall remain the sole responsibility of LESSEE, provided that LESSEE's obligations to remove snow or ice shall be related solely to its access to the Premises.

7. IMPROVEMENTS.

(a) The communications equipment including, without limitation, the tower structure, antennas, conduits, fencing and other screening, and other improvements shall be at LESSEE's expense and installation shall be at the discretion and option of LESSEE. LESSEE shall have the right to replace, repair, add or otherwise modify its communications equipment, tower structure, antennas, conduits, fencing and other screening, or other improvements or any portion thereof and the frequencies over which the communications equipment operates, whether or not any of the communications equipment, antennas, conduits or other improvements are listed on any exhibit.

(b) LESSEE and any assignee, successor-in-interest, or sub-tenant agrees that all improvements, including any modifications, changes or alterations, permitted under this Agreement will be installed, constructed, maintained, and operated in a manner that properly reflects the nature of the Cemetery as a dignified and respectful place of burial. Without limiting the generality of the preceding sentence: (i) to the extent permitted by the utility company that serves the Property, all electric lines, transmission cables, and other similar facilities, excluding transformers and other utility appurtenances that are typically installed above ground, shall be installed underground by LESSEE, or any assignee, successor-in-interest, or sub-tenant within the Cemetery and in such location as shall be reasonably approved by LESSOR in writing; and (ii) LESSEE and any assignee, successor-in-interest, or sub-tenant of LESSEE shall use their best efforts to minimize interference with funerals, ceremonies, burials, installation of markers or memorials, visits to burial places, maintenance of Cemetery grounds, and other normal operations of the Cemetery. LESSEE must schedule the initial construction with LESSOR.

8. GOVERNMENT APPROVALS. LESSEE's Use is contingent upon LESSEE obtaining all of the certificates, permits and other approvals (collectively the "Government Approvals") that may be required by any Federal, State or Local authorities (collectively, the "Government Entities") as well as a satisfactory soil boring test, environmental studies, or any other due diligence LESSEE chooses that will permit LESSEE's Use. LESSOR shall cooperate with LESSEE in its effort to obtain such approvals and shall take no action which would adversely affect the status of the Property with respect to LESSEE's Use.

9. TERMINATION. LESSEE may, unless otherwise stated, immediately terminate this Agreement upon written notice to LESSOR in the event that (i) any applications for such Government Approvals should be finally rejected; (ii) any Government Approval issued to LESSEE is canceled, expires, lapses or is otherwise withdrawn or terminated by any Government Entity; (iii) LESSEE determines that such Government Approvals may not be obtained in a timely manner; (iv) LESSEE determines any structural analysis is unsatisfactory; (v) LESSEE, in its sole discretion, determines the Use of the Premises is obsolete or unnecessary; (vii) with 3 months prior notice to LESSOR, upon the annual anniversary of the Commencement Date; or (viii) at any time before the Commencement Date for any reason or no reason in LESSEE's sole discretion.

10. INDEMNIFICATION. Subject to Paragraph 11, each Party and/or any successor and/or assignees thereof, shall indemnify and hold harmless the other Party, and/or any successors and/or assignees thereof, against (i) any and all claims of liability or loss from personal injury or property damage resulting from or arising out of the negligence or willful misconduct of the indemnifying Party, its employees, contractors or agents, except to the extent such claims or damages may be due to or caused by the negligence or willful misconduct of the other Party, or its employees, contractors or agents, and (ii) reasonable attorney's fees, expense, and defense costs incurred by the indemnified Party. Where a claim is the result of the concurrent acts of the Parties, each Party shall be liable under this Paragraph 10 to the

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extent of its fault or liability therefor. The indemnified Party will provide the indemnifying Party with prompt, written notice of any claim that is subject to the indemnification obligations in Paragraph 10. The indemnified Party will cooperate appropriately with the indemnifying Party in connection with the indemnifying Party's defense of such claim. The indemnifying Party shall defend any indemnified Party, at the indemnified Party's request, against any claim with counsel reasonably satisfactory to the indemnified Party. The indemnifying Party shall not settle or compromise any such claim or consent to the entry of any judgment without the prior written consent of each indemnified Party and without an unconditional release of all claims by each claimant or plaintiff in favor of each indemnified Party. All indemnification obligations shall survive the termination or expiration of this Agreement.

11. INSURANCE. The Parties agree that LESSEE at its own cost and expense, will maintain commercial general liability insurance with limits of .J for bodily injury (including death) and property damage each occurrence. LESSOR at its own cost and expense will maintain commercial general liability insurance with a per occurrence limit and a) aggregate limit. The Parties agree to include the other Party as an additional insured as their interests may appear under this Agreement. The Parties hereby waive and release any and all rights of action for negligence against the other which may hereafter arise on account of damage to the Premises or the Property, resulting from any fire, or other casualty which is insurable under "Causes of Loss – Special Form" property damage insurance or for the kind covered by standard fire insurance policies with extended coverage, regardless of whether or not, or in what amounts, such insurance is now or hereafter carried by the Parties, even if any such fire or other casualty shall have been caused by the fault or negligence of the other Party. These waivers and releases shall apply between the Parties and they shall also apply to any claims under or through either Party as a result of any asserted right of subrogation. All such policies of insurance obtained by either Party concerning the Premises or the Property shall waive the insurer's right of subrogation against the other Party.

12. LIMITATION OF LIABILITY. Except for indemnification pursuant to Paragraphs 10 and 24, a violation of Paragraph 29, or a violation of law, neither Party shall be liable to the other, or any of their respective agents, representatives, or employees for any lost revenue, lost profits, diminution in value of business, loss of technology, rights or services, loss of data, or interruption or loss of use of service, incidental, punitive, indirect, special, trebled, enhanced or consequential damages, even if advised of the possibility of such damages, whether such damages are claimed for breach of contract, tort (including negligence), strict liability or otherwise, unless applicable law forbids a waiver of such damages.

13. INTERFERENCE.

(a) LESSEE agrees that LESSEE will not cause interference that is measurable in accordance with industry standards to LESSOR's equipment. LESSOR agrees that LESSOR and other occupants of the Property will not cause interference that is measurable in accordance with industry standards to the then existing equipment of LESSEE.

(b) Without limiting any other rights or remedies, if interference occurs and continues for a period in excess of 48 hours following notice to the interfering party via telephone to LESSEE'S Network Operations Center at (800-621-2622) or to LESSOR at (845-831-5401) the interfering party shall or shall require any other user to reduce power or cease operations of the interfering equipment until the interference is cured.

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(c) The Parties acknowledge that there will not be an adequate remedy at law for noncompliance with the provisions of this Paragraph and therefore the Parties shall have the right to equitable remedies such as, without limitation, injunctive relief and specific performance.

14. REMOVAL AT END OF TERM. Upon expiration or within 90 days of earlier termination, LESSEE shall remove LESSEE's Communications Equipment (except footings) and restore the Premises to its original condition, reasonable wear and tear and casualty damage excepted. LESSOR agrees and acknowledges that the communications equipment shall remain the personal property of LESSEE and LESSEE shall have the right to remove the same at any time during the Term, whether or not said items are considered fixtures and attachments to real property under applicable laws. If such time for removal causes LESSEE to remain on the Premises after termination of the Agreement, LESSEE shall pay rent in accordance with Paragraph 15.

15. HOLDOVER. If LESSEE holds over after the expiration or earlier termination of the Term, then this Agreement shall continue on a month-to-month basis at the then existing monthly rental rate or the existing monthly pro-rata basis if based upon a longer payment term, until the removal of the communications equipment is completed.

16. RIGHT OF FIRST REFUSAL. If at any time after the Effective Date, LESSOR receives an offer or letter of intent from any person or entity that is in the business of owning, managing or operating communications facilities or is in the business of acquiring landlord interests in agreements relating to communications facilities, to purchase fee title, an easement, a lease, a license, or any other interest in the Premises or any portion thereof or to acquire any interest in this Agreement, or an option for any of the foregoing, LESSOR shall provide written notice to LESSEE of said offer ("LESSOR's Notice"). LESSOR's Notice shall include the prospective buyer's name, the purchase price being offered, any other consideration being offered, the other terms and conditions of the offer, a description of the portion of and interest in the Premises and/or this Agreement which will be conveyed in the proposed transaction, and a copy of any letters of intent or form agreements presented to LESSOR by the third-party offeror. LESSEE shall have the right of first refusal to meet any bona fide offer of sale or transfer on the terms and conditions of such offer or by effectuating a transaction with substantially equivalent financial terms. If LESSEE fails to provide written notice to LESSOR that LESSEE intends to meet such bona fide offer within 30 days after receipt of LESSOR's Notice, LESSOR may proceed with the proposed transaction in accordance with the terms and conditions of such third-party offer, in which event this Agreement shall continue in full force and effect and the right of first refusal described in this Paragraph shall survive any such conveyance to a third party. If LESSEE provides LESSOR with notice of LESSEE's intention to meet the third party offer within 60 days after receipt of LESSOR's Notice, then if LESSOR's Notice describes a transaction involving greater space than the Premises, LESSEE may elect to proceed with a transaction covering only the Premises and the purchase price shall be pro-rated on a square footage basis. Further, LESSOR acknowledges and agrees that if LESSEE exercises this right of first refusal, LESSEE may require a reasonable period of time to conduct due diligence and effectuate the closing of a transaction on substantially equivalent financial terms of the third-party offer. LESSEE may elect to amend this Agreement to effectuate the proposed financial terms of the third party offer rather than acquiring fee simple title or an easement interest in the Premises. For purposes of this Paragraph, any transfer, bequest, or devise of LESSOR's interest in the Property as a result of the death of LESSOR, whether by will or intestate succession, or any conveyance to LESSOR's family members by direct conveyance or by conveyance to a trust for the benefit of family members shall not be considered a sale for which LESSEE has any right of first refusal.

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17. RIGHTS UPON SALE. Should LESSOR, at any time during the Term, decide (i) to sell or otherwise transfer all or any part of the Property, or (ii) to grant to a third party by easement or other legal instrument an interest in and to any portion of the Premises, such sale, transfer, or grant of an easement or interest therein shall be under and subject to this Agreement and any such purchaser or transferee shall recognize LESSEE's rights hereunder. In the event that LESSOR completes any such sale, transfer, or grant described in this Paragraph without executing an assignment of the Agreement whereby the third party agrees in writing to assume all obligations of LESSOR under this Agreement, then LESSOR shall not be released from its obligations to LESSEE under this Agreement, and LESSEE shall have the right to look to LESSOR and the third party for the full performance of the Agreement.

18. LESSOR'S TITLE.

(a) LESSOR covenants that LESSEE, on paying the rent and performing the covenants herein, shall peaceably and quietly have, hold and enjoy the Premises. LESSOR represents and warrants to LESSEE as of the Effective Date and covenants during the Term that LESSOR has full authority to enter into and execute this Agreement and that there are no liens, judgments, covenants, easement, restrictions or other impediments of title that will adversely affect LESSEE's Use.

(b) LESSEE acknowledges that LESSOR is a public cemetery corporation and that the Property is used as a public cemetery and that LESSOR and the Cemetery are subject to the provisions of Article 15 of the Not-for-Profit Corporations Law and the regulations promulgated thereunder (including, but not limited to, 19 NYCRR § 201.16) and to the New York State Cemetery Board.

19. ASSIGNMENT.

(a) Without any approval or consent of the other Party, this Agreement may be sold, assigned or transferred by either Party to (i) any entity in which the Party directly or indirectly holds an equity or similar interest; (ii) any entity which directly or indirectly holds an equity or similar interest in the Party; or (iii) any entity directly or indirectly under common control with the Party. LESSEE may assign this Agreement to any entity which acquires all or substantially all of LESSEE's assets in the market defined by the FCC in which the Property is located by reason of a merger, acquisition or other business reorganization without approval or consent of LESSOR. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the other Party, which such consent will not be unreasonably withheld, delayed or conditioned. No change of stock ownership, partnership interest or control of LESSEE or transfer upon partnership or corporate dissolution of either Party shall constitute an assignment hereunder. LESSEE may sublet the Premises in LESSEE's sole discretion.

(b) LESSEE may, in its sole discretion, sublet, license or otherwise allow the use of all or any part of the Premises without any prior approval or consent of the LESSOR, upon the payment of per month per additional tower user beyond LESSEE, payable by such sublessee, licensee or other user (hereinafter, a "user") directly to LESSOR. LESSEE shall notify LESSOR of any and all fully executed sublease agreements, which notice shall include the following: (i) the contact information of the sublessee; and (ii) the commencement date of the sublease.

(i) Notwithstanding any other provision of this Agreement: (1) no additional payment shall be due to LESSOR where such sublease, license or other use is required, ordered or negotiated as a condition of approval by or with any governmental authority having jurisdiction over LESSEE or the Premises, for

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governmental, emergency services or other public service use; and (2) LESSEE shall not be required to obtain approval from the LESSOR for such use.

(ii) LESSEE shall have the sole right to determine whether it will sublet, license or otherwise allow the use of any portion of the Premises or whether it will sublet, license or enter into any other usage agreement with any specific user. LESSEE shall have no liability of any nature to LESSOR for failure to sublet, license or otherwise allow the user of all or any part of the Premises to any or all potential user(s).

(iii) LESSEE shall not be responsible to LESSOR for the collection or payment of rents by any user to LESSOR hereunder and shall have no liability to LESSOR in the event of failure of payment by any such user.

(iv) Any user agreement that is entered into by LESSEE shall be subject to the provisions of this Agreement and shall be binding upon the successors, assigns, heirs and legal representatives of the respective Parties hereto. LESSEE shall have the right to require, in its sole discretion, that any such user(s) enter into a three-party agreement with LESSOR and LESSEE to confirm the direct payment obligation to LESSOR hereunder, document LESSOR's consent to said agreement and otherwise memorialize said user's agreement to all terms and conditions of this Agreement.

(v) It is understood and agreed by the Parties that the additional payment hereunder shall only apply if LESSEE is able to accommodate all of the third-party user's facilities within the Premises. If LESSEE is unable to accommodate any or part of said user's facilities within the Premises, then LESSOR may enter into an agreement with the user for a portion of the property that said user requires to locate its facilities. In this event, LESSEE shall receive 100% of the rental for that portion of the facilities that are located within the limits of the Premises and LESSOR shall receive 100% of the rental, negotiated by the LESSOR and said user, for the portion of user's facilities that are located on the property outside LESSEE's Premises.

20. NOTICES. Except for notices permitted via telephone in accordance with Paragraph 13, all notices hereunder must be in writing and shall be deemed validly given if sent by certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service and provided further that it guarantees delivery to the addressee by the end of the next business day following the courier's receipt from the sender, addressed as follows (or any other address that the Party to be notified may have designated to the sender by like notice):

LESSOR: The Fairview Cemetery Association
PO Box 157
Glenham, New York 12527

And Dylan Harris Esq.
Lewis & Greer PC
510 Haight Avenue

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Poughkeepsie, New York 12603

LESSEE: Verizon Wireless of the East LP
d/b/a Verizon Wireless
180 Washington Valley Road
Bedminster, New Jersey 07921
Attention: Network Real Estate

Notice shall be effective upon actual receipt or refusal as shown on the receipt obtained pursuant to the foregoing.

21. SUBORDINATION AND NON-DISTURBANCE. Within 15 days of the Effective Date, LESSOR shall obtain a Non Disturbance Agreement (as defined below) from existing mortgagee(s), ground lessors and master lessors, if any, of the Property. At LESSOR's option, this Agreement shall be subordinate to any future master lease, ground lease, mortgage, deed of trust or other security interest (a "Mortgage") by LESSOR which from time to time may encumber all or part of the Property; provided, however, as a condition precedent to LESSEE being required to subordinate its interest in this Agreement to any future Mortgage covering the Property, LESSOR shall obtain for LESSEE's benefit a non-disturbance and attornment agreement for LESSEE's benefit in the form reasonably satisfactory to LESSEE, and containing the terms described below (the "Non Disturbance Agreement"), and shall recognize LESSEE's rights under this Agreement. The Non Disturbance Agreement shall include the encumbering party's ("Lender's") agreement that, if Lender or its successor in interest or any purchaser of Lender's or its successor's interest (a "Purchaser") acquires an ownership interest in the Property, Lender or such successor in interest or Purchaser will honor all of the terms of the Agreement. Such Non Disturbance Agreement must be binding on all of Lender's participants in the subject loan (if any) and on all successors and assigns of Lender and/or its participants and on all Purchasers. In return for such Non Disturbance Agreement, LESSEE will execute an agreement for Lender's benefit in which LESSEE (1) confirms that the Agreement is subordinate to the Mortgage or other real property interest in favor of Lender, (2) agrees to attorn to Lender if Lender becomes the owner of the Property and (3) agrees to accept a cure by Lender of any of LESSOR's defaults, provided such cure is completed within the deadline applicable to LESSOR. In the event LESSOR defaults in the payment and/or other performance of any mortgage or other real property interest encumbering the Property, LESSEE, may, at its sole option and without obligation, cure or correct LESSOR's default and upon doing so, LESSEE shall be subrogated to any and all rights, titles, liens and equities of the holders of such mortgage or other real property interest and LESSEE shall be entitled to deduct and setoff against all rents that may otherwise become due under this Agreement the sums paid by LESSEE to cure or correct such defaults.

22. DEFAULT. It is a "Default" if (i) either Party fails to comply with this Agreement and does not remedy the failure within 30 days after written notice by the other Party or, if the failure cannot reasonably be remedied in such time, if the failing Party does not commence a remedy within the allotted 30 days and diligently pursue the cure to completion within 90 days after the initial written notice, or (ii) LESSOR fails to comply with this Agreement and the failure interferes with LESSEE's Use and LESSOR does not remedy the failure within 5 days after written notice from LESSEE or, if the failure cannot reasonably be remedied in such time, if LESSOR does not commence a remedy within the allotted 5 days and diligently pursue the cure to completion within 15 days after the initial written notice. The cure periods set forth in

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this Paragraph 22 do not extend the period of time in which either Party has to cure interference pursuant to Paragraph 13 of this Agreement.

23. REMEDIES. In the event of a Default, without limiting the non-defaulting Party in the exercise of any right or remedy which the non-defaulting Party may have by reason of such default, the non-defaulting Party may terminate this Agreement and/or pursue any remedy now or hereafter available to the non-defaulting Party under the Laws or judicial decisions of the state in which the Property is located. Further, upon a Default, the non-defaulting Party may at its option (but without obligation to do so), perform the defaulting Party's duty or obligation. The costs and expenses of any such performance by the non-defaulting Party shall be due and payable by the defaulting Party upon invoice therefor. If LESSEE undertakes any such performance on LESSOR's behalf and LESSOR does not pay LESSEE the full amount within 30 days of its receipt of an invoice setting forth the amount due, LESSEE may offset the full amount due against all fees due and owing to LESSOR under this Agreement until the full amount is fully reimbursed to LESSEE. However, notwithstanding the foregoing, LESSOR shall not by virtue of any activity arising out of its operations as a cemetery association be liable for any costs or expenses set forth herein.

24. ENVIRONMENTAL. LESSEE shall conduct its business in compliance with all applicable laws governing the protection of the environment or employee health and safety ("EH&S Laws"). LESSEE shall indemnify and hold harmless the LESSOR from claims to the extent resulting from LESSEE's violation of any applicable EH&S Laws or to the extent that LESSEE causes a release of any regulated substance to the environment. LESSOR shall indemnify and hold harmless LESSEE from all claims resulting from the violation of any applicable EH&S Laws or a release of any regulated substance to the environment except to the extent resulting from the activities of LESSEE. The Parties recognize that LESSEE is only leasing a small portion of the Property and that LESSEE shall not be responsible for any environmental condition or issue except to the extent resulting from LESSEE's specific activities and responsibilities. In the event that LESSEE encounters any hazardous substances that do not result from its activities, LESSEE may relocate its facilities to avoid such hazardous substances to a mutually agreeable location or, if LESSEE desires to remove at its own cost all or some the hazardous substances or materials (such as soil) containing those hazardous substances, LESSOR agrees to sign any necessary waste manifest associated with the removal, transportation and/or disposal of such substances.

25. CASUALTY. If a fire or other casualty damages the Property or the Premises and impairs LESSEE's Use, rent shall abate until LESSEE'S Use is restored. If LESSEE's Use is not restored within 45 days, LESSEE may terminate this Agreement.

26. CONDEMNATION. If a condemnation of any portion of the Property or Premises impairs LESSEE's Use, LESSEE may terminate this Agreement. LESSEE may on its own behalf make a claim in any condemnation proceeding involving the Premises for losses related to LESSEE's communications equipment, relocation costs and, specifically excluding loss of LESSEE's leasehold interest, any other damages LESSEE may incur as a result of any such condemnation.

27. APPLICABLE LAWS.

(a) During the Term, LESSOR shall maintain the Property in compliance with all applicable laws, EH&S Laws, rules, regulations, ordinances, directives, covenants, easements, consent decrees, zoning and land use regulations, and restrictions of record, permits, building codes, and the requirements of any applicable fire insurance underwriter or rating bureau, now in effect or which may hereafter come into effect (including, without limitation, the Americans with Disabilities Act and laws

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regulating hazardous substances) (collectively "Laws"). LESSEE shall, in respect to the condition of the Premises and at LESSEE's sole cost and expense, comply with (i) all Laws relating solely to LESSEE's specific and unique nature of use of the Premises; and (ii) all building codes requiring modifications to the Premises due to the improvements being made by LESSEE in the Premises. It shall be LESSOR's obligation to comply with all Laws relating to the Property, without regard to specific use (including, without limitation, modifications required to enable LESSEE to obtain all necessary building permits).

(b) 1506-E of the Not-for-Profit Corporation Law. It is the intent of the parties hereto to comply in all respects with Section 1506-E of the Not-for-Profit Corporation Law of the State of New York. To that end, the parties agree as follows:

1. Board Approval. This agreement shall not be effective unless approved by the Board of the Fairview Cemetery Association. The minutes of the meeting of the Board approving this lease are attached as Exhibit C.

2. Bond to be posted. To cover the estimated cost of the removal of the structure to be erected herein, at the end of the term, Lessee has posted a bond in the sum of)0 which is attached hereto as Exhibit D.

3. Visual Buffer. In order to establish a visual buffer around the installation to be made herein, the Lessee will erect a fence and plantings in accordance with the landscaping plan annexed hereto as Exhibit E.

4. Notice. A notice shall be posted a minimum of ten (10) days prior to submission of the application to the Cemetery Board at each corner of the demised property which such notice shall provide information written in plain English concerning the proposed lease and, if the proposed lease includes construction of new structures or buildings, such notice shall include a drawing, which shall be an accurate rendition of the proposed construction. In addition, such notices shall state the telephone number and address where comments may be received and the last date on which such comments will be accepted, which shall be no earlier than sixty days following the date the notices are posted. See Notice attached hereto as Exhibit F.

28. TAXES.

(a) LESSOR shall invoice and LESSEE shall pay any applicable transaction tax (including sales, use, gross receipts, or excise tax) imposed on the LESSEE and required to be collected by the LESSOR based on any service, rental space, or equipment provided by the LESSOR to the LESSEE. LESSEE shall pay all personal property taxes, fees, assessments, or other taxes and charges imposed by any Government Entity that are imposed on the LESSEE and required to be paid by the LESSEE that are directly attributable to the LESSEE's equipment or LESSEE's use and occupancy of the Premises. Payment shall be made by LESSEE within 60 days after presentation of a receipted bill and/or assessment notice which is the basis for such taxes or charges. LESSOR shall pay all ad valorem, personal property, real estate, sales and use taxes, fees, assessments or other taxes or charges that are attributable to LESSOR's Property or any portion thereof imposed by any Government Entity. Lessee will make every effort to have the demised Premises identified as a separate parcel for assessment purposes with all property taxes paid directly to the Town, County and School District as may be required.

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(b) LESSEE shall have the right, at its sole option and at its sole cost and expense, to appeal, challenge or seek modification of any tax assessment or billing for which LESSEE is wholly or partly responsible for payment. LESSOR shall reasonably cooperate with LESSEE at LESSEE's expense in filing, prosecuting and perfecting any appeal or challenge to taxes as set forth in the preceding sentence, including but not limited to, executing any consent, appeal or other similar document. In the event that as a result of any appeal or challenge by LESSEE, there is a reduction, credit or repayment received by the LESSOR for any taxes previously paid by LESSEE, LESSOR agrees to promptly reimburse to LESSEE the amount of said reduction, credit or repayment. In the event that LESSEE does not have the standing rights to pursue a good faith and reasonable dispute of any taxes under this paragraph, LESSOR will pursue such dispute at LESSEE's sole cost and expense upon written request of LESSEE.

29. NON-DISCLOSURE. The Parties agree this Agreement and any information exchanged between the Parties regarding the Agreement are confidential. The Parties agree not to provide copies of this Agreement or any other confidential information to any third party without the prior written consent of the other or as required by law. If a disclosure is required by law, prior to disclosure, the Party shall notify the other Party and cooperate to take lawful steps to resist, narrow, or eliminate the need for that disclosure.

30. MOST FAVORED LESSEE. LESSOR represents and warrants that the rent, benefits and terms and conditions granted to LESSEE by LESSOR hereunder are now and shall be, during the Term, no less favorable than the rent, benefits and terms and conditions for substantially the same or similar tenancies or licenses granted by LESSOR to other parties. If at any time during the Term LESSOR shall offer more favorable rent, benefits or terms and conditions for substantially the same or similar tenancies or licenses as those granted hereunder, then LESSOR shall, within 30 days after the effective date of such offering, notify LESSEE of such fact and offer LESSEE the more favorable offering. If LESSEE chooses, the parties shall then enter into an amendment that shall be effective retroactively to the effective date of the more favorable offering, and shall provide the same rent, benefits or terms and conditions to LESSEE. LESSEE shall have the right to decline to accept the offering. LESSOR's compliance with this requirement shall be subject, at LESSEE's option, to independent verification. This provision shall not apply to any rentals entered into by the LESSOR for Cemetery purposes.

31. MISCELLANEOUS.

(a) This Agreement contains all agreements, promises and understandings between the LESSOR and the LESSEE regarding this transaction, and no oral agreement, promises or understandings shall be binding upon either the LESSOR or the LESSEE in any dispute, controversy or proceeding. This Agreement may not be amended or varied except in a writing signed by all Parties. This Agreement shall extend to and bind the heirs, personal representatives, successors and assigns hereto. The failure of either party to insist upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights hereunder shall not waive such rights and such party shall have the right to enforce such rights at any time. The performance of this Agreement shall be governed, interpreted, construed and regulated by the laws of the state in which the Premises is located without reference to its choice of law rules. Except as expressly set forth in this Agreement, nothing in this Agreement shall grant, suggest or imply any authority for one Party to use the name, trademarks, service marks or trade names of the other for any purpose whatsoever. LESSOR agrees to execute a Memorandum of this Agreement, which LESSEE may record with the appropriate recording officer. The provisions of the Agreement relating to indemnification from one Party to the other Party shall survive any termination or expiration of this Agreement.

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(b) LESSEE shall pay all costs of constructing LESSEE's improvements, any modifications, additions or alterations thereto, and any other improvement constructed by LESSEE in full and when due, and shall not permit or suffer the filing of any mortgages, leasehold mortgages, financing statement, mechanic's lien, or other lien of any kind or description. If any such mortgage, leasehold mortgage, financing statement, mechanic's lien or other lien is filed, LESSEE shall promptly satisfy same and cause same to be discharged and satisfied of record.

IN WITNESS WHEREOF, the Parties hereto have set their hands and affixed their respective seals the day and year first above written.

LESSOR: The Fairview Cemetery Association

By: Rose Story

Name: Rose Story

Its: President

Date: 3/31/23

LESSEE: Verizon Wireless of the East LP d/b/a Verizon Wireless

By Cellco Partnership, its General Partner

By: DocuSigned by: Rommel Angeles CB0404E9DCBB429...

Name: Rommel Angeles

Its: Director - Network Engineering

Date: Apr 28, 2023

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EXHIBIT "A"

DESCRIPTION OF PROPERTY

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enjoy the said premises. Third That the said premises are free from encumbrances. Fourth that the party of the first part will execute or procure any further necessary assurance of the title to said premises. Fifth that the party of the first part will forever warrant the title to said premises.

In witness whereof the said party of the first part has hereunto set his hand and seal the day and year first above written.

Sealed and Delivered In presence of C. B. Merrick — Thos. R. Fox (SS)

State of New York } ss:
County of Dutchess }

On this ninth day of October in the year One thousand eight hundred and ninety four before me personally Came Thomas R. Fox Known to me and to me known to be the individual described in and who executed the foregoing Instrument and acknowledged that he executed the same.

John F. Ringwood
Notary Public.

Recorded Oct. 13. 1894 @ 10.16 a. M.

James Emans, Clerk

L. 276. P. 463

This Indenture made the Eight day of September in the year Eighteen hundred and ninety four Between Henry G. Wolcott and Julia H. his wife of the Town of Fishkill County of Dutchess State of New York parties of the first part and The Fairview Cemetery Association of Matteawan Dutchess County New York party of the second part. Witnesseth that the said parties of the first part in consideration of Eleven Thousand two Hundred and seventy two 50/100 Dollars lawful money of the United States paid by the party of the second part do hereby grant and release unto the said party of the second part its successors and assigns forever

All that tract piece or parcel of land situate in the Town of Fishkill aforesaid and bounded and described as follows: Beginning at a post set on the easterly side of the road leading from Matteawan to Glenham

DEED

276/463

(1)

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Depot and running thence with other lands of party of the first part south forty six degrees thirty five minutes east seven hundred Eighty seven (787) feet to a post thence south fourteen degrees ten minutes west five hundred seventy (570) feet to a hickory tree marked thence south fifty Eight degrees forty Eight minutes west three hundred forty three (343) feet to an angle in the wall thence south twenty four degrees thirty four minutes west One hundred fifty seven (157) feet to corner of walls thence south fifty degrees twenty seven minutes east two hundred thirty four (234) feet to lands of Mrs. P. A. Brinckerhoff thence with said Mrs. Brinckerhoff's land north seventy one degrees thirty five minutes east nine hundred seventy five (975) feet to lands of Hilton & others thence with said Hilton's land north six ten degrees six minutes east fifteen hundred & seventy two (1672) feet to lands of John McFarlin thence with said McFarlins land north Eighty four degrees twelve minutes west seven hundred (700) feet thence north four degrees fifty minutes east six hundred & Eighty (680) feet thence north forty six degrees thirty minutes west forty Eight (48) feet to the easterly side of the road aforesaid thence with the easterly side of said road south westerly fourteen hundred ninety two (1492) feet to the place of Beginning. Containing fifty & 104/1000 Acres of land

Together with the appurtenances and all the estate and rights of the parties of the first part in and to said premises. To Have and To Hold the above granted premises unto the said party of the second part its successors and assigns forever. And the said Henry G. Wolcott one of the parties of the first part does covenant with said party of the second part as follows: First: That the parties of the first part are seized of the said premises in fee simple and have good right to convey the same. Second That the party of the second part shall quietly enjoy the said premises. Third that the said premises are free from encumbrances. Fourth That the parties of the first part will execute or procure any further necessary assurance of the title to said premises. Fifth that said Henry G. Wolcott one of the parties of the first part will forever warrant the title to said premises.

In witness whereof the said parties of the first part have hereunto set their hands and seals the day and year first above written

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Sealed and Delivered
In presence of
James G. Meyer

Henry G. Wolcott (Seal)
Julia H. Wolcott (Seal)

State of New York } ss:
County of Dutchess } On this 7th day of September in the year
One thousand eight hundred and ninety four before me per
sonally came Henry G. Wolcott and Julia H. Wolcott his wife
known to me and to me known to be the individuals descri
bed in and who executed the within Instrument and acknow
ledged that they executed the same.

James G. Meyer
Notary Public.

Recorded Oct. 15. 1894 @ 8 a. m.

James Emans
Clerk

This Indenture made the 16th day of October One Thousand
Eight hundred and ninety four Between S. H. Brown Administra
tor de Bonis Non &c. of John Rockefeller deceased of the first part
and Fred S. Lyke of the second part Witnesseth whereas the
said party of the first part on the 11th day of January One
thousand Eight hundred and ninety two recovered a judgment
in the Surrogate's Court of Dutchess County in a decree
bearing date Janry 11th 1892 in favor of the estate of John Rock
feller against Catharine Rockefeller for $764.48. Now this Indent
ure Witnesseth that the said party of the first part in co
nsideration of two Dollars to him duly paid has sold and by
these presents does assign transfer and set over unto the
said party of the second part and his assigns the said judg
ment and all sum and sums of money that may be had
or obtained by means thereof or in any proceedings to be
had thereupon. And the said party of the first part do
hereby constitute and appoint the said party of the second
part and his assigns his true and lawful attorney irrevo

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EXHIBIT "B"

SITE PLAN OF THE PREMISES is a portion of the property located at 375 Washington Avenue, City of Beacon, Dutchess County, New York

Tax Map No. 6055-04-713005

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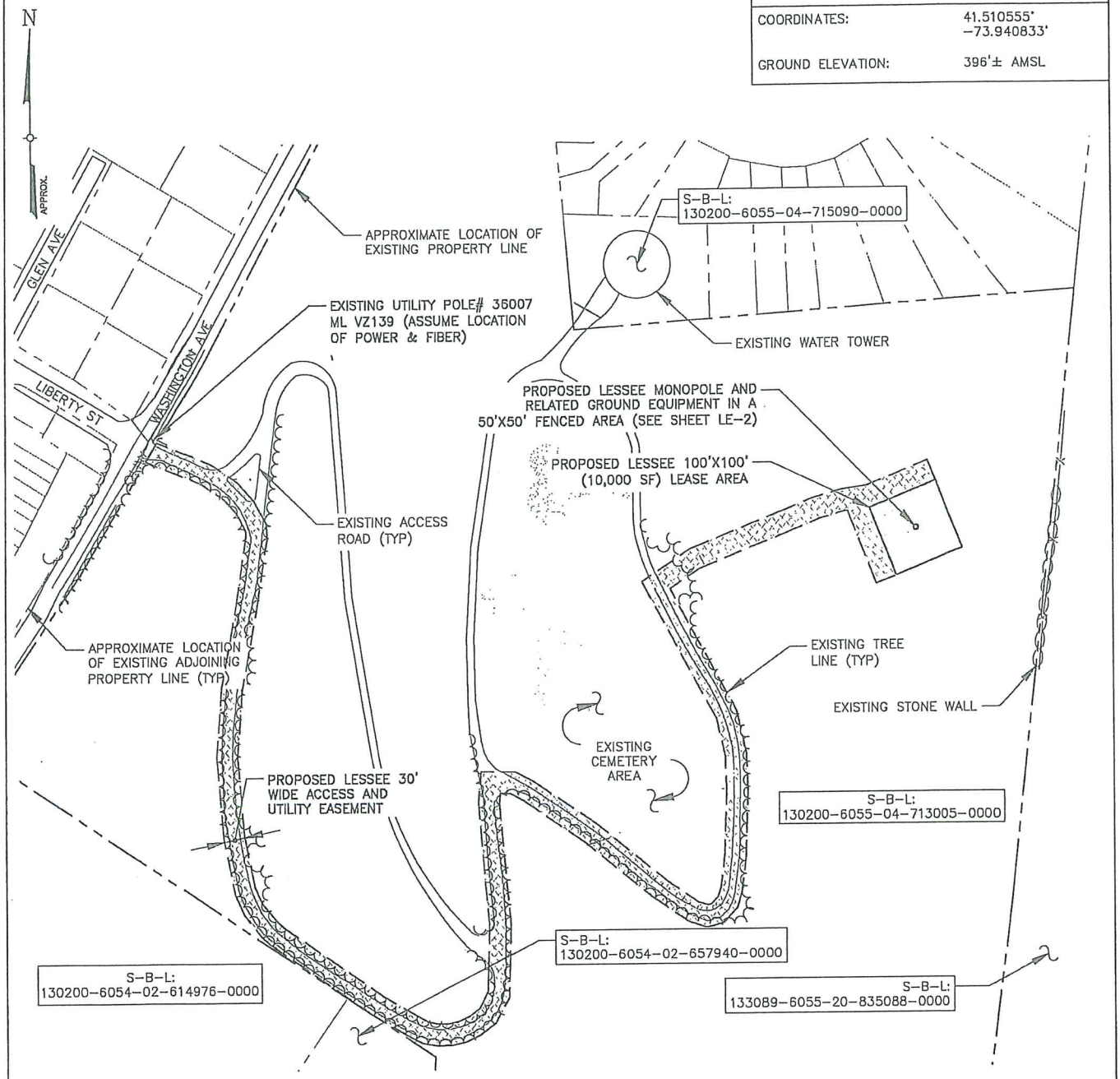
SITE INFORMATION	
COORDINATES:	41.510555° −73.940833°
GROUND ELEVATION:	396'± AMSL



NOTE
1. THIS DRAWING IS FOR OPTION, LEASE, LICENSE AND PERMITTING PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.
2. FINAL UTILITY EASEMENT LOCATION WILL BE DETERMINED BY THE UTILITY COMPANY.

1 / LE-1 PROPERTY PLAN

SCALE: 1" = 200'

0 1

ORIGINAL SIZE IN INCHES

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.
Project Contact Info
36 British American Blvd.
Suite 101
Latham, NY 12110
Phone: (518) 783-1630
(800) 829-6531
www.tectonicengineering.com

HEDGEWOOD – LEASE EXHIBIT

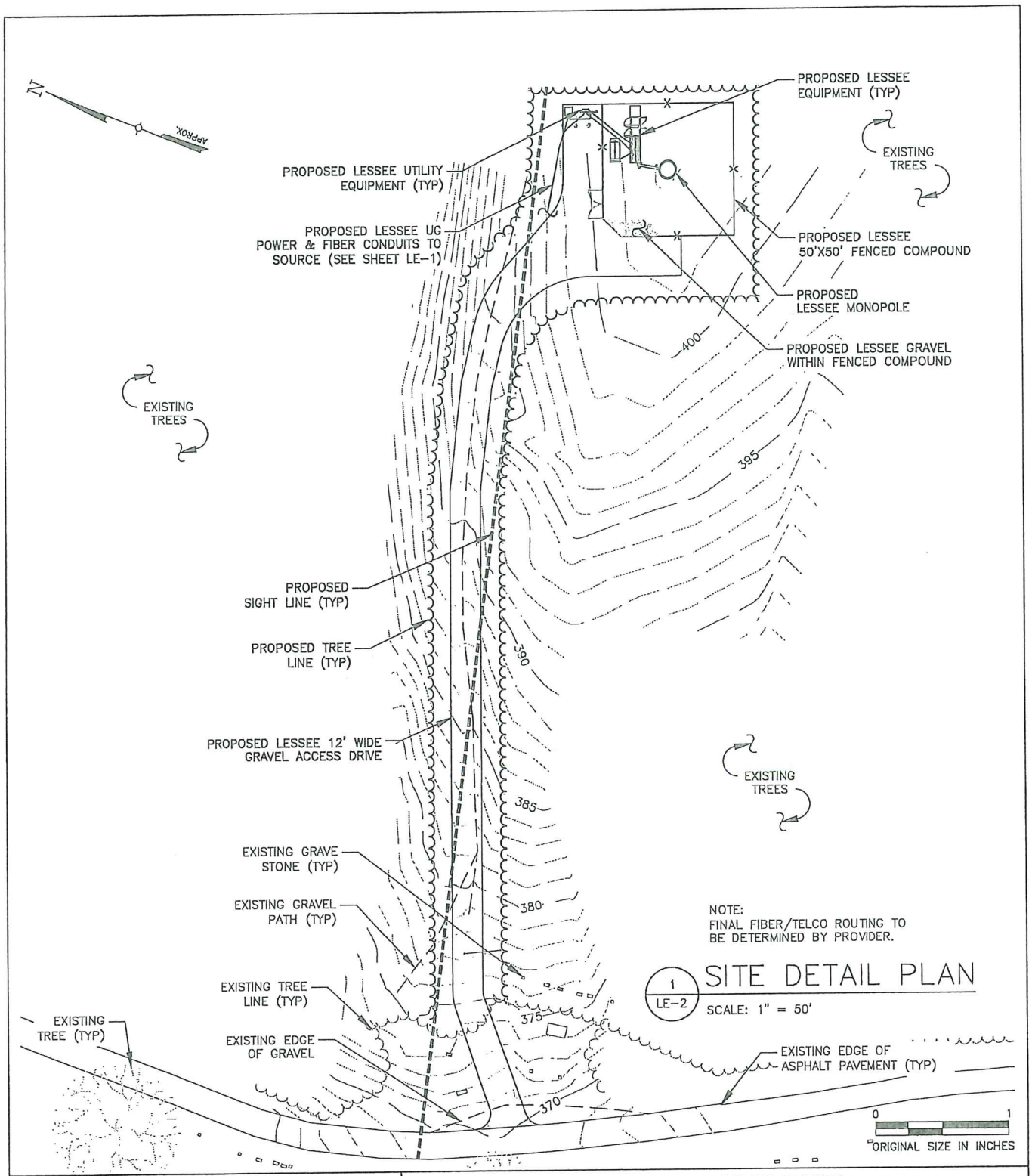
PROJECT # 20161509174 – LOCATION CODE # 432847

375 WASHINGTON AVE – CITY OF BEACON – DUTCHESS COUNTY, NY 12508

CELLCO PARTNERSHIP,
(LESSEE)
1275 JOHN STREET, SUITE 100, WEST HENRIETTA, NY 14586

TEC WO: 11272.005	ISSUED BY: JF	DATE: 9/16/22	SCALE: AS NOTED	SHEET: LE-1	REV: 1

DocuSign Envelope ID: 268840C9-8111-4D72-80B4-0E165769D544



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HEDGEWOOD – LEASE EXHIBIT

PROJECT # 20161509174 – LOCATION CODE # 432847

375 WASHINGTON AVE – CITY OF BEACON – DUTCHESS COUNTY, NY 12508

CELLCO PARTNERSHIP,
(LESSEE)
1275 JOHN STREET, SUITE 100, WEST HENRIETTA, NY 14586

TEC WO: 11272.005	ISSUED BY: JF	DATE: 9/16/22	SCALE: AS NOTED	SHEET: LE-2	REV: 1

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EXHIBIT "C"

FAIRVIEW CEMETERY ASSOCIATION BOARD MEETING MINUTES

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Fairview Cemetery Association
June 8, 2022

In attendance: Rose Story, Roger Story, Martha Murphy, Roger Bogardus, Marian (Vikki) Ventresca

Financial report was given by Martha Murphy and accepted as read.

President Rose Story discussed the offer made by Verizon for the lease of property 100 x 100. We were offered a $5,000 sign on bonus and max rent of $1,600 a month. A 2% rent escalation once a year. They also would pay $300/mo for every carrier that collocates on the tower. Excludes municipal antennas by the City of Beacon. After a brief discussion by members present it was put to a vote. It was decided to accept their offer by a unanimous vote. Rose stated we would need to get a lawyer.

With no other business meeting was ajourned.

Respectfully
Marian (Vikki) Ventresca
Secretary

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EXHIBIT "D"

REMOVAL BOND

DocuSign Envelope ID: 268840C9-8111-4D72-80B4-0E165769D544

Leah Juenger
Client Representative

Marsh USA Inc.
800 Market Street
Suite 1800
St. Louis, MO 63101
314-342-2439
Leah.Juenger@marsh.com
www.marsh.com

MARSH

September 8, 2022

Darchelle Turner
Verizon Wireless
4 Centerock Road
West Nyack, NY 10994

Subject: New Bond

Principal: Verizon Wireless of the East LP
Obligee: The Faireview Cemetery Association
Bond Description: Removal
Bond Amount:
Bond Number: 107676717
Surety Name: Travelers Casualty and Surety Company of America

Dear Darchelle:

In response to the request dated 09/07/2022, I am pleased to enclose the above-referenced bond document that is based on the information we received with the request.

Prior to filing with The Faireview Cemetery Association the following items need to be completed:

1. Signed by authorized officer
2. Officer's name and title inserted below signature
3. Corporate seal affixed (if applicable)

As always, the bond document should be re-checked for accuracy before filing with The Faireview Cemetery Association.

If you have any questions, please feel free to contact me. Thank you for allowing Marsh to service your surety needs.

Sincerely,

Leah Juenger
Client Representative

Enclosure

DocuSign Envelope ID: 268840C9-8111-4D72-80B4-0E165769D544

TOWER / STRUCTURE / ANTENNA/ EQUIPMENT REMOVAL BOND

Bond #107676717

Site Name: Hedgewood
Site Location: 375 Washington Avenue, Beacon, NY 12508
Verizon Project #: 20161509174
Verizon Tower Location Code: 432847

KNOW ALL MEN BY THESE PRESENTS, THAT, **Verizon Wireless of the East LP, One Verizon Way, Basking Ridge, NJ, 07920**, as Principal, and **Travelers Casualty and Surety Company of America** a corporation duly organized under the laws of the State of **Connecticut**, as Surety, are held and firmly bound unto **The Faireview Cemetery Association, P.O. Box 157, Glenham, NY 12527**, as Obligee, in the sum of) lawful money of the United States, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents, the liability of the Surety being limited to the penal sum of this bond regardless of the number of years the bond is in effect.

WHEREAS the Principal has entered into a written agreement with the property owner for the placement of a tower(s), structure(s), antenna(s), and/or equipment furnishing telephone, television or other electronic media service, which agreement sets forth the terms and conditions which govern the use of such tower(s), structure(s), antenna(s), and/or equipment and which agreement is hereby specifically referred to and made part hereof, and

WHEREAS, the Obligee requires the submission of a bond guaranteeing the maintenance, replacement, removal or relocation of said tower(s), structure(s), antenna(s), and/or equipment.

NOW THEREFORE, the condition of this obligation is such, that if the above bounden Principal shall perform in accordance with the aforesaid ordinance and/or agreement, and indemnify the Obligee against all loss caused by Principal's breach of any ordinance or agreement relating to maintenance, replacement, removal or relocation of a tower(s), structure(s), antenna(s), and/or equipment, then this obligation shall be void, otherwise to remain in full force and effect unless cancelled as set forth below.

THIS BOND may be cancelled by Surety by giving thirty (30) days written notice to the Obligee by certified mail. Such cancellation shall not affect any liability the Surety may have or incurred under this bond prior to the effective date of the termination. Provided that no action, suit or proceeding shall be maintained against the Surety on this bond unless action is brought within twelve (12) months of the cancellation date of this bond.

THIS BOND signed, sealed, dated on the **8th** day of **September, 2022**. This bond is effective the **12th** day of **September, 2022**.

Verizon Wireless of the East LP
Principal

By:_____

Travelers Casualty and Surety Company of America
Surety

By:_____
Leah L. Juenger, Attorney-In-Fact

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State of Missouri
County of St. Charles } ss:

On this 8th day of September, 2022, before me, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared

Leah L. Juenger

known to me to be Attorney-in-Fact of Travelers Casualty and Surety Company of America the corporation described in and that executed the within and foregoing instrument, and known to me to be the person who executed the said instrument in behalf of the said corporation, and he duly acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year stated in this certificate above.

My Commission Expires July 21, 2024

Debra C. Schneider Notary Public

DEBRA C. SCHNEIDER
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Charles County
My Commission Expires: July 21, 2024
Commission Number: 12419088

DocuSign Envelope ID: 268840C9-8111-4D72-80B4-0E165769D544

TRAVELERS	Travelers Casualty and Surety Company of America Travelers Casualty and Surety Company St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint Leah L. Juenger of St. Louis, Missouri, their true and lawful Attorney(s)-In-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this 21st day of April, 2021.

HARTFORD, CONN.

State of Connecticut

By: Robert L. Raney, Senior Vice President

City of Hartford ss.

On this the 21st day of April, 2021, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the 30th day of June, 2026

NOTARY PUBLIC CONNECTICUT

Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-In-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-In-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 8th day of September, 2022.

HARTFORD, CONN.

Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-In-Fact and the details of the bond to which this Power of Attorney is attached.

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, New York 12508

August 18, 2023

RE: Verizon Wireless Tower "Fairview Cemetery"
Verizon Wireless Site Name: Hedgewood
Tax ID: 130200-6055-04-713005
375 Washington Avenue, City of Beacon, New York

Dear Mr Gunn:

This letter is provided in response to the comments raised in the May 8, 2023 memorandum prepared by Mr. John Clarke, with John Clarke Planning and Design. We offer the following responses on behalf of the applicant, Verizon Wireless:

1. The project narratives and Site Plan sheets do not include any detailed description of existing site conditions, leading to the following questions:

   (a) Is this the best location off the cemetery driveway to avoid impacts on current grave sites?

   RESPONSE: Yes. The driveway follows an existing trail that is in a clearing flanked by grave sites on both sides. Our survey has located all grave sites in the vicinity of the driveway and there are no conflicts. The persons managing the cemetery have also approved the location of the new driveway.

   (b) What are the typical diameter and number of trees to be removed for the access drive and equipment compound, and can any large specimen trees be avoided?

   RESPONSE: Sheet C-1B has been updated to show individual trees 6" caliper and greater throughout the project area. The tree locations and sizes were obtained via field survey. The driveway design follows the existing trail which is the ideal location with respect to topography and tree preservation.

Project Contact Info

36 British American Boulevard, Suite 101 | Latham, NY 12110
518.783.1630 Tel | 518.783.1544 Fax

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(c) What are the tree heights in the area to determine how exposed the monopole will be?

RESPONSE: The existing trees near the tower are in the 60-70 foot range. However, this is only one of several factors which affect visibility of the monopole. The most important factor is vegetation, topography, and structures in the near-field of a point of view toward the tower. As you can see in the visual resource evaluation report, the 2-mile study area is heavily developed, and outside the developed areas is blanketed by woods. This results in the tower being visible from only a few vantage points throughout the viewshed.

2. Section 223-26.4D(10) requires a visual impact assessment based on appropriate modeling, photographic simulation, or other techniques. Photo-simulations from key public visibility points should be included in the application.

   RESPONSE: The balloon fly was completed on July 17, 2023 and the corresponding visual resource evaluation report with photosimulations is included in this resubmittal package.

3. Section 223-26.4L outlines possible visual mitigations measures. What stealth design, color treatment, or other methods will minimize visual impacts?

   RESPONSE: Based on the limited visibility of the tower, visual mitigation has not been investigated for this application. We look forward to receiving feedback from the Planning Board on the visual assessment report.

4. The proposed outdoor lighting must comply with Section 223-14B with fill cut-off, down-lit fixtures.

   RESPONSE: The proposed light fixture is in compliance with the City Code. We have added additional notes and photometrics to Sheet C-4B of the site plans.

Should you have any questions, please do not hesitate to contact the undersigned at (518) 783-1630.

Sincerely,
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.

Steven M. Matthews, PE
Managing Director – Engineering

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, New York 12508

August 18, 2023

RE: Verizon Wireless Tower "Fairview Cemetery"
Verizon Wireless Site Name: Hedgewood
Tax ID: 130200-6055-04-713005
375 Washington Avenue, City of Beacon, New York

Dear Mr Gunn:

This letter is provided in response to the comments raised in the May 4, 2023 memorandum prepared by Mr. John Russo, P.E. with Lanc & Tully, P.C. We offer the following responses on behalf of the applicant, Verizon Wireless:

1. Section 223-26.4, paragraph D(10), of the city of Beacon Zoning Code states that the applicant shall prepare "A visual impact assessment of the proposed wireless telecommunications services facility based upon appropriate modeling, photographic simulation and other pertinent analytical techniques as required by the Planning Board." It is recommended that the applicant prepare visual sightline profiles from various vantage points as determined by the Planning Board, as well as visual renderings from those vantage points.

   RESPONSE: The balloon fly was completed on July 17, 2023 and the corresponding visual resource evaluation report with photosimulations is included in this resubmittal package.

2. In accordance with Section 223-26.4, paragraph D(12), a copy of the lease agreement with the property owner shall be provided to the Planning Board.

   RESPONSE: A copy of the lease agreement is provided in this resubmittal package.

3. The plans should note the varying diameter of the monopole at various heights along its length.

   RESPONSE: Monopole diameters are noted in the site plan drawings on Sheet C-3.

4. The plans shall state the proposed color of the monopole tower.

   RESPONSE: A note stating the tower will have a galvanized steel finish (gray in color) is shown on Sheet C-3.

Project Contact Info

36 British American Boulevard, Suite 101 | Latham, NY 12110
518.783.1630 Tel | 518.783.1544 Fax

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5. The proposed silt fencing along the gravel drive for the project, as shown on Sheet C-1B, should be shifted so that the trenching for the underground utilities is located within the area captured by the silt fence. At present the plans show the silt fencing to run atop or to the inside of this area to be trenched.

   RESPONSE: The silt fencing has been corrected as requested. See Sheet C-1B.

6. As shown on Sheet C-1A, the underground utilities will be crossing the paved drives within the Fairview Cemetery at 4 locations. The plans shall include construction details for the restoration of the pavement.

   RESPONSE: Pavement restoration for utility trenching is shown on Detail 3 of Sheet C-4C.

7. The proposed underground utilities to be run along the access drives from and to Washington Avenue shall be installed outside of any drainage swales so as to allow for continued proper maintenance of the drainage on the site. A note shall be added to the plans in regard to this.

   RESPONSE: Based on our site inspection and survey, there are no drainage swales along the sides of the access roads where utility trenching is to occur.

8. Sheet C-4B contains a proposed lighting detail. Note No. 2 for this detail states "Light shall be used by Verizon Wireless technicians during emergency maintenance operations". Note No. 3. states "Light shall be provided with a shut off dial timer." It is unclear as to why the light needs a shut-off dial timer if it is only to be used by technicians during emergency maintenance operations. This should be clarified further.

   RESPONSE: The note on Sheet C-4B has been updated. In short, the dial timer is a fail safe that will shut off when the timer expires. This feature is implemented to eliminate the possibility of the technician forgetting to shut the light off when the leave the site, which would keep the light running for weeks or months until the next time a technician visits the site.

Should you have any questions, please do not hesitate to contact the undersigned at (518) 783-1630.

Sincerely,
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.

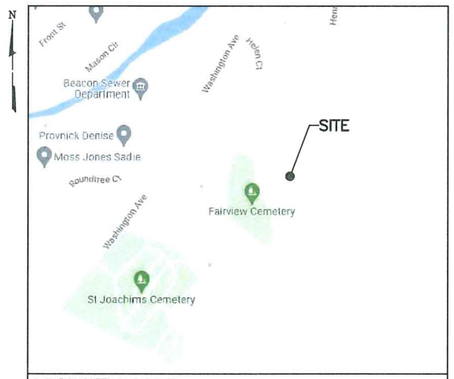
Steven M. Matthews, PE
Director of Engineering

VERIZON WIRELESS OF THE EAST LP,
d/b/a

verizon

SITE NAME:
HEDGEWOOD

RE PROJECT NUMBER: 20161509174
LOCATION CODE: 432847



VICINITY MAP

DIRECTIONS

DIRECTIONS TO SITE: FROM NORTH GREENBUSH, GET ON I-90 W FROM US-4 S AND NY-43 W, FOLLOW FOR ±3.2 MILES. MERGE ONTO I-90 W, FOLLOW FOR ±1.2 MILES. TAKE EXIT 6A TO MERGE ONTO I-787 S TOWARD ALBANY, FOLLOW FOR ±3.4 MILES. USE THE RIGHT 2 LANES TO TAKE EXIT 1 TO MERGE ONTO I-87 S, FOLLOW FOR ±83.0 MILES. TAKE EXIT 17 TOWARD I-84/NY-300/NY-17K/SCRANTON/NEWBURGH, FOLLOW FOR ±0.7 MILES. KEEP LEFT TO CONTINUE TOWARD I-84 E, FOLLOW FOR ±0.1 MILE. KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR I-84 E/DANBURY AND MERGE ONTO I-84 E, FOLLOW FOR ±8.2 MILES. TAKE EXIT 44 FOR NY-52 TOWARD FISHKILL/BEACON, FOLLOW FOR ±0.1 MILE. TURN RIGHT ONTO NY-52, FOLLOW FOR ±0.2 MILES. TURN LEFT ONTO OLD GLENHAM RD, FOLLOW FOR ±0.9 MILES. TURN LEFT ONTO MAPLE ST, FOLLOW FOR ±0.1 MILE. CONTINUE ONTO WASHINGTON AVE, FOLLOW FOR ±0.8 MILES. TURN LEFT AT LIBERTY ST, FOLLOW FOR ±0.2 MILES. SITE WILL BE ON THE LEFT.

SITE ADDRESS:	375 WASHINGTON AVE BEACON, NY 12508
MUNICIPALITY:	CITY OF BEACON
COUNTY:	DUTCHESS
TAX MAP NUMBER:	130200-6055-04-713005-0000
ZONING DISTRICT:	R1-120 ONE FAMILY HISTORIC DISTRICT AND LAND MARK OVERLAY ZONE
STRUCTURE COORDINATES:	41.510545° -73.940514°
GROUND ELEVATION:	402.1'± AMSL
PROPERTY OWNER:	FAIRVIEW CEMENTARY ASSN P.O. BOX 157 GLENHAM, NY 12527
APPLICANT:	VERIZON WIRELESS 1275 JOHN STREET, SUITE 100 WEST HENRIETTA, NY 14586
CONTACT PERSON:	KATHY POMPONIO
CONTACT PHONE:	(585) 321-5435

PROJECT SUMMARY

PROJECT DESCRIPTION

THE PROPOSED WORK CONSISTS OF INSTALLING CELLULAR ANTENNAS AND RELATED EQUIPMENT ON A PROPOSED MONOPOLE AND THE INSTALLATION OF EQUIPMENT AT GRADE WITHIN A PROPOSED FENCED COMPOUND. PROJECT INCLUDES THE CONSTRUCTION OF A NEW GRAVEL ACCESS DRIVEWAY AND UNDERGROUND POWER AND FIBER UTILITIES TO SERVICE THE FACILITY.

SHT. NO.	DESCRIPTION	REV NO	REVISION DATE
T-1	TITLE SHEET	2	8/18/23
AD-1	ADJOINERS PLAN	2	8/18/23
AD-2	ADJOINERS LIST	2	8/18/23
AD-3	ADJOINERS LIST	2	8/18/23
SB-1	SETBACK PLAN	2	8/18/23
C-1A	OVERALL SITE PLAN	2	8/18/23
C-1B	GRADING & EROSION CONTROL PLAN	2	8/18/23
C-2	SITE DETAIL PLAN	2	8/18/23
C-3	ELEVATION & ORIENTATION PLAN	2	8/18/23
C-4A	SITE DETAILS	2	8/18/23
C-4B	SITE DETAILS	2	8/18/23
C-4C	SITE DETAILS	2	8/18/23
C-5	EQUIPMENT ELEVATIONS	2	8/18/23

SHEET INDEX

THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL ITEMS OF CONCERN HAVE BEEN ADDRESSED AND EACH OF THE DRAWINGS HAS BEEN REVISED AND ISSUED "FOR CONSTRUCTION".

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UDIG-NY

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NY industrial code rule 753 requires no less than two working days notice, but not more than ten days notice

UDIGNY - NEW YORK

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED FOR 22"x34" FULL SIZE AND 11"x17" HALF SIZE. OTHER SIZED VERSIONS ARE NOT PRINTED TO THE SCALE SHOWN. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

verizon
1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.
Project Contact Info
38 British American Blvd. Phone: (518) 783-1630
Suite 101 (800) 839-8331
Latham, NY 12110 www.tectonicengineering.com

WORK ORDER NUMBER	DRAWN BY
11272.005	MQ

NO.	DATE	ISSUE
0	11/7/22	FOR REGULATORY
1	4/11/23	FOR ZONING
2	8/18/23	PER TOWN COMMENTS

RELEASED BY | DATE

STATE OF NEW YORK
STEVEN M. MATTEWS
087507
LICENSED PROFESSIONAL ENGINEER

UNAUTHORIZED ALTERATION OR ADDITIONS TO A PLAN BEARING THE SEAL OF A LICENSED ENGINEER OR LAND SURVEYOR IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

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0 1 2 3
ORIGINAL SIZE IN INCHES

SITE INFORMATION

HEDGEWOOD
RE PN: 20161509174
LC: 432847

SITE ADDRESS

375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE

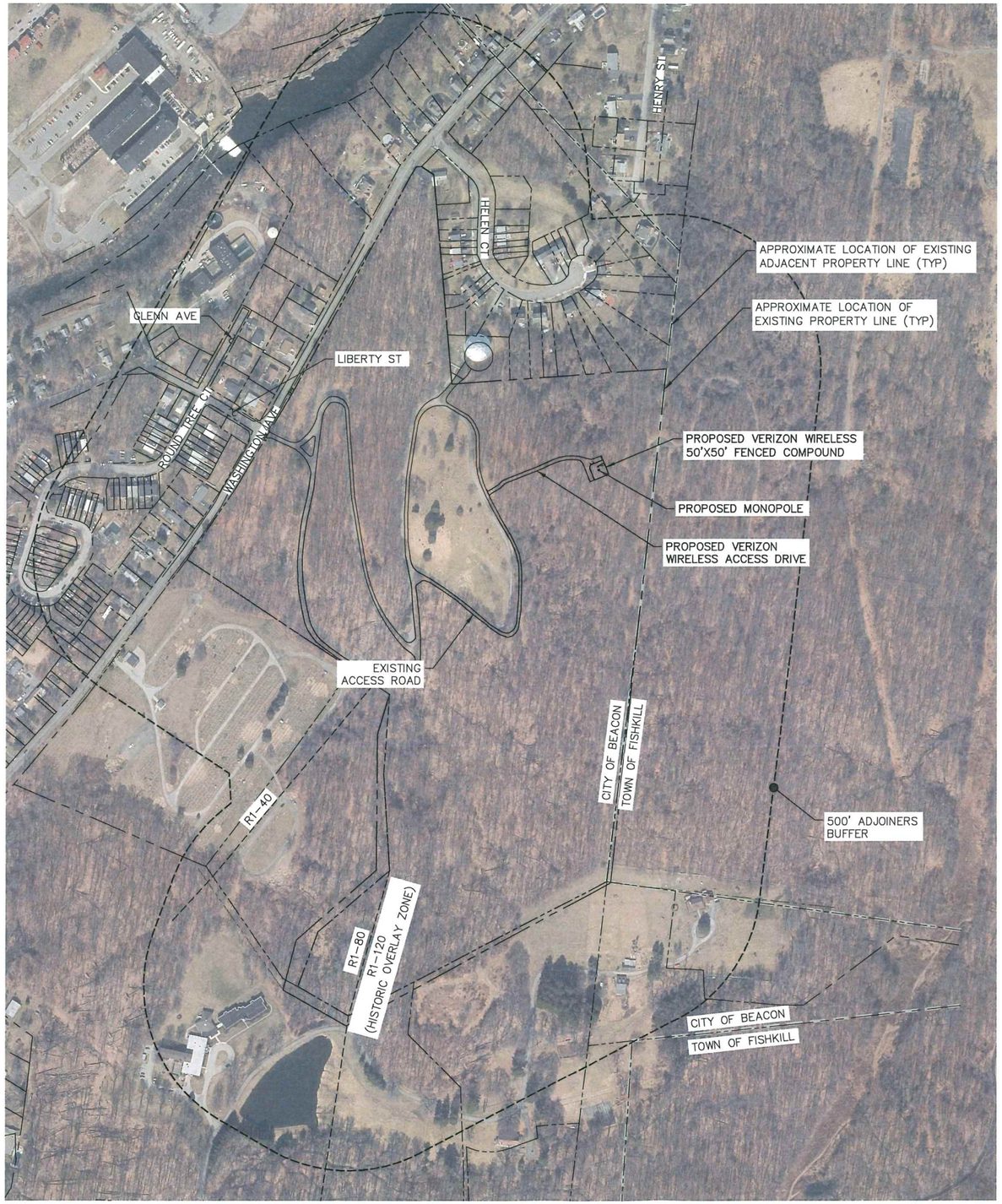
TITLE SHEET

SHEET NUMBER

T-1

N

GRID



1 / AD-1 ADJOINERS PLAN

SCALE: 1" = 400' (11x17 SIZE)
1" = 200' (22x34 SIZE)

NOTE:

THE PROPERTY LINES HEREON ARE APPROXIMATE BASED ON GIS DATA AND ARE FOR ORIENTATION PURPOSES ONLY. THEY DO NOT REPRESENT A PROPERTY/BOUNDARY DECISION BY A LAND SURVEYOR.

verizon

1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

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Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.
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WORK ORDER NUMBER	DRAWN BY
11272.005	MQ

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RELEASED BY | DATE

STATE OF NEW YORK
STEVEN M. MATTEWS
LICENSED PROFESSIONAL ENGINEER
087507

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0 1 2 3
ORIGINAL SIZE IN INCHES

SITE INFORMATION
HEDGEWOOD
RE PN: 20161509174
LC: 432847

SITE ADDRESS
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE
ADJOINERS PLAN

SHEET NUMBER
AD-1

Rubin J. Rivera
25 Helen Ct
Beacon, NY 12508
For Property:13020006055000473912700000

Jesse A. Friedlander
3 Lisa Ln
Monticello, NY 12701
For Property:13020006055000816060660000

Jessie J. Williams
476 Liberty St
Beacon, NY 12508
For Property:13020006055000816190860000

Jason A. Pultz
509 Washington Ave
Beacon, NY 12508
For Property:13020006055000472017700000

Lorraine Browne
34 Helen Ct
Beacon, NY 12508
For Property:13020006055000472910100000

Adrienne Z. Haynes
59 Roundtree Ct
Beacon, NY 12508
For Property:13020006055000815690220000

Gina Canen
63 Roundtree Ct
Beacon, NY 12508
For Property:13020006055000815670180000

Edwin Gonzalez
226 Henry St
Md Beacon, NY 12508
For Property:13308900605500207511510000

Michael Wolfe
37 Millholland Dr
Fishkill, NY 12524
For Property:13308900605400007908250000

David DeLuca
508 Washington Ave
Beacon, NY 12508
For Property:13020006055000469718700000

Charles G. Bentley
84 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008157706060000

Leon Richard Stevens
218 Henry St
Beacon, NY 12508
For Property:13308900605500207501760000

Michael Nurik
37 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008157504100000

James M. Ruyack
518 Washington Ave
Beacon, NY 12508
For Property:13308900605500197072010000

Archdiocese of New York
1011 First Ave
New York, NY 10022
For Property:13020006054000266998850000

Church Of St Joachim
61 Leonard St
Beacon, NY 12508
For Property:13020006054000265794000000

Joseph P. Gentile
27 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008159404300000

Jacqueline Palmer Allen
18 Helen Ct
Beacon, NY 12508
For Property:13020006055000470712700000

W Edward Robinson
29 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008159204300000

Stacy M. Bernstein
57 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008157002400000

Ralph E. Johnson, III
231 Henry St
Md Beacon, NY 12508
For Property:13308900605500207691380000

City Of Beacon
1 Municipal Plz
Beacon, NY 12508
For Property:13020006054000259680800000

Carl F. Rubing
46 Helen Ct
Beacon, NY 12508
For Property:13020006055000476511100000

City Of Beacon
1 Municipal Plz
Beacon, NY 12508
For Property:13020006055000471509000000

Michele A. Bulson, Trustee
388 Washington Ave
Beacon, NY 12508
For Property:13020006055008161604500000

Andrew Wilson
17 Helen Ct
Beacon, NY 12508
For Property:13020006055000472213000000

Gregory Harrison
40 Helen Ct
Beacon, NY 12508
For Property:13020006055000474510200000

City Of Beacon
1 Municipal Ctr
Beacon, NY 12508
For Property:13020006055000466219300000

Doreena M. Robinson
17 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008160404500000

Marlene J. McNeil
15 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008161705200000

Peter Skorewicz
23 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008159804400000

Rafael Torres
350 Washington Ave
Beacon, NY 12508
For Property:13020006055008158800300000

Jevina S. Lackhan
11 Helen Ct
Beacon, NY 12508
For Property:13020006055000472213800000

Fairview Cemetery Assn
PO Box 157
Glenham, NY 12527
For Property:13020006055000471300500000

Robert J. Werlau, Jr
39 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008157704100000

George E. Moffitt, LT
1 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008162406500000

Edward Mandigo
374 Washington Ave
Beacon, NY 12508
For Property:13020006055008160603100000

Michael E. Campbell
26 Helen Ct
Beacon, NY 12508
For Property:13020006055000471011100000

Mohamed Zakria
11 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008161905600000

Hilaria Moran deHernandez
23 Helen Ct
Beacon, NY 12508
For Property:13020006055000473712600000

Faith D. Cole
1 Glen Ave
Beacon, NY 12508
For Property:13020006055008263308800000

Mario Rodriguez
41 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008157904000000

Diane Antezzo Bernardo
92 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008156101200000

Vincent V. Sheeley
336 Washington Ave
Beacon, NY 12508
For Property:13020006054002557593000000

Glendale Dev Estates HOA
54 Helen Ct
Beacon, NY 12508
For Property:13020006055000473314000000

Annagjid Paulin
PO Box 504
Castle Point, NY 12511
For Property:13020006055000476112000000

Kenneth Bolton
51 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008157203000000

Li-Chu Chien
33 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008157104300000

Aline Morris
15 Helen Ct
Beacon, NY 12508
For Property:13020006055000472213200000

Stella E. Heady
478 Washington Ave
Beacon, NY 12508
For Property:13020006055000467116000000

Evelyn Provnick, LT
473 Liberty St
Beacon, NY 12508
For Property:13020006055008160740000000

Vanessa Frets
31 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008158904300000

Beverly B. Sarich
8 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008160306200000

Metra Homeowner Assoc
49 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008158507000000

Shannon Kathleen Murphy
162 Hiddenbrooke Dr
Beacon, NY 12508
For Property:13020006054000289876000000

Nina Kalach
11701 Park Ln #B2J
Kew Gardens, NY 11418
For Property:13020006055008157504000000

Vincent V. Sheeley
336 Washington Ave
Beacon, NY 12508
For Property:13020006054002558199300000

Gabriella Szentimrey
400 Washington Ave
Beacon, NY 12508
For Property:13020006055008264208300000

Glendale Dev Estates HOA
54 Helen Ct
Beacon, NY 12508
For Property:13020006055000470211900000

Vincent V. Sheeley
336 Washington Ave
Beacon, NY 12508
For Property:13020006054002558299500000

Angelina T. Falzone
12 Helen Ct
Beacon, NY 12508
For Property:13020006055000470513500000

Vincent V. Sheeley
336 Washington Ave
Beacon, NY 12508
For Property:13020006054002558598800000

Jenna Gottlieb
38 Helen Ct
Beacon, NY 12508
For Property:13020006055000473810100000

City Of Beacon
1 Municipal Plz
Beacon, NY 12508
For Property:13020006055000461919000000

Charlie Hayes
450 Washington Ave
Beacon, NY 12508
For Property:13020006055008265311600000

Felix A. Class
86 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008157800700000

Carole J. Pelaia
7 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008162106000000

City Of Beacon
1 Municipal Plz
Beacon, NY 12508
For Property:13020006055000465614500000

Gerardo Montoya
502 Washington Ave
Beacon, NY 12508
For Property:13020006055000469317900000

Hung P. Truong
61 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008156802000000

Edwin Gonzalez
226 Henry St
Md Beacon, NY 12508
For Property:13020006055000474215500000

James M. Ruyack
518 Washington Ave
Beacon, NY 12508
For Property:13020006055000470519700000

Vincent V. Sheeley
336 Washington Ave
Beacon, NY 12508
For Property:13020006054002557399800000

Charles M. Murphy
45 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008158303800000

Mohammed- Ismail-S Mohammed-Fakir
12 Monarch Dr
Hopewell Junction, NY 12533
For Property:13020006055008158006000000

Christopher Ryan Gebert
27 Helen Ct
Beacon, NY 12508
For Property:13020006055000474112900000

Metra Homeowner Assoc
49 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008161904900000

Mariana P. Garzon
19 Helen Ct
Beacon, NY 12508
For Property:13020006055000472112000000

Stephen P. Marzovilla
13 Roundtree Ct
Beacon, NY 12508
For Property:13020006055008161805400000

Whitney Garritt
354 Washington Ave
Beacon, NY 12508
For Property:13020006055008159203080000

James Van Buren
171 Hiddenbrook Dr
Beacon, NY 12508
For Property:13020006054002507897000000

Chevron U S A Inc
PO Box 285
Houston, TX 77001
For Property:13308900605500208350880000

Joseph M. Lampe
42 Helen Ct
Beacon, NY 12508
For Property:13020006055000475010400000

Thomas M. Dunderdale
366 Washington Ave
Beacon, NY 12508
For Property:13020006055008160021000000

verizon

1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

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PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.
Project Contact Info
36 British American Blvd. Phone: (518) 783-1630
Suite 101 (800) 829-8531
Latham, NY 12110 www.tectonicengineering.com

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2	8/18/23	PER TOWN COMMENTS

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STEPHEN M. MATTSON
087507
LICENSED PROFESSIONAL ENGINEER

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0 1 2 3
ORIGINAL SIZE IN INCHES

SITE INFORMATION
HEDGEWOOD
RE PN: 20161509174
LC: 432847

SITE ADDRESS
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE
ADJOINERS LIST

SHEET NUMBER
AD-2

City Of Beacon
1 Municipal Plz
Beacon, NY 12508
For Property:13020000605500815950830000

Fulton Avenue Realty
47 Fulton Ave
Beacon, NY 12508
For Property:13020000605500826391100000

Dominque Lake
918 Ramble Run Rd
Baltimore, MD 21220
For Property:13020000605500816640640000

City Of Beacon
1 Municipal Plz
Beacon, NY 12508
For Property:13020000605500826310650000

Yolanda Smith
55 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815700260000

Erica C. Guerrido
21 Helen Ct
Beacon, NY 12508
For Property:13020000605500047341230000

Edward J. Pavone
480 Washington Ave
Beacon, NY 12508
For Property:13020000605500046831690000

Steven P. Stanulewich
505 Washington Ave
Beacon, NY 12508
For Property:13020000605500047141700000

Rachel Jane Lockett
380 Washington Ave
Beacon, NY 12508
For Property:13020000605500816130400000

Joseph J. Gentile
16 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815790590000

Gloria E. Hall
486 Liberty St
Beacon, NY 12508
For Property:13020000605500826360750000

Diwakar Sahai
Vandenburgh Pl 160B
Troy, NY 12180
For Property:13020000605500047041230000

Sandra Leggett Grant
3 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500816230630000

Chastity Beato
88 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815790090000

Metra Homeowner Assoc
49 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500816240690000

Jared W. Rutherford
35 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815730420000

Thomas Dunderdale
358 Washington Ave
Beacon, NY 12508
For Property:13020000605500815930160000

William Ferro
47 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815850370000

City Of Beacon
1 Municipal Plz
Beacon, NY 12508
For Property:13020000605500816110890000

Ashik Ramkalawon
44 Helen Ct
Beacon, NY 12508
For Property:13020000605500047581050000

Fred J. Holmes
21 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500816000440000

Anthony J. Spillane
5 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500816220610000

Judy Carrasquillo
53 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815710270000

Liliana Rodriguez, Trustee
378 Washington Ave
Beacon, NY 12508
For Property:13020000605500816100350000

Glendale Dev Estates HOA
54 Helen Ct
Beacon, NY 12508
For Property:13020000605500047181080000

Daniel M. Wilenchik
90 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815800110000

Leon R. Stevens
218 Henry St
Beacon, NY 12508
For Property:13020000605500047281720000

Fulton Avenue Realty
47 Fulton Ave
Beacon, NY 12508
For Property:13020000605500826481010000

Carl E. Lucy, LT
487 Washington Ave
Beacon, NY 12508
For Property:13020000605500047021520000

City Of Beacon
1 Municipal Plz
Beacon, NY 12508
For Property:13020000605500047051400000

Patricia E. Kreger
65 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815660160000

Christal Rodriguez
490 Washington Ave
Beacon, NY 12508
For Property:13020000605500046891750000

Metra Homeowner Assoc
49 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815900310000

Adam Brown
525 Washington Ave
Beacon, NY 12508
For Property:13020000605500816020610000

Joseph Lavetsky
32 Helen Ct
Beacon, NY 12508
For Property:13020000605500047241010000

Hyacinth Alleyne
2 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500816070680000

Lisa C. Hasbrouck
24 Helen Ct
Beacon, NY 12508
For Property:13020000605500047091140000

Thomas L'Heureux
515 Washington Ave
Beacon, NY 12508
For Property:13308900605500197261880000

Regina Martinez
19 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500816020440000

St Joachims Church
61 Leonard St
Beacon, NY 12508
For Property:13020000605400026149760000

Mario Capparelli
402 Washington Ave
Beacon, NY 12508
For Property:13020000605500826470920000

Karel Murray
304 Lincoln Ave E
Mt Vernon, NY 10553
For Property:13020000605500047071170000

Ju Ping Tu
55 Park Ave Apt 10E
New York, NY 10016
For Property:13020000605500815760590000

Carmen Vazqueztell
14 Helen Ct
Beacon, NY 12508
For Property:13020000605500047051320000

Daniel T. Aloisi
13 Helen Ct
Beacon, NY 12508
For Property:13020000605500047221340000

Andres Rivera
2 Glen Ave
Beacon, NY 12508
For Property:13020000605500826380970000

Timothy W. Kimmel
5 Forest View Dr
Hopewell Junction, NY 12533
For Property:13020000605500826280800000

Ralph E. Johnson, III
231 Henry St
Beacon, NY 12508
For Property:13020000605500047661290000

Pamela B. Drew
12 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500816010590000

Navienne J. Dunkley
50 Helen Ct
Beacon, NY 12508
For Property:13020000605500047581260000

Brittany L. McIntyre
9 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500816200580000

Robert W. McKeon, LT
477 Liberty St
Beacon, NY 12508
For Property:13020000605500816120720000

Hazel Rountree
25 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815960430000

Terrence R. Stanulwich
36 Helen Ct
Beacon, NY 12508
For Property:13020000605500047331010000

Nancy Gilliland
370 Washington Ave
Beacon, NY 12508
For Property:13020000605500816030260000

446 Washington Avenue LLC
1158 North Ave
Beacon, NY 12508
For Property:13020000605500826561070000

Robert R. Pendley
28 Helen Ct
Beacon, NY 12508
For Property:13020000605500047131090000

Stephanie Martin
29 Helen Ct
Beacon, NY 12508
For Property:13020000605500047441310000

Timothy P. Smith
43 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815810390000

Matthew Schleifer
522 Washington Ave
Beacon, NY 12508
For Property:13308900605500197152080000

Zbigniew Waksmundski
80 Roundtree Ct
Beacon, NY 12508
For Property:13020000605500815730020000

Margaret M. Scianna
472 Liberty St
Beacon, NY 12508
For Property:13020000605500815607930000

Mario Negron
16 Helen Ct
Beacon, NY 12508
For Property:13020000605500047061290000

Emily Tomasi
516 Washington Ave
Beacon, NY 12508
For Property:13020000605500047031930000

Michael Wolfe
200 Mountain Ln
Beacon, NY 12508
For Property:13020000605400027448130000

verizon
1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

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0 1 2 3
ORIGINAL SIZE IN INCHES

SITE INFORMATION
HEDGEWOOD
RE PN: 20161509174
LC: 432847

SITE ADDRESS
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE
ADJOINERS LIST

SHEET NUMBER
AD-3

1 SB-1 SETBACK PLAN
SCALE: 1" = 300' (11x17 SIZE)
1" = 150' (22x34 SIZE)

NOTE:

1. THE PROPERTY LINES HEREON ARE APPROXIMATE BASED ON GIS DATA AND ARE FOR ORIENTATION PURPOSES ONLY. THEY DO NOT REPRESENT A PROPERTY/BOUNDARY DECISION BY A LAND SURVEYOR.

BULK REQUIREMENTS

CITY OF BEACON
ZONING DISTRICT: R1-120 – 1 FAMILY RESIDENTIAL
HISTORIC DISTRICT AND LANDMARK OVERLAY ZONE

	REQUIRED	EXISTING	PROPOSED
MINIMUM YARDS (TOWER)			
FRONT:	124 FT	–	992 FT
SIDE:	124 FT	–	311 FT
REAR:	124 FT	–	185 FT
MINIMUM YARDS (COMPOUND)			
FRONT:	75 FT	–	961 FT
SIDE:	50 FT	–	280 FT
REAR:	75 FT	–	151 FT
MAXIMUM TOWER HEIGHT:	150'	–	124 FT

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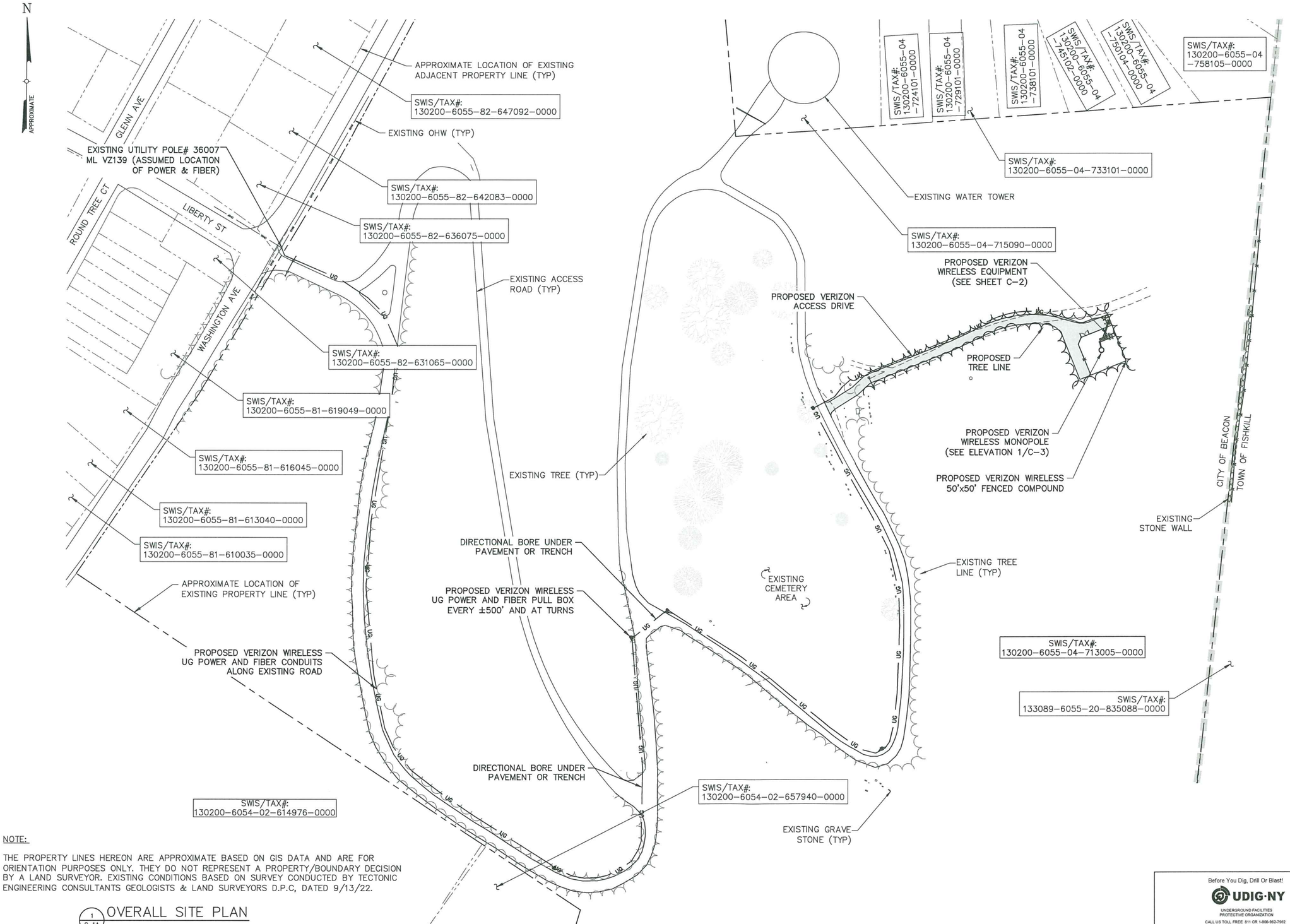
SITE INFORMATION
HEDGEWOOD
RE PN: 20161509174
LC: 432847

SITE ADDRESS
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE
SETBACK PLAN

SHEET NUMBER
SB-1



NOTE:

THE PROPERTY LINES HEREON ARE APPROXIMATE BASED ON GIS DATA AND ARE FOR ORIENTATION PURPOSES ONLY. THEY DO NOT REPRESENT A PROPERTY/BOUNDARY DECISION BY A LAND SURVEYOR. EXISTING CONDITIONS BASED ON SURVEY CONDUCTED BY TECTONIC ENGINEERING CONSULTANTS GEOLOGISTS & LAND SURVEYORS D.P.C, DATED 9/13/22.

1 / C-1A OVERALL SITE PLAN

SCALE: 1" = 120' (11x17 SIZE)
1" = 60' (22x34 SIZE)

Before You Dig, Drill Or Blast!
UDIG-NY
UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION
CALL US TOLL FREE 811 OR 1-800-962-7962
NY industrial code rule 753 requires no less than two working days notice, but not more than ten days notice.
UDIGNY – NEW YORK

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WEST HENRIETTA, NY 14586

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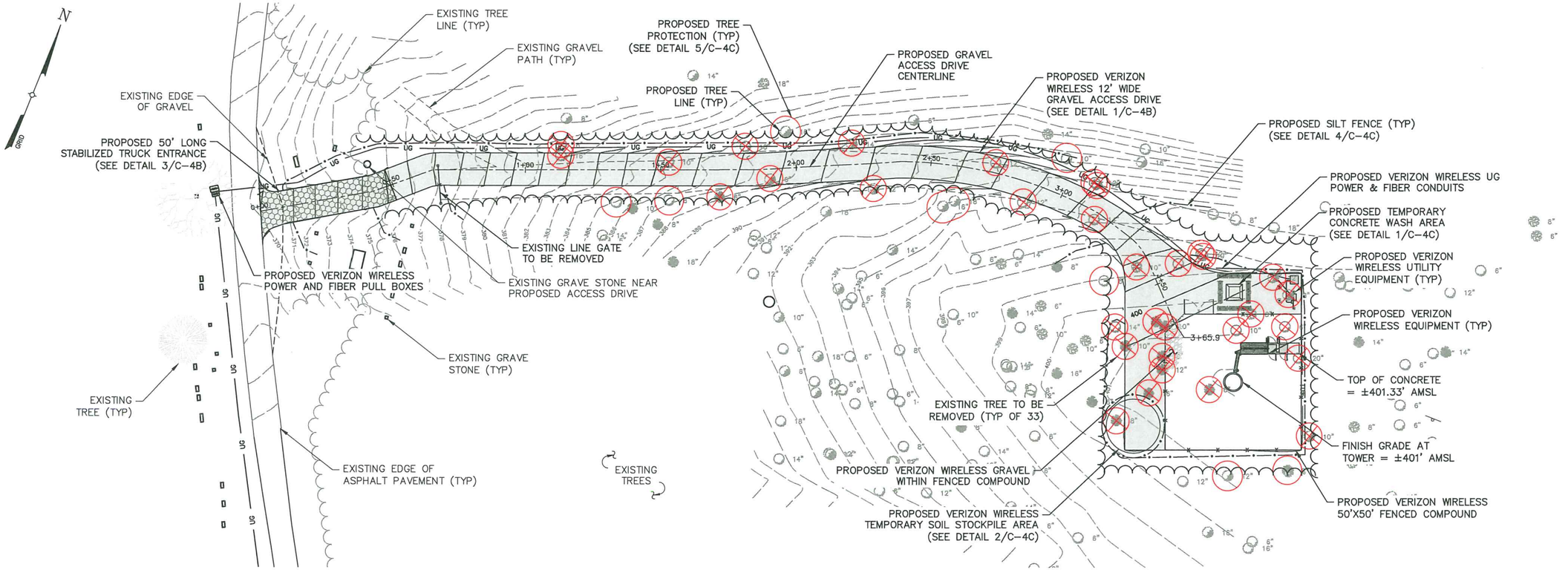
SITE INFORMATION
HEDGEWOOD
RE PN: 20161509174
LC: 432847

SITE ADDRESS
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

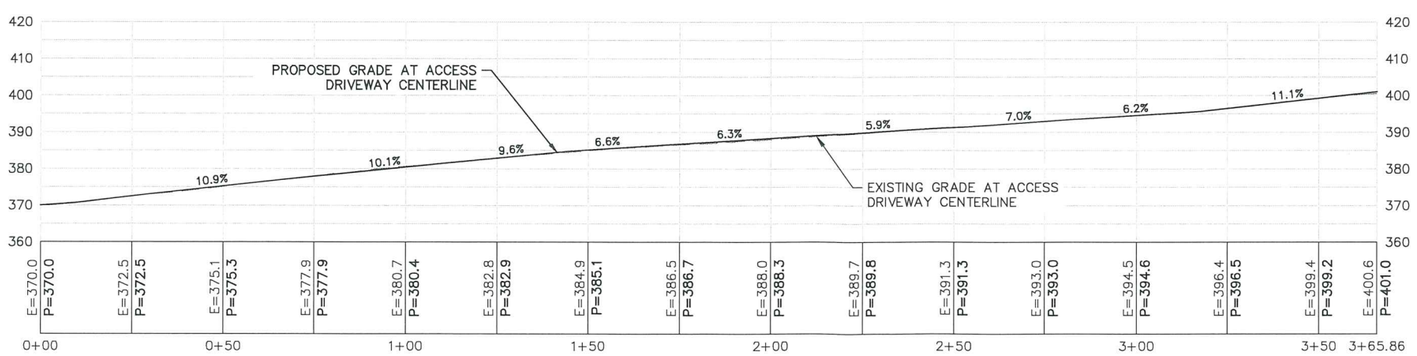
SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
C-1A



1/C-1B DRIVEWAY PLAN VIEW

SCALE: 1" = 40' (11x17 SIZE)
1" = 20' (22x34 SIZE)



2/C-1B DRIVEWAY PROFILE VIEW

SCALE: 1" = 40' (11x17 SIZE)
1" = 20' (22x34 SIZE)

ACCESS DRIVEWAY LENGTH = 366'±

UNDERGROUND UTILITY LENGTH = 2682'±

AREA OF DISTURBANCE = 9,515 SF ± (0.22 ACRES)

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WEST HENRIETTA, NY 14586

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www.tectonicengineering.com

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ORIGINAL SIZE IN INCHES

SITE INFORMATION

HEDGEWOOD
RE PN: 20161509174
LC: 432847

SITE ADDRESS

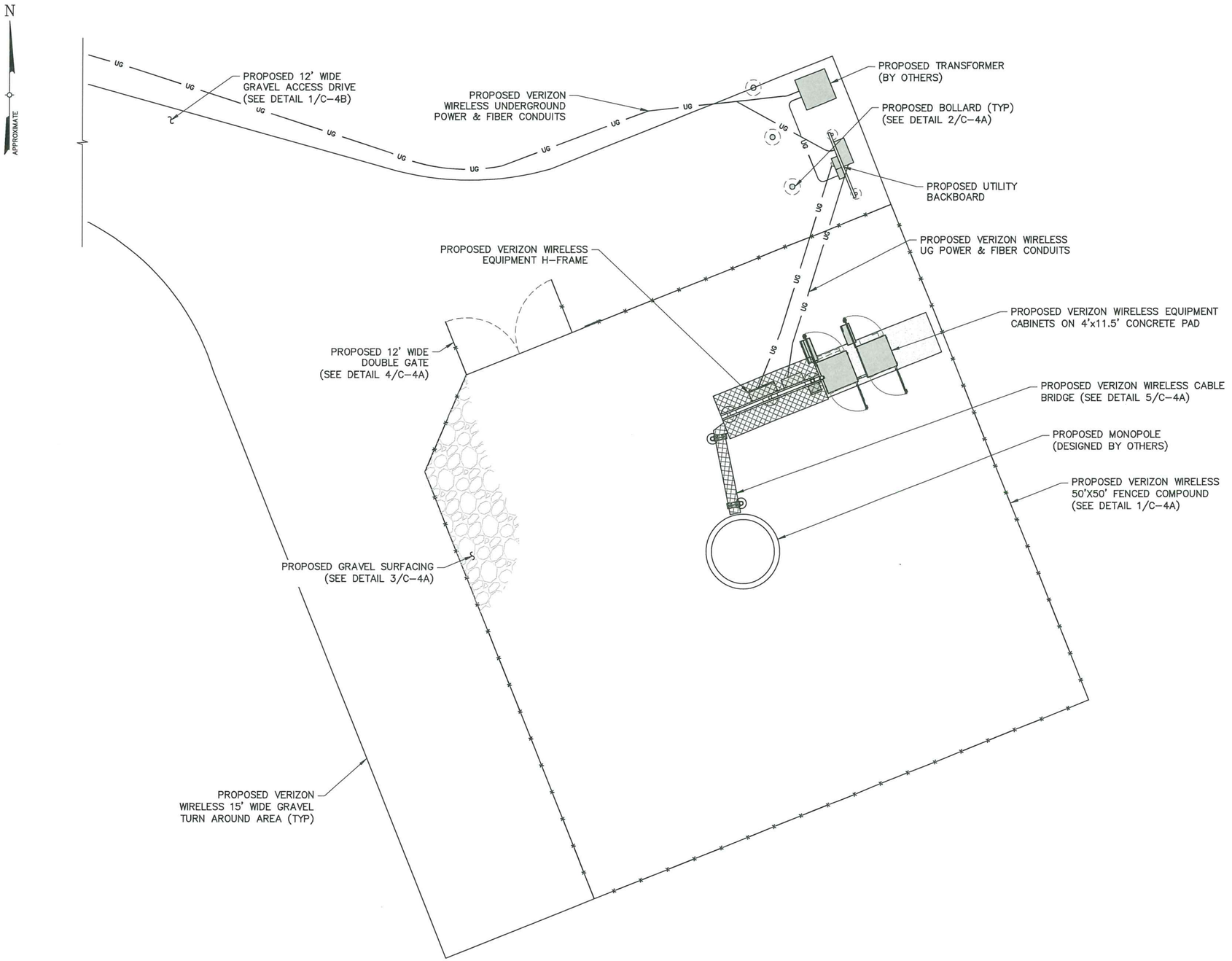
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE

GRADING & EROSION CONTROL PLAN

SHEET NUMBER

C-1B



1 C-2 SITE DETAIL PLAN

SCALE: 1" = 10' (11x17 SIZE)
1" = 5' (22x34 SIZE)

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UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION
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NY industrial code rule 753 requires no less than two working days notice, but not more than ten days notice.
UDIGNY – NEW YORK

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0 1 2 3
ORIGINAL SIZE IN INCHES

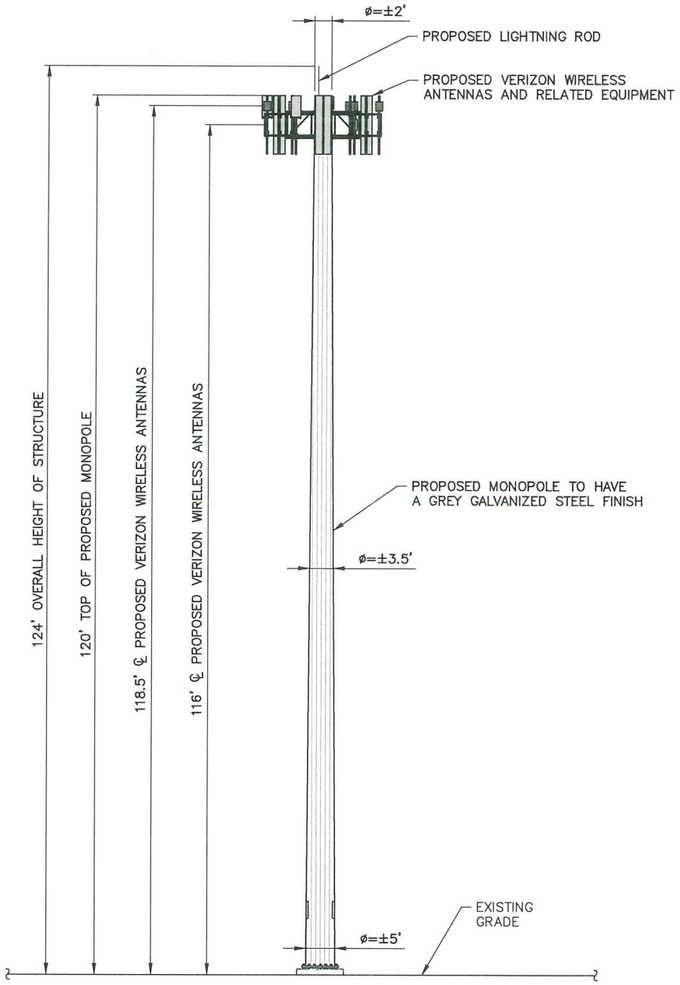
SITE INFORMATION
HEDGEWOOD
RE PN: 20161509174
LC: 432847

SITE ADDRESS
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE
SITE DETAIL PLAN

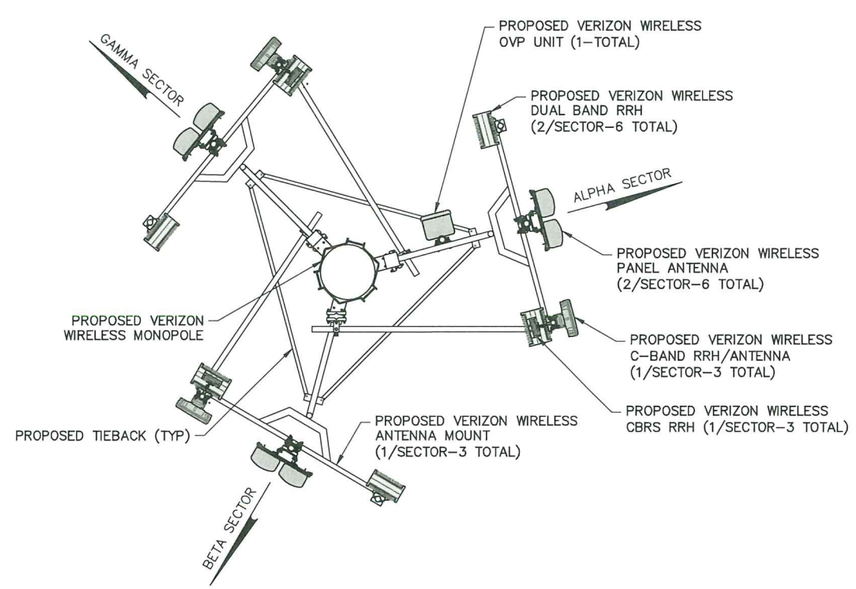
SHEET NUMBER
C-2

NOTE: TOWER SHALL HAVE A GALVANIZED STEEL FINISH, GREY IN COLOR.



NOTE: FINAL TOWER DESIGN, DETAILS, AND DIMENSIONS SHALL BE PROVIDED AS PART OF THE BUILDING PERMIT APPLICATION.

1 / C-3 ELEVATION
SCALE: 1" = 20' (11x17 SIZE)
1" = 10' (22x34 SIZE)



2 / C-3 ANTENNA ORIENTATION
SCALE: 3/4" = 1'-0" (11x17 SIZE)
3/8" = 1'-0" (22x34 SIZE)

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WEST HENRIETTA, NY 14586

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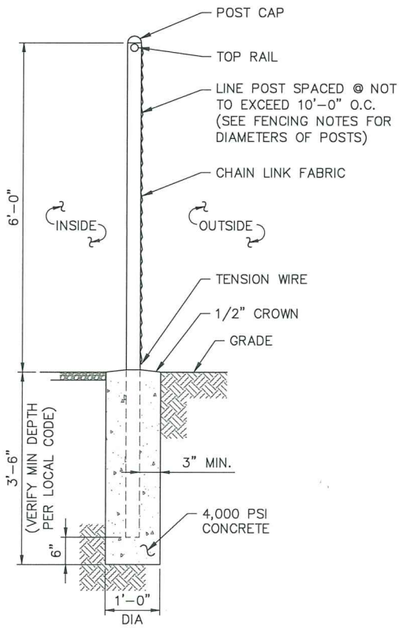
RE PN: 20161509174
LC: 432847

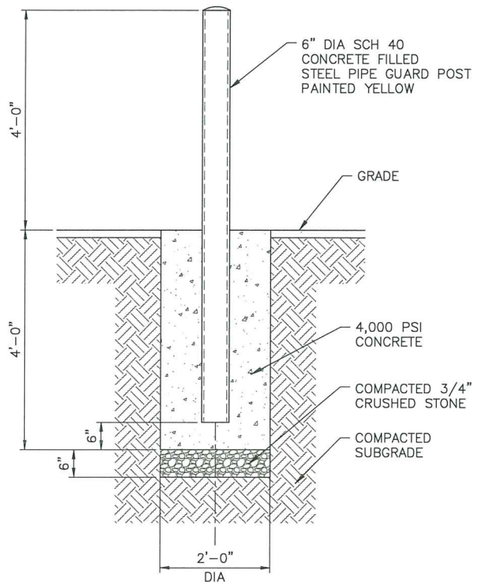
SITE ADDRESS
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE
ELEVATION &
ORIENTATION PLAN

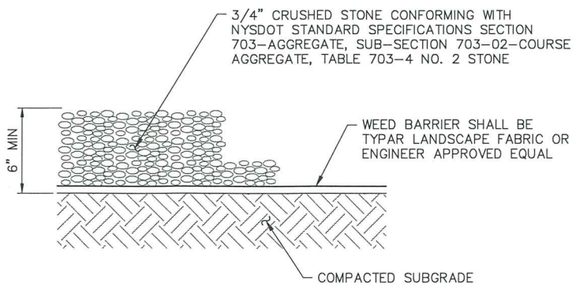
SHEET NUMBER
C-3



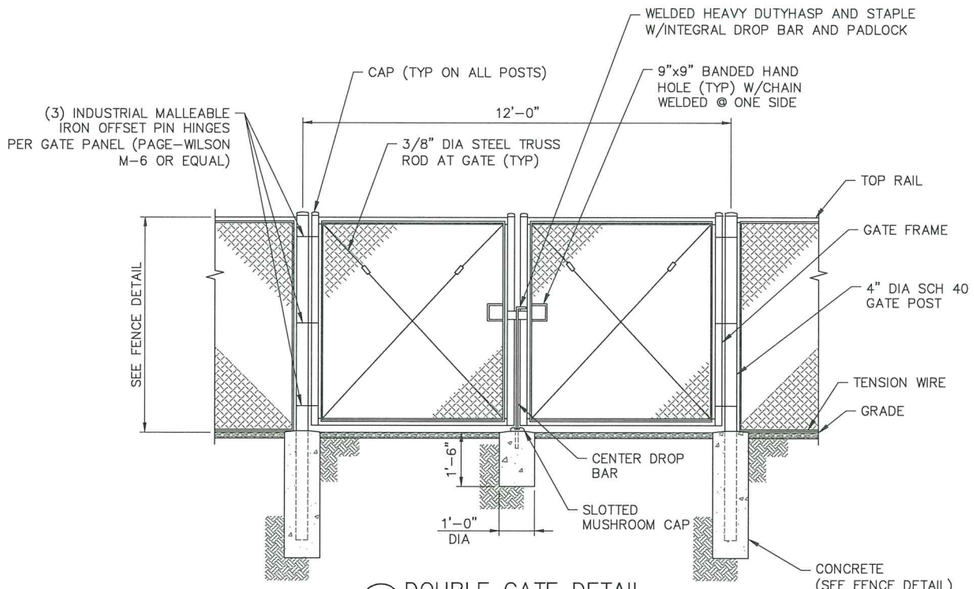
1 C-4A FENCE DETAIL
SCALE: 3/8" = 1'-0" (11x17 SIZE)
3/4" = 1'-0" (22x34 SIZE)



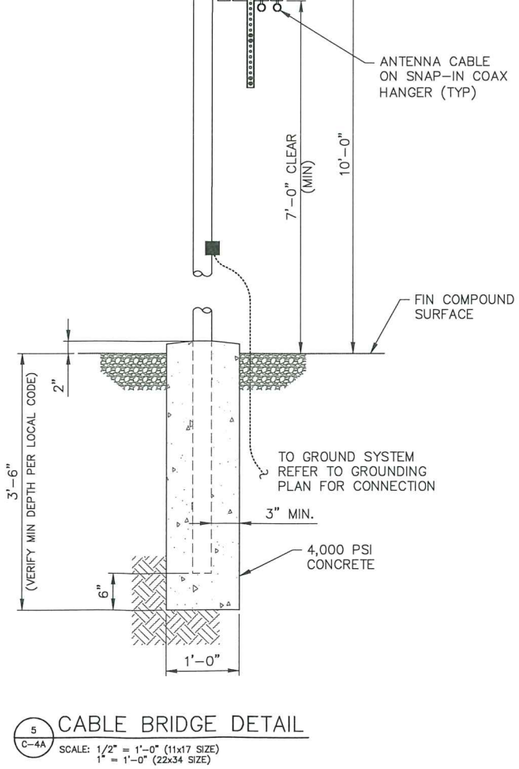
2 C-4A BOLLARD DETAIL
SCALE: 3/8" = 1'-0" (11x17 SIZE)
3/4" = 1'-0" (22x34 SIZE)



3 C-4A GRAVEL SURFACING TREATMENT
SCALE: 1/2" = 1'-0" (11x17 SIZE)
1 1/2" = 1'-0" (22x34 SIZE)



4 C-4A DOUBLE GATE DETAIL
SCALE: 1/4" = 1'-0" (11x17 SIZE)
1/2" = 1'-0" (22x34 SIZE)



5 C-4A CABLE BRIDGE DETAIL
SCALE: 1/2" = 1'-0" (11x17 SIZE)
1" = 1'-0" (22x34 SIZE)

verizon

1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

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Latham, NY 12110 www.tectonicengineering.com

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STATE OF NEW YORK
STEPHEN M. MATTIA
087507
LICENSED PROFESSIONAL ENGINEER

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0 1 2 3
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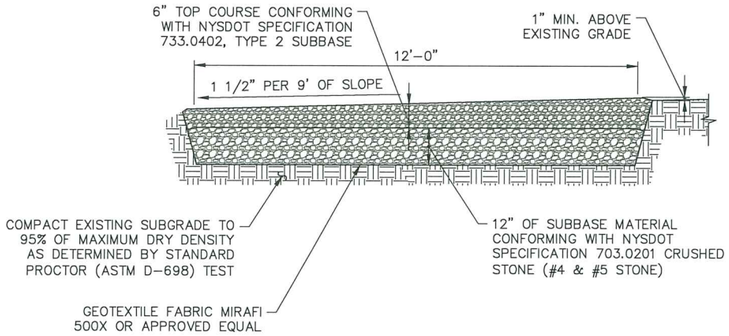
SITE INFORMATION
HEDGEWOOD
RE PN: 20161509174
LC: 432847

SITE ADDRESS
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE
SITE DETAILS

SHEET NUMBER
C-4A

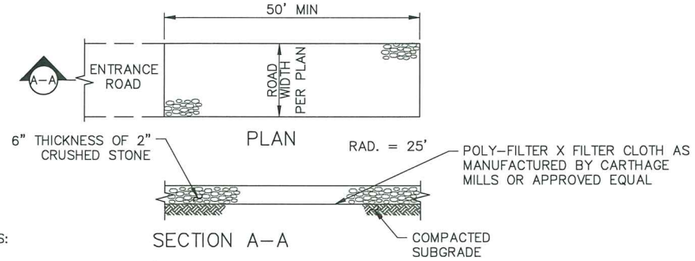


EARTH WORK SUBGRADE COMPACTION & SELECT GRANULAR FILL

1. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING & GRUBBING THE CONSTRUCTION SITE AND ROADWAY AREAS. THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL REPORT, AS PREPARED FOR THIS SITE, WHEN NECESSARY, FOR SITE WORK PREPARATION, & FOUNDATION WORK. AS A MINIMUM THE TOP 3" OF GRADE SHALL BE REMOVED, THE EXPOSED SUBGRADE COMPACTED AND GEOTEXTILE FABRIC INSTALLED AS REQUIRED FOR UNSTABLE SOIL CONDITION.
2. ALL SELECT GRANULAR FILL SHALL BE COMPACTED TO A 95% COMPACTION AT A MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR TEST (ASTM D-1557) AND WITHIN PLUS OR MINUS 3% OF OPTIMUM MOISTURE CONTENT.
3. CONTRACTOR TO ASSURE THAT EXISTING DRAINAGE PATTERNS ARE MAINTAINED.

1 / C-4B GRAVEL DRIVE CROSS SECTION
SCALE: 3/8" = 1'-0" (11x17 SIZE)
3/4" = 1'-0" (22x34 SIZE)

3 / C-4B LIGHTING PLAN
SCALE: NTS



NOTES:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET
3. THICKNESS - NOT LESS THAN SIX INCHES
4. WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. IF ACCUMULATED SOIL DOES NOT COME OFF BY WAY OF STABILIZED CONSTRUCTION ENTRANCE, THE CONTRACTOR SHALL KNOCK OFF ACCUMULATED SOIL BY MANUAL METHODS UPSLOPE OF A SILT FENCE BARRIER.
9. SEDIMENT TRAPPING - SILT FENCE BARRIER SHALL BE INSTALLED DOWN SLOPE OF CONSTRUCTION ENTRANCE TO CATCH ANY SEDIMENT THAT COULD POTENTIALLY FALL OFF OF CONSTRUCTION EQUIPMENT AND/OR VEHICLES.
10. PERIODIC INSPECTIONS AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

3 / C-4B STABILIZED CONSTRUCTION ENTRANCE
SCALE: NTS

LITHONIA LIGHTING

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — The OLFL provides years of maintenance-free general illumination for residential or commercial outdoor applications such as yards, driveways, patios, loading areas and warehouses.

CONSTRUCTION — Rugged cast aluminum, corrosion-resistant housing in bronze finish. Tempered glass lens is fully gasketed to protect LEDs and keep out moisture, dirt and bugs. 120V driver operates at 60 Hz, 0.23 amps, 25 watts. Rated for outdoor installations, -40°C minimum ambient.

OPTICS — High-performance LEDs produce 1900 lumens and maintain 70% of light output at 50,000 hours of service. (LED lifespan based on IESNA LM-80-08 results and calculated per IESNA TM-21-11 methodology.) Precision optics and reflector for maximum light output. See Lighting Facts Labels for specific fixture performances.

INSTALLATION — Mounts easily to existing junction box on wall or under eave. Adjustable head allows precise illumination.

LISTINGS — UL Listed to US and Canadian safety standards for wet locations. ENERGY STAR® certified product.

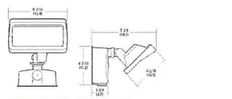
WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Outdoor General Purpose

OLFL

LED FLOODLIGHT



All dimensions are inches (centimeters) unless otherwise indicated.

ORDERING INFORMATION	All configurations of this product are considered "standard" and have short lead times.		Example: OLFL 14 PE BZ	
OLFL	14		PE	BZ
Series	Model / Color temperature (CCT)*	Voltage	Control	Finish
OLFL	14 4000K	(blank) 120V	SHUT OFF DIAL TIMER INSTALLED BY VERIZON WIRELESS CONTRACTOR	BZ Bronze

Notes
1. Nominal Correlated Color Temperature (CCT) per ANSI C78.377-2008.

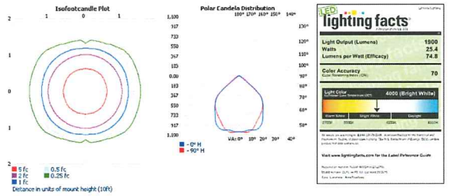
DECORATIVE INDOOR & OUTDOOR — OLFL 14

OLFL LED Floodlight

PHOTOMETRIC DIAGRAMS

To see complete photometric reports or download .ies files for this product, visit the OLFL home page on www.Lithonia.com. Tested in accordance with IESNA LM82.19 and LM250 standards. Actual wattage may differ by +/- 8% when operating between 120V +/- 10%.

OLFL 14



NOTES:

1. LIGHT SHALL BE EQUIPPED WITH A DOWN-SHIELD TO LIMIT THE LIGHT FIELD TO THE EQUIPMENT AREA ONLY.
2. LIGHT SHALL ONLY BE USED BY VERIZON WIRELESS TECHNICIANS DURING EMERGENCY MAINTENANCE OPERATIONS
3. LIGHT SHALL BE PROVIDED WITH A SHUT OFF DIAL TIMER. THIS IS A FAIL SAFE SO THE LIGHT AUTOMATICALLY SHUTS OFF WHEN THE TIME RUNS OUT IN THE EVENT THE TECHNICIAN FORGETS TO TURN THE LIGHT OFF WHEN THEY LEAVE THE SITE.
4. PHOTO TEMPERATURE SHALL BE 4000K.

LITHONIA LIGHTING — OLFL 14

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4 / C-4B PROPOSED LIGHT SPECIFICATIONS
SCALE: NTS

verizon
1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

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Latham, NY 12110 www.tectonicengineering.com

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ORIGINAL SIZE IN INCHES

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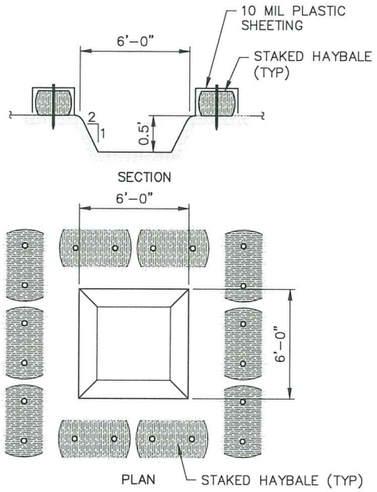
RE PN: 20161509174
LC: 432847

SITE ADDRESS
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

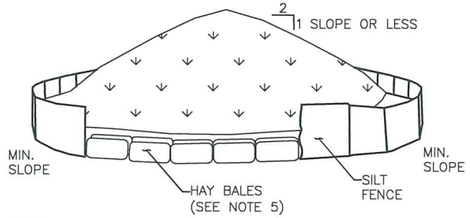
SHEET TITLE
SITE DETAILS

SHEET NUMBER
C-4B



1 C-4C TEMPORARY CONCRETE WASH

SCALE: NTS

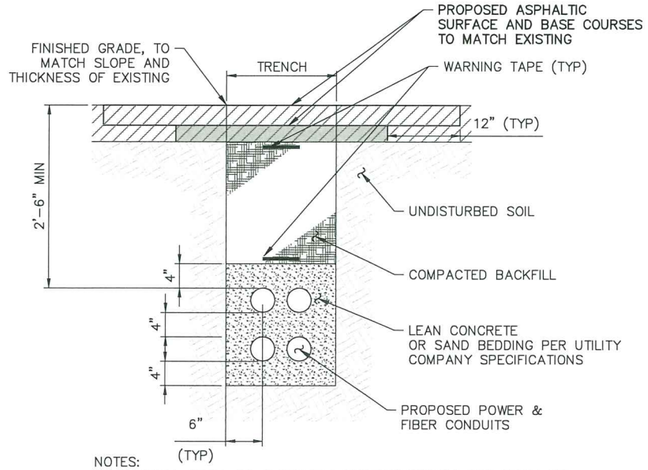


NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1V:2H.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SPECIFICATIONS FOR INSTALLATION OF SILT FENCE.
5. HAYBALES TO BE USED WHERE STOCKPILES ARE LOCATED ON PAVED AREAS.

2 C-4C TEMPORARY SOIL STOCKPILE DETAIL

SCALE: NTS

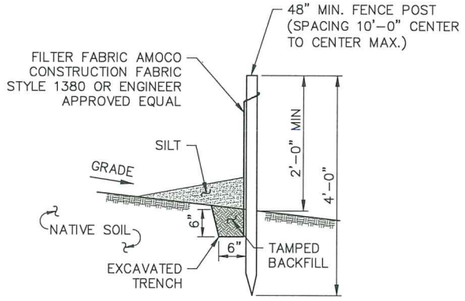


NOTES:

1. BACKFILL SHALL BE CLEAN FILL WITHOUT STONES AND SHALL BE THOROUGHLY COMPACTED IN 12" LAYERS BY TAMPING OR APPROVED EQUAL METHOD. NO BELLYING OF TRENCH SHALL BE ALLOWED.
2. SCH 40 PVC CONDUIT SHALL BE USED BELOW GRADE.
3. SCH 80 PVC CONDUIT SHALL BE USED UNDER ROADWAY.

3 C-4C MAIN ELECTRIC/FIBER UTILITY TRENCH DETAIL

SCALE: 1/2" = 1'-0" (11x17 SIZE)
1" = 1'-0" (22x34 SIZE)

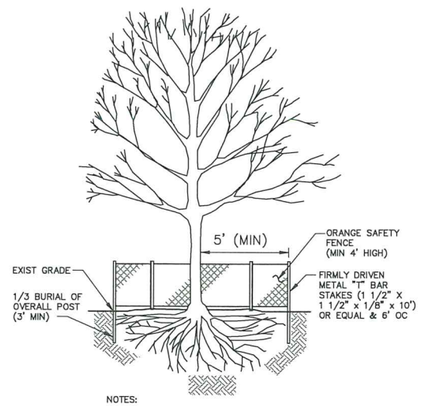


NOTES:

1. SILT FENCE SHALL BE MAINTAINED IN PLACE DURING CONSTRUCTION AND SOIL STABILIZATION PERIOD.
2. CONTRACTOR SHALL CONSTRUCT SILT FENCE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
3. EXCAVATE TRENCH 6" WIDE X 6" DEEP. BURY BOTTOM 12" OF FABRIC AND TAMP IN PLACE.
4. WHEN FENCE IS NO LONGER NEEDED, THE ACCUMULATED SILT, ALL THE POSTS AND FABRIC SHALL BE REMOVED AND TRENCH BACK FILLED WITH TOPSOIL AND SEEDED.

4 C-4C SILT FENCE DETAIL

SCALE: NTS



NOTES:

1. BARRIER PREVENTS COMPACTION OF SOIL AROUND ROOTS BY CONSTRUCTION EQUIPMENT.
2. REMOVE ALL FENCING AND STAKES IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION.
3. OPTIONAL: 2"x6" WOOD FRAMING BUILT AS SQUARE AROUND TREE.

5 C-4C TREE PROTECTION DETAIL

SCALE: NONE

verizon

1275 JOHN STREET, SUITE 100
WEST HENRIETTA, NY 14586

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Project Contact Info
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Suite 101 (800) 829-8531
Latham, NY 12110 www.tectonicengineering.com

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SITE INFORMATION

HEDGEWOOD
RE PN: 20161509174
LC: 432847

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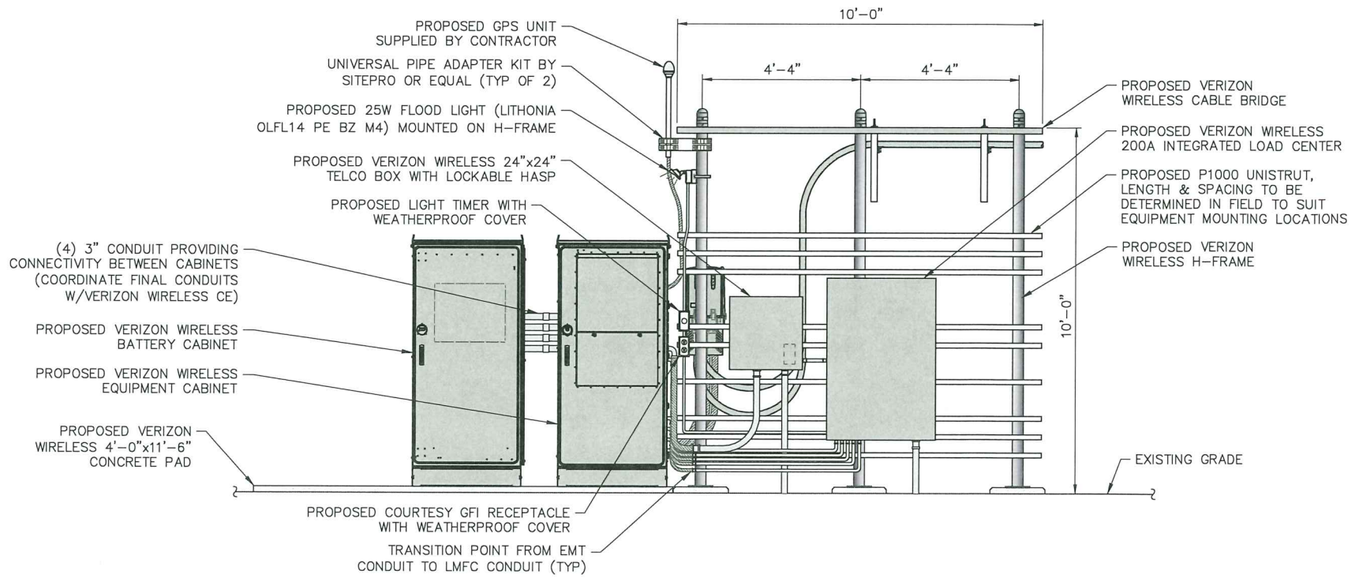
375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE

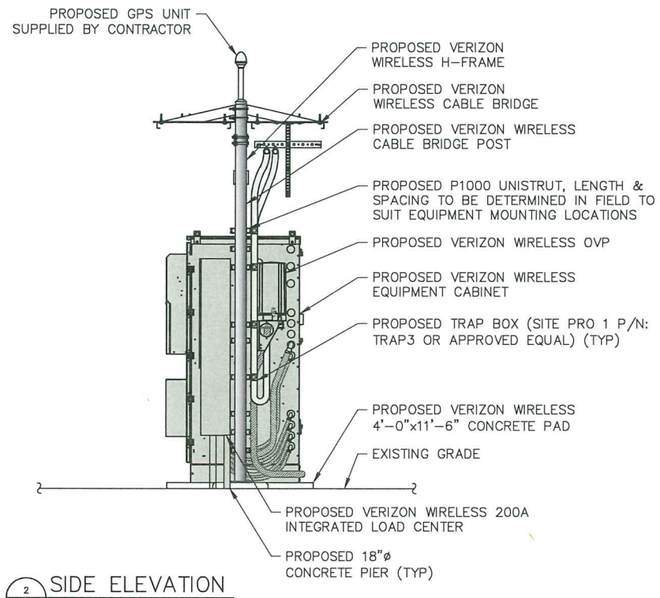
SITE DETAILS

SHEET NUMBER

C-4C



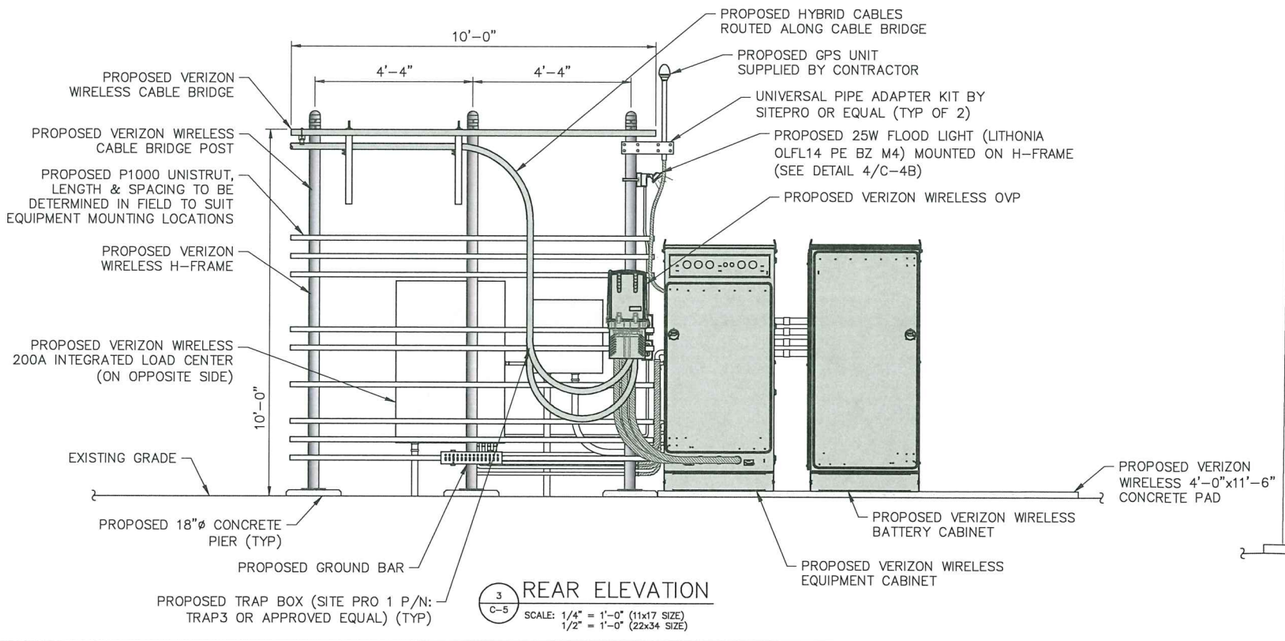
1 C-5 FRONT ELEVATION
SCALE: 1/4" = 1'-0" (11x17 SIZE)
1/2" = 1'-0" (22x34 SIZE)



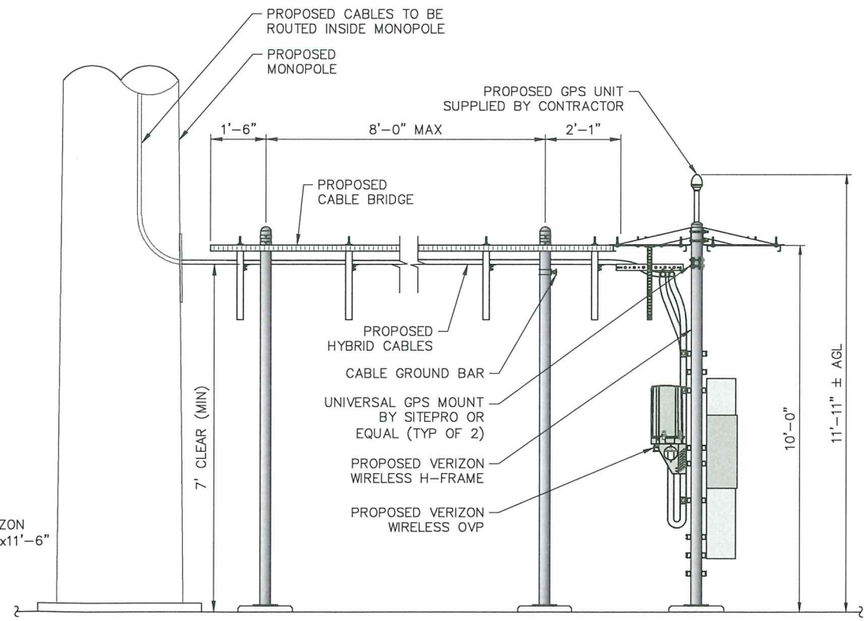
2 C-5 SIDE ELEVATION
SCALE: 1/4" = 1'-0" (11x17 SIZE)
1/2" = 1'-0" (22x34 SIZE)

LEGEND

	EMT CONDUIT
	LMFC CONDUIT



3 C-5 REAR ELEVATION
SCALE: 1/4" = 1'-0" (11x17 SIZE)
1/2" = 1'-0" (22x34 SIZE)



4 C-5 EQUIPMENT ELEVATION
SCALE: 1/4" = 1'-0" (11x17 SIZE)
1/2" = 1'-0" (22x34 SIZE)

verizon
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375 WASHINGTON AVE
CITY OF BEACON
DUTCHESS COUNTY
NY 12508

SHEET TITLE
EQUIPMENT ELEVATIONS

SHEET NUMBER
C-5

WILLIAM P. JOHNSON
RF ENGINEERING CONSULTANT
PO BOX 20263 ROCHESTER, NEW YORK 14602

October 5, 2023

Mr. John Gunn, Chair
CITY of BEACON Planning Board
One Municipal Plaza
Beacon, NY 12508

RE: Proposed Verizon Wireless Telecommunications Facility RF Site Review
375 Washington Avenue ("Hedgewood" site)

Dear Mr. Gunn,

We issued a preliminary RF engineering report for the Verizon Wireless ("Applicant") subject site on July 10, 2023. Our preliminary report contained 14 "Findings" several of which recommended responses by Applicant. Those findings are repeated here for convenience.

Preliminary Report Finding #5:

> "Base station antennae must be elevated to allow efficient RF propagation and achieve the proposed RF coverage and capacity relief to neighboring cells. Applicant has not provided evidence that (a) a lower height would not suffice to accomplish their goals or (b) a higher height was justified but was reduced to the proposed height of 120' due to aesthetic concerns. We recommend a series of propagation plots for the proposed site at lower heights in 20' intervals to show the effects on both RF coverage and traffic off-load with any additional objective evidence and analysis Applicant can provide to support the proposed height."

Preliminary Report Finding #6:

> "Deployment of cellular base stations can be affected by developing plans for neighboring sites. We recommend that Applicant provide service gap documentation for the anticipated decommissioning of the existing Mount Beacon site and discuss with the board (a) whether any neighbor site deployments are planned withing the jurisdiction, (b) if any such plans may allow height reduction of the proposed tower, and (c) where and how tall anticipated future sites will be deployed."

Preliminary Report Finding #7:

> "During public hearings and municipal site plan review, other alternate sites that may provide improved visual impact are often identified in addition to those

> Applicant identified. We recommend Applicant perform an RF analysis for any additional nearby sites identified by municipal staff and others that have potential for improved visual impact."

Preliminary Report Finding #14:

> "We anticipate that after decommissioning the existing Mount Beacon site that the proposed RF coverage will show that several coverage gap areas will remain in the area. Those gaps that remain after a proposed site is active and Mount beacon is decommissioned imply the possibility that Applicant may decide to address those areas as part of their overall wireless network. We recommend Applicant discuss this matter with the board and disclose the potential need to serve remaining gap areas and how approval of the proposed site will influence the placement and height of future sites."

On August 30, Applicant's attorney provided new RF materials ("Engineering Necessity Case - Hedgewood" dated August 10, 2023, hereinafter referred to as the "ENC#1") in response to that report. Specific reference to the findings were not provided at that time. The cover page of ENC#1 shows a new site "Beacon Bridge East." The "Mt. Beacon" site is shown as off-air as we anticipated since it is now decommissioned. In the absence of "Mount Beacon" Applicant's "Groveville" site provides low-band RF coverage to the target area. The ENC#1 document showed the "Groveville" site Forward Data Volume (FDV) plot only to March of 2023, prior to decommissioning of the "Mt. Beacon" site which, therefore, does not properly reflect the current traffic load on that site. We requested an update of the FDV plot.

Applicant provided the updated "Groveville" FDV plot and additional RF information ("Engineering Necessity Case - Hedgewood" dated October 2, 2023, hereinafter referred to as the "ENC#2) to address our request and the relevant preliminary report findings. The ENC@2 document explains the importance of the "focus" areas circled on the mid-band proposed coverage plots. See ENC#2 page 22. ENC#2 materials provide current FDV, ASEU and AvgAV "Groveville" delta sector data and more descriptive information about the "focus" areas that are driving the minimum height requirement. The "Groveville" site is north of the city and it is currently providing most of the service to the proposed target area to be eventually serviced by the "Hedgewood" site, the subject of the current permit application.

The following list of Findings are the outstanding items from our preliminary report of July 10, 2023. The ENC#2 addresses Finding #5 and, in part, Finding #14. We anticipate that Applicant will verbally address preliminary report Finding #6 and the unaddressed items in Finding #14 (plans for future sites in and near the city), and Finding #7 (alternate sites identified by the city, if any) during the October 11th hearing.

The following new Findings for this report begin numeration at #15 to avoid confusion and allow reference to Findings in each report as needed. We have not repeated some of the technical background information and therefore refer the reader to our preliminary report of July 10, 2023, for clarification if needed.

Supplemental Report #1 (i.e. this document) Findings and Discussion

15. Based on the current information in ENC#2, we note that the "Groveville" site is occasionally over threshold limits for low-band and mid-band FDV ("Forward Data Volume"). During those times users will experience poor service. Traffic off-loading is a desirable objective to avoid early capacity overload in the future.

16. Based on the current information in ENC#2, we note that low-band RF coverage from "Groveville" does not provide complete "Tier 1" (-85 dBm) service to a significant part of the city. Lack of "Tier 1" coverage can cause some in-building service to be unreliable.[1] The lack of strong "Tier 1" coverage is the primary driver for the proposed site now that "Mount Beacon" is decommissioned.

17. Based on ENC#1 and ENC#2, existing mid-band RF coverage is not complete withing the target coverage area. The proposed "Hedgewood" site, if approved, will provide substantial "Tier 1" mid-band service to the area around the site and "Tier 2" and "Tier 3" mid-band services in the areas where there is currently no mid-band service.

18. Although the "Groveville" FDV demand is not severe and both ASEU and AvgUC are withing operational limits, the decommissioning of the former "Mount Beacon" site has caused several areas where low-band traffic is now being drawn to "Groveville" causing the excess FDV. The proposed "Hedgewood" site should draw traffic from "Groveville" to lower the FDV demand. This should extend the time until additional network densification might be required.

19. The proposed "Hedgewood" site will (a) provide dominant mid-band service to the area near the proposed site that can penetrate structures and (b) provide subscriber access to higher bandwidth services in residences and on roadways near the proposed site. The combination of traffic off-load and enhanced signal strength will remedy both coverage gaps and service gaps in the vicinity of the proposed site.

20. ENC#2 analyzes selected "focus" areas to understand how height reduction of the antenna centerline (ACL) affects those areas. At ACL 116' as currently proposed the "Tier 1" in-

[1] An example is when one has to move to a certain location in a residence to make or receive wireless calls.

building coverage begins to degrade (as compared to the plot for ACL=126'). Reduction of ACL to 96' shows both loss of Tier 1 coverage and Tier 3 coverage weakening in the focus areas. We therefore conclude that ACL=116' is at or near the minimum necessary height to relieve coverage and service gaps in the coverage area.

21. Finally we agree that the focus areas identified by Applicant on the propagation plots in ENC#2 are valid areas of concern where in-building and in-vehicle roadway service is required based on the areal photographs of those areas.

Conclusion

The information in this report concerns the RF engineering issues related to the proposed project to assist the board in weighing the alternatives and planning for the future of the community. Engineering design choices implicate aesthetic and legal issues as well. However, this report must not be relied upon for any legal advice or direction. Legal advice about action on these issues must be obtained from the board's counsel.

Thank you for the continued opportunity to assist the City of Beacon. Please feel free to contact me if there are additional questions or other concerns at this time.

Very truly yours,

William P. Johnson
RF Engineering Consultant

Young / Sommer LLC

ATTORNEYS AT LAW

EXECUTIVE WOODS, FIVE PALISADES DRIVE, ALBANY, NY 12205
Phone: 518-438-9907 • Fax: 518-438-9914

www.youngsommer.com

RECEIVED 8/30/23 NP

Writer's Telephone Extension: 258
solson@youngsommer.com

August 29, 2023

Via E-mail and Federal Express
Planning Board
City of Beacon
One Municipal Plaza
Suite One
Beacon NY 12508

Re: Application of Verizon Wireless for a Personal Wireless Service Facility at 375 Washington Avenue (SBL 6055-04-+713005)

Dear Members of the Planning Board:

Enclosed are fifteen (15) copies of the supplemental Engineering Necessity Case prepared by Verizon Wireless' RF Engineer in response to Mr. Johnson's July 10, 2023 letter report for the above-referenced application.

Please place this matter on the agenda for the September 12, 2023 Planning Board meeting.

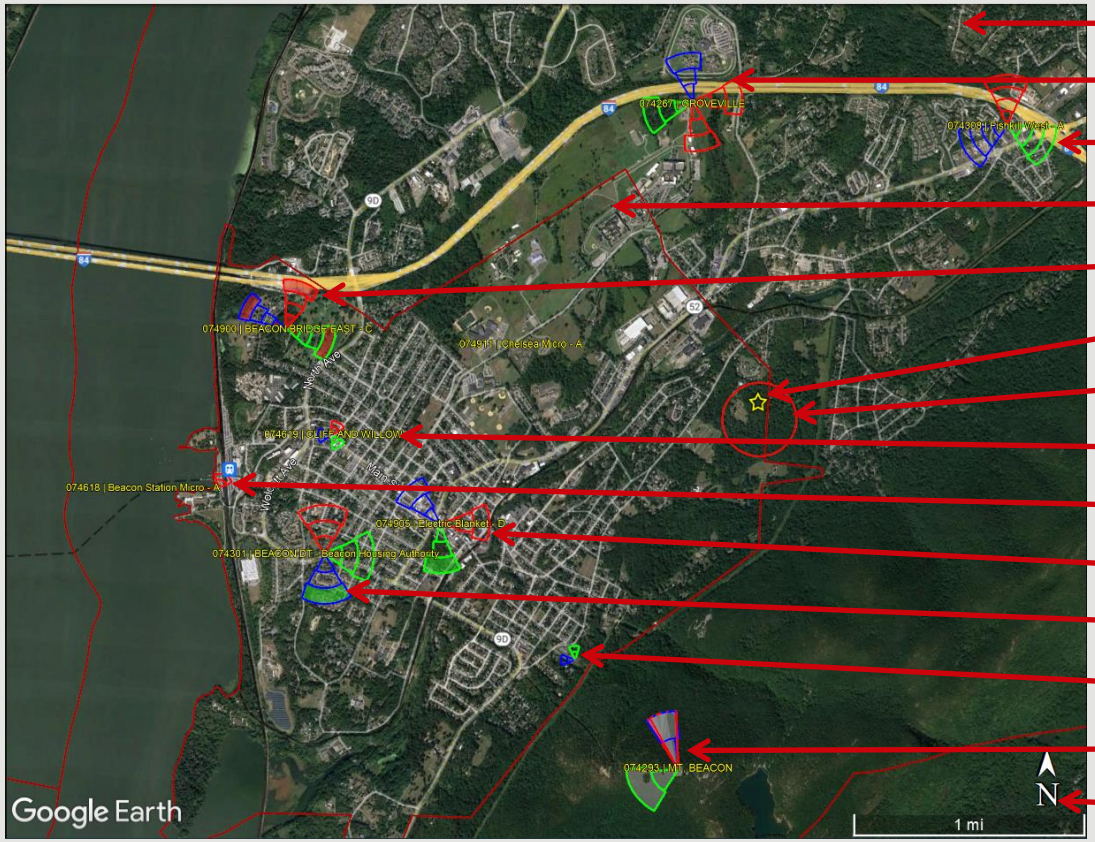
Very truly yours,

Scott P. Olson

Encl.

Verizon Wireless Communications Facility

Engineering Necessity Case – "Hedgewood"



- Town of FISHKILL
- Groveville Site
- FISHKILL WEST Site
- City of Beacon
- Beacon Bridge East Site
- Project location (Hedgewood)
- Hedgewood Search Area
- CLIFF AND WILLOW Site
- Beacon Station Micro Site
- Electric Blanket Site
- BEACON DT Site
- Howland Micro Site
- Mt. Beacon Site (off-air)
- Town of Philipstown

Prepared by: Brendan Hennessy

Project: The project is the installation and operation of a new wireless telecommunications tower facility site in the City of Beacon(the "Project Facility").

verizon

Introduction

The purpose of this subsequent analysis is to summarize and communicate the technical radio frequency (RF) information used in the justification of this new site.

Coverage and/or capacity deficiencies are the two main drivers that prompt the need for a new wireless communications facility/site. All sites provide a mixture of both capacity and coverage for the benefit of the end user.

Coverage can be defined as the existence of signal of usable strength and quality in an area, including but not limited to in-vehicles or in-buildings.

The need for improved coverage is identified by RF Engineers that are responsible for developing and maintaining the network. RF Engineers utilize both theoretical and empirical data sets (propagation maps and real world coverage measurements). Historically, coverage improvements have been the primary justification of new sites.

Capacity can be defined as the amount of traffic (voice and data) a given site can process before significant performance degradation occurs.

When traffic volume exceeds the capacity limits of a site serving a given area, network reliability and user experience degrades. Ultimately this prevents customers from making/receiving calls, applications cease functioning, internet connections time out and data speeds fail. This critical condition is more important than just a simple nuisance for some users. Degradation of network reliability and user experience can affect emergency responders and to persons in a real emergency situation can literally mean life or death.

Project Need Overview

The targeted service improvement area, located in the northeastern portion of the City of Beacon is currently served by one site. This site is overloaded requiring capacity relief. Additionally the target area is subject to significant terrain challenges for RF (signal) propagation. This terrain combined with area foliage and long distance prevent effective propagation of Verizon's RF signals into this area compounding the capacity issue with areas of variable coverage creating significant gaps in coverage.

The serving site is **GROVEVILLE,** located in the Town of Fishkill, is approximately one and a half miles north (of the project location) situated on an existing tower located off **Kirby Town Road.** While this site provides weak/variable coverage in portions of the target area, it does so from a terrain and distance challenged position making the site not capable of efficiently or effectively providing adequate coverage or capacity.

Available (mid band AWS) carriers at this and other area sites are not capable of effectively serving/offloading the project area due to inherent propagation losses from distance, challenging terrain and in building coverage losses negatively impacting mid band coverage and capacity offload capabilities. There are other Verizon sites in this general area but due to distance and terrain they also do not provide any significant overlapping coverage in the area in question that could allow for increased capacity and improved coverage from other sources.

The primary objectives for this project are to increase capacity and improve coverage throughout the northeastern portion of the City of Beacon , more specifically portions of Washington Ave, Route 52, Liberty St, Old Town Road, Greenwood Dr, Hiddenbrook Dr, Mountain Ln, as well neighboring residential and commercial areas along and near these roads. In order to offload capacity from GROVEVILLE site, a new dominant server must be created. This new dominant coverage will effectively offload the existing overloaded site as well as provide improved coverage where significant gaps exist today.

Following the search for co-locatable structures to resolve the aforementioned challenges and finding none available, Verizon proposes to attach the necessary antenna(s) to a new 120' monopole tower to be located at 375 Washington Avenue, City of Beacon, NY 12508. Verizon's antennas will utilize 116' for the ACL (Antenna Center Line) with a top of antenna height of 120'. This solution will provide the necessary coverage and capacity improvements needed.

Wireless LTE (Voice and Data) Growth

Wireless smart city solutions are being used to track available parking and minimize pollution and wasted time.

These same solutions are being used to track pedestrian and bike traffic to help planning and minimize accidents.

Smart, wireless connected lighting enables cities to control lighting remotely, saving energy and reducing energy costs by 20%.

4G technology is utilized to track and plan vehicle deliveries to minimize travel, maximize efficiency, and minimize carbon footprint.

4G technology is also used to monitor building power usage down to the circuit level remotely, preventing energy waste and supporting predictive maintenance on machines and equipment.

Wireless sensors placed in shipments are being used to track temperature-sensitive medications, equipment, and food. This is important for preventing the spread of food-borne diseases that kill 3,000 Americans each year.

Source: Verizon Innovation Center, February. 2018

Wireless is a critical component in schools and for today's students.

20,000 learning apps are available for iPads. 72% of iTunes top selling educational apps are designed for preschoolers and elementary students.

600+ school districts replaced text books with tablets in classrooms.

77% of parents think tablets are beneficial to kids.

74% of school administrators feel digital content increases student engagement.

70% of teens use cellphones to help with homework.

Source: CTIA's Infographics Today's Wireless Family, October, 2017

The average North American smartphone user will consume 48 GB of data per month in 2023, up from just 5.2 GB per month in 2016 and 7.1 GB per month in 2017 .[1]

Of American homes are wireless only.[2]

In North America, the average household has 13 connected devices with smartphones outnumbering tablets 6 to 1.[3]

1. Ericsson Mobility Report, November 2017
2. CDC's 2018 Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January-July, 2018
3. IHS Market Connected Device Market Monitor: Q1 2016 , June 7, 2016

A wireless network is like a highway system…

US, mobile data traffic was 1.3 Exabytes per month in 2016, the equivalent of 334 million DVDs each month or 3,687 million text messages each second **according to** Cisco VNI Mobile Forecast Highlights, 2016-2021,Feb 2017

verizon

Wireless facilities and property values.

Cell service in and around the home has emerged as a critical factor in home-buying decisions.

National studies demonstrate that most home buyers value good cell service over many other factors including the proximity of schools when purchasing a home.

75% More than 75% of prospective home buyers said a good cellular connection was important to them.[1]

83% The same study showed that 83% of Millennials (those born between 1982 and 2004) said cell service was the most important fact in purchasing a home.

90% 90% of U.S. households use wireless service. Citizens need access to 911 and reverse 911 and wireless may be their only connection.[2]

1. RootMetrics/Money, The Surprising Thing Home Buyers Care About More than Schools, June 2, 2015
2. CTIA, June 2015

With over 80% of 9-1-1 calls now coming from cell phones…[1]

240 million 911 calls are made annually. In many areas, 80% or more are from wireless devices. [1]

1. National Emergency Number Association, Enhancing 9-1-1 Operations With Automated Abandoned Callbac & Location Accuracy (Motorola Solutions) (August 23, 2018)

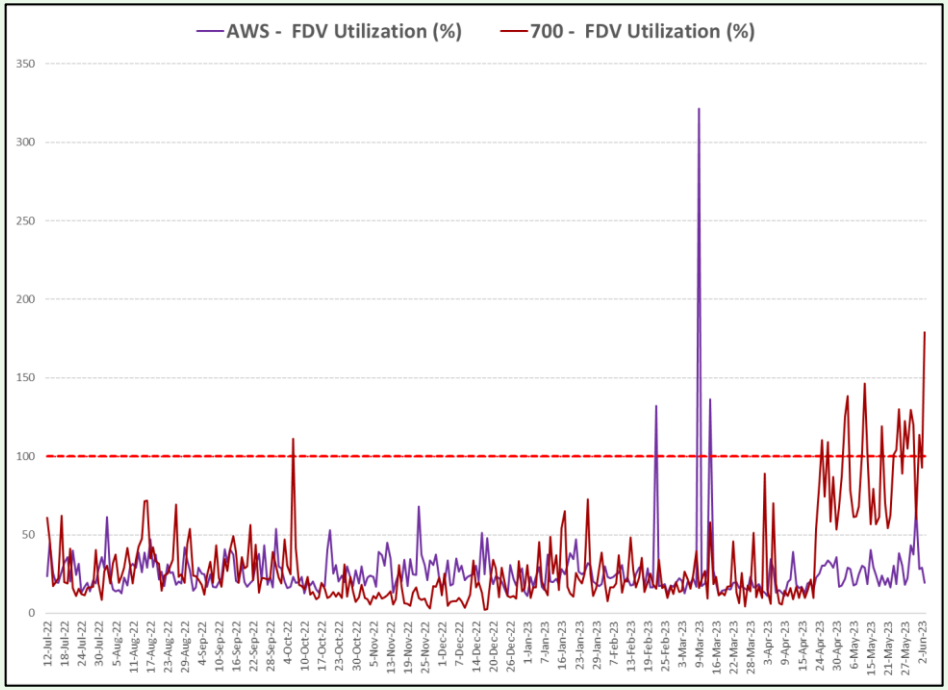
Explanation of Wireless Capacity

Capacity in this analysis is evaluated with up to three metrics further explained below. These metrics assist in determining actual usage for a given site as well as are used to project when a site is expected to run out of capacity (i.e. reach a point of exhaustion where it can no longer process the volume of voice and data requested by local wireless devices, thus no longer providing adequate service).

- Forward Data Volume ("**FDV**"), is a measurement of usage (data throughput) on a particular site over a given period of time.
- Average Schedule Eligible User ("**ASEU**"), is a measurement of the loading of the control channels and systems of a given site.
- Average Active Connections ("**AvgAC**") is a measurement of the number of devices actively connected to a site in any given time slot.

Verizon Wireless uses proprietary algorithms developed by a task force of engineers and computer programmers to monitor each site in the network and accurately project and identify when sites will approach their capacity limits. Using a rolling two-year window for projected exhaustion dates allows enough time, in most cases, to develop and activate a new site. It is critical that these capacity approaching sectors are identified early and the process gets started and completed in time for new solutions (sites) to be on air before network issues impact the customers.

Capacity Utilization
FDV (GROVEVILLE Delta)



Summary: This graph shows FDV (**F**orward **D**ata **V**olume) which is a measurement of the customer data usage that this sector currently serves. As this limit is approached, data rates slow to unacceptable levels, potentially causing unreliable service for Verizon Wireless customers.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Delta** sector of the **GROVEVILLE** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **GROVEVILLE Delta** sector shown above has exceeded its capability of supporting FDV requirements as shown by the purple line exceeding the max utilization threshold (red dashed line). FDV is one of up to three metrics used in this presentation to evaluate capacity capability in this area. This graph also reveals the inability of the AWS carrier (dark red line) to provide the necessary capacity offload for the low band carrier due to differences in RF propagation characteristics. The solution is network densification.

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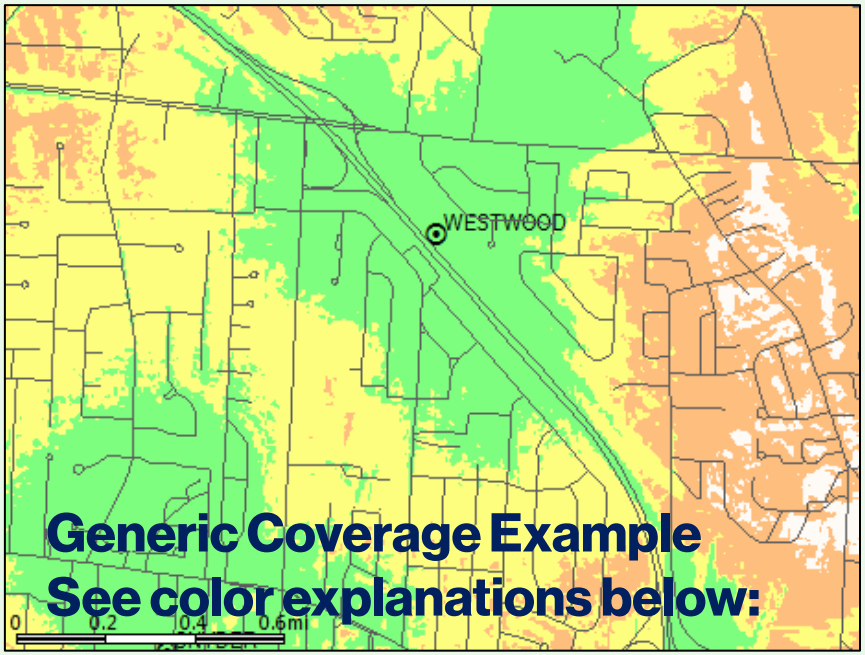
Explanation of Wireless Coverage



Coverage is best shown via coverage maps. RF engineers use computer simulation tools that take into account terrain, vegetation, building types, and site specifics to model the RF environment. This model is used to simulate the real world network and assist engineers to evaluate the impact of a proposed site (along with industry experience and other tools).

Many Verizon Wireless sites provide 3G CDMA at 850 MHz and 4G LTE at 700 MHz. As capacity requirements increase, higher frequency PCS (1900 MHz) and AWS (2100 MHz) carriers are added. In some mountaintop situations the mid band (higher frequency) AWS and PCS carriers are not fully effective due to excessive distance from the user population.

Coverage provided by a given site is affected by the frequencies used. Lower frequencies propagate further distances, and are less attenuated by clutter than higher frequencies. To provide similar coverage levels at higher frequencies, a denser network of sites is required (network densification).

Note the affect of clutter on the predicted coverage footprint above

**Dark Green >/= -75dBm RSRP, typically serves dense urban areas as well as areas of substantial construction (colleges, hospitals, dense multi family etc.)
Green >/= -85dBm RSRP, typically serves suburban single family residential and light commercial buildings
Yellow >/= -95dBm RSRP, typically serves most rural/suburban-residential and in car applications
Orange >/= -105dBm RSRP, rural highway coverage, subject to variable conditions including fading and seasonality gaps
White = <-105dBm RSRP, variable to no reliable coverage gap area

More detailed, site-specific coverage slides are later in the presentation
*Signal strength requirements vary as dictated by specific market conditions
** Not displayed in example map, layer not used in all site justifications

verizon

Explanation of this Search Area

Hedgewood Search Area

A **Search Area** is the geographical area within which a new site is targeted to solve a coverage or capacity deficiency. Three of the factors taken into consideration when defining a search area are topography, user density, and the existing network.

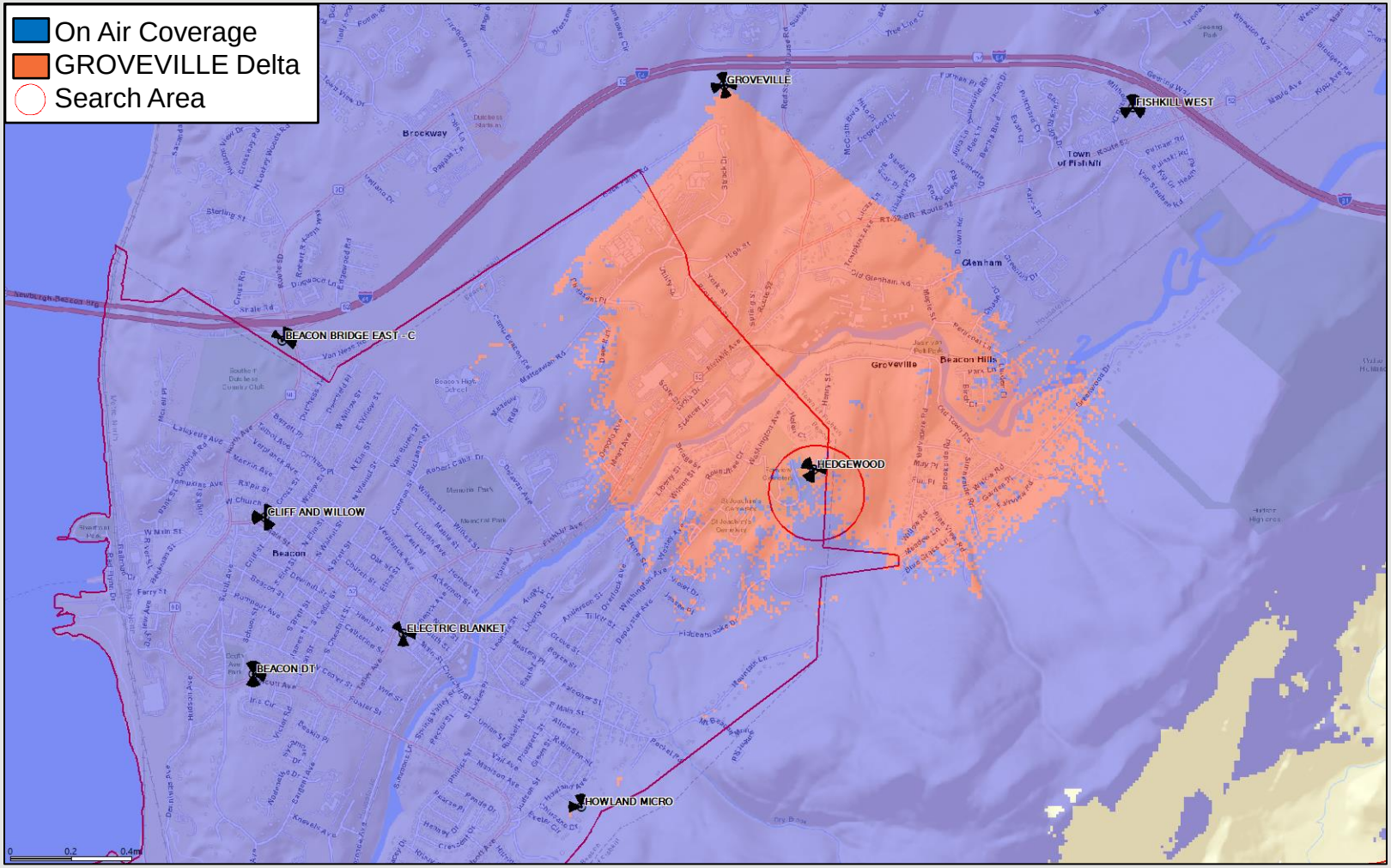
- **Topography** must be considered to minimize the obstacles between the proposed site and the target coverage area. For example, a site at the bottom of a ridge will not be able to cover the other side from a certain height.
- In general, the farther from a site the **User Population** is, the weaker the RF conditions are and the worse their experience is likely to be. These distant users also have an increased impact on the serving site's capacity. In the case of a multi sector site, centralized proximity is essential to allow users to be evenly distributed and allow efficient utilization of the site's resources.
- The existing **Network Conditions** also guide the design of a new site. Sites placed too close together create interference due to overlap and are an inefficient use of resources. Sites that are too tall or not properly integrated with existing sites cause interference and degrade service for existing users.
- Existing co-locatable structures inside the search area as well as within a reasonable distance of the search area are submitted by site acquisition and reviewed by RF Engineering. If possible, RF will make use of existing or nearby structures before proposing to build new towers.

To resolve the coverage and capacity deficiencies previously detailed, Verizon Wireless is seeking to add one new cell facility within this area to improve wireless service capacity and coverage. By offloading traffic from **GROVEVILLE Delta** with the proposed site, adequate and reliable service will be restored. The new **Hedgewood** site will provide dominant and dedicated signal to the identified portions of the City of Beacon. This helps to improve not only the **Hedgewood** project area but will also indirectly result with significant improvements in the northeastern portion of the City of Beacon.

verizon

Existing 700MHz Best Server -105dBm RSRP

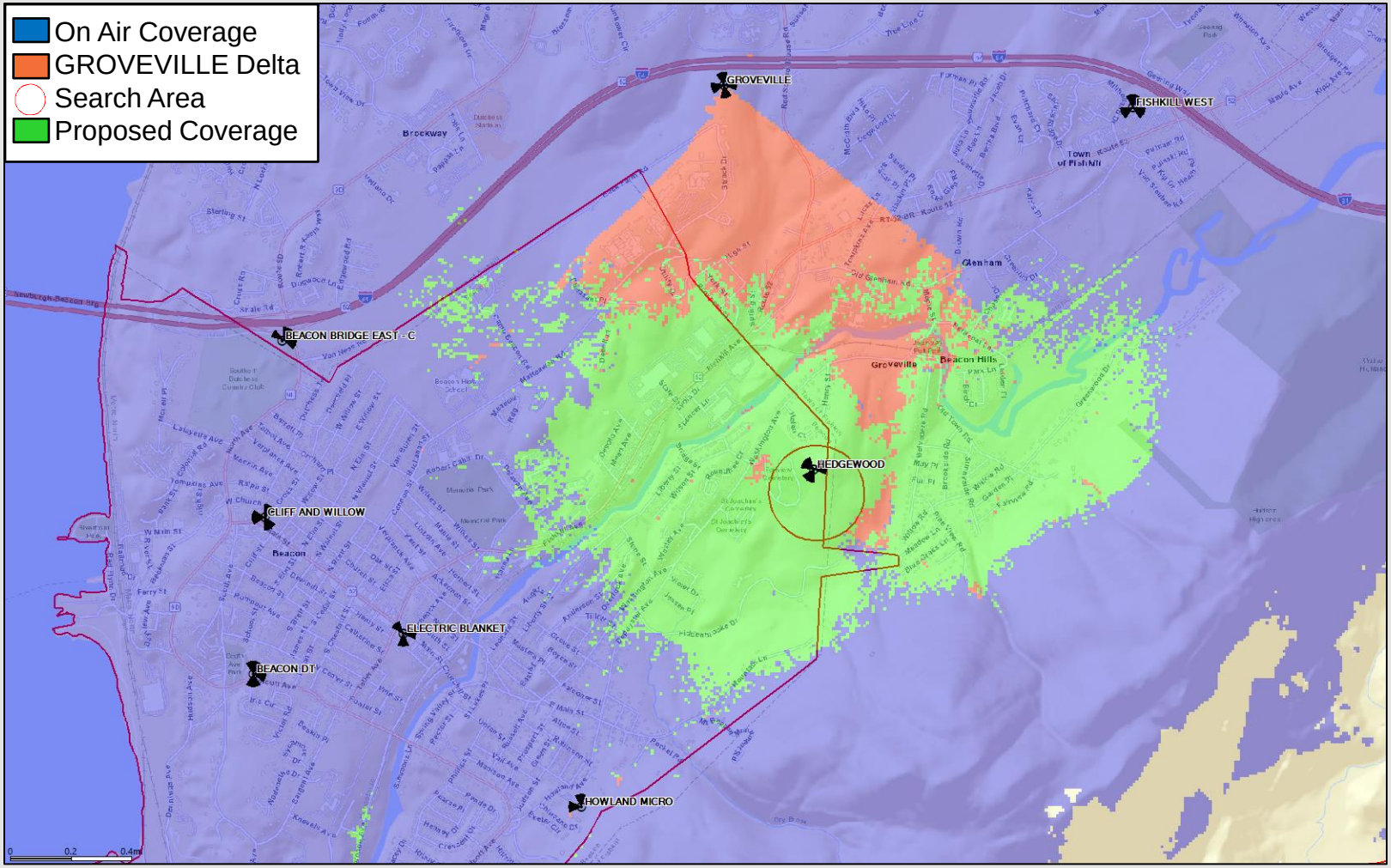
Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.



The map above represents existing low band coverage from existing sites, with the sites in need of capacity offload detailed in the legend above. Blue coverage is from other on air sites.

Proposed 700MHz Best Server -105dBm RSRP

Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.



The map above adds the low band footprint of the proposed Hedgewood site in green. The green best server footprint provides improved coverage and capacity throughout the identified significant gap area. This will help to resolve the coverage and capacity issues impacting the GROVEVILLE Delta sector.

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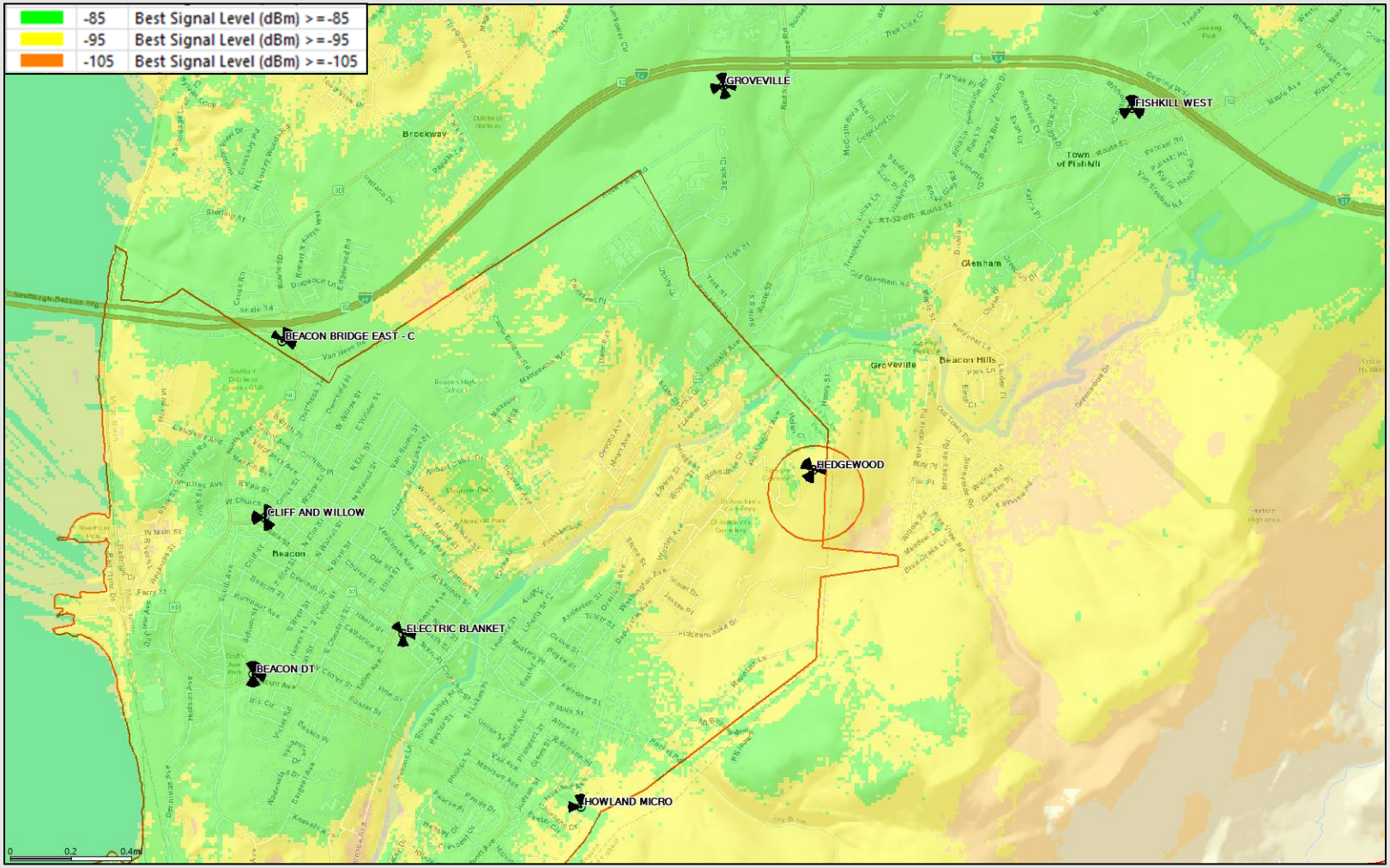
Existing 700MHz Coverage

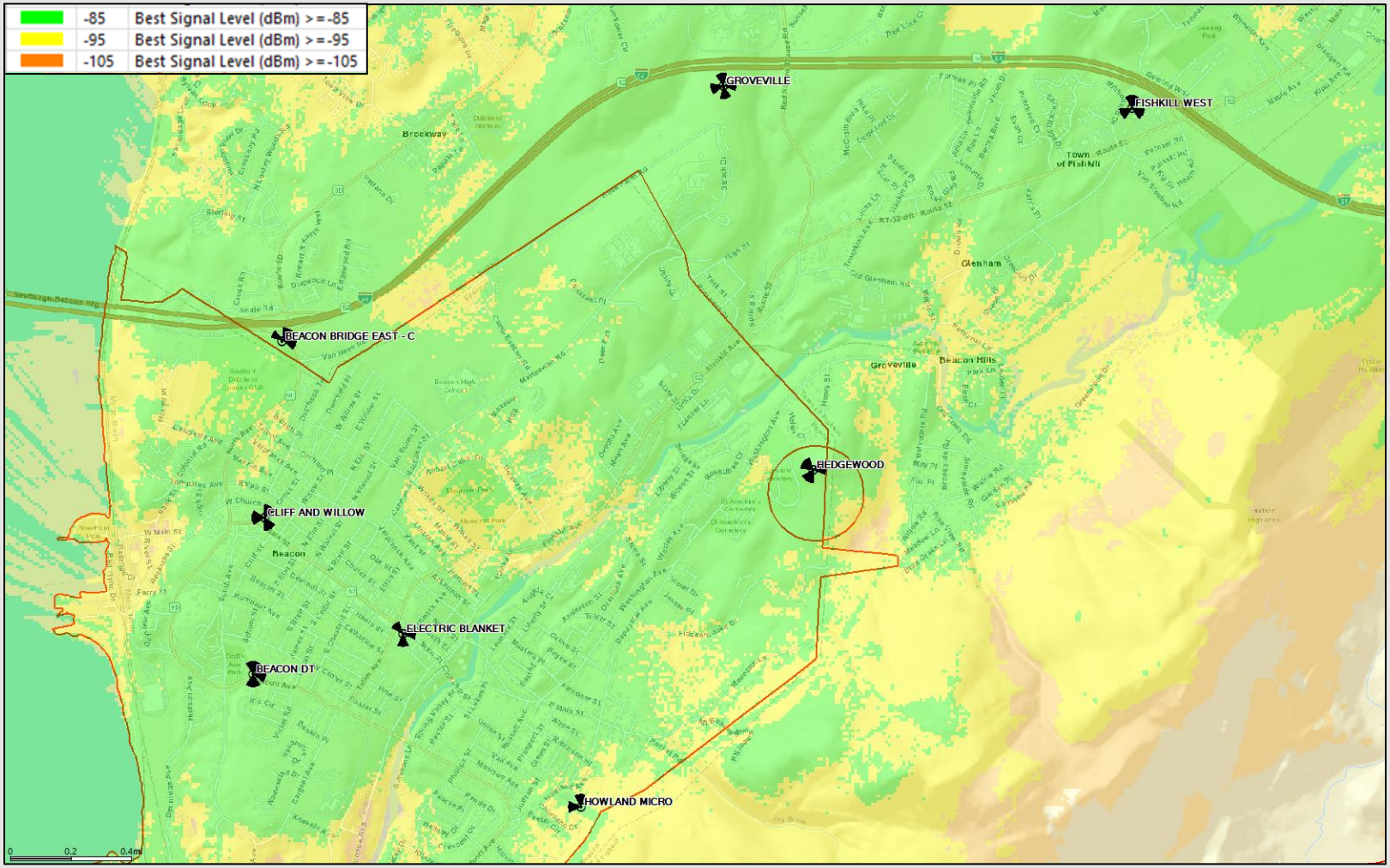
This coverage map shows how weak the RF conditions are in and around the Hedgewood site area.
Refer to slide 7 for further explanation of these color thresholds



The map above represents existing low band signal strength coverage from existing sites.

Proposed 700MHz Coverage

This coverage map shows how improved the RF conditions will be in and around the Hedgewood site area.
Refer to slide 7 for further explanation of these color thresholds

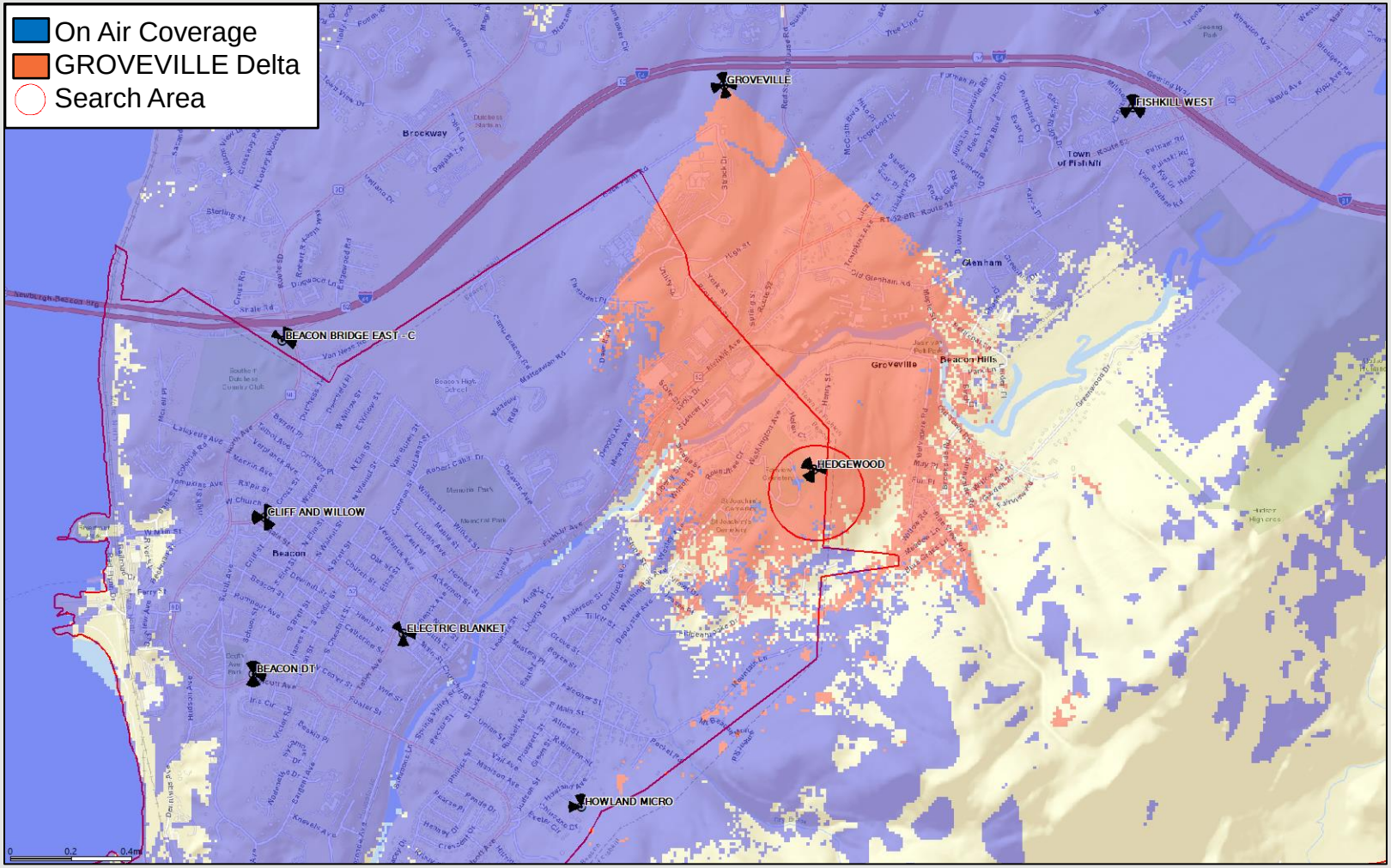


The map above adds the low band footprint of the proposed **Hedgewood** site. The significantly improved signal strength corresponds to improved coverage and capacity throughout the identified significant gap area. This will help to resolve the coverage and capacity issues impacting the GROVEVILLE Delta sector.

verizon

Existing 2100MHz Best Server -105dBm RSRP

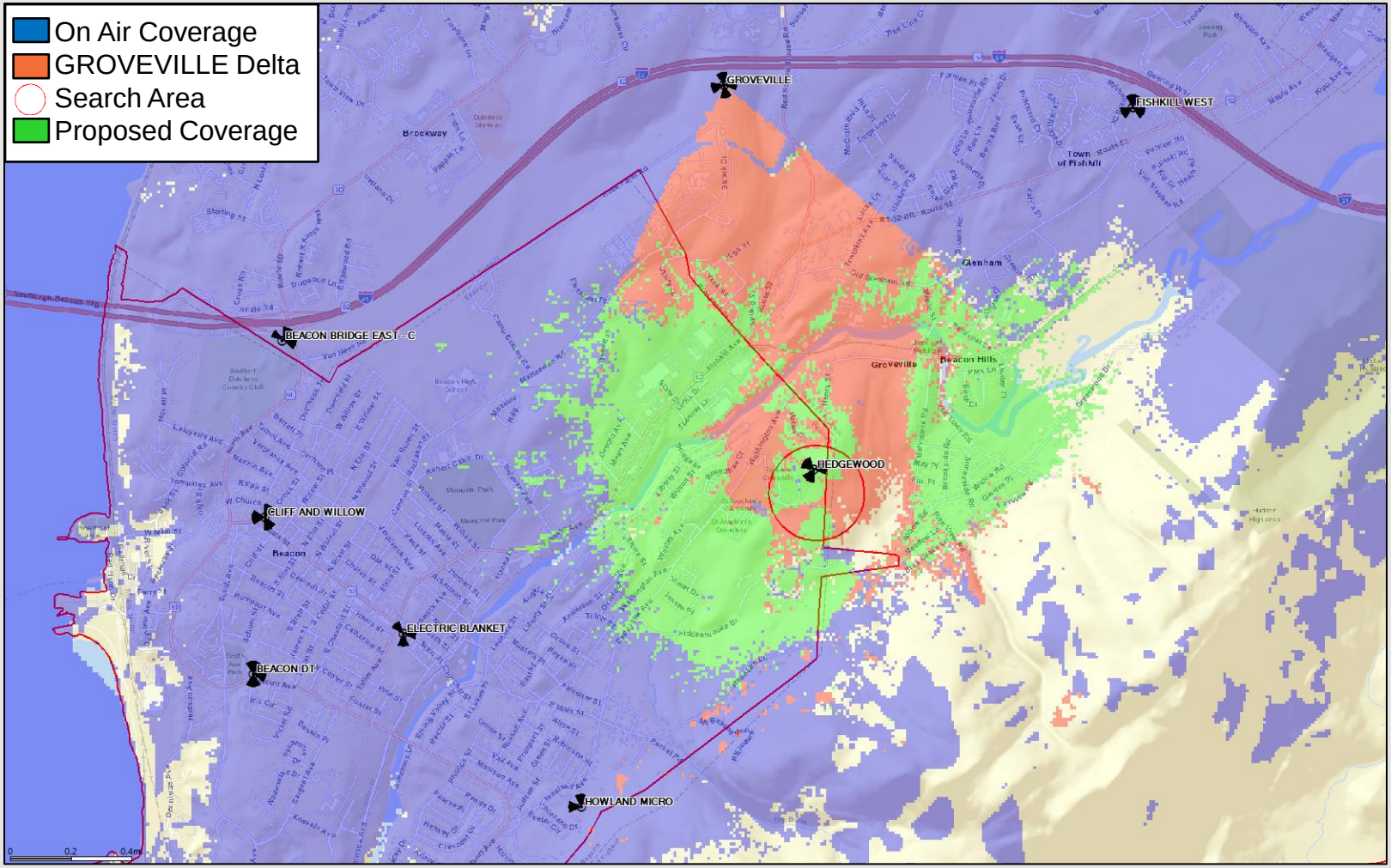
Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.



The map above represents mid band coverage from existing sites, with the sites in need of capacity offload detailed in the legend above. Blue coverage is from other on air sites.

Proposed 2100MHz Best Server -105dBm RSRP

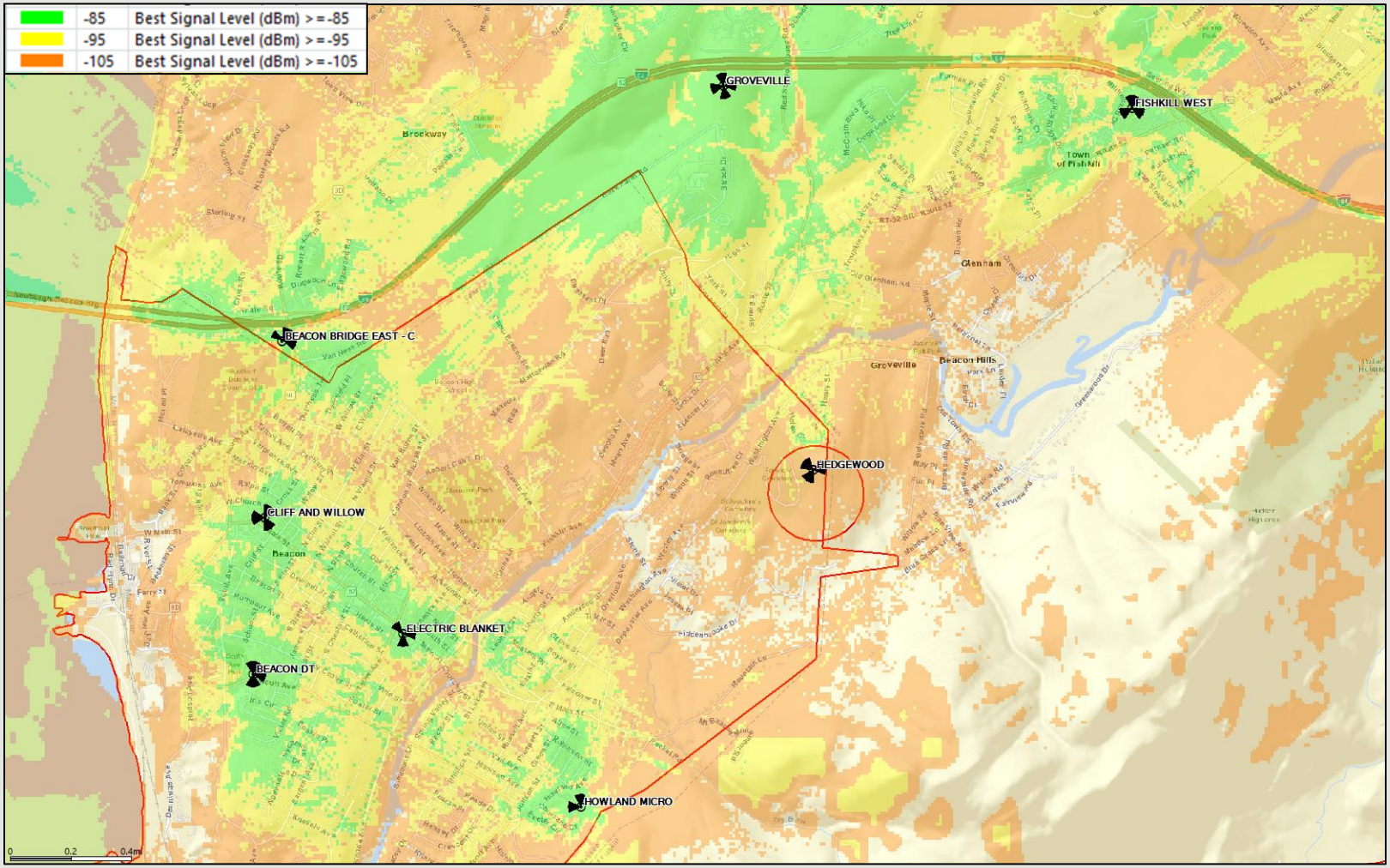
Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.



The map above adds the mid band footprint of the proposed Hedgewood site in green. The green best server footprint provides improved coverage and capacity throughout the identified significant gap area.

Existing 2100MHz Coverage

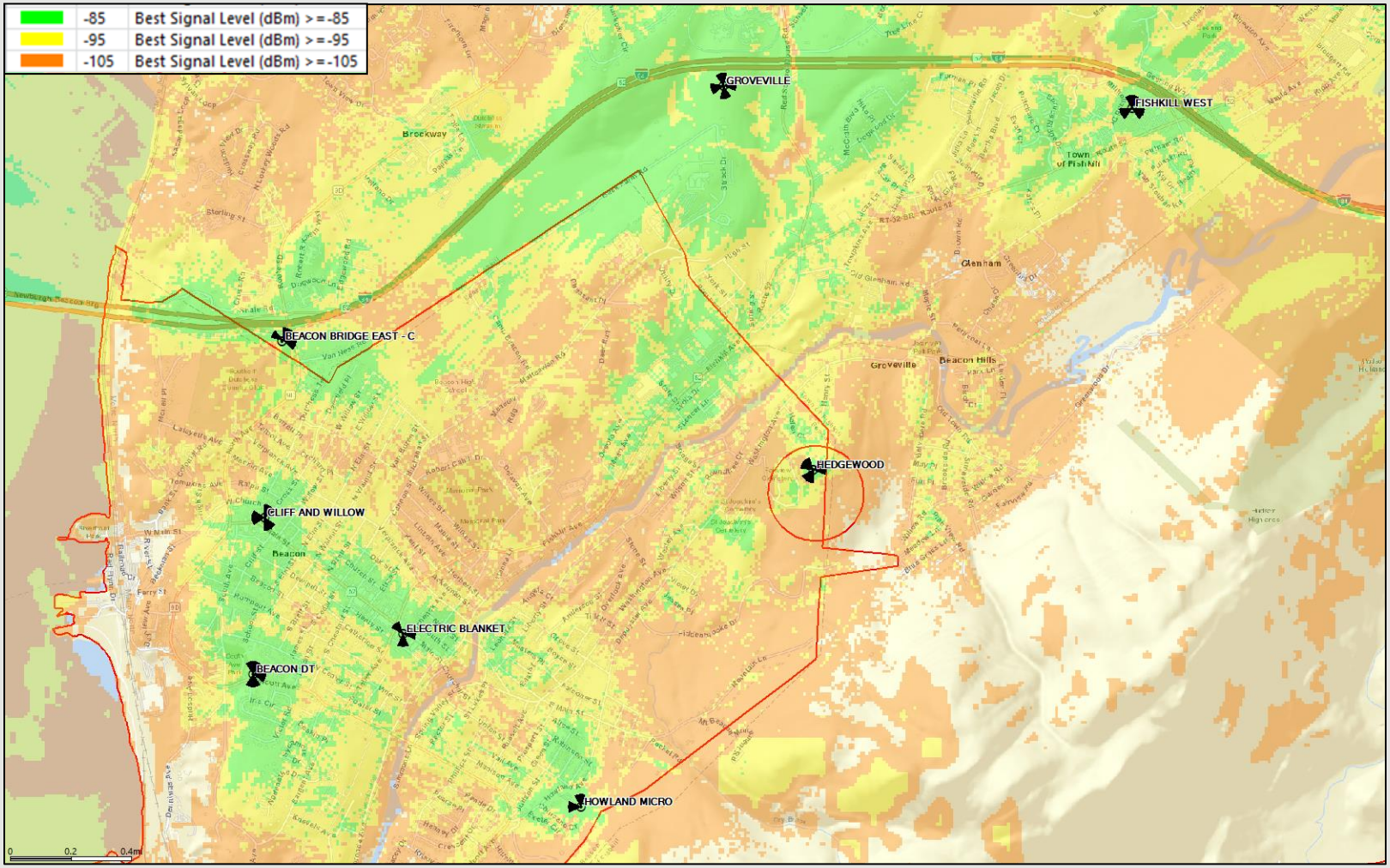
This coverage map shows the RF conditions in and around the Hedgewood site area.
Refer to slide 7 for further explanation of these color thresholds



The map above represents mid band coverage from existing sites. This 2100MHz signal is very weak throughout the project area. Additional mid band network densification is required to resolve these conditions.

Proposed 2100MHz Coverage

This coverage map shows how improved the RF conditions will be in and around the Hedgewood site area.
Refer to slide 7 for further explanation of these color thresholds



The map above adds the mid band footprint of the proposed **Hedgewood** site. The improved signal strength corresponds to improved coverage and capacity throughout the identified significant gap area.

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Midband coverage plots at alternate heights (Minimum Height Justification)

Mid band coverage is critical in the effort to balance capacity (utilization) and allow for “contained” low band sites. If adequate and reliable signal strength from mid band is not present the mobile will attach to low band only. The current low band frequencies, however, due to limits in bandwidth represent only approximately seven percent (7%) of the available bandwidth licenses by Verizon Wireless, the remaining ninety three percent (93%) of bandwidth is available from the mid-band frequencies. Too many users in this RF condition will overburden low band and cause a site to become capacity exhausted requiring additional network densification. Network densification is achieved by adding mid-band frequencies at a new dominant server/site. Areas of higher utilization are of particular importance in evaluating mid band height needs. Mid band spectrum on macro sites has proven to be a very capable resource and also includes C-Band. These frequencies roughly in the 1.9-3.8GHz range are needed throughout the Hedgewood project area to relieve existing network capacity issues.

Current wireless networks continue to rely on “line of sight” technology to provide service to existing customers, the critical component necessary to service customers is establishing the proper height of the antennas to ensure that the antennas can see the service areas. As relative antenna height is increased or decreased, area (RF) clutter is either overcome allowing a site to propagate as needed or becomes obstructed causing gaps in service. The following slides display existing on-air mid band coverage + Hedgewood Site at identified Antenna centerline (ACL).

Criterion for the 'focus' areas

There are always different types of areas around a site.

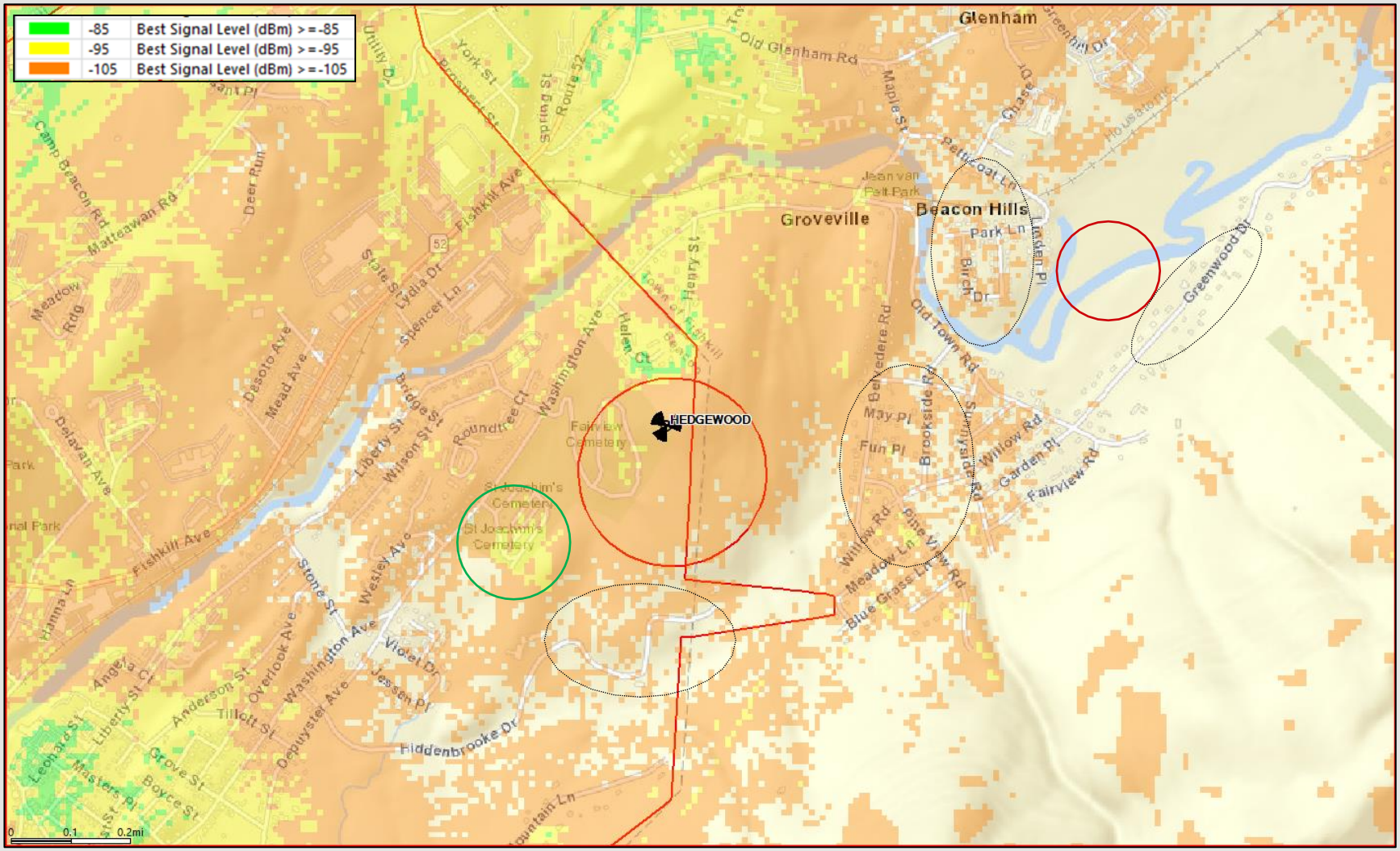
1. Areas with no potential traffic/customer are not considered in minimum height analysis even if Mid-band Coverage fades or is completely lost with the tower height reduction. For example, area in red circle on accompanying propagation maps.

2. Potential traffic (residential/commercial areas and roads) areas, which are close to the site are also not considered as reduction in tower height does not affect these areas significantly. For example, area in green circle on the following propagations.

3. Potential traffic areas, which are not very close to the project location or are located in a challenging terrain and there will be dramatic changes in mid-band coverage when the tower height is altered, are only considered in minimum height evaluation. All such areas are shown with the help of black circles on the following propagations.

Height Justification (Mid-Band Coverage 2100MHz)

Zoomed in + increased signal strength granularity



The map above represents mid band coverage from existing sites. Areas encircled are focus areas for purposes of establishing minimum height justification.

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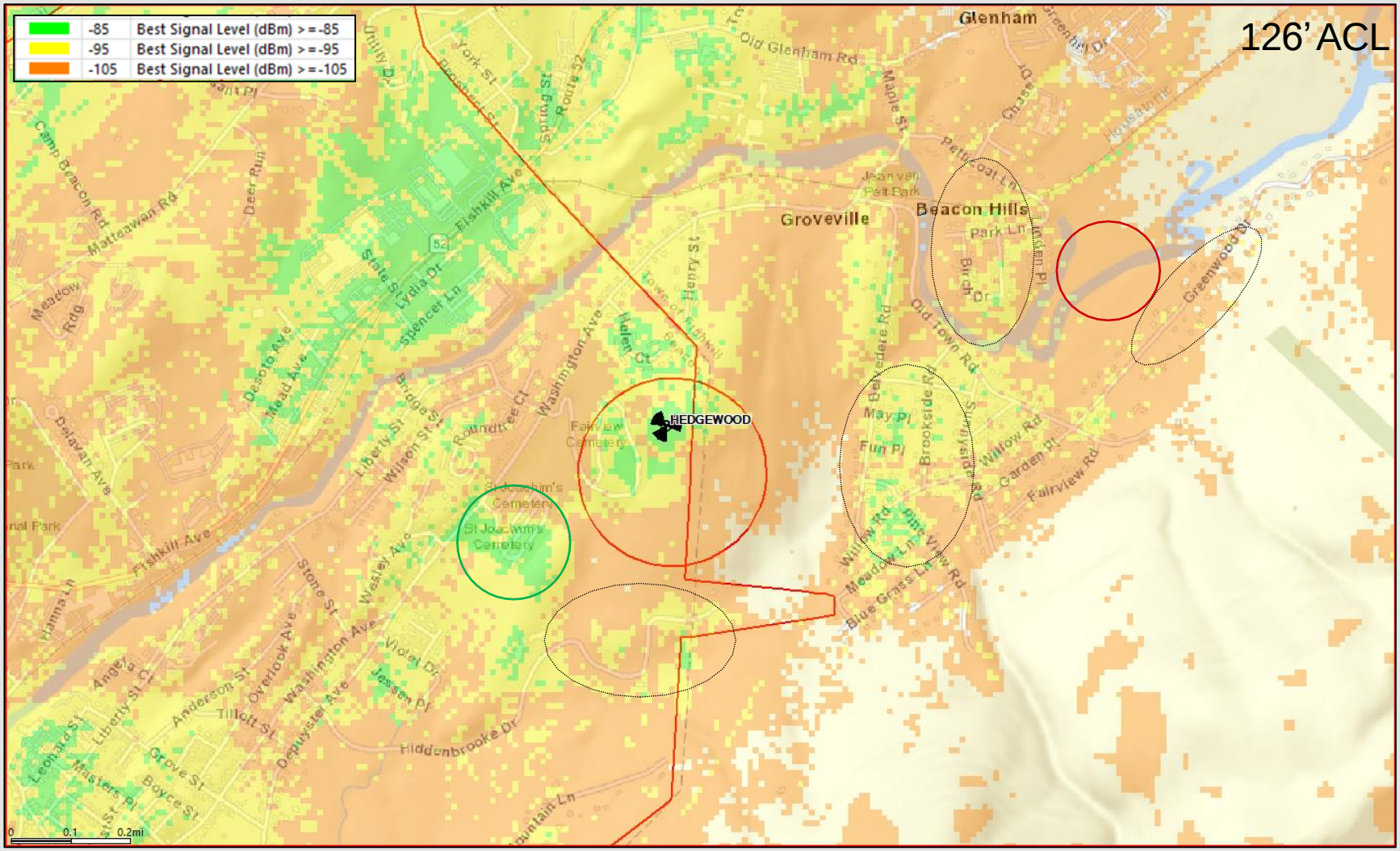
Height Justification (Mid-Band Coverage 2100MHz)

Zoomed in + increased signal strength granularity



The map above represents mid band coverage from existing sites + Hedgewood WT site at 126' Antenna Centerline (ACL) which is 10ft higher than the proposed ACL(116'). The purpose of adding mid band coverage plot at higher ACL is to show that a higher ACL will certainly result in improve mid band coverage but the improvement is not significant enough to raise the antenna by another 10ft.

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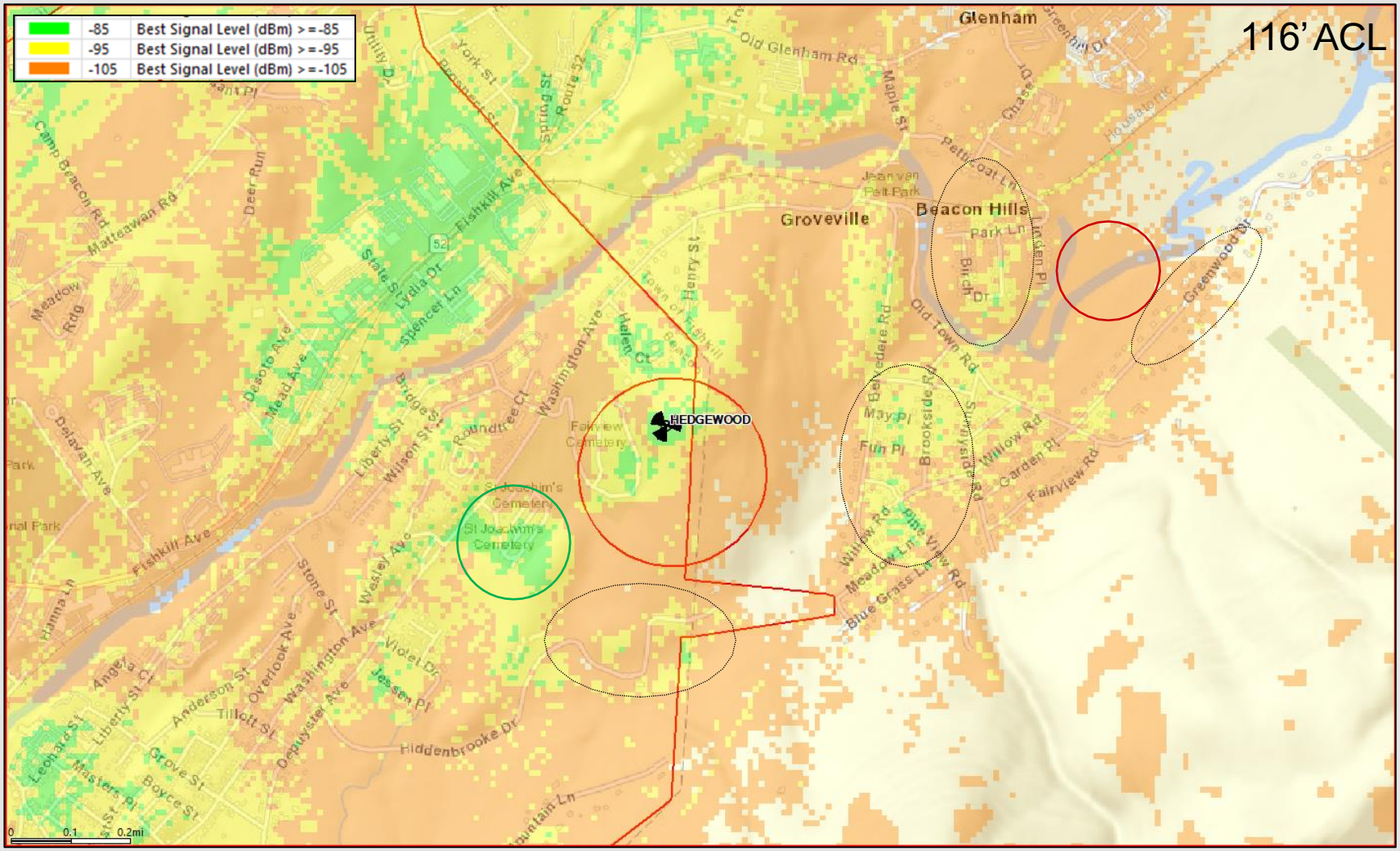
Height Justification (Mid-Band Coverage 2100MHz)

Zoomed in + increased signal strength granularity



The map above represents mid band coverage from existing sites + Hedgewood WT site at 116'ACL. Midband footprint reduced at the proposed height but It can be seen that our focus areas will still have some mid band coverage.

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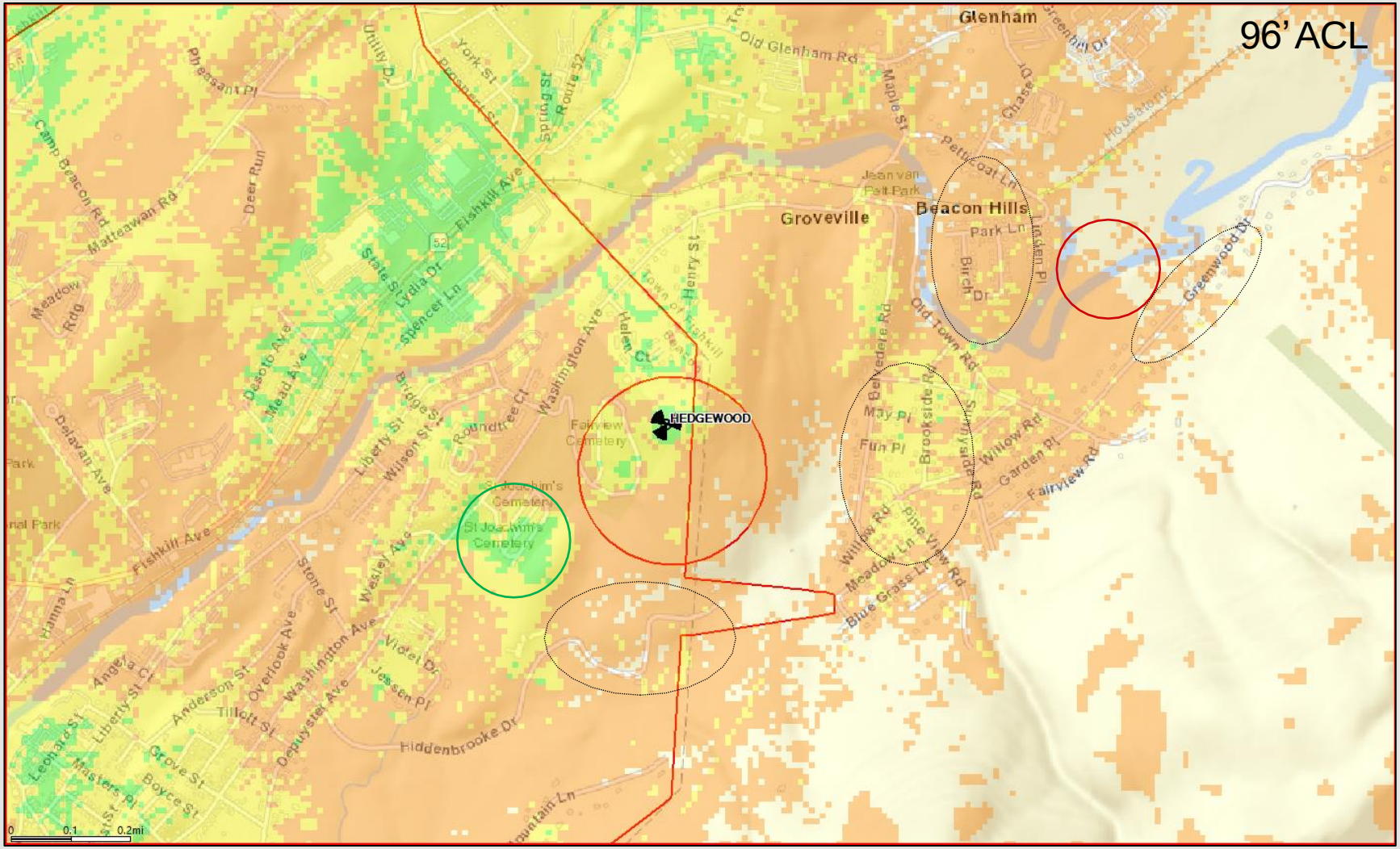
Height Justification (Mid-Band Coverage 2100MHz)

Zoomed in + increased signal strength granularity

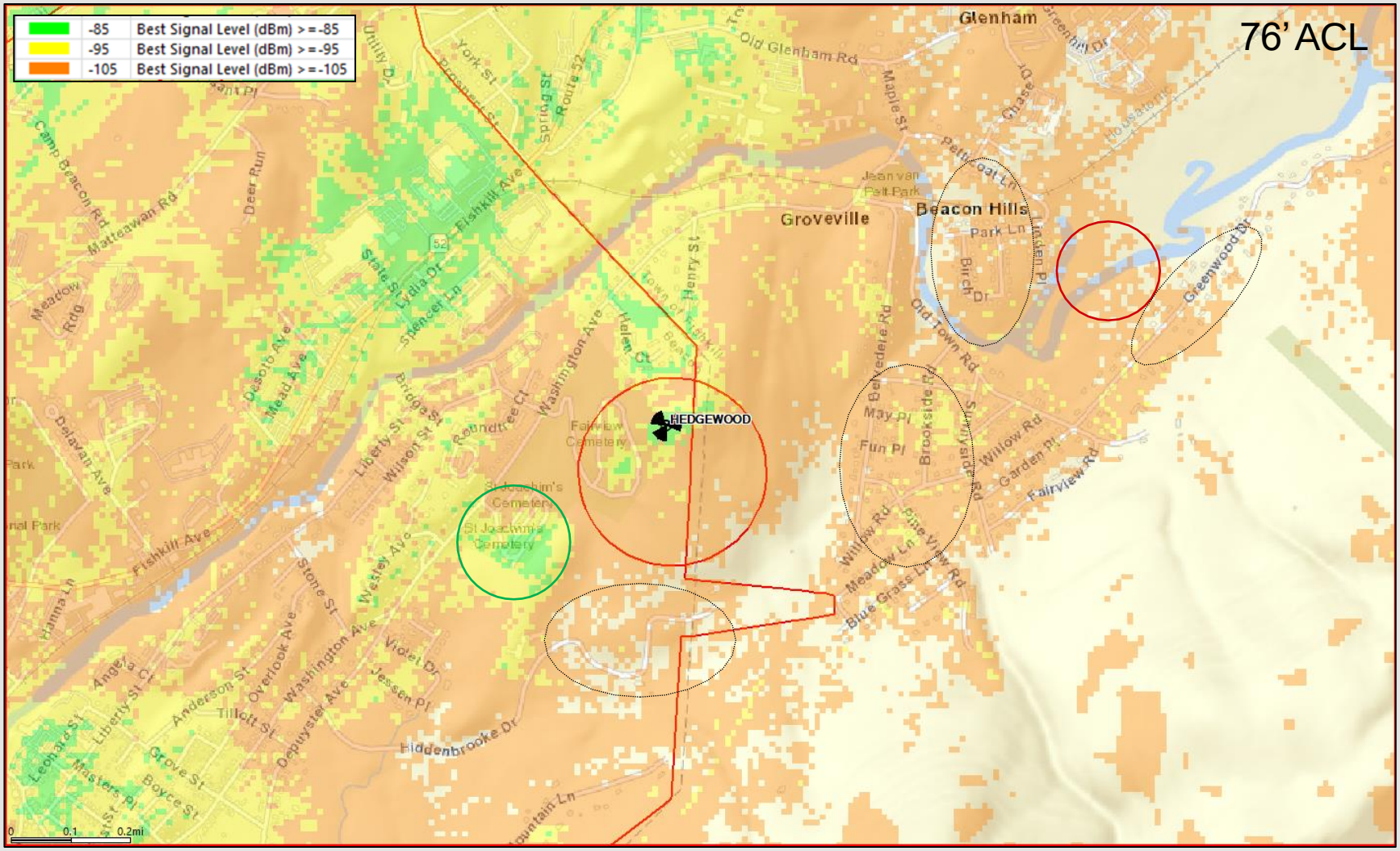


The map above represents mid band coverage from existing sites + Hedgewood site at 96'ACL. Midband footprint significantly reduced at 96'ACL and our focus areas will have either tier 4 outdoor coverage (-95dBm to -105dBm, which means no indoor midband coverage) or no midband coverage at all.

verizon

Height Justification (Mid-Band Coverage 2100MHz)

Zoomed in + increased signal strength granularity



The map above represents mid band coverage from existing sites + Hedgewood site at 76'ACL. Midband footprint significantly reduced at 76'ACL and our focus areas will have either tier 4 outdoor coverage (-95dBm to -105dBm, which means no indoor midband coverage) or no midband coverage at all.

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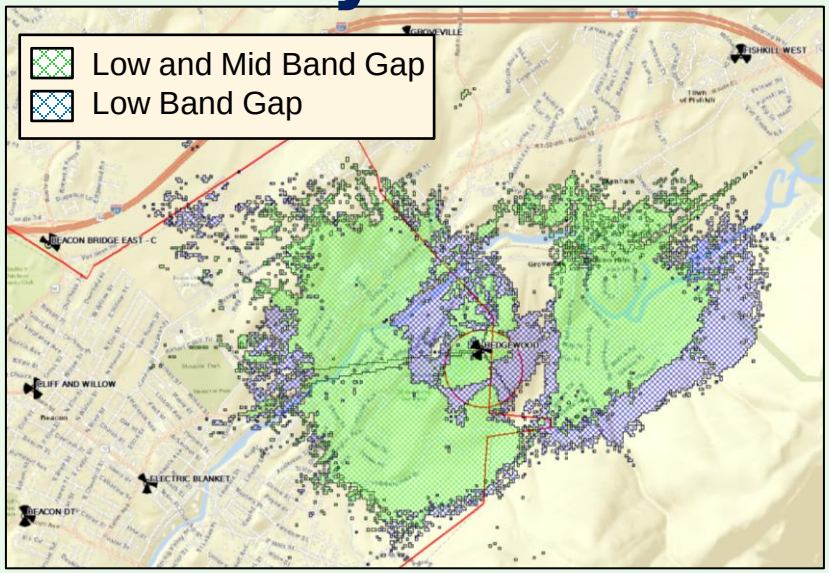
Height Justification Narrative/Summary

As mentioned before, Hedgewood project area is already experiencing high network utilization, primarily on low band due to lack of adequate and reliable mid band coverage in the area. Due to the high number of users in the project area, it is important to provide adequate mid band signal strength to this objective area. Verizon RF evaluated the minimum height requirement and it is our expert opinion that any height lower than 120' (116' ACL) will fail the capacity objective of the project. As shown previously, 116' ACL is not as ideal for the project as 126' would be, however it does provide acceptable coverage for the majority of the project area.

RF Justification Summary



The proposed site at 116' ACL resolves the substantial and significant gaps in coverage and capacity impacting the **Hedgewood** project area. The gaps are shown in the above graphic: The shaded areas as detailed in the legend represent gaps in coverage and capacity that Hedgewood (site) will resolve.

The network was analyzed to determine whether there is sufficient **RF coverage and capacity** in the **City of Beacon**. It was determined that there are significant gaps in adequate LTE service for Verizon Wireless in the 2100MHz frequency band. In addition to the coverage deficiencies, Verizon Wireless' network does not have sufficient capacity (low band or mid band) to handle the existing and projected LTE voice and data traffic in the area near and neighboring the proposed **Hedgewood** facility ("targeted service improvement area"). Based on the need for additional coverage and capacity while considering the topography and specific area requiring service, any further addition of capacity to distant existing sites does not remedy Verizon's significant gap in reliable service. Therefore, the proposed facility is also needed to provide "**capacity relief**" to the existing nearby Verizon Wireless sites, allowing the proposed facility and those neighboring sites to adequately serve the existing and projected capacity demand in this area.

With the existing network configuration there are significant gaps in service which restricts Verizon Wireless customers from originating, maintaining or receiving reliable calls and network access. It is our expert opinion that the proposed height will satisfy the coverage and capacity needs of Verizon Wireless and its subscribers in this portion of the **City of Beacon** and the **Hedgewood** project area. The proposed location depicted herein satisfies the identified service gaps and is proposed at the minimum height necessary for adequate service.

Brendan Hennessy

Brendan Hennessy
Engineer III – RF Design
Verizon Wireless

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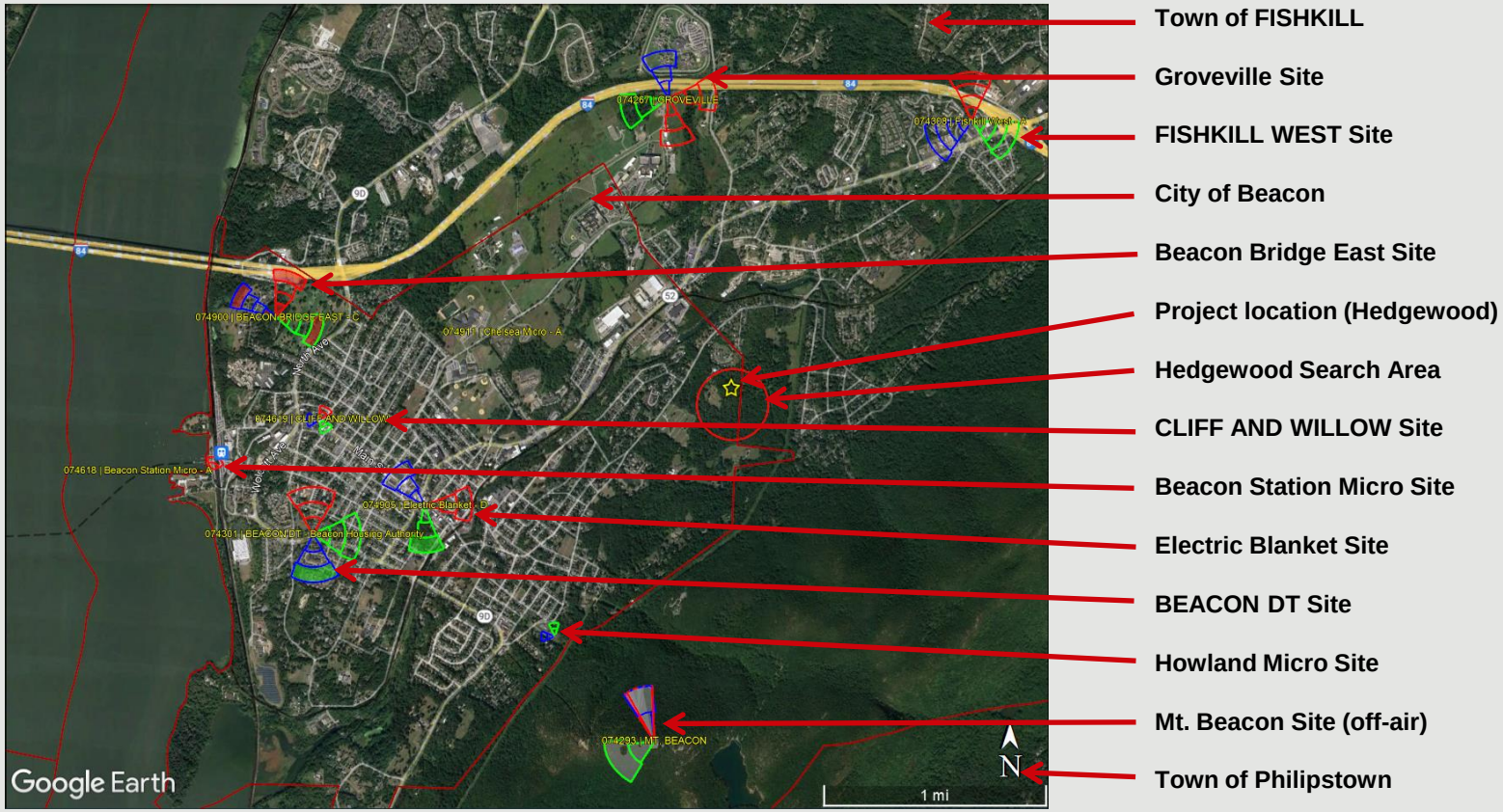
Verizon Wireless Communications Facility

Engineering Necessity Case – "Hedgewood"



- Town of FISHKILL
- Groveville Site
- FISHKILL WEST Site
- City of Beacon
- Beacon Bridge East Site
- Project location (Hedgewood)
- Hedgewood Search Area
- CLIFF AND WILLOW Site
- Beacon Station Micro Site
- Electric Blanket Site
- BEACON DT Site
- Howland Micro Site
- Mt. Beacon Site (off-air)
- Town of Philipstown

Prepared by: Brendan Hennessy

Project: The project is the installation and operation of a new wireless telecommunications tower facility site in the City of Beacon(the "Project Facility").

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Introduction

The purpose of this subsequent analysis is to summarize and communicate the technical radio frequency (RF) information used in the justification of this new site.

Coverage and/or capacity deficiencies are the two main drivers that prompt the need for a new wireless communications facility/site. All sites provide a mixture of both capacity and coverage for the benefit of the end user.

Coverage can be defined as the existence of signal of usable strength and quality in an area, including but not limited to in-vehicles or in-buildings.

The need for improved coverage is identified by RF Engineers that are responsible for developing and maintaining the network. RF Engineers utilize both theoretical and empirical data sets (propagation maps and real world coverage measurements). Historically, coverage improvements have been the primary justification of new sites.

Capacity can be defined as the amount of traffic (voice and data) a given site can process before significant performance degradation occurs.

When traffic volume exceeds the capacity limits of a site serving a given area, network reliability and user experience degrades. Ultimately this prevents customers from making/receiving calls, applications cease functioning, internet connections time out and data speeds fail. This critical condition is more important than just a simple nuisance for some users. Degradation of network reliability and user experience can affect emergency responders and to persons in a real emergency situation can literally mean life or death.

Project Need Overview

The targeted service improvement area, located in the northeastern portion of the City of Beacon is currently served by one site. This site is overloaded requiring capacity relief. Additionally the target area is subject to significant terrain challenges for RF (signal) propagation. This terrain combined with area foliage and long distance prevent effective propagation of Verizon's RF signals into this area compounding the capacity issue with areas of variable coverage creating significant gaps in coverage.

The serving site is **GROVEVILLE,** located in the Town of Fishkill, is approximately one and a half miles north (of the project location) situated on an existing tower located off **Kirby Town Road.** While this site provides weak/variable coverage in portions of the target area, it does so from a terrain and distance challenged position making the site not capable of efficiently or effectively providing adequate coverage or capacity.

Available (mid band AWS) carriers at this and other area sites are not capable of effectively serving/offloading the project area due to inherent propagation losses from distance, challenging terrain and in building coverage losses negatively impacting mid band coverage and capacity offload capabilities. There are other Verizon sites in this general area but due to distance and terrain they also do not provide any significant overlapping coverage in the area in question that could allow for increased capacity and improved coverage from other sources.

The primary objectives for this project are to increase capacity and improve coverage throughout the northeastern portion of the City of Beacon , more specifically portions of Washington Ave, Route 52, Liberty St, Old Town Road, Greenwood Dr, Hiddenbrook Dr, Mountain Ln, as well neighboring residential and commercial areas along and near these roads. In order to offload capacity from GROVEVILLE site, a new dominant server must be created. This new dominant coverage will effectively offload the existing overloaded site as well as provide improved coverage where significant gaps exist today.

Following the search for co-locatable structures to resolve the aforementioned challenges and finding none available, Verizon proposes to attach the necessary antenna(s) to a new 120' monopole tower to be located at 375 Washington Avenue, City of Beacon, NY 12508. Verizon's antennas will utilize 116' for the ACL (Antenna Center Line) with a top of antenna height of 120'. This solution will provide the necessary coverage and capacity improvements needed.

Wireless LTE (Voice and Data) Growth

Wireless smart city solutions are being used to track available parking and minimize pollution and wasted time.

These same solutions are being used to track pedestrian and bike traffic to help planning and minimize accidents.

Smart, wireless connected lighting enables cities to control lighting remotely, saving energy and reducing energy costs by 20%.

4G technology is utilized to track and plan vehicle deliveries to minimize travel, maximize efficiency, and minimize carbon footprint.

4G technology is also used to monitor building power usage down to the circuit level remotely, preventing energy waste and supporting predictive maintenance on machines and equipment.

Wireless sensors placed in shipments are being used to track temperature-sensitive medications, equipment, and food. This is important for preventing the spread of food-borne diseases that kill 3,000 Americans each year.

Source: Verizon Innovation Center, February. 2018

Wireless is a critical component in schools and for today's students.

20,000 learning apps are available for iPads. 72% of iTunes top selling educational apps are designed for preschoolers and elementary students.

600+ school districts replaced text books with tablets in classrooms.

77% of parents think tablets are beneficial to kids.

74% of school administrators feel digital content increases student engagement.

70% of teens use cellphones to help with homework.

Source: CTIA's Infographics Today's Wireless Family, October, 2017

The average North American smartphone user will consume 48 GB of data per month in 2023, up from just 5.2 GB per month in 2016 and 7.1 GB per month in 2017 .[1]

Of American homes are wireless only.[2]

In North America, the average household has 13 connected devices with smartphones outnumbering tablets 6 to 1.[3]

1. Ericsson Mobility Report, November 2017
2. CDC's 2018 Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January-July, 2018
3. IHS Market Connected Device Market Monitor: Q1 2016 , June 7, 2016

A wireless network is like a highway system…

US, mobile data traffic was 1.3 Exabytes per month in 2016, the equivalent of 334 million DVDs each month or 3,687 million text messages each second **according to** Cisco VNI Mobile Forecast Highlights, 2016-2021,Feb 2017

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Wireless facilities and property values.

Cell service in and around the home has emerged as a critical factor in home-buying decisions.

National studies demonstrate that most home buyers value good cell service over many other factors including the proximity of schools when purchasing a home.

75% More than 75% of prospective home buyers said a good cellular connection was important to them.[1]

83% The same study showed that 83% of Millennials (those born between 1982 and 2004) said cell service was the most important fact in purchasing a home.

90% 90% of U.S. households use wireless service. Citizens need access to 911 and reverse 911 and wireless may be their only connection.[2]

1. RootMetrics/Money, The Surprising Thing Home Buyers Care About More than Schools, June 2, 2015
2. CTIA, June 2015

With over 80% of 9-1-1 calls now coming from cell phones…[1]

240 million 911 calls are made annually. In many areas, 80% or more are from wireless devices. [1]

1. National Emergency Number Association, Enhancing 9-1-1 Operations With Automated Abandoned Callbac & Location Accuracy (Motorola Solutions) (August 23, 2018)

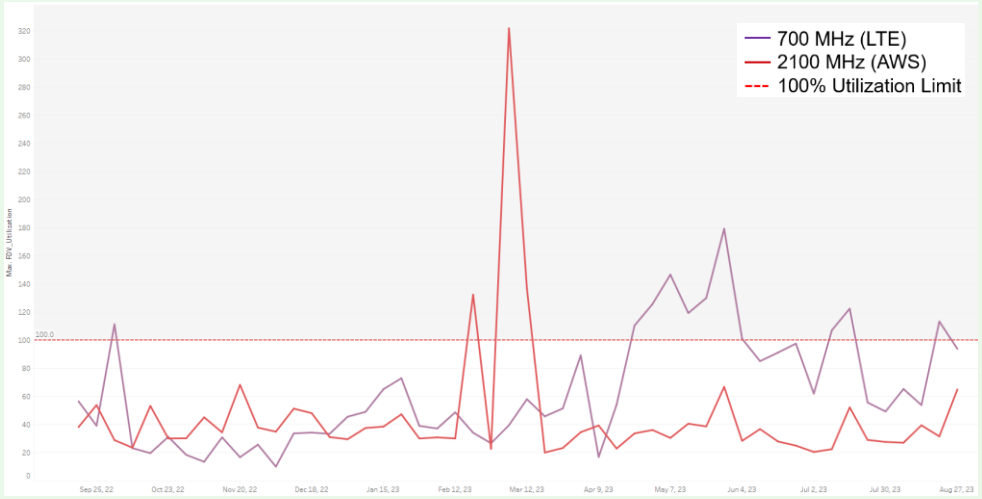
Explanation of Wireless Capacity

Capacity in this analysis is evaluated with up to three metrics further explained below. These metrics assist in determining actual usage for a given site as well as are used to project when a site is expected to run out of capacity (i.e. reach a point of exhaustion where it can no longer process the volume of voice and data requested by local wireless devices, thus no longer providing adequate service).

- Forward Data Volume ("**FDV**"), is a measurement of usage (data throughput) on a particular site over a given period of time.
- Average Schedule Eligible User ("**ASEU**"), is a measurement of the loading of the control channels and systems of a given site.
- Average Active Connections ("**AvgAC**") is a measurement of the number of devices actively connected to a site in any given time slot.

Verizon Wireless uses proprietary algorithms developed by a task force of engineers and computer programmers to monitor each site in the network and accurately project and identify when sites will approach their capacity limits. Using a rolling two-year window for projected exhaustion dates allows enough time, in most cases, to develop and activate a new site. It is critical that these capacity approaching sectors are identified early and the process gets started and completed in time for new solutions (sites) to be on air before network issues impact the customers.

Capacity Utilization
FDV (GROVEVILLE Delta)



Summary: This graph shows FDV (**F**orward **D**ata **V**olume) which is a measurement of the customer data usage that this sector currently serves. As this limit is approached, data rates slow to unacceptable levels, potentially causing unreliable service for Verizon Wireless customers.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Delta** sector of the **GROVEVILLE** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **GROVEVILLE Delta** sector shown above has exceeded its capability of supporting FDV requirements as shown by the purple line exceeding the max utilization threshold (red dashed line). FDV is one of up to three metrics used in this presentation to evaluate capacity capability in this area. This graph also reveals the inability of the AWS carrier (dark red line) to provide the necessary capacity offload for the low band carrier due to differences in RF propagation characteristics. The solution is network densification.

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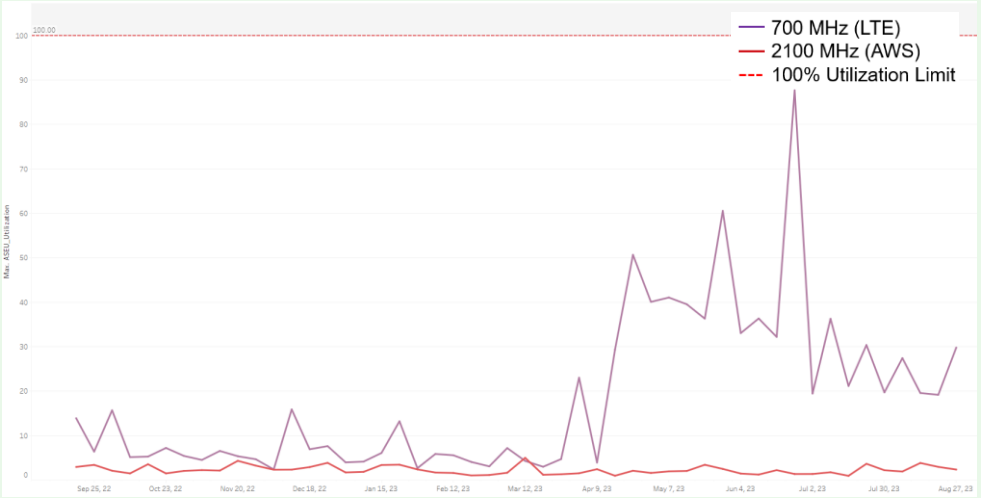
Capacity Utilization
ASEU (GROVEVILLE Delta)

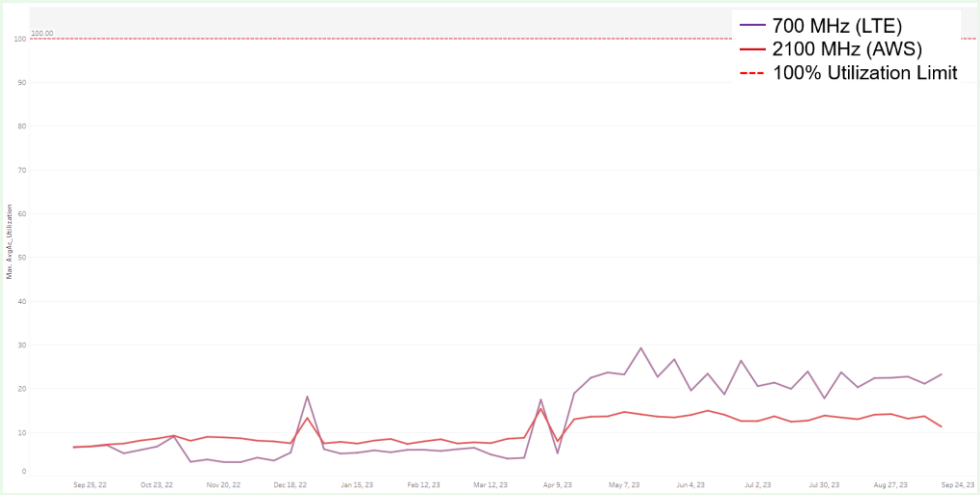


Summary: This graph shows ASEU (**A**verage **S**chedule **E**ligible **U**ser). ASEU is a measurement of the loading of the control channels and systems of a given site. The ASEU load is heavily impacted by distant users or those in poor RF conditions.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Delta** sector of the **GROVEVILLE** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: While the ASEU for 700 at the existing **GROVEVILLE** sector greatly increased after the Mt. Beacon site was decommissioned, it is not yet exceeding the utilization limit. ASEU is one of up to three metrics used in this presentation to evaluate capacity capability in this area.

Capacity Utilization
AvgAC (GROVEVILLE Delta)

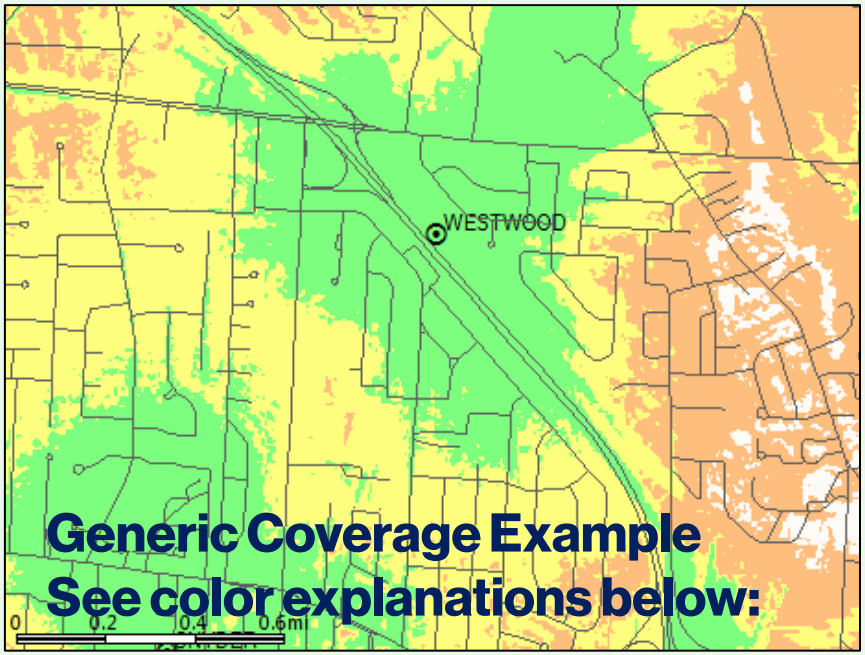


Summary: This graph shows AvgAC (**A**verage **A**ctive **C**onnections). AvgAC utilization by carrier is a measurement of max active connection capacity per sector in any given time slot. When this limit is reached, no additional devices will be able to connect to the site, resulting in connection failures and dropped calls.

The purple line represents the daily max busy hour 700MHz utilization and the dark red line is daily max busy hour AWS utilization on the **Delta** sector of the **GROVEVILLE** site. The red dashed line is the limit where the sector reaches exhaustion and service starts to significantly degrade. The point in time where we see the purple or dark red lines reach or exceed the red dashed line is when service quickly degrades as usage continues to increase.

Detail: The existing **GROVEVILLE** sector shown above is operating normally for this metric. **AvgAC** is one of three capacity metrics used in this document.

Explanation of Wireless Coverage



Generic Coverage Example
See color explanations below:

Coverage is best shown via coverage maps. RF engineers use computer simulation tools that take into account terrain, vegetation, building types, and site specifics to model the RF environment. This model is used to simulate the real world network and assist engineers to evaluate the impact of a proposed site (along with industry experience and other tools).

Many Verizon Wireless sites provide 3G CDMA at 850 MHz and 4G LTE at 700 MHz. As capacity requirements increase, higher frequency PCS (1900 MHz) and AWS (2100 MHz) carriers are added. In some mountaintop situations the mid band (higher frequency) AWS and PCS carriers are not fully effective due to excessive distance from the user population.

Coverage provided by a given site is affected by the frequencies used. Lower frequencies propagate further distances, and are less attenuated by clutter than higher frequencies. To provide similar coverage levels at higher frequencies, a denser network of sites is required (network densification).

Note the affect of clutter on the predicted coverage footprint above

**Dark Green >/= -75dBm RSRP, typically serves dense urban areas as well as areas of substantial construction (colleges, hospitals, dense multi family etc.)
Green >/= -85dBm RSRP, typically serves suburban single family residential and light commercial buildings
Yellow >/= -95dBm RSRP, typically serves most rural/suburban-residential and in car applications
Orange >/= -105dBm RSRP, rural highway coverage, subject to variable conditions including fading and seasonality gaps
White = <-105dBm RSRP, variable to no reliable coverage gap area

More detailed, site-specific coverage slides are later in the presentation
*Signal strength requirements vary as dictated by specific market conditions
** Not displayed in example map, layer not used in all site justifications

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Explanation of this Search Area

Hedgewood Search Area

A **Search Area** is the geographical area within which a new site is targeted to solve a coverage or capacity deficiency. Three of the factors taken into consideration when defining a search area are topography, user density, and the existing network.

- **Topography** must be considered to minimize the obstacles between the proposed site and the target coverage area. For example, a site at the bottom of a ridge will not be able to cover the other side from a certain height.
- In general, the farther from a site the **User Population** is, the weaker the RF conditions are and the worse their experience is likely to be. These distant users also have an increased impact on the serving site's capacity. In the case of a multi sector site, centralized proximity is essential to allow users to be evenly distributed and allow efficient utilization of the site's resources.
- The existing **Network Conditions** also guide the design of a new site. Sites placed too close together create interference due to overlap and are an inefficient use of resources. Sites that are too tall or not properly integrated with existing sites cause interference and degrade service for existing users.
- Existing co-locatable structures inside the search area as well as within a reasonable distance of the search area are submitted by site acquisition and reviewed by RF Engineering. If possible, RF will make use of existing or nearby structures before proposing to build new towers.

To resolve the coverage and capacity deficiencies previously detailed, Verizon Wireless is seeking to add one new cell facility within this area to improve wireless service capacity and coverage. By offloading traffic from **GROVEVILLE Delta** with the proposed site, adequate and reliable service will be restored. The new **Hedgewood** site will provide dominant and dedicated signal to the identified portions of the City of Beacon. This helps to improve not only the **Hedgewood** project area but will also indirectly result with significant improvements in the northeastern portion of the City of Beacon.

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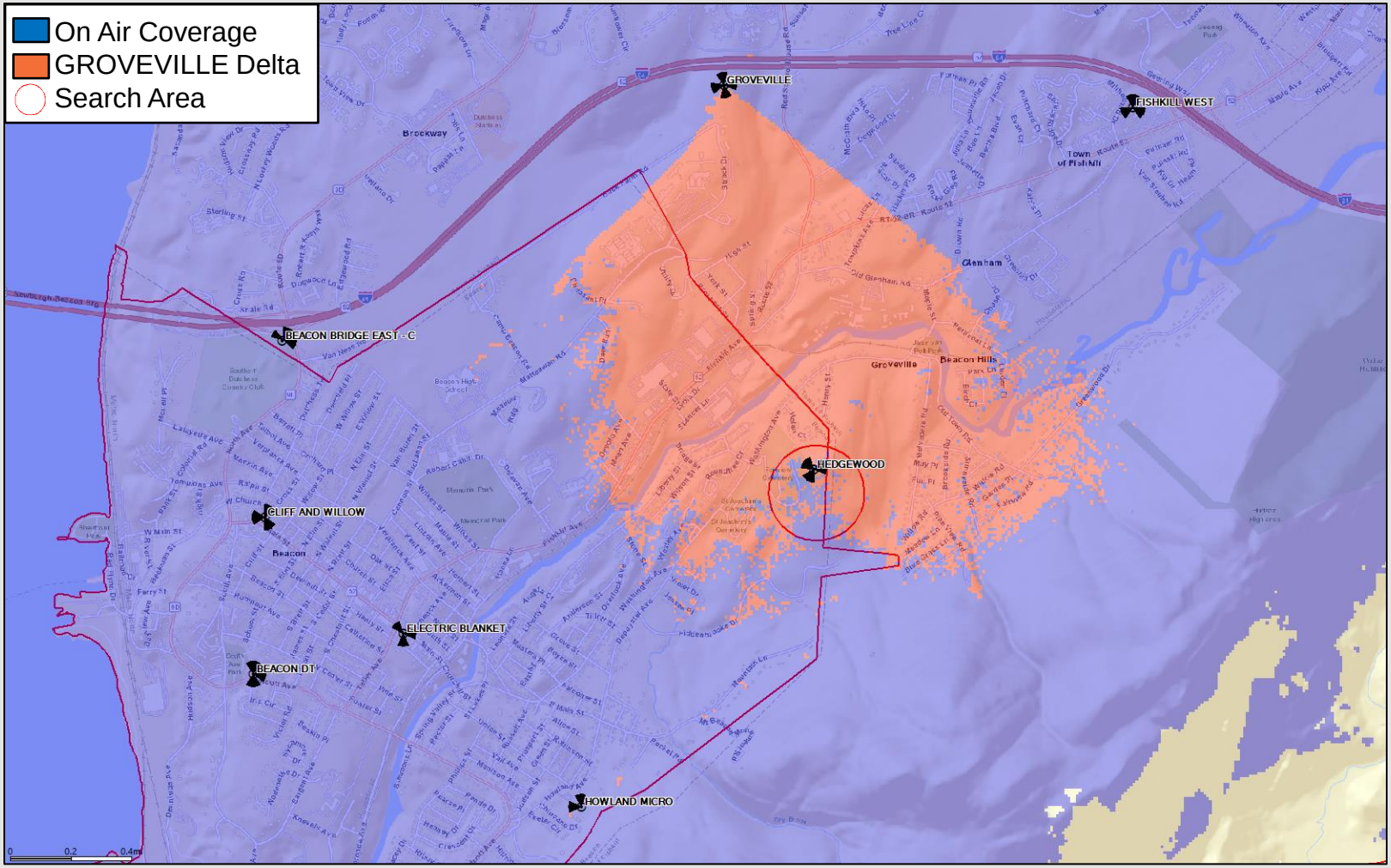
Existing 700MHz Best Server -105dBm RSRP

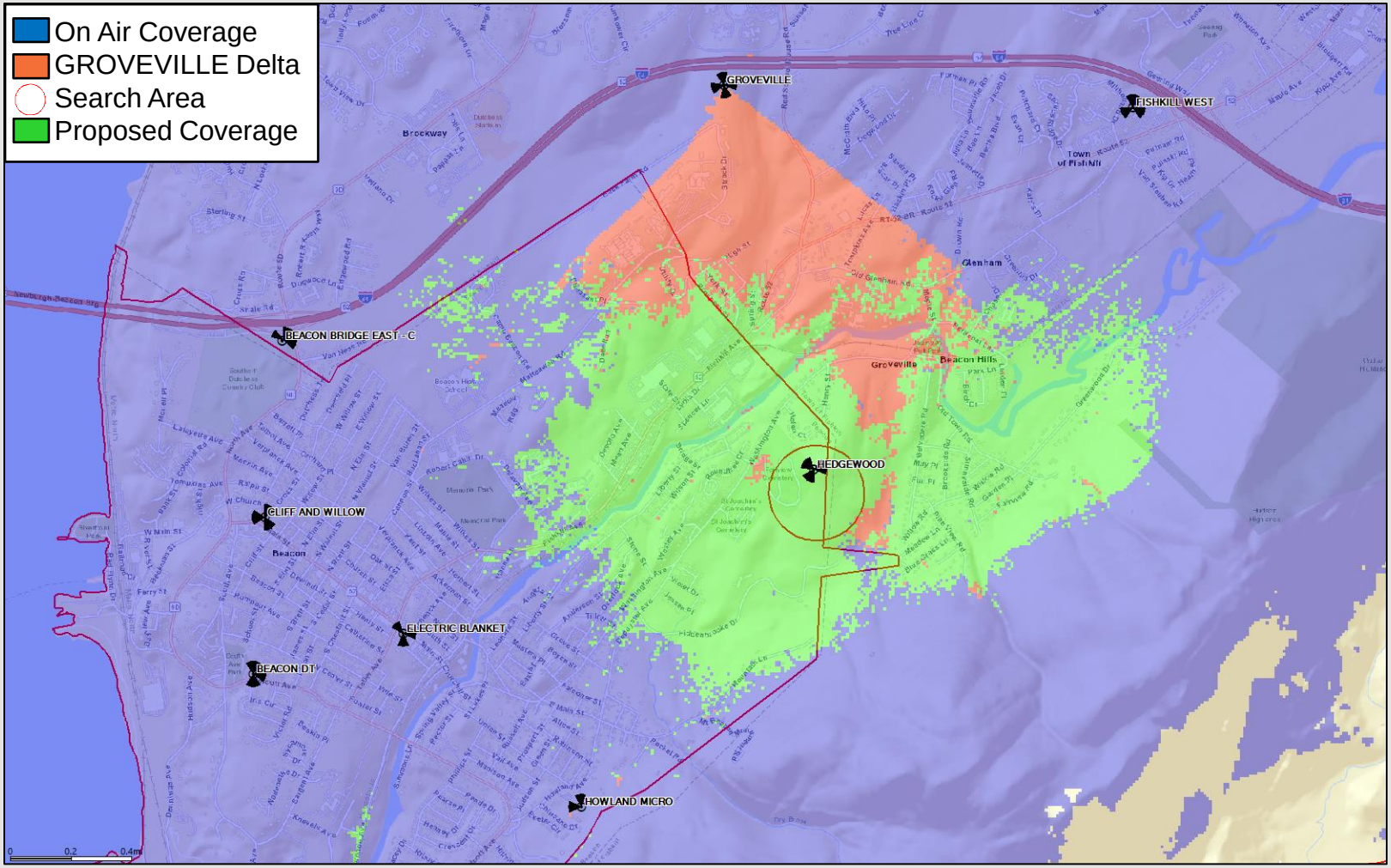
Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.



The map above represents existing low band coverage from existing sites, with the sites in need of capacity offload detailed in the legend above. Blue coverage is from other on air sites.

Proposed 700MHz Best Server -105dBm RSRP

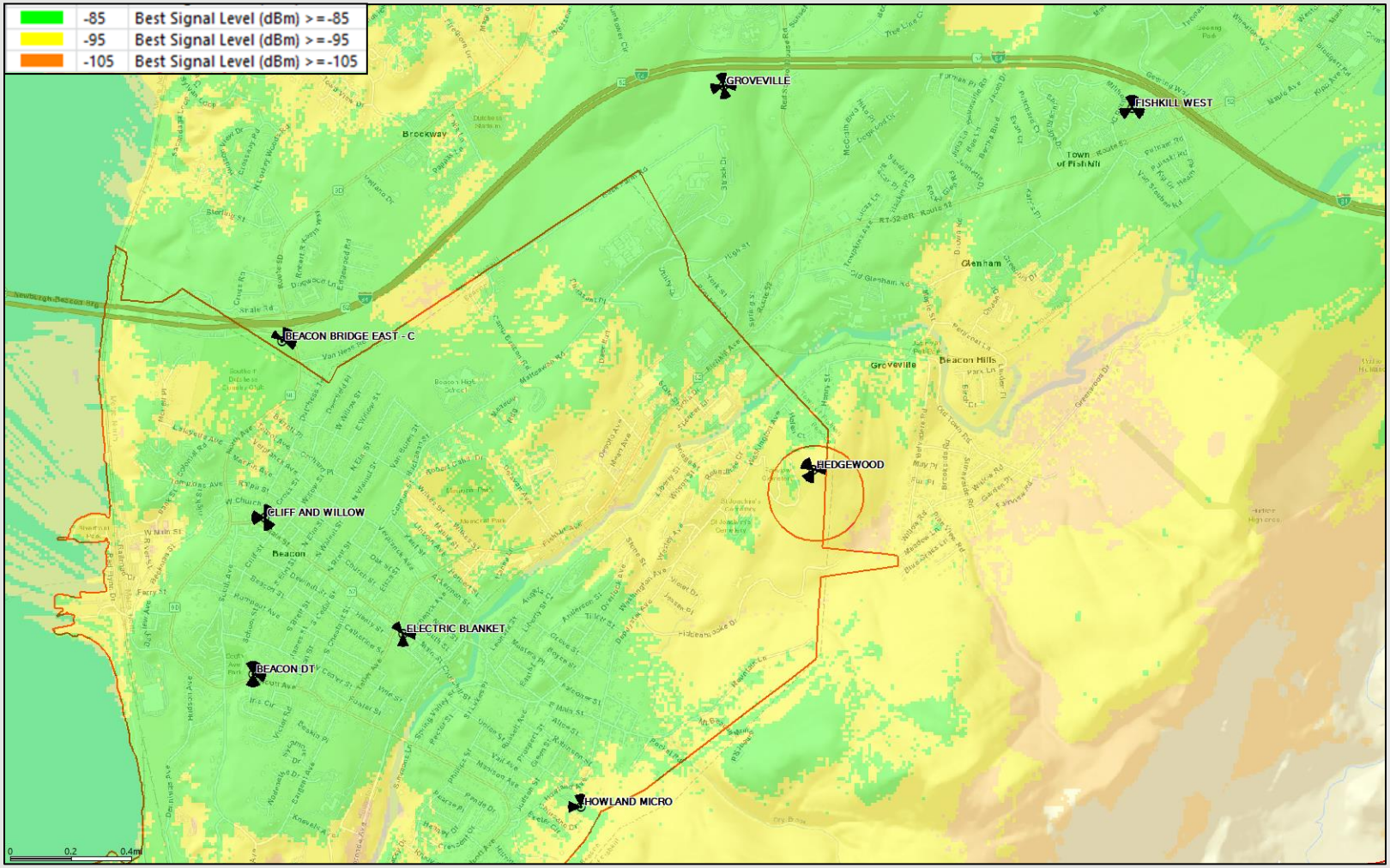
Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.



The map above adds the low band footprint of the proposed Hedgewood site in green. The green best server footprint provides improved coverage and capacity throughout the identified significant gap area. This will help to resolve the coverage and capacity issues impacting the GROVEVILLE Delta sector.

Existing 700MHz Coverage

This coverage map shows how weak the RF conditions are in and around the Hedgewood site area.
Refer to slide 7 for further explanation of these color thresholds



The map above represents existing low band signal strength coverage from existing sites.

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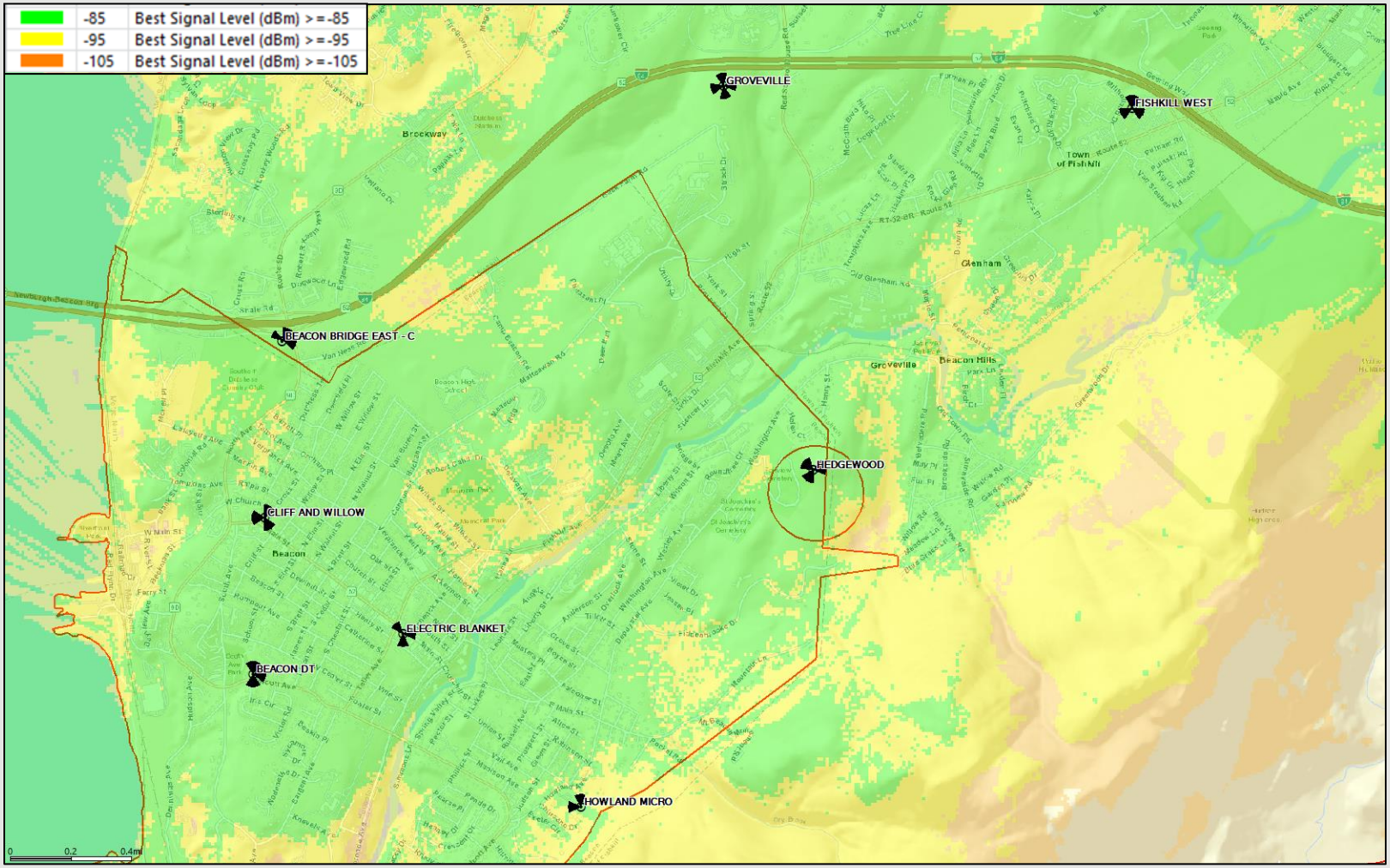
Proposed 700MHz Coverage

This coverage map shows how improved the RF conditions will be in and around the Hedgewood site area.
Refer to slide 7 for further explanation of these color thresholds



The map above adds the low band footprint of the proposed **Hedgewood** site. The significantly improved signal strength corresponds to improved coverage and capacity throughout the identified significant gap area. This will help to resolve the coverage and capacity issues impacting the GROVEVILLE Delta sector.

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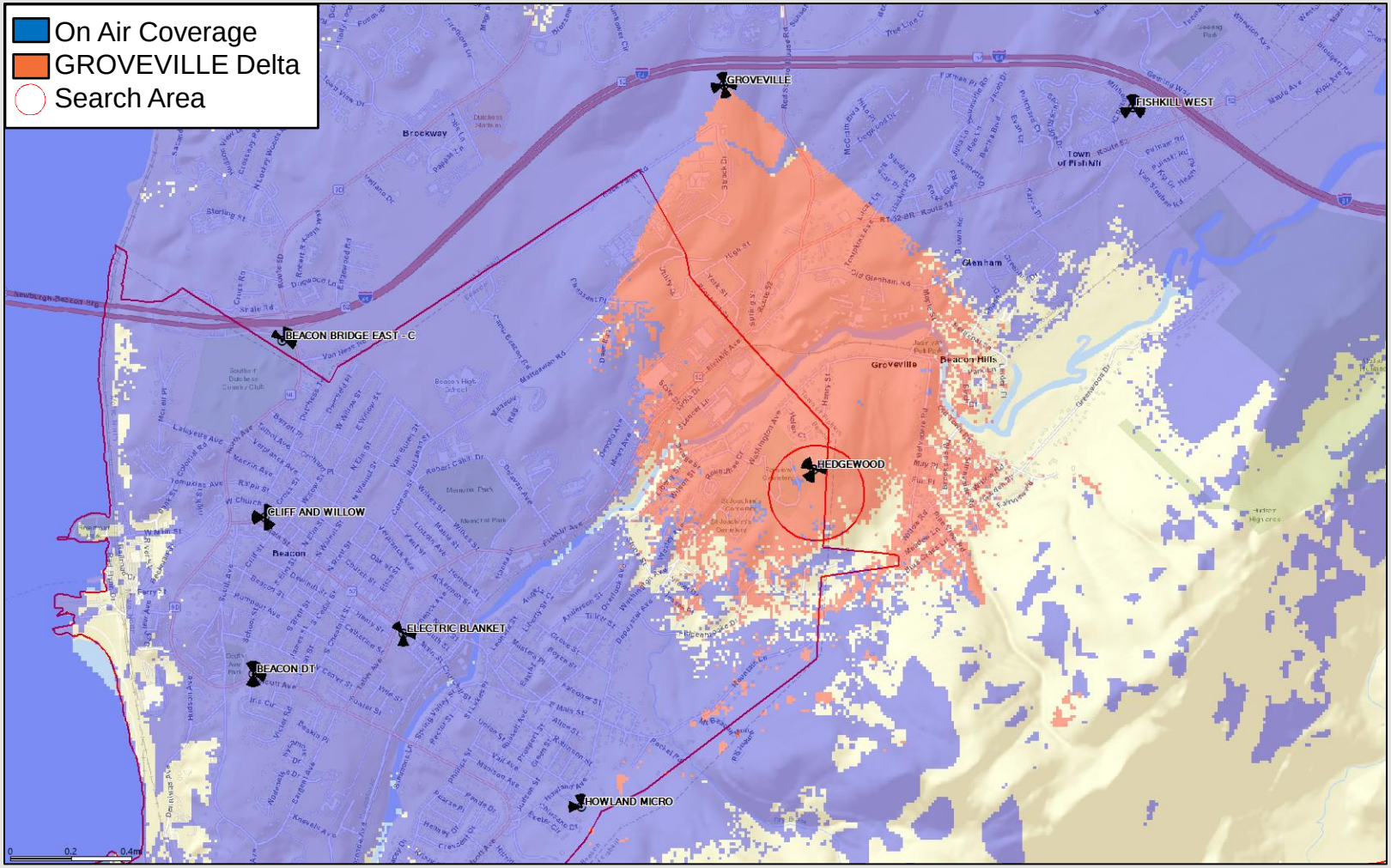
Existing 2100MHz Best Server -105dBm RSRP

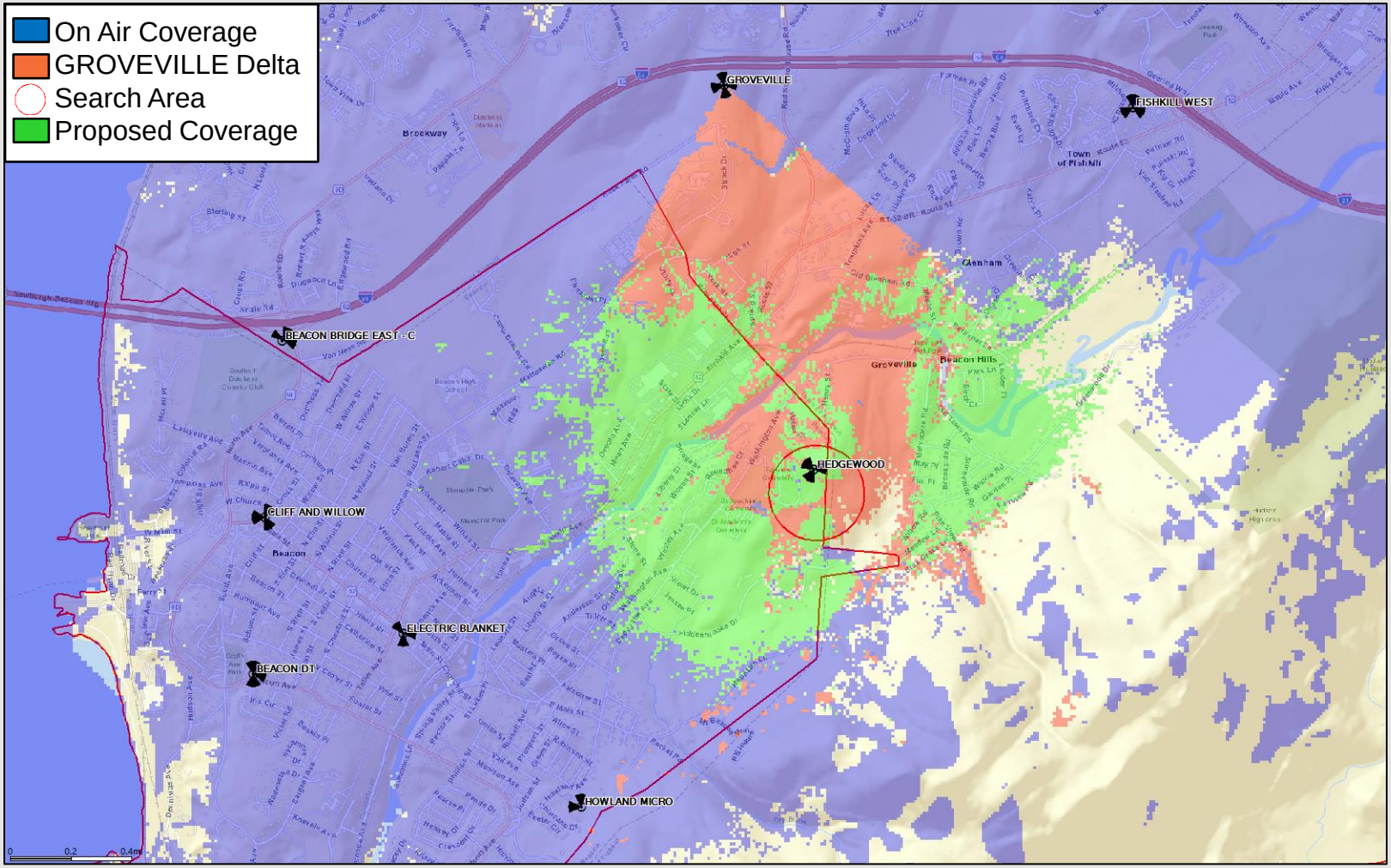
Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.



The map above represents mid band coverage from existing sites, with the sites in need of capacity offload detailed in the legend above. Blue coverage is from other on air sites.

Proposed 2100MHz Best Server -105dBm RSRP

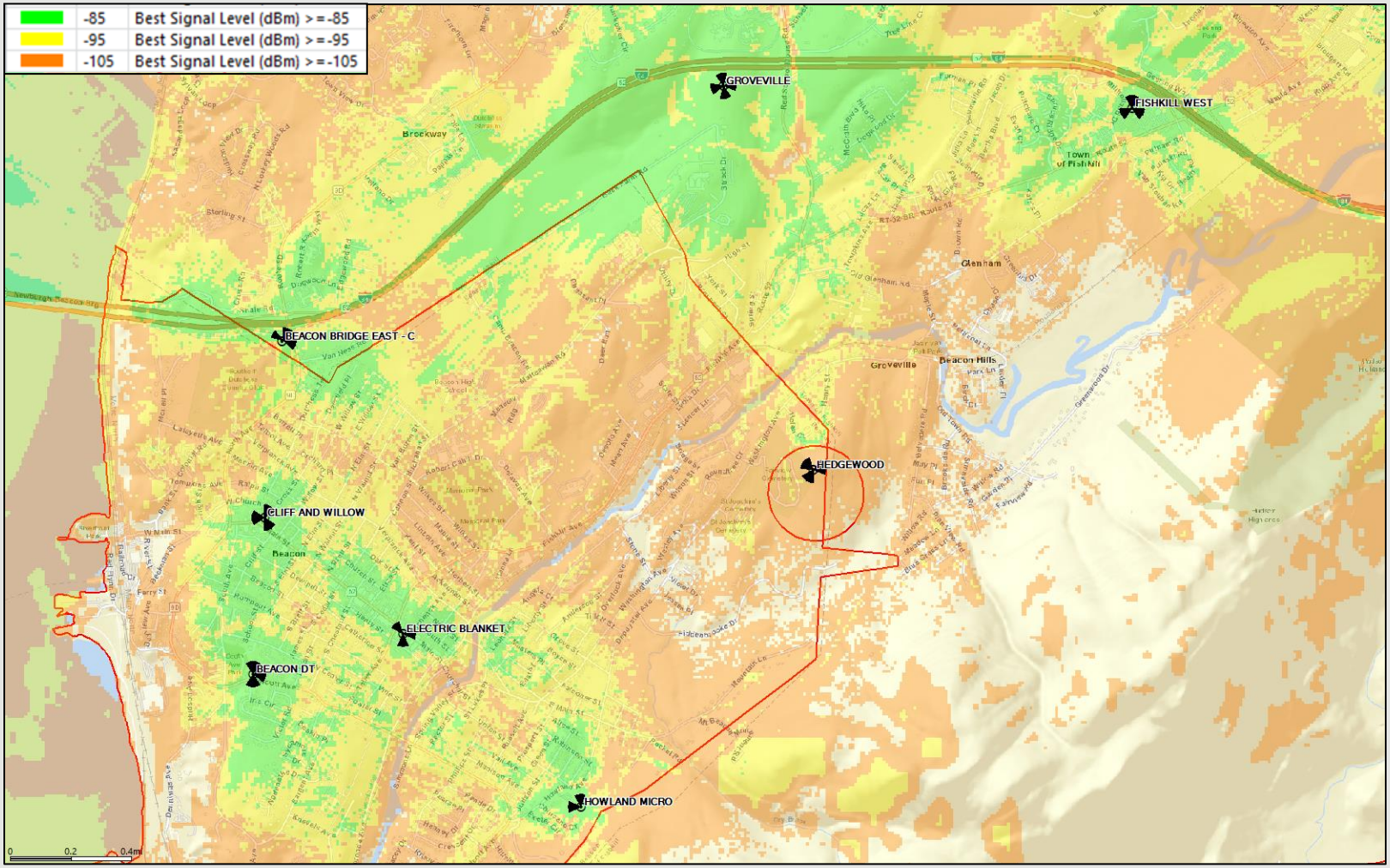
Best Server plots depict the actual footprint of each sector in question at one threshold so the viewer can accurately evaluate the area offloaded by the new sites dominant signal area.



The map above adds the mid band footprint of the proposed Hedgewood site in green. The green best server footprint provides improved coverage and capacity throughout the identified significant gap area.

Existing 2100MHz Coverage

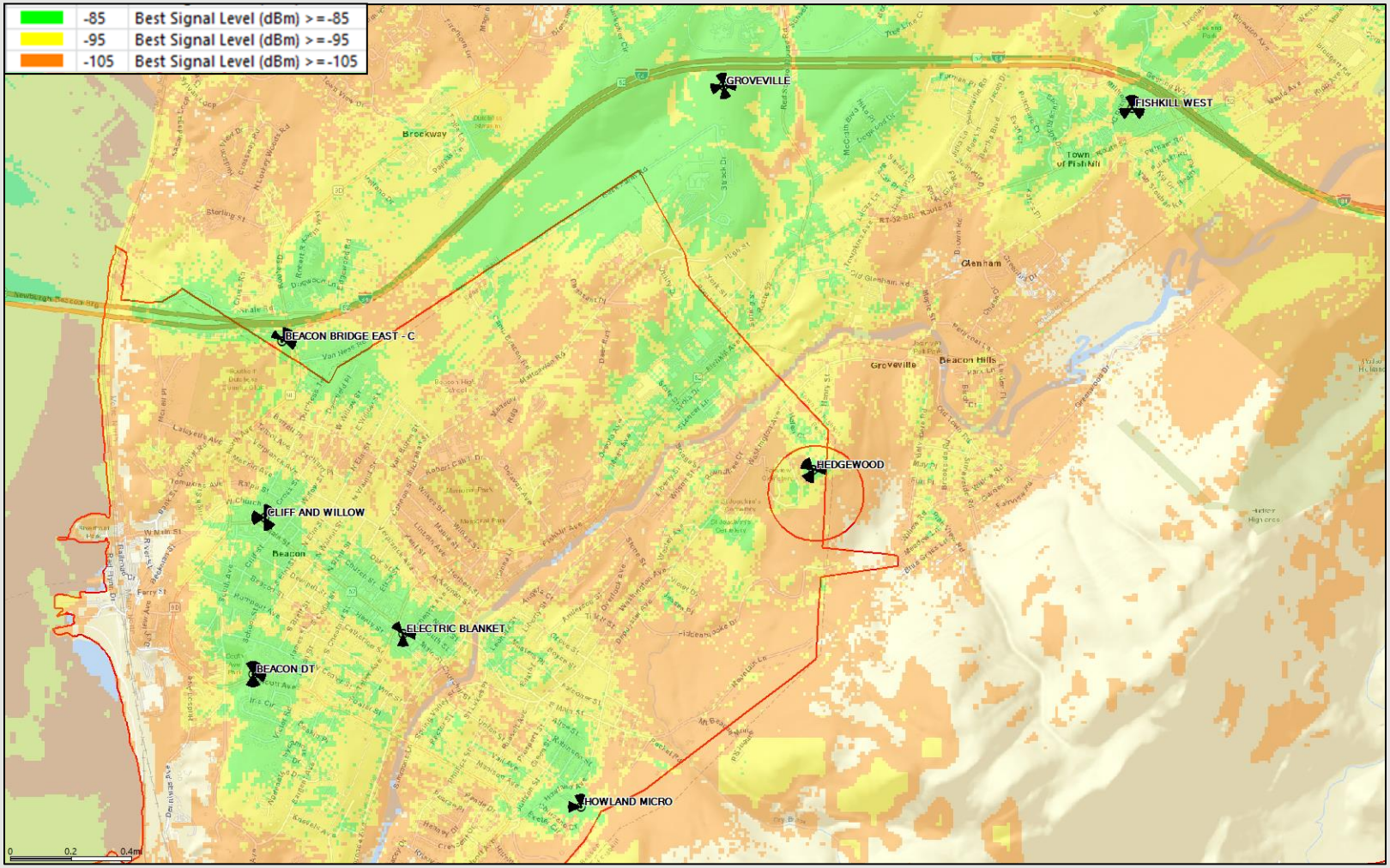
This coverage map shows the RF conditions in and around the Hedgewood site area.
Refer to slide 7 for further explanation of these color thresholds



The map above represents mid band coverage from existing sites. This 2100MHz signal is very weak throughout the project area. Additional mid band network densification is required to resolve these conditions.

Proposed 2100MHz Coverage

This coverage map shows how improved the RF conditions will be in and around the Hedgewood site area.
Refer to slide 7 for further explanation of these color thresholds



The map above adds the mid band footprint of the proposed **Hedgewood** site. The improved signal strength corresponds to improved coverage and capacity throughout the identified significant gap area.

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Midband coverage plots at alternate heights (Minimum Height Justification)

Mid band coverage is critical in the effort to balance capacity (utilization) and allow for “contained” low band sites. If adequate and reliable signal strength from mid band is not present the mobile will attach to low band only. The current low band frequencies, however, due to limits in bandwidth represent only approximately seven percent (7%) of the available bandwidth licenses by Verizon Wireless, the remaining ninety three percent (93%) of bandwidth is available from the mid-band frequencies. Too many users in this RF condition will overburden low band and cause a site to become capacity exhausted requiring additional network densification. Network densification is achieved by adding mid-band frequencies at a new dominant server/site. Areas of higher utilization are of particular importance in evaluating mid band height needs. Mid band spectrum on macro sites has proven to be a very capable resource and also includes C-Band. These frequencies roughly in the 1.9-3.8GHz range are needed throughout the Hedgewood project area to relieve existing network capacity issues.

Current wireless networks continue to rely on “line of sight” technology to provide service to existing customers, the critical component necessary to service customers is establishing the proper height of the antennas to ensure that the antennas can see the service areas. As relative antenna height is increased or decreased, area (RF) clutter is either overcome allowing a site to propagate as needed or becomes obstructed causing gaps in service. The following slides display existing on-air mid band coverage + Hedgewood Site at identified Antenna centerline (ACL).

Criterion for the 'focus' areas

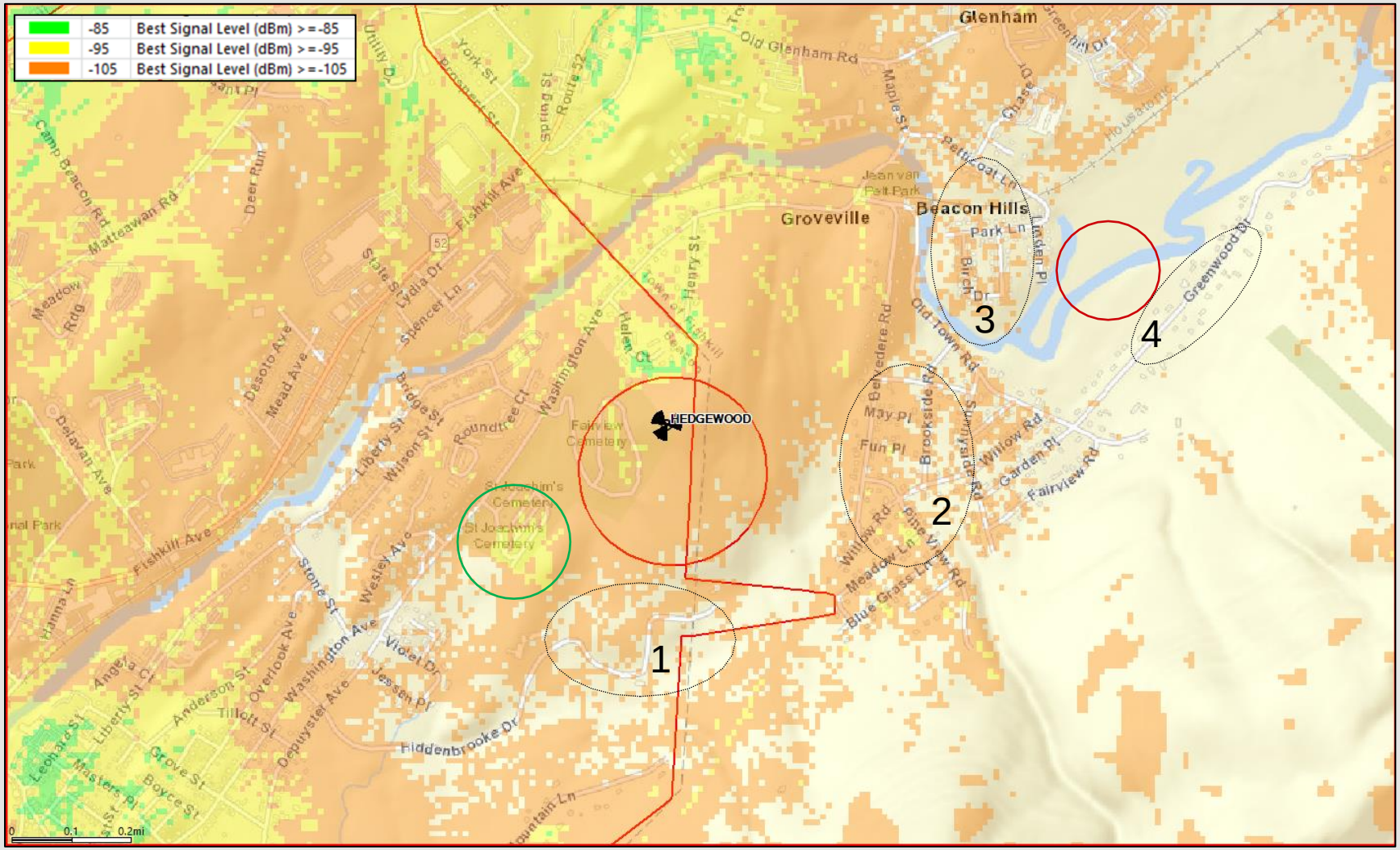
There are always different types of areas around a site.

1. Areas with no potential traffic/customer are not considered in minimum height analysis even if Mid-band Coverage fades or is completely lost with the tower height reduction. For example, area in red circle on accompanying propagation maps.

2. Potential traffic (residential/commercial areas and roads) areas, which are close to the site are also not considered as reduction in tower height does not affect these areas significantly. For example, area in green circle on the following propagations.

3. Potential traffic areas, which are not very close to the project location or are located in a challenging terrain and there will be dramatic changes in mid-band coverage when the tower height is altered, are only considered in minimum height evaluation. All such areas are shown with the help of black circles on the following propagations.

Attributes for the 'focus' areas



Each black circled area is assigned a number for comparing the following slides. For each area, the next slides will show satellite imagery and provide a description of why each area is considered in the height justification.

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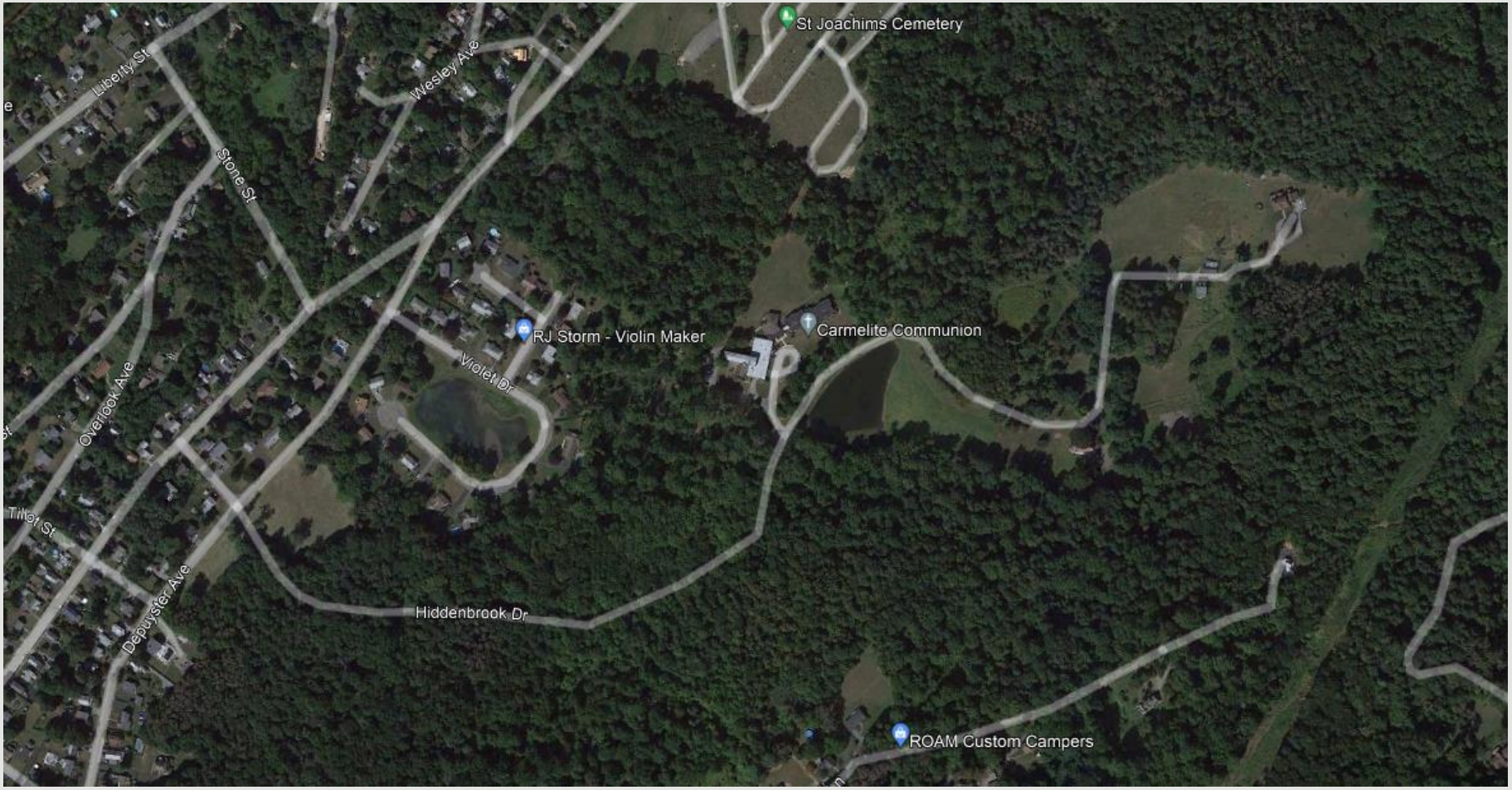
Focus Area 1 – Hiddenbrook Dr Area



This area consists of some suburban residential housing as well as the Carmelite Communion monastery & chapel.

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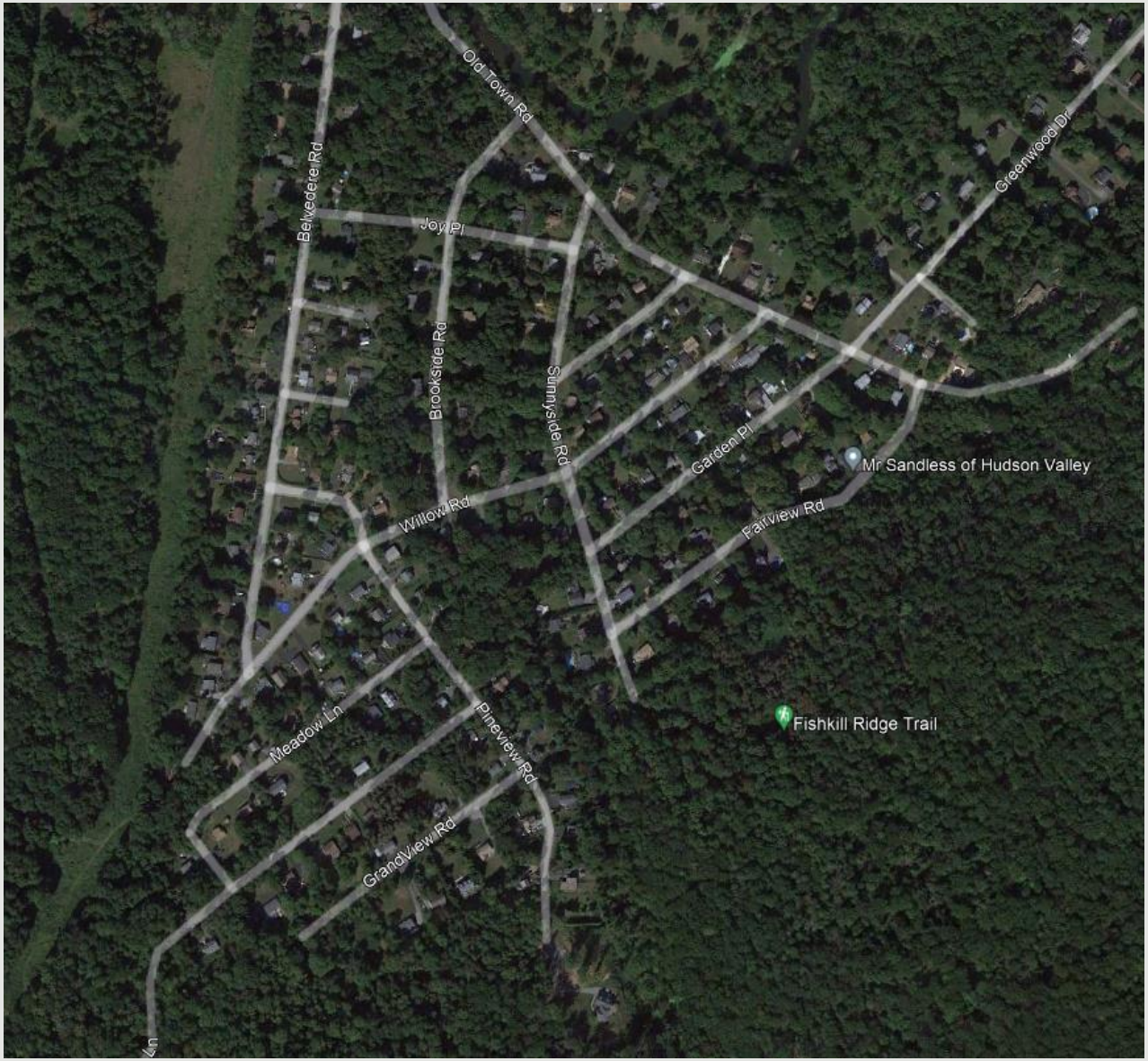
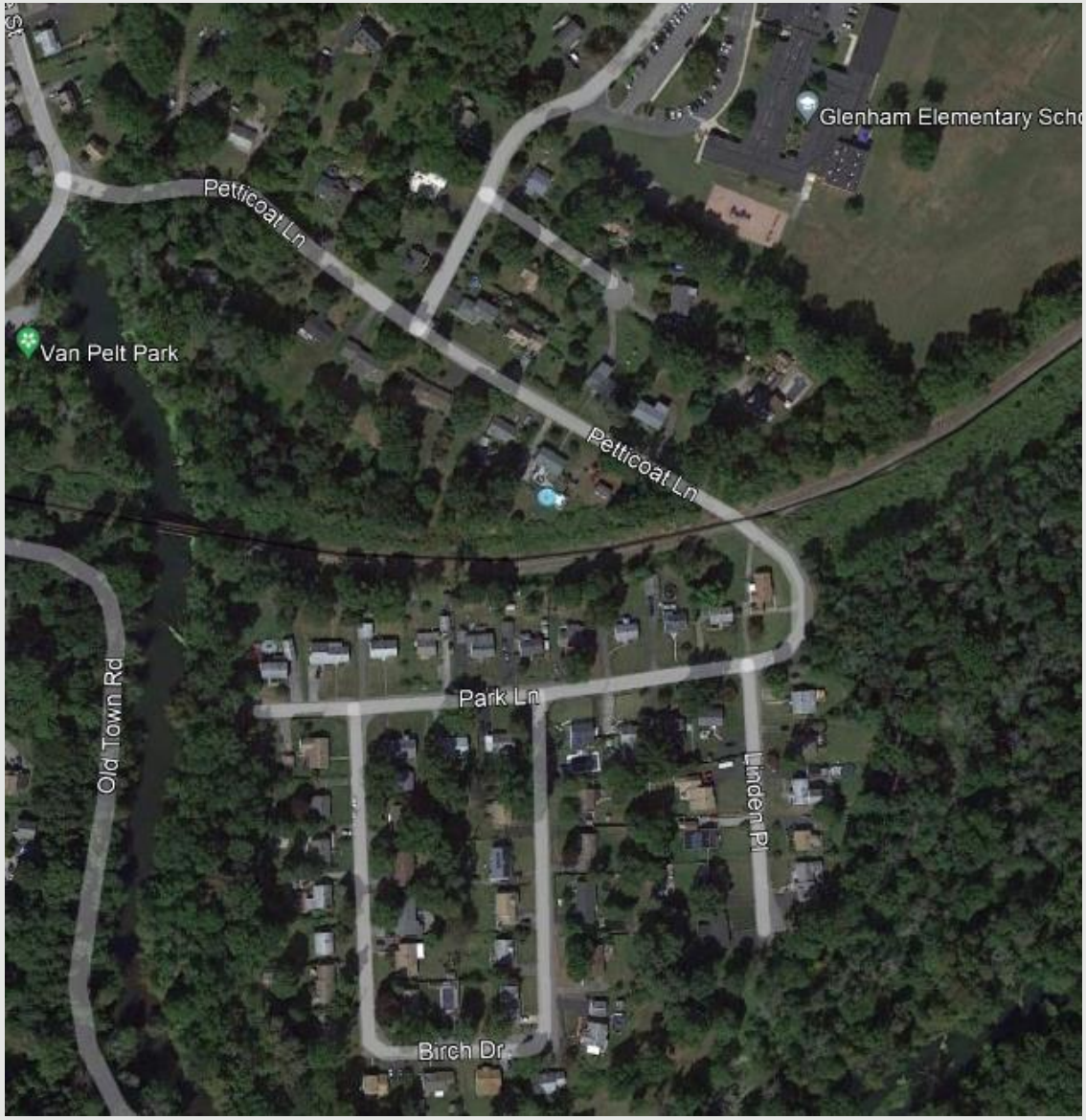
Focus Area 2 – Old Town Rd Area



This area consists of fairly dense residential suburbs, as well as some small businesses.

Focus Area 3 – Beacon Hills Area



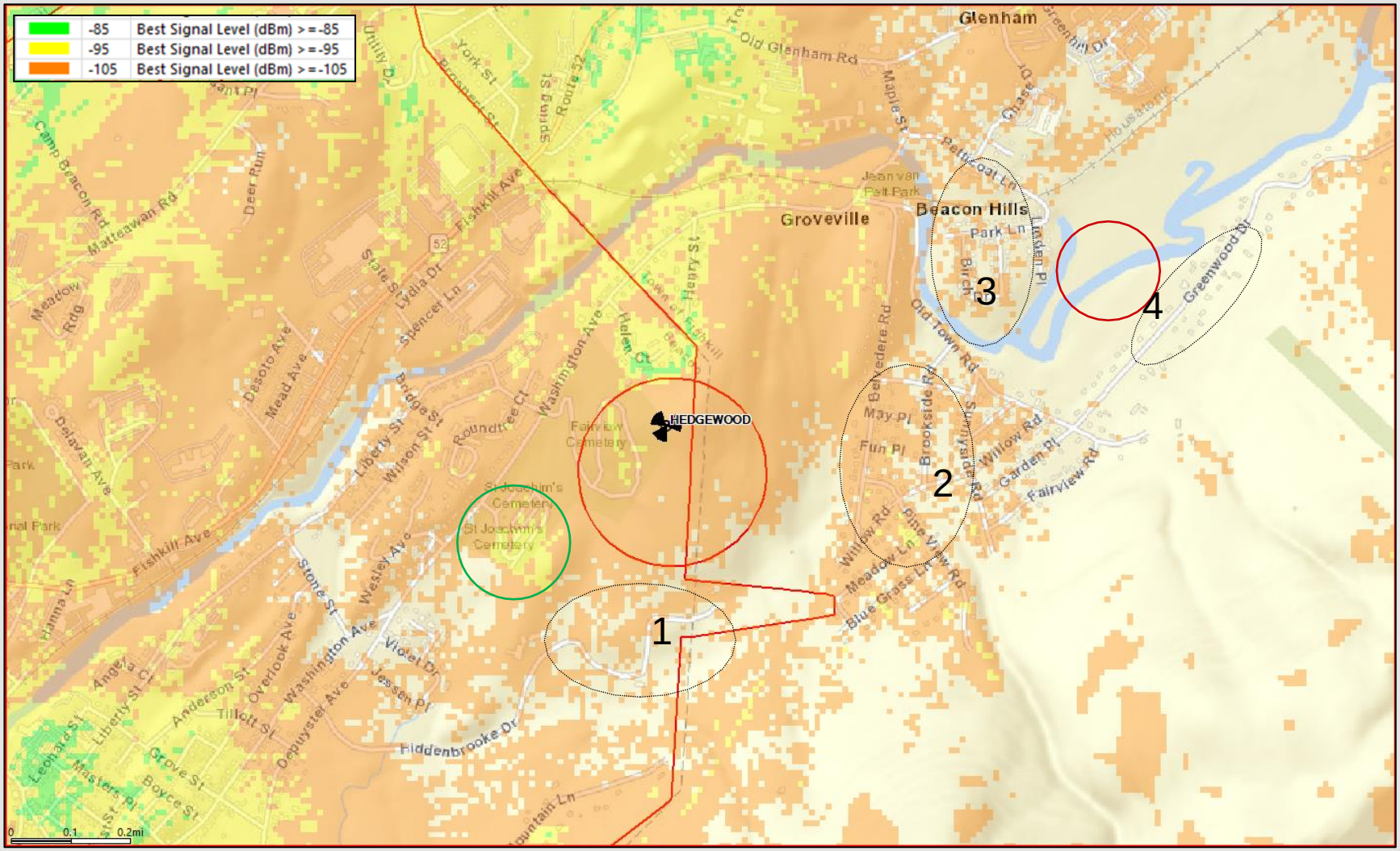
This area consists of fairly dense residential housing. There is also an elementary school on the fringes of the focus area.

Focus Area 4 – Greenwood Dr Area

This area consists of fairly dense residential housing, as well as a couple small businesses.

Height Justification (Mid-Band Coverage 2100MHz)

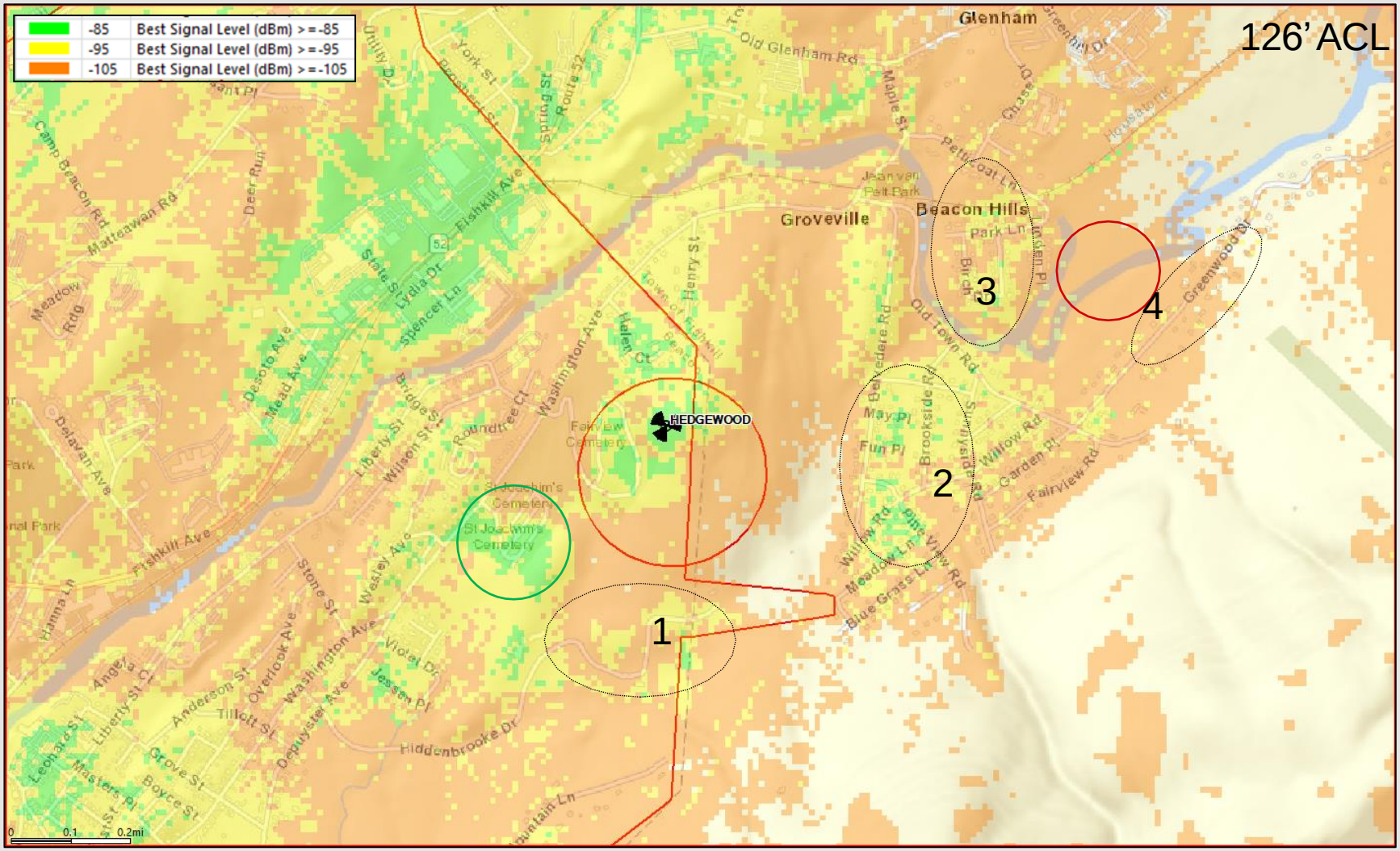
Zoomed in + increased signal strength granularity



The map above represents mid band coverage from existing sites. Areas encircled are focus areas for purposes of establishing minimum height justification.

Height Justification (Mid-Band Coverage 2100MHz)

Zoomed in + increased signal strength granularity

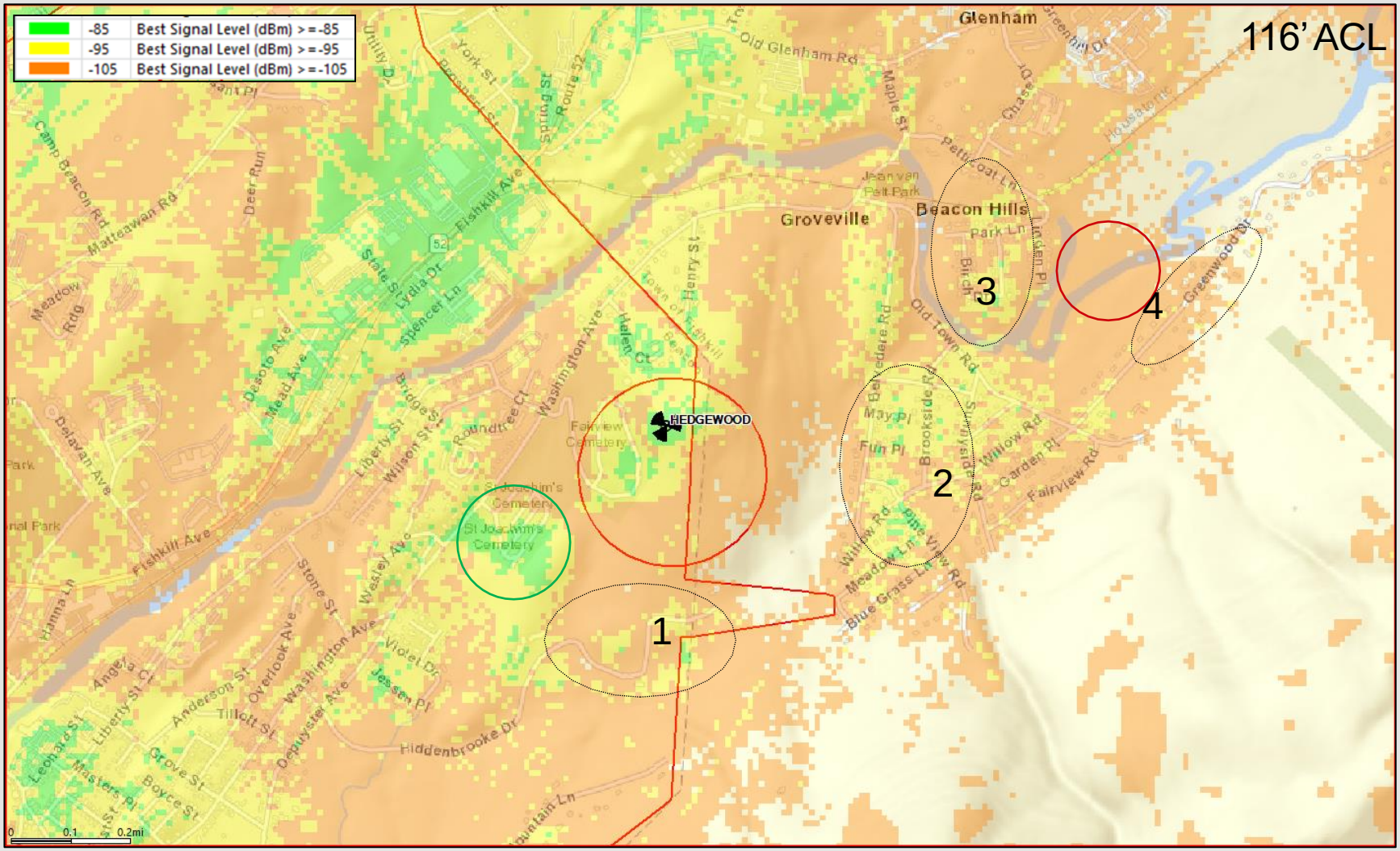


The map above represents mid band coverage from existing sites + Hedgewood site at 126' Antenna Centerline (ACL) which is 10ft higher than the proposed ACL(116'). The purpose of adding mid band coverage plot at higher ACL is to show that a higher ACL will certainly result in improve mid band coverage but the improvement is not significant enough to raise the antenna by another 10ft.

verizon

Height Justification (Mid-Band Coverage 2100MHz)

Zoomed in + increased signal strength granularity

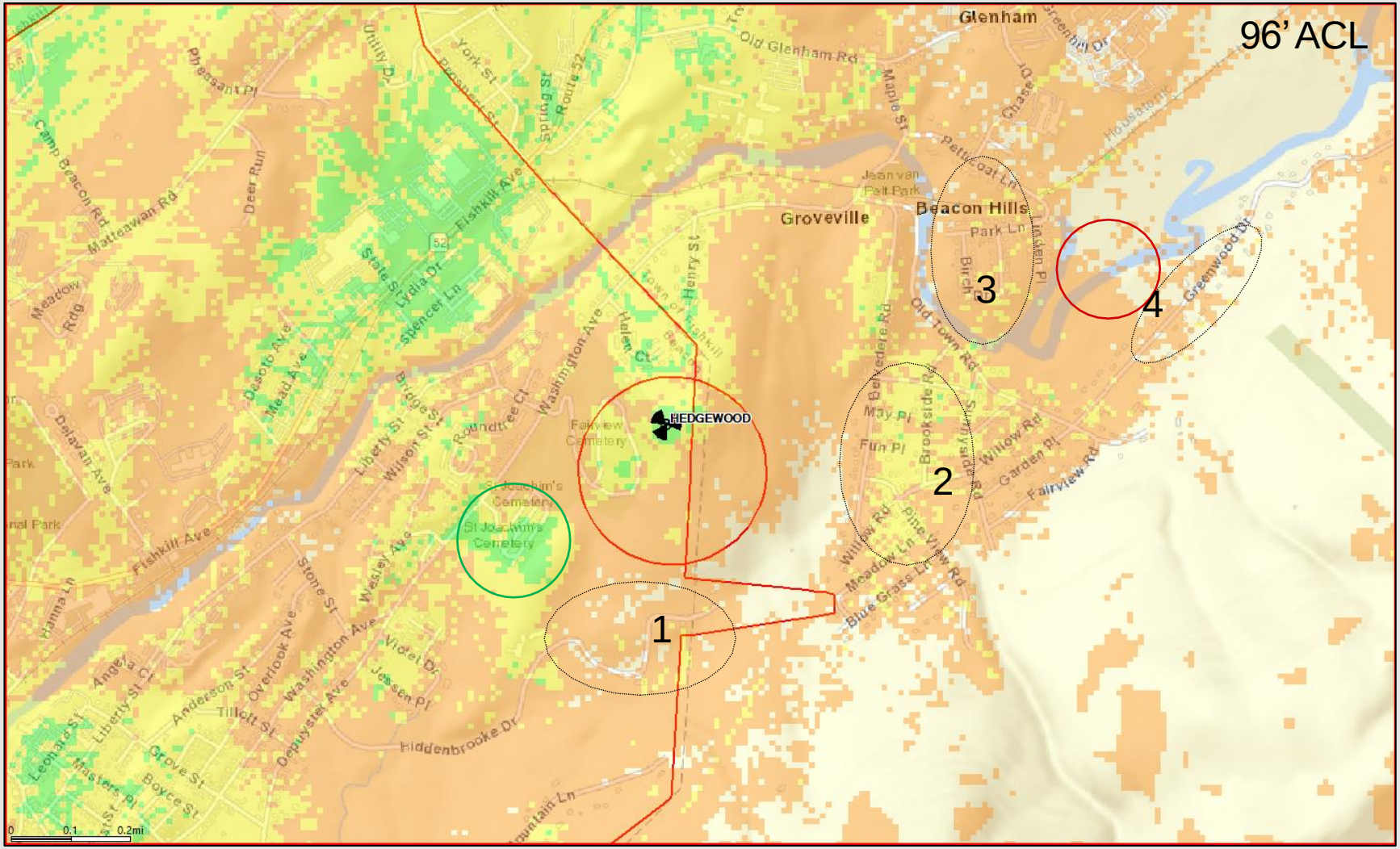


The map above represents mid band coverage from existing sites + Hedgewood site at 116'ACL. Midband footprint reduced at the proposed height but It can be seen that our focus areas will still have some mid band coverage.

verizon

Height Justification (Mid-Band Coverage 2100MHz)

Zoomed in + increased signal strength granularity

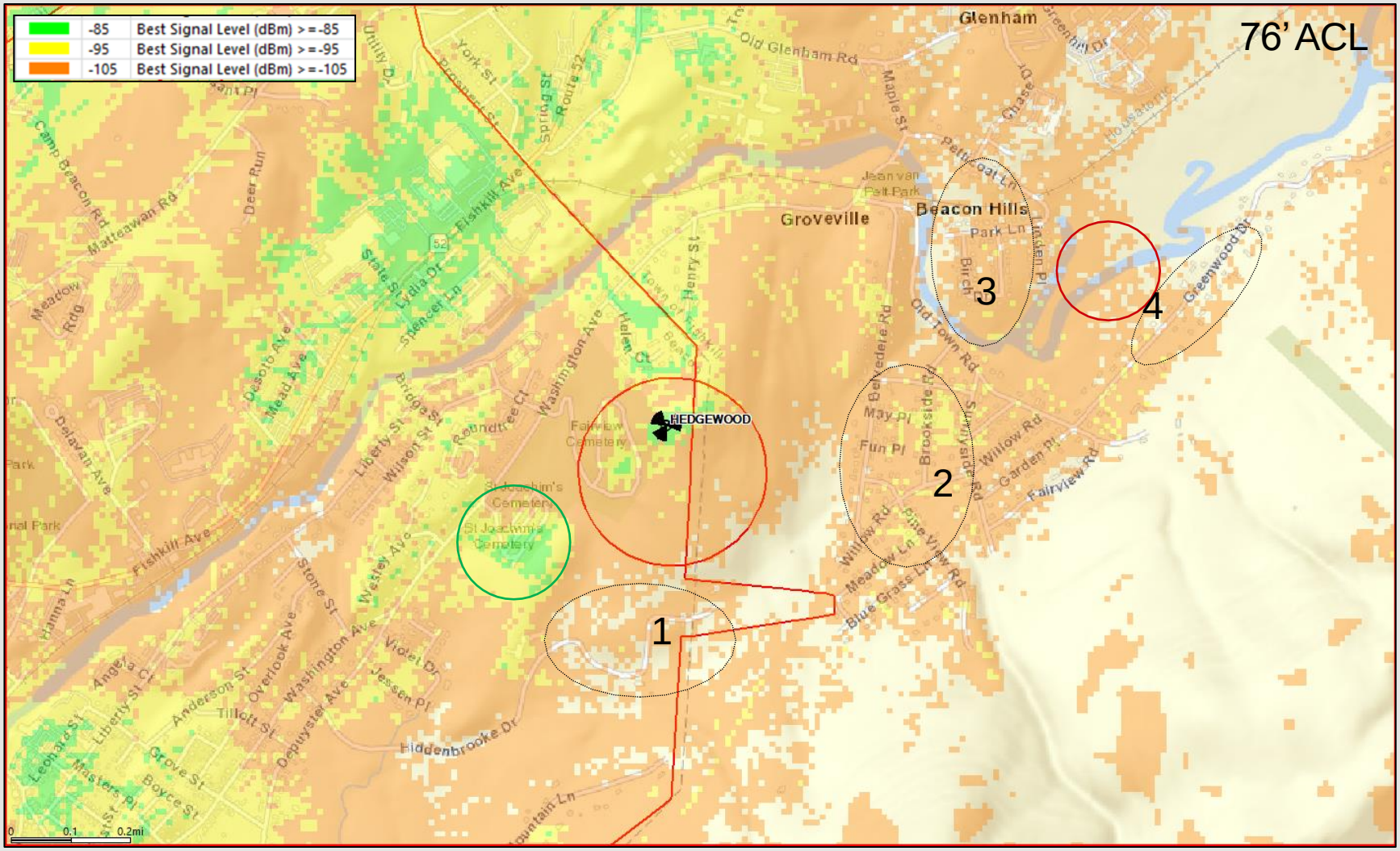


The map above represents mid band coverage from existing sites + Hedgewood site at 96'ACL. Midband footprint significantly reduced at 96'ACL and our focus areas will have either tier 4 outdoor coverage (-95dBm to -105dBm, which means no indoor midband coverage) or no midband coverage at all.

verizon

Height Justification (Mid-Band Coverage 2100MHz)

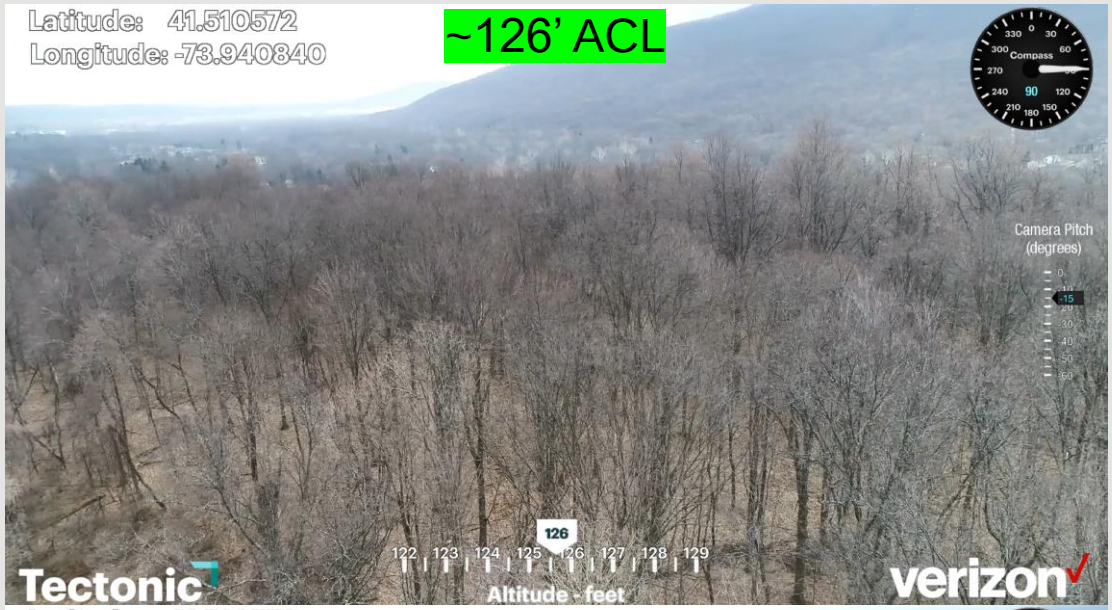
Zoomed in + increased signal strength granularity



The map above represents mid band coverage from existing sites + Hedgewood site at 76'ACL. Midband footprint significantly reduced at 76'ACL and our focus areas will have either tier 4 outdoor coverage (-95dBm to -105dBm, which means no indoor midband coverage) or no midband coverage at all.

verizon

Drone Views to Old Town Rd Area (Focus Area 2)



The adjacent images display views from the proposed Hedgewood site location to the East towards Old Town Rd (previously identified as focus area 2). These drone images display both the proposed view from an ACL of ~116' as well as from a higher ACL of ~126'.

It is clear that there is better line of sight (LOS) to the Old Town Rd area at 126' when compared to 116'. At 116' ACL there are area trees and terrain obstructions impacting the "RF far field" degrading coverage capabilities especially at the higher line of sight (LOS) frequencies (mid-band). This significantly impacts coverage capabilities and overall site footprint however the proposed 116' ACL is able to provide usable signal in portions of the areas of concern.

verizon

Drone Views to Old Town Rd Area (Focus Area 2)

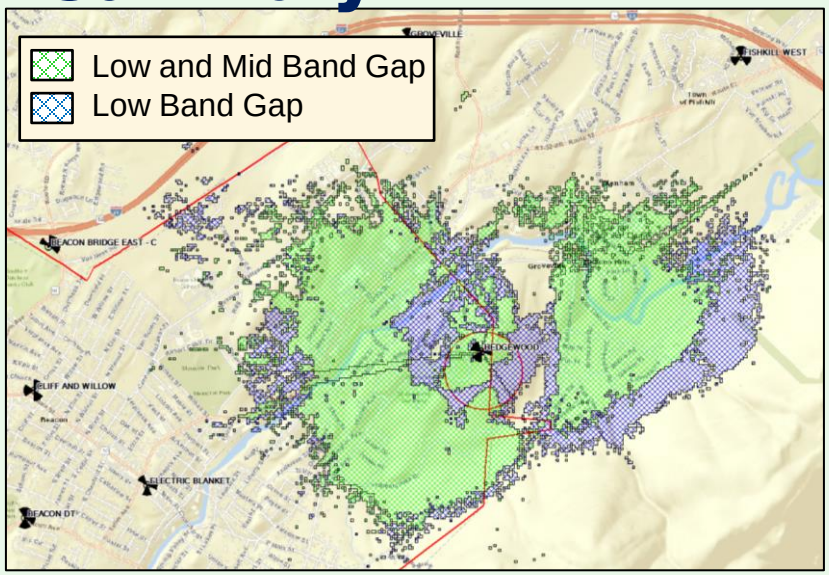
The adjacent image shows a view from the proposed Hedgewood site location to the East towards Old Town Rd (previously identified as focus area 2). This drone image displays the proposed view from an ACL of ~96'.

The lower ACL results with "variable to no coverage" gap areas from mid band and it can clearly be seen that at 96' ACL the antennas would not clear the tree line.

Height Justification Narrative/Summary

As mentioned before, Hedgewood project area is already experiencing high network utilization, primarily on low band due to lack of adequate and reliable mid band coverage in the area. Due to the high number of users in the project area, it is important to provide adequate mid band signal strength to this objective area. Verizon RF evaluated the minimum height requirement and it is our expert opinion that any height lower than 120' (116' ACL) will fail the capacity objective of the project. As shown previously, 116' ACL is not as ideal for the project as 126' would be, however it does provide acceptable coverage for the majority of the project area.

RF Justification Summary



The proposed site at 116' ACL resolves the substantial and significant gaps in coverage and capacity impacting the **Hedgewood** project area. The gaps are shown in the above graphic: The shaded areas as detailed in the legend represent gaps in coverage and capacity that Hedgewood (site) will resolve.

The network was analyzed to determine whether there is sufficient **RF coverage and capacity** in the **City of Beacon**. It was determined that there are significant gaps in adequate LTE service for Verizon Wireless in the 2100MHz frequency band. In addition to the coverage deficiencies, Verizon Wireless' network does not have sufficient capacity (low band or mid band) to handle the existing and projected LTE voice and data traffic in the area near and neighboring the proposed **Hedgewood** facility ("targeted service improvement area"). Based on the need for additional coverage and capacity while considering the topography and specific area requiring service, any further addition of capacity to distant existing sites does not remedy Verizon's significant gap in reliable service. Therefore, the proposed facility is also needed to provide "**capacity relief**" to the existing nearby Verizon Wireless sites, allowing the proposed facility and those neighboring sites to adequately serve the existing and projected capacity demand in this area.

With the existing network configuration there are significant gaps in service which restricts Verizon Wireless customers from originating, maintaining or receiving reliable calls and network access. It is our expert opinion that the proposed height will satisfy the coverage and capacity needs of Verizon Wireless and its subscribers in this portion of the **City of Beacon** and the **Hedgewood** project area. The proposed location depicted herein satisfies the identified service gaps and is proposed at the minimum height necessary for adequate service.

Brendan Hennessy

Brendan Hennessy
Engineer III – RF Design
Verizon Wireless

verizon

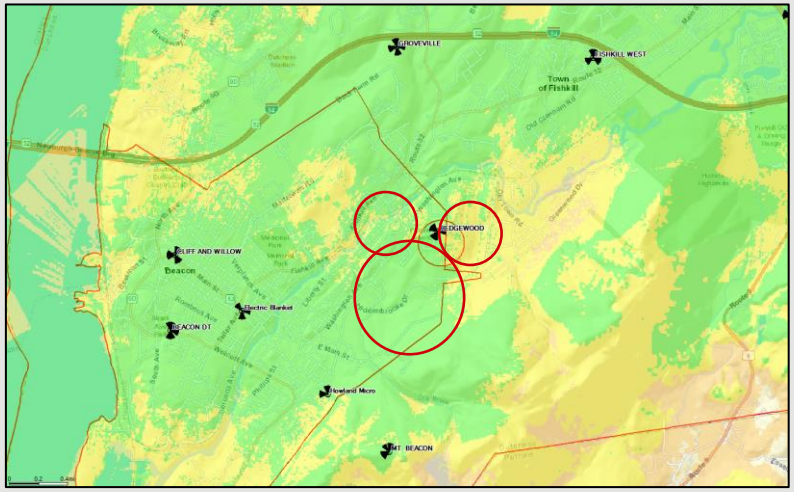
Mt. Beacon Decommissioning - Supplement

When this project was first proposed, the Mt. Beacon macro site was on-air. Since then, in an attempt to reduce interference in the area, the Mt. Beacon site has been shut down. One of the objectives of the proposed Hedgewood site is to help replace the coverage and capacity that Mt. Beacon was providing. The following slides show the differences in coverage between the following 3 scenarios:

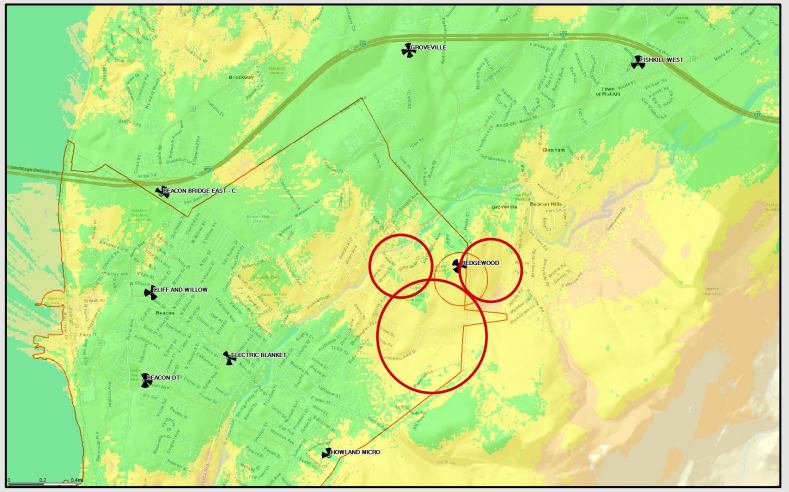
1. Existing coverage + coverage that was provided by Mt. Beacon
2. Existing coverage (without Mt. Beacon)
3. Proposed coverage (without Mt. Beacon + with Hedgewood)

Red circles have been added to the plots to highlight the areas where service was lost or degraded when Mt. Beacon was shut down, but will subsequently be restored or improved with the proposed Hedgewood project.

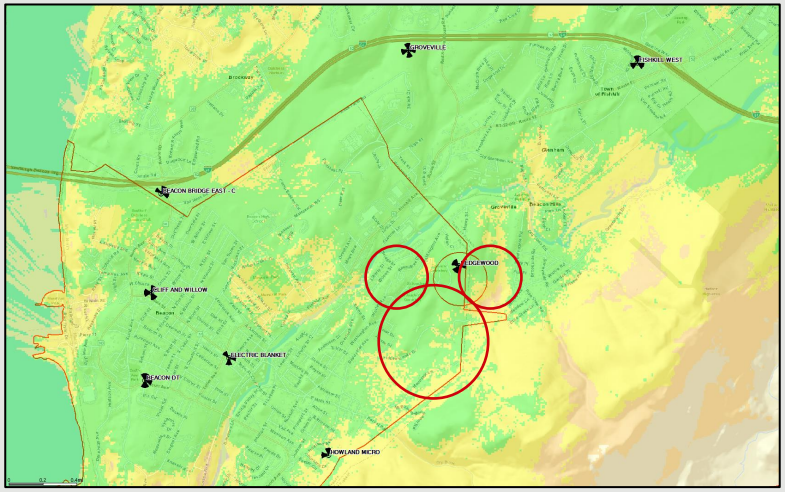
Mt. Beacon Decommissioning – 700 MHz



Existing 700 coverage + coverage that was provided by Mt. Beacon



Existing 700 coverage (without Mt. Beacon)

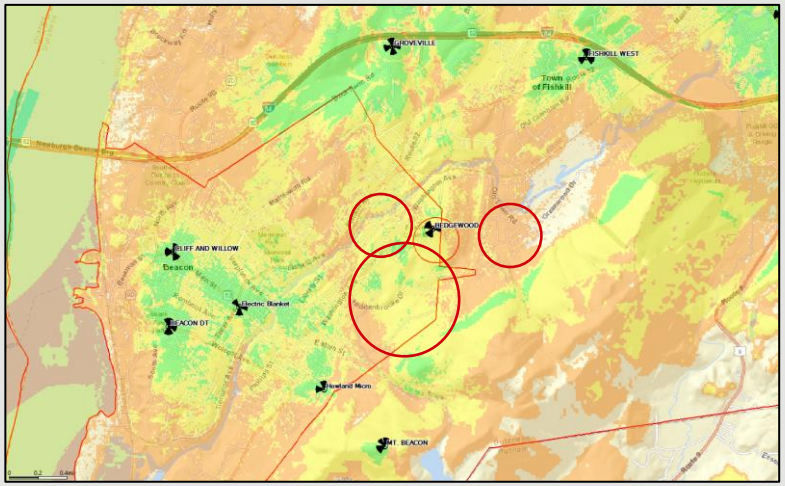


Proposed 700 coverage (without Mt. Beacon + with Hedgewood)

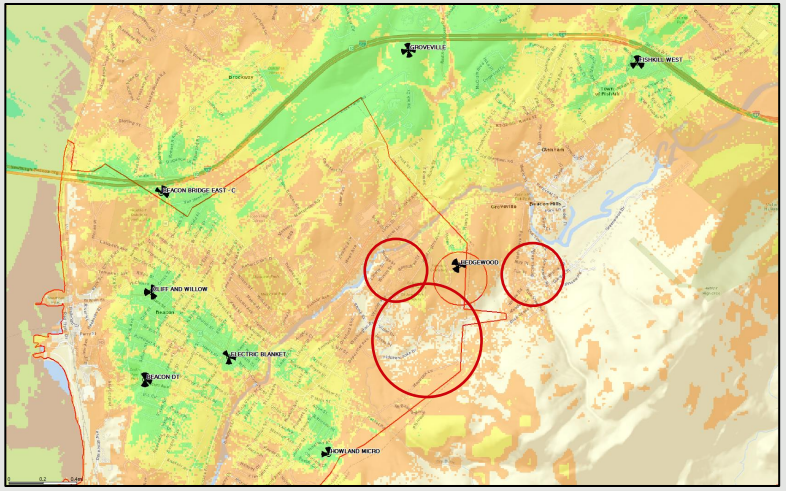
	-85	Best Signal Level (dBm) >=-85
	-95	Best Signal Level (dBm) >=-95
	-105	Best Signal Level (dBm) >=-105

verizon

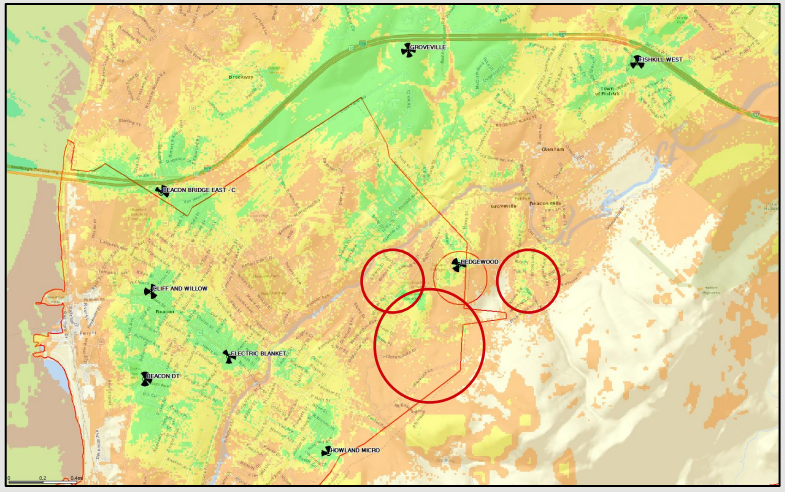
Mt. Beacon Decommissioning – 2100 MHz



Existing 2100 coverage + coverage that was provided by Mt. Beacon



Existing 2100 coverage (without Mt. Beacon)



Proposed 2100 coverage (without Mt. Beacon + with Hedgewood)

	-85	Best Signal Level (dBm) >=-85
	-95	Best Signal Level (dBm) >=-95
	-105	Best Signal Level (dBm) >=-105

verizon

Mt. Beacon Decommissioning - Summary

The previous two slides clearly demonstrate that the decommissioning of the Mt. Beacon site left significant coverage gaps and degraded service within the Hedgewood project area on both low band and mid band frequencies. These slides also clearly show that the proposed Hedgewood site at 116’ ACL will restore adequate service in these areas.

Young / Sommer LLC

ATTORNEYS AT LAW

EXECUTIVE WOODS, FIVE PALISADES DRIVE, ALBANY, NY 12205
Phone: 518-438-9907 • Fax: 518-438-9914

www.youngsommer.com

RECEIVED 8/11/23 MP

Writer's Telephone Extension: 258
solson@youngsommer.com

August 10, 2023

Via Federal Express
Planning Board
City of Beacon
One Municipal Plaza
Suite One
Beacon NY 12508

Re: Application of Verizon Wireless for a Personal Wireless Service Facility at 375 Washington Avenue (SBL 6055-04-+713005)

Dear Board Members:

Enclosed are fifteen (15) copies of the completed Visual Resource Evaluation prepared by Tectonic Engineering dated July 25, 2023 for the above-referenced application.

Please place this matter on the agenda for the September 12, 2023 Planning Board meeting.

Very truly yours,

Scott P. Olson

Encl.

VISUAL RESOURCE EVALUATION

PROPOSED 120' TALL TELECOMMUNICATIONS STRUCTURE

Hedgewood
375 Washington Avenue
City of Beacon
Dutchess County, New York 12508

Submitted by:

verizon

1275 John Street, Suite 90
West Henrietta, NY 14586

Prepared by:

Tectonic

PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

70 Pleasant Hill Road
Mountainville, New York 10953
845-534-5959
845-534-5999 FAX

July 25, 2023

VISUAL RESOURCE EVALUATION

Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C. (Tectonic), was contracted by Verizon Wireless, to conduct a "Visual Resource Evaluation" to determine which areas within the City of Beacon and the surrounding areas will contain views of the proposed 120 foot tall (124 overall height) wireless telecommunications structure.

Setting:

The proposed site is located at 375 Washington Avenue, in the City of Beacon, Dutchess County, New York 12508. The surrounding land use is predominantly wooded/undeveloped land with scattered residential, commercial and industrial development. Within the study area the topography ranges in elevation from approximately sea level to 1,620' +/- Above Mean Sea Level. The predominant forest trees are mixed deciduous and coniferous, with an estimated height of 60 to 70 feet. The field study for this visual resource evaluation was conducted in the middle of the summer season during leaf on conditions.

Methodology:

On July 17, 2023, Tectonic conducted a field investigation for the purpose of evaluating the viewshed associated with the proposed installation of the 120-foot tall monopole tower (structure). The structure will have a total height of 124-feet above ground level (AGL) with the addition of the lighting rod. Conditions were clear**,** approximately 75°-85°, with wind speeds of approximately 0-7 mph in the morning. The study area consisted of a two (2) mile radius from the project site. The two (2) mile radius generally consists of wooded/undeveloped areas, residential properties, commercial properties, and recreational properties. Creating a viewshed greater than a two (2) mile radius is generally unwarranted. Due to the fact that objects tend to appear smaller the farther they are from the viewer, in this case, the structure would appear very small, if visible at all, from a distance of more than two (2) miles.

The methodology utilized during this field investigation is referred to as a "balloon test." The height of the proposed structure was simulated by floating a three (3) foot diameter, helium-filled weather balloon at 120 feet AGL. The 120-foot height was utilized during the balloon test as this is the proposed height of the structure.

Prior to being on site, desktop-level review viewshed maps for a two (2) mile radius from the proposed tower location were computer generated utilizing the ArcGIS Desktop/ArcMap program, digital elevation data, and land cover data. The digital elevation data was provided by New York State via the digital elevation models (DEMs) produced cooperatively between the United States Geological Service and New York State's Department of Environmental Conservation. The DEM represents topography only data, without buildings, structures, or other development on the elevation model. As such, the Multi-Resolution Land Characteristics (MRLC) land cover data, cooperatively compiled by federal agencies, was utilized to provide approximate land cover data information; this data set was up to date as of 2019. This land cover data provides information associated with various types of development densities and vegetation, including types of forests, woody wetlands, and shrublands. The land cover data associated with the approximate locations of primarily deciduous forests, evergreen forests, mixed forests, and woody wetlands, as well as both medium and heavy development areas within the study area were extracted from this comprehensive land data source into a raster form. Once extracted, an estimate was created for the height of the trees within these areas. This extracted forest cover location data along with the estimated tree and building height elevations were then added onto a copy of the topographic only DEM

in order to represent forested/developed areas within the study area, creating a DEM that represents the topography, developed, and vegetated areas within the study area.

Next, the tower location was generated within ArcGIS Desktop with the proposed tower elevations, in a format that could be utilized by ArcGIS Desktop in order to run the Spatial Analyst "Viewshed" tool to evaluate surface areas within the two-mile study area where the tower could potentially be seen by observers within the study area. This tool takes into consideration the average height of a person above the ground surface at the observer locations when looking towards the proposed tower location, and makes note where something, either topography, development, or vegetation, will be blocking the tower from sight by the person standing at that location. This process is run twice – once for topography only and once for the combined topography, development, and vegetation. This method ensures that areas "blocked by topography" are differentiated from areas "blocked by vegetation". Areas "blocked by topography" are places where the tower will be blocked from view to an observer due to intervening topography, such as hills, mountains, or other features. Areas "blocked by vegetation" are areas where the tower will potentially not be visible to an observer due to vegetated land cover or developed with structures. Colors are used to differentiate between areas from which the structure will be visible (White/No color) and areas from which a view of the structure will be blocked by topography (Red) or vegetation/development (Yellow). These computer-generated maps were created in order to provide the best- and worse-case scenarios the different heights would have on visibility within the two (2) mile study area.

Tectonic traveled the study area along publicly accessible roadways to confirm the potential visibility of the structure based on the computer-generated viewshed map. Areas delineated as "blocked by topography" and "blocked by vegetation" were confirmed by viewing the site from public roadways within a two (2) mile radius. It was found that the topography only computer-generated viewshed map was correct and accurate within the areas surveyed, and that the balloon was in fact not visible from areas indicated to be blocked by topography. The combined computer-generated and in-field review of the viewshed analysis resulted in the discovery that the proposed structure would be visible from only a select few locations within the two (2) mile radius, represented on the attached Combined Viewshed Map. Photograph locations are shown on the Photographic Log Map. The in-field review noted the visibility of the structure will be limited to the surrounding area where vegetation has been cleared along Henry Street, Pine View Road, Matteawan Road, Fishkill Avenue, and Saint Joachim's Cemetery.

Photographs were taken from various vantage points within the study area to document the actual view towards the proposed structure, as well as the general character of the viewshed. Each photograph attached includes a brief description of the location and orientation from which it was taken, and the photo number corresponds to the key number on the attached photograph log map.

Process:

Photographs of the weather balloon from the viewpoints noted were taken with a Nikon D3200 using a 18-55mm length lens set to ±33mm, a focal length equivalent to 50mm on a full frame camera. A full frame camera with a 50mm lens has traditionally been accepted as the best focal length to mimic the view as observed from the human eye. A three (3) foot diameter red helium filled balloon was floated to a height of 120 feet.

In order to analyze the potential visual impacts of the proposed structure, Tectonic took photographs of the balloons from locations within the search area for the purpose of preparing simulations of the

proposed structure. Photographs for which there is a corresponding simulated view (#3, 6, 25, 27, and 36) of the proposed structure were produced by first creating a 3-dimensional (3D) structure based on the proposed design plans and scaling, then mimicking the site conditions and view looking towards the proposed site where the marker balloon was set to a height of 120' AGL. This 3D structure was then rendered to produce a digital image of the proposed structure to scale and at the proposed perspective. The digital images of the field photograph and rendered image were then merged and scaled through the use of the image editing software, "Krita", an open-source Adobe Photoshop alternative. During this process, the rendered structure's height and width is checked against the known height and width by scaling the similar type structure using measurements obtained from the marker balloon. The similar type structure used has an antenna array that spans eight (8) feet high and eight (8) feet wide. By measuring the balloon diameter of three (3) foot, one can determine the proper scaling of the antenna array by multiplying the balloon height and width by a factor of 2.6667, or by 266.67%. The image and structure are then composited together and the image exported, producing the final digital image.

We note that the simulations provided are artistic renderings of views from chosen locations and should not be interpreted to be the actual view of the tower following construction. While we utilize best efforts to simulate the view of the proposed tower from a particular location, some variance between the simulations, manufacturer products, and final installed towers is to be expected.

Conclusion:

The Viewshed Analysis Map presents a conservative delineation of the viewshed within the study area and along public roadways and public parks. The photo simulations have been prepared per the methodology described above and provide a general depiction of the appearance of the structure from the photographed viewpoints.

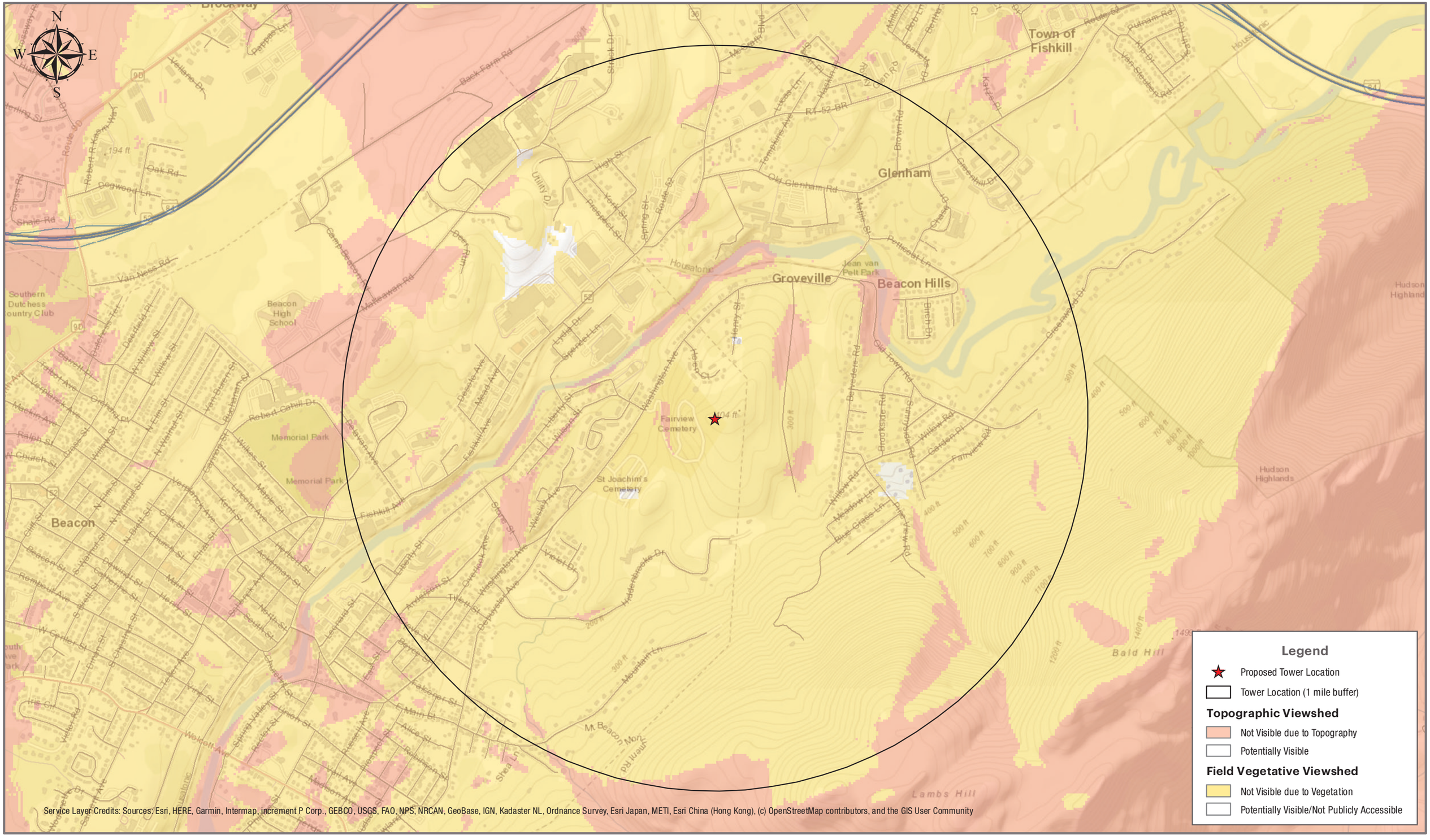
Sincerely,
TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C.

By:

Dina Peoples
GIS Specialist

Reviewed By:

Lori A. Bart
Environmental Project Manager



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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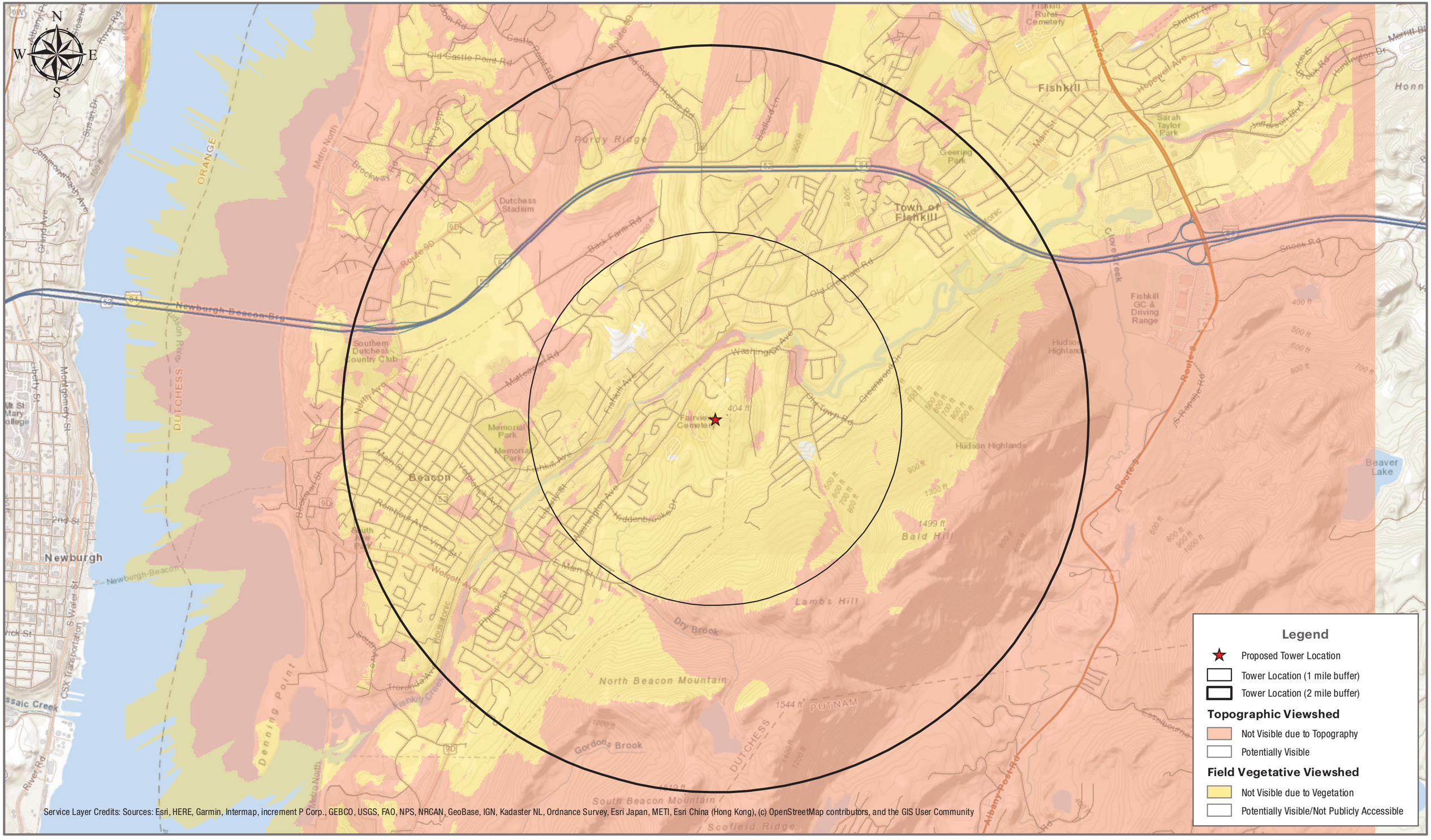
120ft Tower Viewshed
Field Conditions Update for
Publicly Accessible Areas

Hedgewood
375 Washington Ave.
Beacon, NY 12508

0 0.125 0.25 0.5 Miles

Combined
Viewshed Map
11272.005



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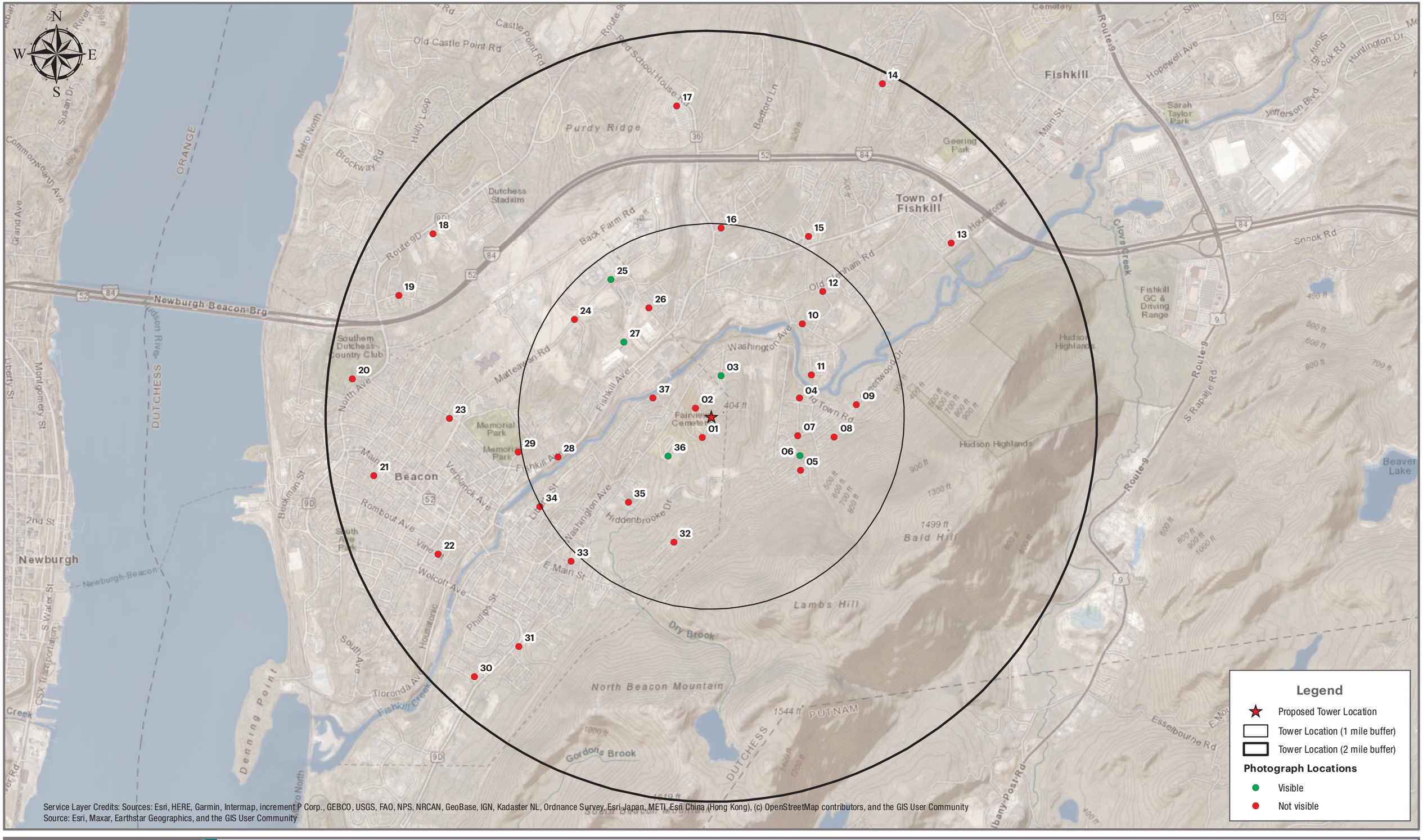
120ft Tower Viewshed
Field Conditions Update for
Publicly Accessible Areas

Hedgewood
375 Washington Ave.
Beacon, NY 12508

0 0.25 0.5 1 Miles

Combined
Viewshed Map
11272.005

126



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

120ft Tower

Hedgewood
375 Washington Ave.
Beacon, NY 12508

0 0.25 0.5 1 Miles

Photograph Log Map
11272.005

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Looking northeast from S end of Fairview Cemetery.
Proposed installation will not be visible from this location.

P-1

Distance from the photographic location to the proposed installation is ±0.11 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southeast from N end of Fairview Cemetery.
Proposed installation will not be visible from this location.

P-2

Distance from the photographic location to the proposed installation is ±0.09 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking south from Henry Street.
Proposed installation will be visible from this location.

P-3

Distance from the photographic location to the proposed installation is ±0.21 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking south from Henry Street.
Proposed installation will be visible from this location.

Distance from the photographic location to the proposed installation is ±0.21 miles.

S-3

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southwest from Brookside Rd.
Proposed installation will not be visible from this location.

P-4

Distance from the photographic location to the proposed installation is ±0.47 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northwest from Granview Rd.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±0.54 miles.

P-5

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northwest from Pineview Rd.
Proposed installation will be visible from this location.

P-6

Distance from the photographic location to the proposed installation is ±0.50 miles.

11272.005

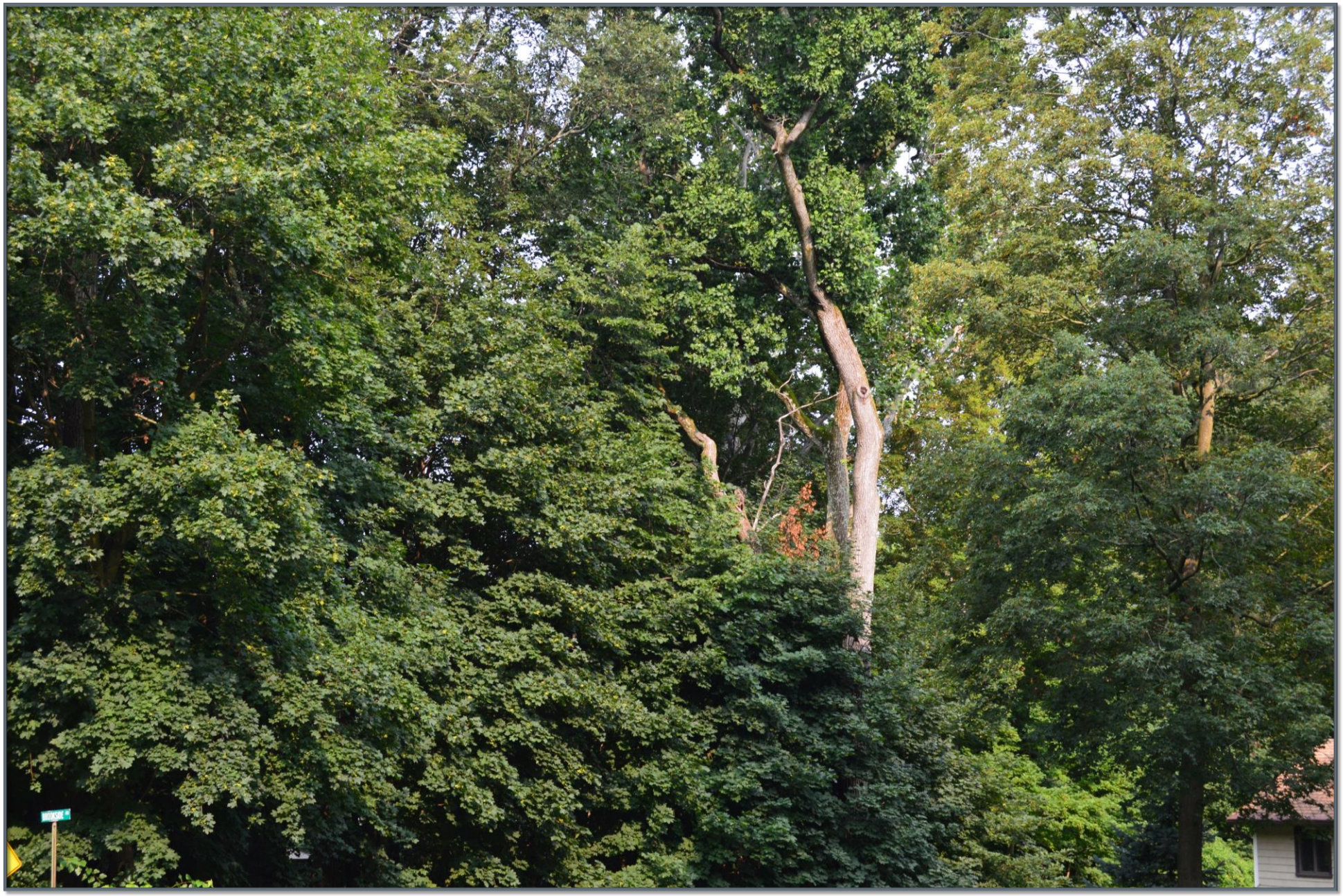
Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northwest from Pineview Rd.
Proposed installation will be visible from this location.

S-6

Distance from the photographic location to the proposed installation is ±0.50 miles.

11272.005



Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking west from Willow Rd.
Proposed installation will not be visible from this location.

P-7

Distance from the photographic location to the proposed installation is ±0.46 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking west from Fairview Rd.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±0.65 miles.

P-8

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking west from Greenwood Dr.
Proposed installation will not be visible from this location.

P-9

Distance from the photographic location to the proposed installation is ±0.76 miles.

11272.005

Tectonic
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Looking southwest from Petticoat Lane.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±0.67 miles.

P-10

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southwest from Birch Drive.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±0.56 miles.

P-11

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southwest from Chase Drive.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±0.87 miles.

P-12

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southwest from the intersection of Van Steuben & Kip Dr.
Proposed installation will not be visible from this location.

P-13

Distance from the photographic location to the proposed installation is ±0.56 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southwest from Ridge Rd.
Proposed installation will not be visible from this location.

P-14

Distance from the photographic location to the proposed installation is ±1.94 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southwest from 100.7 WHUD parking lot.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±1.06 miles.

P-15

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking south from McGrath Blvd.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±0.98 miles.

P-16

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking south from Downstate Correctional Facility Entrance.
Proposed installation will not be visible from this location.

P-17

Distance from the photographic location to the proposed installation is ±1.62 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southeast from Vellano Dr.
Proposed installation will not be visible from this location.

P-18

Distance from the photographic location to the proposed installation is ±1.73 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southeast from Dogwood Lane.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±1.74 miles.

P-19

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking east from intersection of N Ave & Talbot Ave.
Proposed installation will not be visible from this location.

P-20

Distance from the photographic location to the proposed installation is ±1.87 miles.

11272.005

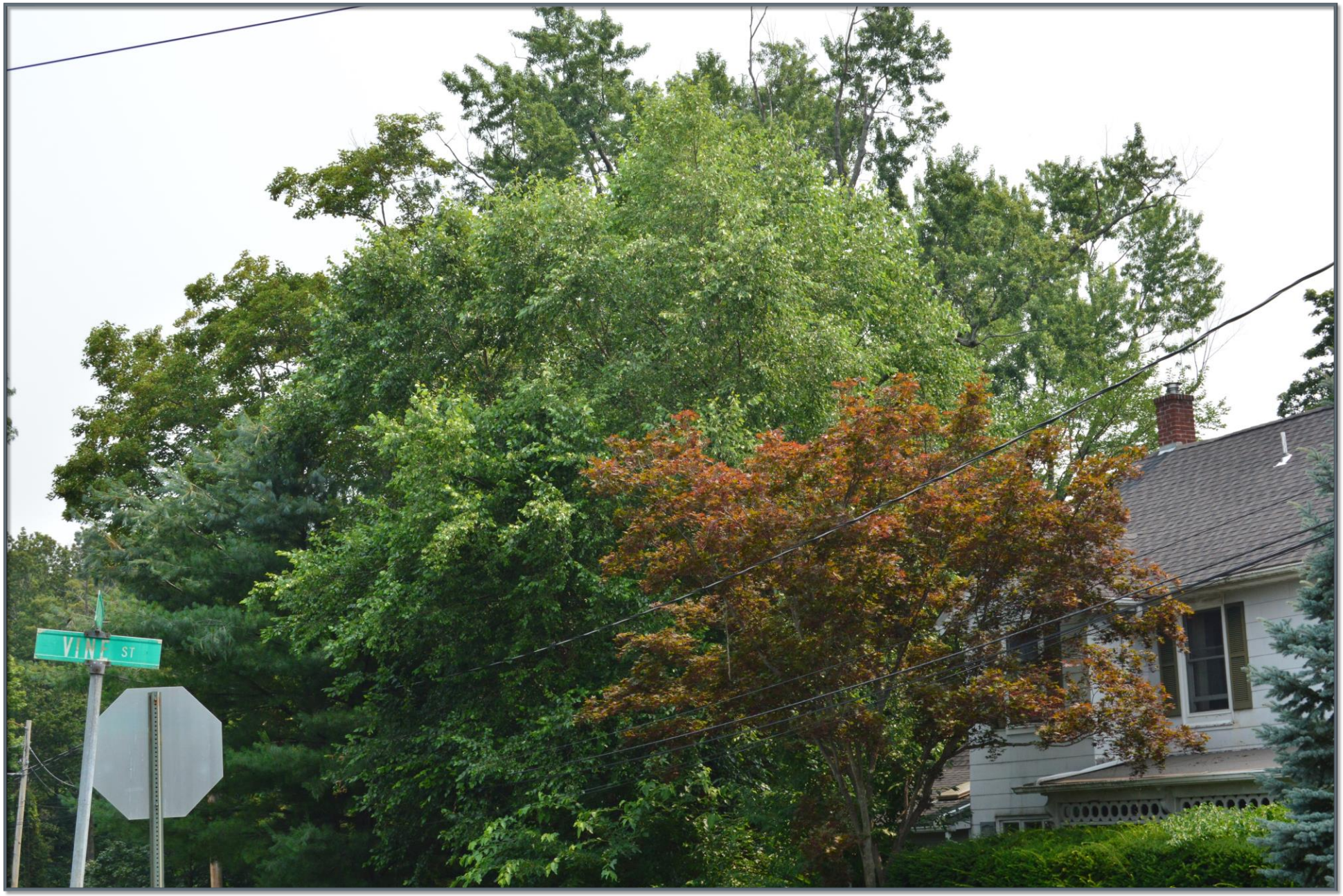
Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking east from DeWindt St.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±1.78 miles.

P-21

11272.005



Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northeast from intersection of Vine & John St.
Proposed installation will not be visible from this location.

P-22

Distance from the photographic location to the proposed installation is ±1.59 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking east from Wilkes St.
Proposed installation will not be visible from this location.

P-23

Distance from the photographic location to the proposed installation is ±1.36 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

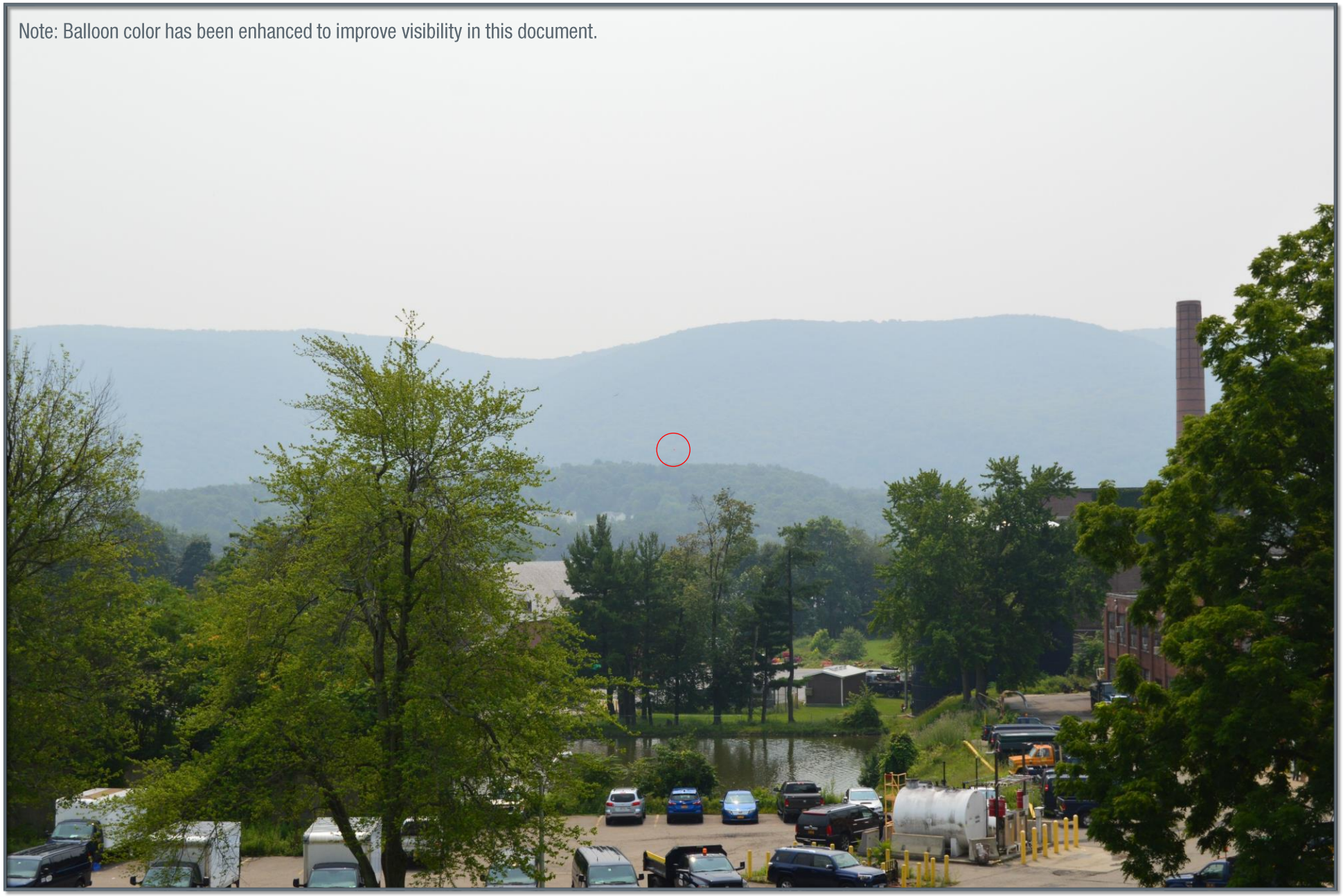
Looking southeast from intersection of Matteawan Rd & Deer Run.
Proposed installation will not be visible from this location.

P-24

Distance from the photographic location to the proposed installation is ±0.87 miles.

11272.005

Note: Balloon color has been enhanced to improve visibility in this document.



Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southeast from Matteawan Rd.
Proposed installation will be visible from this location.

P-25

Distance from the photographic location to the proposed installation is ±0.88 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southeast from Matteawan Rd.
Proposed installation will be visible from this location.

S-25

Distance from the photographic location to the proposed installation is ±0.88 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

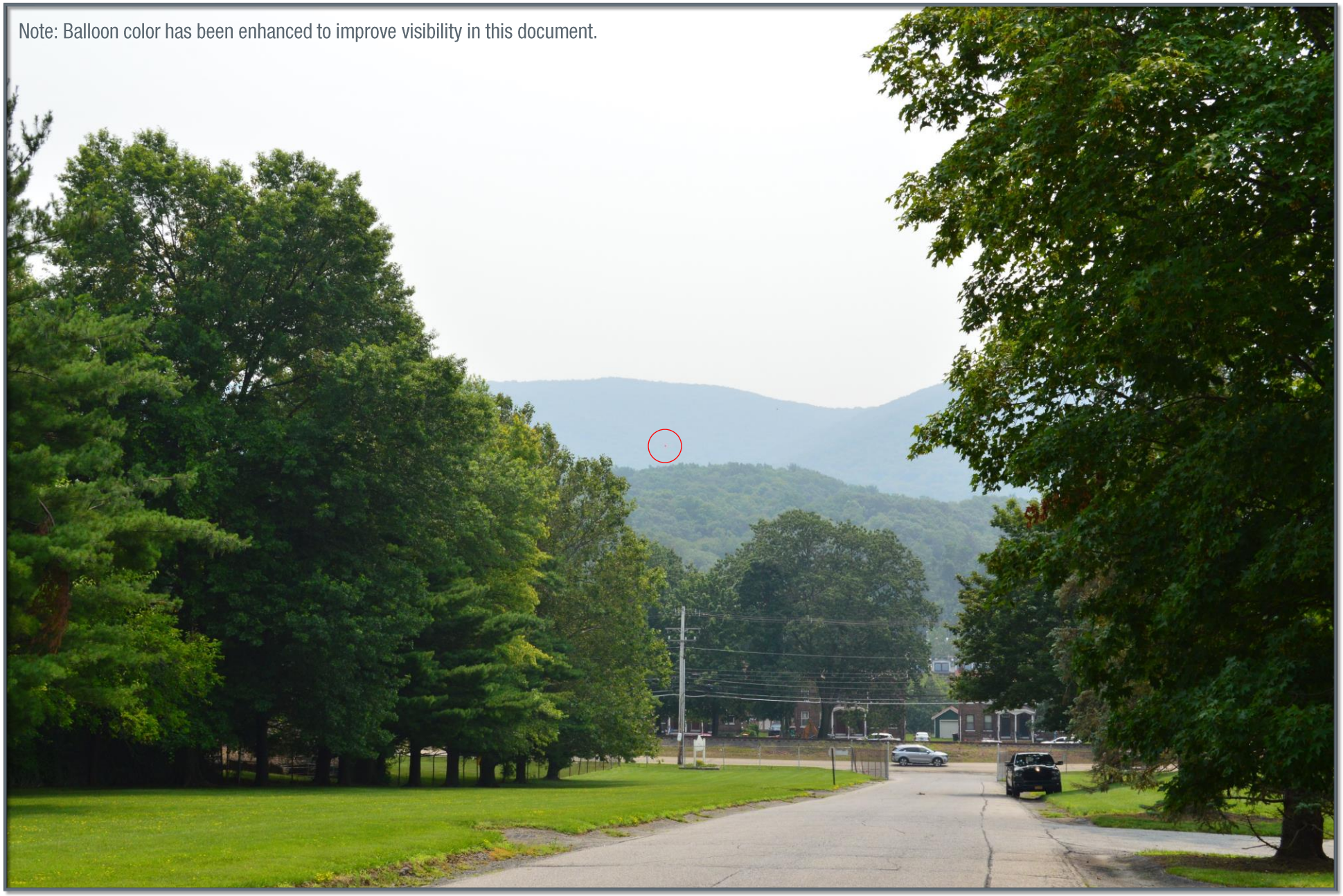
Looking southeast from intersection of Prospect St & Stewart Ave.
Proposed installation will not be visible from this location.

P-26

Distance from the photographic location to the proposed installation is ±0.65 miles.

11272.005

Note: Balloon color has been enhanced to improve visibility in this document.



Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southeast from Chemprene Inc Entrance.
Proposed installation will be visible from this location.

P-27

Distance from the photographic location to the proposed installation is ±0.59 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking southeast from Chemprene Inc Entrance.
Proposed installation will be visible from this location.

S-27

Distance from the photographic location to the proposed installation is ±0.59 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking east from Fishkill Ave, near Hedgewood Home.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±0.82 miles.

P-28

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking east from Robert Cahill Dr.
Proposed installation will not be visible from this location.

P-29

Distance from the photographic location to the proposed installation is ±1.02 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking east from Ellen Dr.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±1.82 miles.

P-30

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northeast from Mountain Beacon parking entrance.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±1.56 miles.

P-31

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking north from Mountain Lane.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±0.68 miles.

P-32

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northeast from Falcner St.
Proposed installation will not be visible from this location.

P-33

Distance from the photographic location to the proposed installation is ±1.025miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northeast from Liberty St.
Proposed installation will not be visible from this location.

Distance from the photographic location to the proposed installation is ±1.00 miles.

P-34

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northeast from Jessen Pl.
Proposed installation will not be visible from this location.

P-35

Distance from the photographic location to the proposed installation is ±0.62 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northeast from St. Joachim's Cemetery.
Proposed installation will be visible from this location.

P-36

Distance from the photographic location to the proposed installation is ±0.30 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking northeast from St. Joachim's Cemetery.
Proposed installation will be visible from this location.

S-36

Distance from the photographic location to the proposed installation is ±0.30 miles.

11272.005

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Looking east from Beacon Water Department parking lot.
Proposed installation will not be visible from this location.

P-37

Distance from the photographic location to the proposed installation is ±0.32 miles.

11272.005

Young / Sommer LLC

ATTORNEYS AT LAW

EXECUTIVE WOODS, FIVE PALISADES DRIVE, ALBANY, NY 12205
Phone: 518-438-9907 • Fax: 518-438-9914

www.youngsommer.com

Writer's Telephone Extension: 258
solson@youngsommer.com

December 5, 2023

Via Federal Express

Planning Board
City of Beacon
One Municipal Plaza
Suite One
Beacon NY 12508

Re: Application of Verizon Wireless for a Personal Wireless Service Facility at 375 Washington Avenue (SBL 6055-04-+713005)

Dear Chairman Gunn and Members of the Planning Board:

Please allow this letter to respond to certain comments discussed at the recent public hearing regarding the above-referenced application.

1. John Clarke Planning and Design Comment (Nov. 10, 2023 Memorandum): Will the proposed tower be visible above the secondary ridgeline from Fishkill Avenue at State Street?

   Response: We forwarded this comment to Verizon Wireless' visual consultant who provided the following response:

   > "Based on a desktop review utilizing LIDAR elevation data in Google Earth and a review of drone flights performed at 116ft and 126ft elevation from the tower location in February 2022 with leaf-off conditions, roughly 700 feet of Fishkill Avenue will have at least partial visibility where a gap between the existing trees and structures provide a line of sight to the tower. This area of visibility along Fishkill Avenue extends from the Hudson Highlands Veterinary Medical Group to just past the Chemprene Inc driveway. During leaf-on conditions, visibility within this area of visibility will be reduced by the existing vegetation along the roadway. During leaf-off conditions, the bare vegetation and existing evergreen vegetation will

work to obscure and break up the outline of the proposed tower, especially as the mountains will provide a backdrop for the tower to blend into."

2. John Clarke Planning and Design Comment (Nov. 14, 2023 Public Hearing): Are there any additional Verizon Wireless sites planned in the City?

   Response: The Hedgewood macro site is the last current active project in Beacon needed to replace the coverage gaps left from the decommissioning of the Mt. Beacon site. Once the Hedgewood site is on-air, Verizon Wireless will be able to evaluate any remaining network needs within Beacon. Depending on the results of the evaluation, additional site(s) could be proposed. However, no additional sites are currently proposed or anticipated for the immediately foreseeable future.

3. John Russo, P.E. Comment (Nov. 14, 2023 Public Hearing): Would like to see construction details of the proposed tower.

   Response: Construction details are typically provided in the Construction Drawings which are issued subsequent to receipt of all necessary land use and zoning approvals and as part of the Building Permit process. At such time, detailed tower design specifications are also provided to the City for review.

4. Planning Board Member Len Warner Comment (Nov. 14, 2023 Public Hearing): When will the Groveville lease at 60 Stack Drive expire?

   Response: Verizon Wireless currently leases space on the existing tower at 60 Stack Drive (the "Groveville Site"). The tower at the Groveville Site is owned or managed by Crown Castle and located on property owned by the State of New York. Verizon Wireless currently has lease rights extending though and including August 1, 2031. Verizon Wireless does not currently have any plans to relocate its facility from this location upon expiration of its lease. Verizon Wireless expects to enter into a lease amendment to extend the lease terms beyond August 1, 2031.

5. Public Comments (Nov. 14, 2023 Public Hearing): A few members of the public commented that the proposed facility would result in adverse health effects.

   Response: The Telecommunications Act of 1996 ("TCA") was enacted to promote and facilitate the rapid deployment of personal wireless service facilities such as that proposed. Notwithstanding its clear intentions, the TCA "generally preserves the traditional authority of State and local governments to regulate the location, construction and modification of wireless communication facilities like cell phone towers." *T-Mobile S., LLC v City of Roswell, Georgia*, 574 US 293 [2015] (quotations and citations omitted); *see* 47 USC § 332 (7) (A). However, the TCA also imposes "specific limitations on that authority", and those limitations preempt Petitioner's claims in this matter. *T-Mobile S., LLC* at 300 (*quoting Ranch Palos Verdes v Abrams*, 544 US 113, 115 [2005]). For example, 47 USC §332 (c) (7) (B) (iv) expressly states that:

   > "no State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal

> wireless service facilities on the basis of environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions."

"Environmental effects within the meaning of [this section] include health concerns about the biological effects of RF radiation." *T-Mobile Northeast LLC v Town of Ramapo*, 701 F Supp 2d 446 [SDNY 2009]; *see also Cellular Phone Taskforce v FCC*, 205 F3d 82, 88 [2d Cir 2000] (holding that "the [TCA] preempted state and local governments from regulating the placement, construction or modification of personal wireless service facilities on the basis of the health effects of RF radiation where the facilities would operate within levels determined by the FCC to be safe").

To demonstrate compliance with current FCC emissions standards, Verizon Wireless provided a Site Compliance Report prepared by SiteSafe dated October 27, 2022 which was provided in Exhibit 8 of the original application. The Site Compliance Report concludes that "the composite exposure from this facility in all areas at ground level will be below 1% of the General Public MPE limit, or over 100 times less than the maximum allowed exposure in publicly accessible area." Because Verizon Wireless has provided unrefuted evidence that the proposed site will be fully compliant with the current FCC emissions requirements, the Planning Board is not permitted to consider alleged health effects.

Finally, we would like to clarify that Verizon Wireless does not own the Mt. Beacon tower structure. We are, therefore, not able to advise whether the tower structure is planned to be removed in the near future.

We look forward to continuing the discussion of this application at the Planning Board's November 12, 2023 meeting.

Very truly yours,

Scott P. Olson

Encl.

c: John Clarke, Beacon Planning Consultant (via email)
John Russo, P.E. (via email)
Jennifer Gray, Esq. (via email)
Nate Keenan, Tectonic (via email)
David C. Brennan, Esq. (via email)

LANC & TULLY
Engineering and Surveying, P.C.

December 7, 2023

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: Verizon Wireless Tower
Fairview Cemetery
375 Washington Avenue
City of Beacon

Dear Mr. Gunn:

My office has received the following in regard to the Verizon Wireless cell tower proposed at the Fairview Cemetery:

- Response correspondence dated December 5, 2023, as prepared by Scott Olson, Esq. of Young/Sommer, LLC.

Based upon our review, all previous engineering comments have been addressed. Once the applicant has addressed any outstanding legal or planning comments and paid any outstanding fees, we would recommend the signing of the plans.

If you have any questions, or require any additional information, please do not hesitate to contact our office.

Very truly,

LANC & TULLY, P.C.

John Russo, P.E.

cc: John Clarke, Planner
Jennifer Gray, Esq.
Bruce Flower, Building Inspector

P.O. Box 687, Goshen, New York 10924 | (845) 294-3700
www.lanctully.com

John Clarke Planning and Design jclarkeplandesign@gmail.com
845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: December 8, 2023
Re: **375 Washington Avenue, Verizon Telecommunications Tower Site Plan and Special Permit**

I reviewed the December 5, 2023 response letter to consultant and public comments from Young/Sommer.

Proposal
The applicant is proposing to install a 120-foot monopole with a 4-foot lightning rod, 9 antennas, and a 50-foot square fenced compound for ground-mounted equipment. The location is on the 50-acre Fairview Cemetery parcel in the R1-120 zoning district and the Historic District and Landmark Overlay (HDLO) zone.

Comments and Recommendations

1. Based on a February 2022 drone flight with leaf-off conditions, the Verizon visual consultant confirmed that the proposed tower will be at least partially visible above the secondary ridgeline from Fishkill Avenue near the State Street intersection, although "the bare vegetation and existing evergreen vegetation will work to obscure and break up the outline of the proposed tower." This viewpoint is approximately ½-mile from the tower site. The City Council had considered this location for recognition as a scenic view, but it was never designated.

2. All my previous comments have been addressed.

If you have any questions or need additional information, please feel free to email me.

John Clarke, Beacon Planning Consultant

c: Bruce Flower, Building Inspector
Jennifer L. Gray, Esq., City Attorney
John Russo, P.E., City Engineer
Scott P. Olson, Esq., Project Representative

City of Beacon Planning Board Agenda
12/12/2023

Title:

Review application for Site Plan and Subdivision approval, Mixed-Use Commercial and Residential, 45 Beekman Street, High Street, and High Street, submitted by Beekman Arts Center LLC and Bay Ridge Studios LLC.

ATTACHMENTS

45 Beekman PB 12.12.23 Final 11-28-2023 Subdivision Site Plan Planning Board Cover Letter - Be(5782582.5).pdf

45 Beekman PB 12.12.23 Exhibit A - Images of the Premises and Surrounding Area.pdf

45 Beekman PB 12.12.23 Exhibit B - City of Beacon Application for Site Plan Approval.pdf

45 Beekman PB 12.12.23 Exhibit C - City of Beacon Application for Subdivision Approval.pdf

45 Beekman PB 12.12.23 Exhibit D - Full Environmental Assessment Form.pdf

45 Beekman PB 12.12.23 Exhibit E - Coastal Assessment Form & LWRP Consistency Statement.pdf

45 Beekman PB 12.12.23 Exhibit F - Traffic & Parking Study by Colliers Engineering and Design, P.C. November 28, 2023.pdf

45 Beekman PB 12.12.23 Site Plans Set dated November 28, 2023 (Sheets 1-5).pdf

John Clarke reveiw PB 45 Beekman St 12.8.23.pdf

Lanc Tully review PB 45 Beekman 12-08-23.pdf

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Taylor M. Palmer, Esq.
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November 28, 2023

VIA E-MAIL
AND HAND DELIVERY
Hon. John Gunn
And Members of the Planning Board
City of Beacon
1 Municipal Plaza
Beacon, New York 12508

Re: Application for Site Plan & Subdivision Approval for Proposed Mixed-Use Development
Premises: 45 Beekman Street, High Street, & High Street Beacon, New York
Tax Parcel IDs: (5955-19-706012, 5954-26-689990 & 5954-26-781983

Dear Chairman Gunn and Members of the Planning Board:

On behalf of Beekman Arts Center LLC and Bay Ridge Studios LLC (the "Applicants"), the owners of the above-referenced Premises,[1] we respectfully submit this letter and the referenced enclosures in support of an Application for Site Plan and Subdivision Approval (the "Application"), proposing to redevelop the Premises by constructing two (2) new mixed-use buildings that will be comprised of commercial (retail/office) tenants and tenant amenity spaces on the first floors, together with multi-family residences on the upper floors (the "Project). The existing commercial building on the 45 Beekman Street parcel will be demolished in connection with the Application.

As is detailed further herein, the Application is consistent with and furthers the City's planning objectives for the Beekman Street corridor linking Main Street and the City's waterfront area. The Applicants look forward to introducing and discussing the Project and the enclosed preliminary Site Plans and Building Plans with the Planning Board for consideration at the Board's December 12th meeting.

THE PROPOSED MIXED-USE DEVELOPMENT:

The Applicants propose to construct two (2) use and dimensionally zoning-compliant mixed-use

[1] Note: The owners for the lots comprising the Premises are as follows: 45 Beekman Street – Beekman Arts Center LLC; Hight Street & High Street – Bay Ridge Studios LLC.

buildings on the Premises,[2] which is generally located at the intersections of North Avenue (NYS Route 9D) and Beekman Street, High Street and Beekman Street, and North Avenue (NYS Route 9D) and Tompkins Avenue. *See* **Exhibit A** – Images of the Premises. The 1.78+/- acre Premises is comprised of three (3) lots, as follows:

1. 45 Beekman Street (1.26+/- acres) is currently improved by a three (3)-story commercial building and paved driveway and parking area;[3]
2. High Street (ID: 5955-19-706012) (+/- 0.25 acres) is currently vacant; and
3. High Street (ID: 5954-26-781983) (+/- 0.28 acres) is currently vacant.[4]

45 Beekman Street is an irregularly shaped lot fronting on North Avenue (NYS Route 9D), Tompkins Avenue, and Beekman Street, with an existing curb cut providing access to Tompkins Avenue and a driveway leading through one of the High Street parcels to an existing curb cut onto Beekman Street. This 45 Beekman Street parcel is setback from and generally down below the abutting Beekman Street and North Avenue roadways. The two (2) vacant High Street lots are similarly irregularly shaped, with frontages on Beekman Street and High Street. All three (3) lots are classified in the Linkage ("L") Zoning District and a small portion of the 45 Beekman Street lot is classified in the R1-7.5 Zoning District where the existing driveway connects to Tompkins Avenue. The northern, *vacant* High Street parcel is also classified within the City's Historic District and Landmark Overlay ("HDLO").[5] The Premises are located across from the City Hall,

[2] Note: The instant Application has been designed to be fully use and dimensionally zoning-compliant with the exception of the off-street parking requirements associated with the Project, which the Planning Board is authorized to modify. *See* CITY OF BEACON ZONING CODE § 223-41.21.F(3). Notably, the City Council is currently considering revisions to these parking requirements. Such revisions could potentially impact the total number of off-street spaces required for the Project. Nonetheless, as is detailed herein, pursuant to the current Zoning requirements, and as is supported by the Applicant's Parking and Traffic Study, the Applicant hereby seeks to have the Planning Board modify this parking requirement based on the shared parking analysis, provided this remains necessary following the Council's consideration of the proposed amendments. But for the off-street parking component, we understand that the Project *does not* require any variances.

[3] Note: As noted herein, the existing building will be demolished in connection with this Application. We understand that this building has previously been used in connection with commercial uses including offices, artist studios, a costume store and automotive storage.

[4] Note: Based on our review of historical aerials of the High Street parcels, at least between 2000 and approximately 2017, the High Street parcels were used a contractor's storage yard. *See* **Exhibit A**.

[5] Note: Based on our review of the historical aerials of the Premises provided on Dutchess County Aerial Access, it appears that this parcel was once improved with a single-family residence, which residence was then demolished during the City's urban renewal efforts in the 1970s. Since then, this parcel has most recently been used as a contractor's yard, as noted above.

and the surrounding area includes commercial, multi-family (including high-density multi-family residential development at The View, West End Lofts and River Ridge Views), and single-family developments, in addition to other retail uses along the City's Main Street. As the Board is aware, a 62-unit four (4)-story multi-family residential development was recently approved in November of last year at 16 West Main Street (which is known as Beacon Commons).

As is more fully detailed in the enclosed preliminary Site Plans and Building Plans, the Applicants propose to construct two (2) four (4)-story mixed-use buildings in furtherance of the purposes of the Linkage District by providing increased residential density and commercial uses along Beekman Street leading into the City's waterfront area from Main Street. The new building program includes 65 apartments and approximately 14,088 square feet of commercial space. The commercial space proposed within each building has not yet been defined as strictly retail or office space, and/or the respective combination of the two (2) uses. Accordingly, for the purposes of the traffic and parking analysis prepared for the Project, all commercial space is assumed to be retail space in order to provide a conservative analysis of traffic and parking conditions. Multi-family residences, office, and retail uses are permitted as of right in the L District.[6]

Both subsurface and surface parking areas comprising 89 off-street spaces are proposed to service the Project, with 54 surface parking spaces proposed behind the new buildings and 35 spaces proposed within the garage level beneath the four (4)-story building located on the 45 Beekman Street parcel (the "Beekman Building").

The building program for the Beekman Building generally consists of the following components:

- First Floor: 8,670 square feet of commercial space (office/retail uses) and 2,410 square feet of tenant amenity space.
- Second, Third & Fourth Floors: 37 dwelling units comprising of 20 one (1) bedroom and 17 two (2) bedroom units, which will include Below Market Rate ("BMR") units, in accordance with the Affordable-Workforce Housing local law.

[6] Note: The proposed commercial uses conform with the City of Beacon Zoning Code Sections 223-41.21.A(9) & (10), which mandate that retail and office uses in the Linkage District must be located along the north side of Beekman Street, and must include a floor area no greater than 5,000 square feet (retail uses) or 25,000 square feet (office uses). The proposed retail space in each building will be 4,335 square feet and 2,709 square feet, while the office space will be 4,335 square feet and 2,709 square feet. In the event the commercial use includes retail only, there will be separate retail establishments, none of which will exceed the 5,000 square foot maximum.

- Parking: 35 subsurface parking spaces in the garage (including four ADA spaces).

For the proposed four (4)-story building located on the lands generally comprising the High Street parcels (the "High Street Building"), the building program includes the following components:

- First Floor: 5,418 square feet of commercial space (office/retail split) and 3,420 square feet of tenant amenity space.
- Second, Third & Fourth Floors: 28 dwelling units comprising of 13 one (1) bedroom and 15 two (2) bedroom units, which will also include BMR units in accordance with the City's Affordable-Workforce Housing local law.

As noted above, the Project will also include the development of 54 surface parking spaces that are proposed to be located behind the new buildings. The off-street parking areas will be accessed by the existing driveways located off of Tompkins Avenue and Beekman Street. Existing sidewalks are located along Beekman Street, High Street, Tompkins Avenue and North Avenue (NYS Route 9D). Crosswalks are presently located on the north side of the intersection across North Avenue, and west side of the intersection across Beekman Street. The entrances of the buildings will front on Beekman Street.[7] Additionally, the Applicants are currently contemplating installing landscaping and related streetscape improvements within the NYSDOT Right-of-Way along the Project's North Avenue (NYS Route 9D) frontage in order to increase the attractiveness of the Premises as viewed from the abutting roadways.[8] *See* enclosed Site Plans. Based on preliminary discussions with City Staff, these streetscape improvements would also work to enhance connectivity, in particular, to the proposed Beekman Building.

THE PROJECT WILL ACHIEVE THE CITY'S PLANNING GOALS, OBJECTIVES, & RECOMMENDATIONS FOR THE PREMISES AND SURROUNDING AREA:

The Project was designed in furtherance of the City's efforts to bring mixed-use, high density residential developments to certain portions of Beekman Street located within the L District, such

[7] *See* CITY OF BEACON ZONING CODE § 223-12.K.

[8] Note: Any work to be completed in the NYSDOT right-of-way will require review and approval by the NYSDOT. The Applicants' traffic consultant is prepared to contact representatives from the NYSDOT in advance of the next Planning Board meeting in furtherance of this Application in order to introduce the proposed scope of work.

as where the Project is proposed.[9] The L District was established in order to assist with the transition between the Main Street core and waterfront area based upon the planning and development goals, objectives, and recommendations set forth in the City of Beacon Comprehensive Plan, dated April 3, 2007 (the "Comprehensive Plan") and the Comprehensive Plan Update, dated 2017 ("Comprehensive Plan Update").[10]

The Comprehensive Plan explicitly calls for: "encourage[ing] the development of high density housing along Beekman Street"; [11] "increase[ing] densities of housing located around the central commercial hub and the waterfront/train station area of Beacon";[12] and the "development of residential and/or other uses along Beekman Street and Wolcott Avenue to improve the pedestrian streetscape between Main Street and the train station".[13] The City's Comprehensive Plan Update similarly provides that "[t]he primary focus area for the 2017 Plan is the waterfront and train station area… The vision for this area is to create a destination that serves as a "gateway" to Beacon, to reclaim the riverfront and to **link that riverfront to downtown Beacon**." [14] The Local Waterfront Revitalization Program ("LWRP") and its appended City of Beacon Harbor Management Plan, which includes the property within its boundaries, echoes these sentiments by outlining a goal that the "[t]he waterfront should be linked to and integrated with downtown Beacon and other points of interest".[15]

Notably, both the Comprehensive Plan and the Comprehensive Plan Update identify the Premises

[9] *See* CITY OF BEACON COMPREHENSIVE PLAN, at page 7 (Population and Residential Development Goal).

[10] *See* CITY OF BEACON COMPREHENSIVE PLAN UPDATE (2017), at page 152 ("In keeping with the 2007 Comprehensive Plan recommendations, the City adopted the Linkage Zoning District, to promote residential development that reinforces connections between the Main Street and waterfront area.") Notably, these planning objectives resulted from feedback from City residents regarding improving the connection between the train station and Main Street by "encouraging residential development along Beekman Street to provide for a more attractive and interesting streetscape"). COMPREHENSIVE PLAN, at page 59.

[11] COMPREHENSIVE PLAN, at pages 12-13 and 106-07 (Land Use Goal, Waterfront/Train Station Area Objective).

[12] COMPREHENSIVE PLAN, at page 7 (Population and Residential Development Goal, Density Objective).

[13] COMPREHENSIVE PLAN, at pages 8 & 66 (Commercial, Office and Industrial Development Goal, Waterfront/Train Station Area Objective, Connection Recommendation).

[14] CITY OF BEACON, 2017 COMPREHENSIVE PLAN UPDATE, at page 10 (emphasis added).

[15] CITY OF BEACON LWRP, APPENDIX C: HARBOR MANAGEMENT PLAN, at page 8.

as a location for future development of high-density residential development.[16] These recommendations are reflected in the purpose underlying the L District regulations, which is to "… encourage residential development to help support Main Street businesses and to create a vibrant, economically successful, walkable, and environmentally sustainable connection between Beacon's Central Main Street District and the train station and riverfront".[17]

The Applicants respectfully submit that the proposed mixed-use Project will achieve the City's goals of creating and enhancing the transition between Main Street and the City's waterfront area. This Project will mesh with the fabric of the existing built environment at Main Street's crossroads with North Avenue (NYS Route 9D), while supporting a vibrant, economically successful and environmentally sustainable Beekman Street. The Applicants desire to redevelop the Premises to increase the attractiveness of the frontages along North Avenue and Beekman Street and to support the vitality and sustainability of the Beekman Street corridor with commercial mixed-uses. Moreover, this location is well-suited for mixed-use development, given the character of the surrounding commercial and residential developments, and that the future use of the site will be woven into the fabric of downtown Beacon as an important link between the Metro-North train station and Main Street.[18]

Accordingly, the Applicants respectfully submit that this mixed-use Project is consistent with and achieves the goals set forth in the City's planning documents, including the Zoning Code, Comprehensive Plan and the LWRP.

PROCEDURAL INFORMATION AND LIST OF ENCLOSURES:

In addition to the Application for Site Plan approval for the Project, the Applicants are also seeking Subdivision Approval from the Planning Board in connection with the proposed lot line adjustment. *See* **Exhibit B** – Site Plan Application; and **Exhibit C** – Subdivision Application. As noted above, the instant Application has been designed to be fully use and dimensionally zoning-

[16] Comprehensive Plan Appendix "Proposed Land Use Plan"; Comprehensive Plan Update Figure 11-1 "Future Land Use Map; Comprehensive Plan Appendix "Connecting Beacon's Main Street with the Hudson River and Railroad Station" prepared by Dutchess County Department of Planning and Development, dated March 6, 2007 (including a sketch depicting the Premises with compact development located along High Street and Beekman Street).

[17] CITY OF BEACON ZONING CODE § 223-41.19

[18] Zoning Code 223-41.20 provides in relevant part that "[i]n order to encourage mixed uses, more than one permitted use shall be allowed on any lot or parcel, subject to all approval criteria contained herein."

compliant, with the exception of the off-street parking requirements, which may be modified by the Planning Board, as is more fully detailed in the shared parking analysis for the Project. Accordingly, but for the off-street parking component, we understand that the Project *does not* require any variances from the Zoning Board of Appeals or, moreover, any review by the City Council.

In accordance with the Planning Board's procedures, on November 8, 2023, the Applicants met with the Building Inspector, City Planner, and City Engineer to discuss the Project in a pre-submission meeting. Since that meeting, the enclosed Site Plan and Building Plans have been updated to reflect comments from that discussion and the Applicants are now prepared to proceed before your Board for initial review of the Project. Accordingly, the Applicants respectfully request to appear at the Planning Board at its December 12th meeting Agenda in order to introduce the Project and initiate the environmental review process pursuant to the State Environmental Quality Review Act ("SEQR"). For the Board's consideration in connection with the environmental review of the Application, enclosed please find a copy of the Full Environmental Assessment Form ("EAF") for this Unlisted Action, as **Exhibit D**.

Additionally, as this Board may be aware, the Premises is located within the City of Beacon's Waterfront Revitalization Management Area, and as such the Application requires the preparation of an LWRP consistency statement. As is more fully detailed in **Exhibit E** (Coastal Assessment Form & LWRP Consistency Statement), the Applicants respectfully submit that the Project is consistent with LWRP Policies 5, 6, 13, 14, 33, 37, 38, and 41.

In further support of the Application, the Applicant's traffic consultant, Colliers Engineering & Design, P.C., prepared a Traffic & Parking Study for the Project, which includes a shared parking analysis, which is dated November 28, 2023 (the "Traffic Study"). As is more fully detailed in the Traffic Study enclosed as **Exhibit F**, inclusive of the mitigation measures contemplated in the analysis, which have been identified to address both existing traffic delays and accommodate the Project generated traffic, the Project is not anticipated to have a significant impact on traffic conditions in the vicinity of the Project.

INDEX OF ENCLOSURES:

In support of this Application, please find five (5) copies of the following documents:

Exhibit A: Images of the Premises;

Exhibit B: City of Beacon Application for Site Plan Approval;

Exhibit C: City of Beacon Application for Subdivision Approval;

Exhibit D: Full Environmental Assessment Form;

Exhibit E: Coastal Assessment Form & LWRP Consistency Statement; and

Exhibit F: Traffic & Parking Study prepared by Colliers Engineering and Design, P.C., dated November 28, 2023.

In further support of this Application, we respectfully submit the preliminary Site Plans Set entitled "Site Plan Application", prepared by Colliers Engineering and Design, P.C. and Aryeh Siegel, Architect, dated November 28, 2023, numbered and titled as follows (unless otherwise noted):

- Sheet 1 of 5 – Sketch Site Plan;[19]
- Sheet 2 of 5 – Existing Conditions Survey and Demolition Plan;
- Sheet 3 of 5 – Building Plans – Beekman Street;
- Sheet 4 of 5 – Building Plans – High Street; and
- Sheet 5 of 5 – Building Elevations.

Additionally, enclosed are three (3) checks payable to the City of Beacon in the amount of $20,022.00, representing the Application filing fee, and in the amount of $18,000.00 for the establishment of an escrow for professional review costs and check in the amount of $1,050.00 representing the Subdivision Application Fee.

[19] Note: The Applicant will include a Subdivision Plat reflecting the lot line adjustment in a forthcoming submission.

We look forward to appearing at this Board's regular meeting on December 12th in order to introduce the proposed Project and to initiate the environmental review process. 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,

Taylor M. Palmer

Enclosures

cc: Jennifer L. Gray, Esq.
John Clarke Planning and Design
John Russo, P.E., Lanc & Tully Engineering & Surveying, P.C.
Aryeh J. Siegel Architect
Colliers Engineering & Design, P.C.
Allison Fausner, Esq.

Exhibit A: Images of the Premises and Surrounding Area

Dutchess County Parcel Access Viewer Image: 45 Beekman Street, High Street & High Street (the "Premises"):

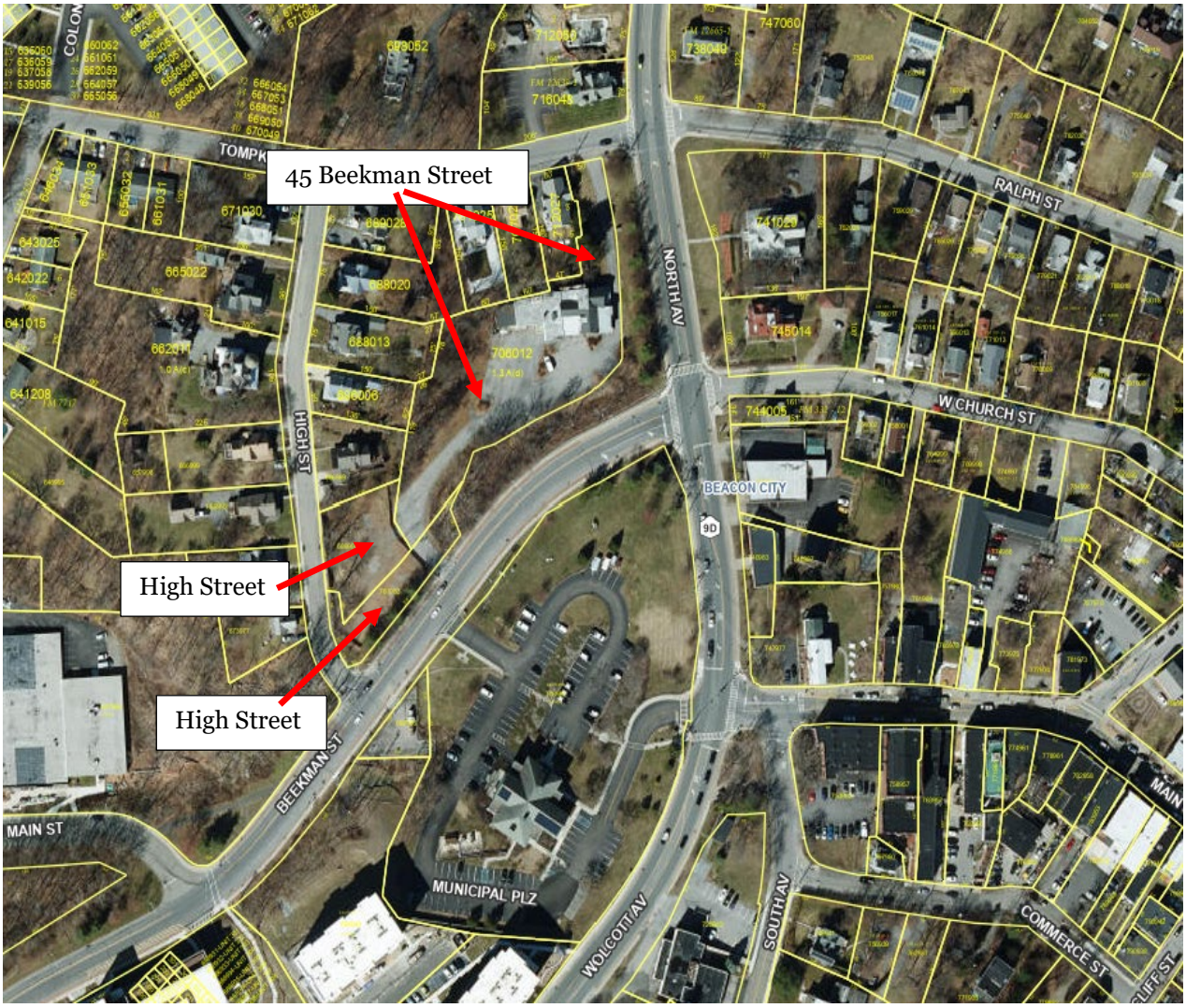


Exhibit A: Images of the Premises and Surrounding Area (cont.)

Google Aerial Image of the Premises:

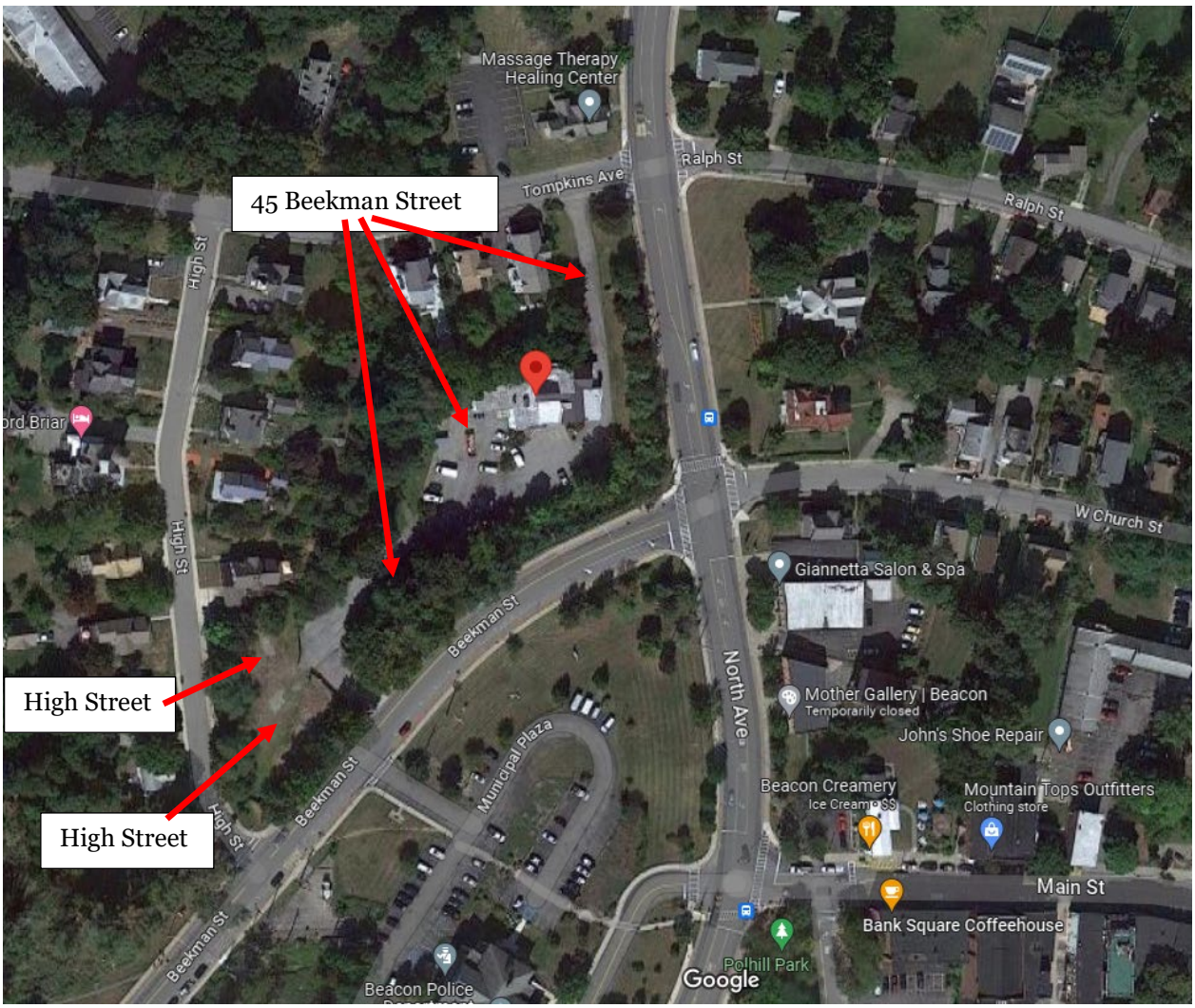


Exhibit A: Images of the Premises and Surrounding Area (cont.)

Google Street View Image of the Premises: Westerly View off North Avenue (Route 9D):

Google Street View Image of the Premises: Southerly View off Tompkins Avenue:

Exhibit A: Images of the Premises and Surrounding Area (cont.)

Google Street View Image of the Premises: Northwest View of the North Avenue (Route 9D)/Beekman Street Intersection:

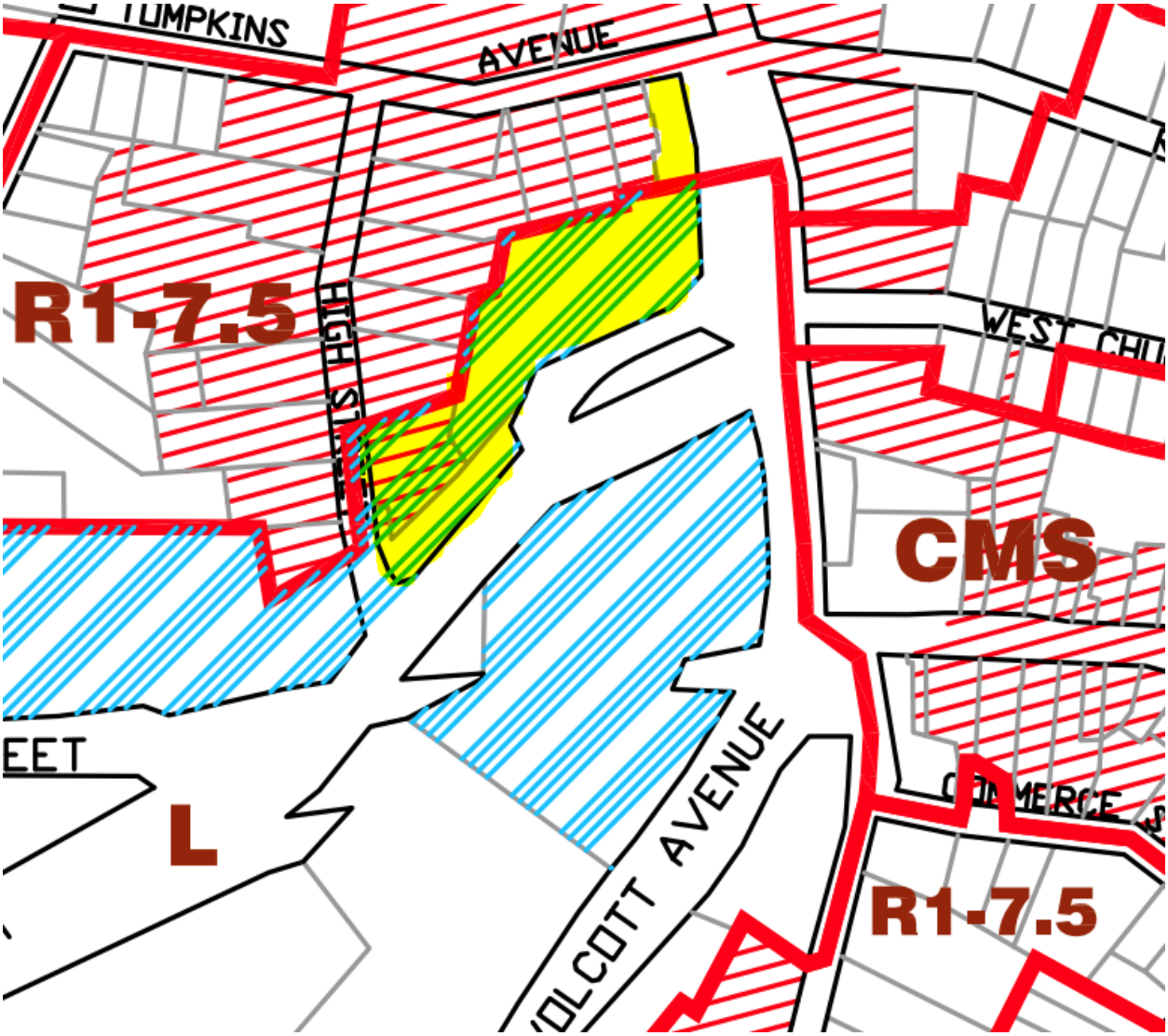
Google Street View Image of the Premises: North View of the Beekman Street/ High Street Intersection:

Exhibit A: Images of the Premises and Surrounding Area (cont.)

Historic Dutchess County Parcel Access Viewer Image (2014): Showing High Street Lots Utilized for Contractor Storage (Aerials Show This Dating Back to Approximately 2000):

Exhibit A: Images of the Premises and Surrounding Area (cont.)

City of Beacon Zoning Map Excerpt of the Premises:



Key: Premises highlighted in yellow.

APPLICATION FOR SITE PLAN APPROVAL

Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: Beekman Arts Center LLC & Bay Ridge Studios LLC

Address: 268 Main Street

Beacon NY 12508

Signature:

Date: 11/21/23

Phone: 917-468-8473

(For Official Use Only)

	Date	Initials
Application & Fee Rec'd		
Initial Review		
Public Hearing		
Conditional Approval		
Final Approval		

IDENTIFICATION OF REPRESENTATIVE / DESIGN PRFESSIONAL

Name: Taylor M. Palmer, Esq. - Cuddy & Feder LLP
Attorney for the Applicant

Address: 300 Westage Business Center, Suite 380

Fishkill, NY 12524

Phone: 914-761-1300

Fax: 914-761-5378

Email address: tpalmer@cuddyfeder.com

IDENTIFICATION OF SUBJECT PROPERTY:

Property Address: 45 Beekman Street, High Street and High Street

Tax Map Designation: Section 5955 Block 19 26 Lot(s) 706012 781983 & 689990

Land Area: 1.78 acres

Zoning District(s) L, RMF-1.5 and HDLO

DESCRIPTION OF PROPOSED DEVELOPMENT:

Proposed Use: Mixed-use development comprised of apartments and commercial space

Gross Non-Residential Floor Space: Existing 15,190 sf Proposed 14,088 sf

TOTAL: 14,088 sf

Dwelling Units (by type): Existing 0 Proposed 65

TOTAL: 65

ITEMS TO ACCOMPANY THIS APPLICATION

a. One electronic and five (5) **folded** paper copies of a site location sketch showing the location of the subject property and the proposed development with respect to neighboring properties and developments.
b. One electronic and five (5) **folded** paper copies of the proposed site development plan, consisting of sheets, showing the required information as set forth on the back of this form and other such information as deemed necessary by the City Council or the Planning Board to determine and provide for the property enforcement of the Zoning Ordinance.
c. One electronic and five (5) **folded** paper copies of additional sketches, renderings or other information.
d. An application fee, payable to the City of Beacon, computed per the attached fee schedule.
e. An initial escrow amount, payable to the City of Beacon, as set forth in the attached fee schedule.

INFORMATION TO BE SHOWN ON SITE LOCATION SKETCH

a. Property lines, zoning district boundaries and special district boundaries affecting all adjoining streets and properties, including properties located on the opposite sides of adjoining streets.
b. Any reservations, easements or other areas of public or special use which affect the subject property.
c. Section, block and lot numbers written on the subject property and all adjoining properties, including the names of the record owners of such adjoining properties.

INFORMATION TO BE SHOWN ON THE SITE DEVELOPMENT PLAN

a. Title of development, date and revision dates if any, north point, scale, name and address of record owner of property, and of the licensed engineer, architect, landscape architect, or surveyor preparing the site plan.
b. Existing and proposed contours at a maximum vertical interval of two (2) feet.
c. Location and identification of natural features including rock outcrops, wooded areas, single trees with a caliper of six (6) or more inches measured four (4) feet above existing grade, water bodies, water courses, wetlands, soil types, etc.
d. Location and dimensions of all existing and proposed buildings, retaining walls, fences, septic fields, etc.
e. Finished floor level elevations and heights of all existing and proposed buildings.
f. Location, design, elevations, and pavement and curbing specifications, including pavement markings, of all existing and proposed sidewalks, and parking and truck loading areas, including access and egress drives thereto.
g. Existing pavement and elevations of abutting streets, and proposed modifications.
h. Location, type and design of all existing and proposed storm drainage facilities, including computation of present and estimated future runoff of the entire tributary watershed, at a maximum density permitted under existing zoning, based on a 100 year storm.
i. Location and design of all existing and proposed water supply and sewage disposal facilities.
j. Location of all existing and proposed power and telephone lines and equipment, including that located within the adjoining street right-of-way. All such lines and equipment must be installed underground.
k. Estimate of earth work, including type and quantities of material to be imported to or removed from the site.
l. Detailed landscape plan, including the type, size, and location of materials to be used.
m. Location, size, type, power, direction, shielding, and hours of operation of all existing and proposed lighting facilities.
n. Location, size, type, and design of all existing and proposed business and directional signs.
o. Written dimensions shall be used wherever possible.
p. Signature and seal of licensed professional preparing the plan shall appear on each sheet.
q. Statement of approval, in blank, as follows:

Approved by Resolution of the Beacon Planning Board
on the _____ day of _____, 20_____
subject to all conditions as stated therein

_____ _____
Chairman, City Planning Board **Date**

APPLICATION FEES

Site Plan	**Residential $500 + $250 per dwelling unit** **Commercial $500 + $250 per 1,000 s.f.**
Special Use Permit	**Residential $500 + $250 per dwelling unit** **Commercial $500 + $250 per 1,000 s.f.**
Subdivision	**$ 750 for 2-4 lots + $100 per lot** **$1,000 for 5 or more lots + $300 per lot**

ESCROW FEES

ALL SUBDIVISIONS, AND RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

No. of Lots or Dwelling Units	Initial Deposit	Depleted to	Replenishment
1-5 (including lot-line realignment)	$ 3,000	$ 1,000	Current bills + $1,200
6-15	$ 9,000	$ 2,500	Current bills + $1,200
Over 15	$ 18,000	$ 5,000	Current bills + $6,000

NON-RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

	Initial Deposit	Depleted to	Replenishment
Existing Buildings/Change of Use with no site development	$ 1,800	$ 1,000	Current bills + $600
Up to 3,000 s.f. gross floor area	$ 3,125	$ 1,000	Current bills + $1,200
3,000 to 10,000 s.f. gross floor area	$ 3,000 + $0.50 per sq.ft. over 3,000	$ 2,500	Current bills + $3,000
Over 10,000 s.f. gross floor area	$ 9,000 + $0.50 per sq.ft. over 10,000	$ 2,500	Current bills + $3,000

ARCHITECTURAL REVIEW OR CERTIFICATE OF APPROPRIATENESS ***(if not currently before PB)***

* *if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Single Family House*	$500	$250	Current bills + $250
All others*	$500	$250	Current bills + $250

CITY OF BEACON
SITE PLAN SPECIFICATION FORM

Name of Application: 45 Beekman & High Street Subdivision and Site Plan Application

PLEASE INDICATE WHETHER THE SITE PLAN DRAWINGS SHOW THE SUBJECT INFORMATION BY PLACING A CHECK MARK IN THE APPROPRIATE BOXES BELOW.		
	YES	**NO**
The site plan shall be clearly marked "Site Plan", it shall be prepared by a legally certified individual of firm, such as a Registered Architect or Professional Engineer, and it shall contain the following information:		
LEGAL DATA		
Name and address of the owner of record.		
Name and address of the applicant (if other than the owner).		
Name and address of person, firm or organization preparing the plan.		
Date, north arrow, and written and graphic scale.		
NATURAL FEATURES		
Existing contours with intervals of two (2) feet, referred to a datum satisfactory to the Planning Board.		
Approximate boundaries of any areas subject to flooding or stormwater overflows.		
Location of existing watercourses, wetlands, wooded areas, rock outcrops, isolated trees with a diameter of eight (8) inches or more measured three (3) feet above the base of the trunk, and any other significant existing natural features.		
EXISTING STRUCTURES, UTILITIES, ETC.		
Outlines of all structures and the location of all uses not requiring structures. Paved areas, sidewalks, and vehicular access between the site and public streets.		
Locations, dimensions, grades, and flow direction of any existing sewers, culverts, water lines, as well as other underground and above ground utilities within and adjacent to the property.		
Other existing development, including fences, retaining walls, landscaping, and screening.		
Sufficient description or information to define precisely the boundaries of the property.		
The owners of all adjoining lands as shown on the latest tax records.		
The locations, names, and existing widths of adjacent streets and curb lines.		
Location, width, and purpose of all existing and proposed easements, setbacks, reservations, and areas dedicated to private or public use within or adjacent to the		

properties.		
PROPOSED DEVELOPMENT	**YES**	**NO**
The location, use and design of proposed buildings or structural improvements.		
The location and design of all uses not requiring structures, such as outdoor storage (if permitted), and off-street parking and unloading areas.		
Any proposed division of buildings into units of separate occupancy.		
The location, direction, power, and time of use for any proposed outdoor lighting.		
The location and plans for any outdoor signs.		
The location, arrangement, size(s) and materials of proposed means of ingress and egress, including sidewalks, driveways, or other paved areas.		
Proposed screening and other landscaping including a planting plan and schedule prepared by a qualified individual or firm.		
The location, sizes and connection of all proposed water lines, valves, and hydrants and all storm drainage and sewer lines, culverts, drains, etc.		
Proposed easements, deed restrictions, or covenants and a notation of any areas to be dedicated to the City.		
Any contemplated public improvements on or adjoining the property.		
Any proposed new grades, indicating clearly how such grades will meet existing grades of adjacent properties or the street.		
Elevations of all proposed principal or accessory structures.		
Any proposed fences or retaining walls.		
MISCELLANEOUS		
A location map showing the applicant's entire property and adjacent properties and streets, at a convenient scale.		
Erosion and sedimentation control measures.		
A schedule indicating how the proposal complies with all pertinent zoning standards, including parking and loading requirements.		
An indication of proposed hours of operation.		
If the site plan only indicates a first stage, a supplementary plan shall indicate ultimate development.		

For all items marked "NO" above, please explain below why the required information has not been provided:

Please see enclosed Application Narrative

Applicant/Sponsor Name: Beekman Arts Center LLC & Bay Ridge Studios LLC

Signature:

By: Saleh Hassen, Member

Date: November 21, 2023

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: Beekman Arts Center LLC

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

Abdel Hassen, Saleh Hassen and Sam Hassen

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

45 Beekman (5955-19-706012)

Applicant Address: 268 Main Street, Beacon NY 12508

Project Address: 45 Beekman and High Street

Project Tax Grid # 5955-19-706012; 5954-26-68990 and 5954-26-781983

Type of Application Subdivision and Site Plan Application

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, Saleh Hassen, Member of Beekman Arts Center LLC, 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 — X
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon — N/A
3. ALL tax payments due to the City of Beacon are current — X
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon — N/A
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon — N/A
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current — X

Signature of Owner Beekman Arts Center LLC

Saleh Hassen, Member

Title if owner is corporation

Office Use Only:	NO	YES	Initial
Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)	X		MP
ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)		X	KLM
ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)		X	KLM

FOR OFFICE USE ONLY
Application #

CITY OF BEACON
1 Municipal Plaza, Beacon, NY
Telephone (845) 838-5000 • http://beaconny.gov/

ENTITY DISCLOSURE FORM

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

Disclosure of the names and addresses of all persons or entities owning any interest or controlling position of any Limited Liability Company, Partnership, Limited Partnership, Joint Venture, Corporation or other business entity (hereinafter referred to as the "Entity") filing a land-use application with the City is required pursuant to Section 223-61.4 of the City Code of the City of Beacon. If any Member of the Entity is not a natural person, then the names and addresses as well as all other information sought herein must be supplied about the non-natural person member of that Entity, including names, addresses and Formation filing documents. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

SECTION A.

IF AFFIANT IS A PARTNERSHIP, JOINT VENTURE OR OTHER BUSINESS ENTITY, EXCEPT A CORPORATION:

Name of Entity	Address of Entity
Beekman Arts Center LLC	268 Main Street Beacon NY 12508
Place where such business entity was created New York State DOS	Official Registrar's or Clerk's office where the documents and papers creating entity were filed New York State DOS
Date such business entity or partnership was created 4/6/2018	Telephone Contact Information 917-468-8473

IF AFFIANT IS A CORPORATION:

Name of Entity	Telephone Contact Information
Principal Place of Business of Entity	Place and Date of incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

SECTION B. List all persons, officers, limited or general partners, directors, members, shareholders, managers, and any others with any interest, mortgage, encumbrance or other interest (recorded or unrecorded) in or with the above referenced

Entity. List all persons to whom corporate stock has been pledged, mortgaged or encumbered and with whom any agreement has been made to pledge, mortgage or encumber said stock. Use a supplemental sheet to list additional persons.

Name	Resident Address	Resident Telephone Number	Nature and Extent of Interest
Abdel Hassen	153-12 80th St. Howard Beach, NY 11414	917-468-8473	50%
Saleh Hassen	157-44 84th St. Howard Beach, NY 11414	917-468-8473	25%
Sam Hassen	164-40 88th St Howard Beach, NY 11414	917-560-4026	25%

SECTION C. 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.
Beekman Arts Center LLC	268 Main Street Beacon NY 12508	(917)468-8473	Deed dated 1/18/2017	Recorded 2/8/2017 Dutchess County Clerk

SECTION D. Is any owner, of record or otherwise, an officer, director, stockholder, agent or employee of any person listed in Section B-C?

☐ **YES** ☒ **NO**

Name	**Employer**	**Position**

SECTION E. Is any party identified in Sections A- C 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 F. Was any person referred to in Sections A-D known by any other name within five (5) years preceding the date of the application?

☐ **YES** ☒ **NO**

Current Name	**Other Names**

SECTION G. List the names and addresses of each person, business entity, partnership and corporation in the chain of title of the subject premises for the five (5) years next preceding the date of the application.

Name	**Address**
Beekman Art Center LLC	268 Main Street Beacon NY 12508 Deed Doc# 02-2017-1113

SECTION H. If the applicant is not a record owner of the subject property, describe the applicant's interest in the subject property and the relationship the applicant has to the record owner(s) of the subject property.

N/A

SECTION I. 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. Any sensitive or confidential information may be redacted from the contract prior to production.

SECTION J. N/A

1. Where the record owner or contract vendee is a corporation, the following additional information shall be submitted**:**

Name of the Corporation	Telephone Contact Information
Principal Business Address	Place and Date of Incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	**Residence or business address**	**Telephone number**

3. Have any shares of the stock of the corporation or of any stockholder been pledged, mortgaged or encumbered?

☐ **YES** ☐ **NO**

If so, please list the name and address of each person having, holding, owning or claiming any such interest.

Name	**Address**

SECTION K. 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**

I, Saleh Hassen being first duly sworn, according to law, deposes and says that I am (Title) Member, an active and qualified member of the Beekman Arts Center LLC, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

(Print) Saleh Hassen, Member
Beekman Arts Center LLC

(Signature) _____

FOR OFFICE USE ONLY
Application #

CITY OF BEACON
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ENTITY DISCLOSURE FORM

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

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SECTION A.

IF AFFIANT IS A PARTNERSHIP, JOINT VENTURE OR OTHER BUSINESS ENTITY, EXCEPT A CORPORATION:

Name of Entity Bay Ridge Studios LLC	Address of Entity 268 Main Street Beacon NY 12508
Place where such business entity was created New York State DOS	Official Registrar's or Clerk's office where the documents and papers creating entity were filed New York State DOS
Date such business entity or partnership was created 7/18/2018	Telephone Contact Information 917-468-8473

IF AFFIANT IS A CORPORATION:

Name of Entity	Telephone Contact Information
Principal Place of Business of Entity	Place and Date of incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

SECTION B. List all persons, officers, limited or general partners, directors, members, shareholders, managers, and any others with any interest, mortgage, encumbrance or other interest (recorded or unrecorded) in or with the above referenced

Entity. List all persons to whom corporate stock has been pledged, mortgaged or encumbered and with whom any agreement has been made to pledge, mortgage or encumber said stock. Use a supplemental sheet to list additional persons.

Name	Resident Address	Resident Telephone Number	Nature and Extent of Interest
Abdel Hassen	153-12 80th St. Howard Beach, NY 11414	917-468-8473	50%
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SECTION C. 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.
Bay Ridge Studios LLC	268 Main Street Beacon NY 12508	917-468-8473	Deed dated 12/31/2001	Recorded 2/3/2022 Dutchess County Clerk

SECTION D. Is any owner, of record or otherwise, an officer, director, stockholder, agent or employee of any person listed in Section B-C?

☐ **YES** ☒ **NO**

Name	**Employer**	**Position**

SECTION E. Is any party identified in Sections A- C 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 F. Was any person referred to in Sections A-D known by any other name within five (5) years preceding the date of the application?

☐ **YES** ☒ **NO**

Current Name	**Other Names**

SECTION G. List the names and addresses of each person, business entity, partnership and corporation in the chain of title of the subject premises for the five (5) years next preceding the date of the application.

Name	**Address**	
Bay Ridge Studios LLC	268 Main Street Beacon NY 12508	Deed Doc# 02-2019-1172
William F. Vassalo	15 Sunset Hill Road Fishkill, NY 12524	Deed Doc# 02-2002-90

SECTION H. If the applicant is not a record owner of the subject property, describe the applicant's interest in the subject property and the relationship the applicant has to the record owner(s) of the subject property.

N/A

SECTION I. 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. Any sensitive or confidential information may be redacted from the contract prior to production.

SECTION J. N/A

1. Where the record owner or contract vendee is a corporation, the following additional information shall be submitted**:**

Name of the Corporation	Telephone Contact Information
Principal Business Address	Place and Date of Incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	**Residence or business address**	**Telephone number**

3. Have any shares of the stock of the corporation or of any stockholder been pledged, mortgaged or encumbered?

☐ **YES** ☐ **NO**

If so, please list the name and address of each person having, holding, owning or claiming any such interest.

Name	**Address**

SECTION K. 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**

I, Saleh Hassen being first duly sworn, according to law, deposes and says that I am (Title) Member, an active and qualified member of the Bay Ridge Studios LLC, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

(Print) Saleh Hassen, Member

Bay Ridge Studios LLC

(Signature) _____

APPLICATION FOR SUBDIVISION APPROVAL

Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: Beekman Arts Center LLC & Bay Ridge Studios LLC

Address: 268 Main Street
Beacon, NY 12508

Signature:

Date: 11/21/23

Phone: 917-468-8473 or 718-843-9550

(For Official Use Only) Date Initials

Preliminary Application Rec'd
Application Fee:
Public Hearing
Preliminary Plat Approved:
Final Plat Approved:
Recreation Fee:
Performance Bond:

IDENTIFICATION OF REPRESENTATIVE / DESIGN PRFESSIONAL

Name: Taylor M. Palmer, Esq. - Cuddy & Feder LLP
Attorney for the Applicant

Address: 300 Westage Business Center, Suite 380
Fishkill, NY 12524

Phone: 914-761-1300

Fax: 914-761-5378

Email address: tpalmer@cuddyfeder.com

IDENTIFICATION OF SUBJECT PROPERTY:

Subdivision name or identifying title:
45 Beekman Street & High Street - Application for Site Plan and Subdivision (Lot Merger) Application

Street which property abuts: Beekman, High, Tompkins and North Ave (Route 9D)

Current Tax Map Designation: Section 5955 5954 19 26 Block 706012 Lot(s) 781983 & 689990

Property (does) (does not) ~~connect directly~~ abut XXXXXXXXXX into a (State) (County) highway. NYS Route 9D

Land in subdivision (is) (is not) within 500 feet of a Municipal boundary.

Total area of property is 1.78 acres

ITEMS TO ACCOMPANY THIS APPLICATION

a. One electronic and five (5) **folded** copies of a subdivision plat showing the location of the subject property and the proposed development with respect to neighboring properties and developments.

b. An application fee, payable to the City of Beacon, computed per the attached fee schedule.

c. An initial escrow amount, payable to the City of Beacon, as set forth in the attached fee schedule.

APPLICATION FEES

Site Plan	**Residential $500 + $250 per dwelling unit** **Commercial $500 + $250 per 1,000 s.f.**
Special Use Permit	**Residential $500 + $250 per dwelling unit** **Commercial $500 + $250 per 1,000 s.f.**
Subdivision	**$ 750 for 2-4 lots + $100 per lot** **$1,000 for 5 or more lots + $300 per lot**

ESCROW FEES

ALL SUBDIVISIONS, AND RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

No. of Lots or Dwelling Units	Initial Deposit	Depleted to	Replenishment
1-5 (including lot-line realignment)	$ 3,000	$ 1,000	Current bills + $1,200
6-15	$ 9,000	$ 2,500	Current bills + $1,200
Over 15	$ 18,000	$ 5,000	Current bills + $6,000

NON-RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

	Initial Deposit	Depleted to	Replenishment
Existing Buildings/Change of Use with no site development	$ 1,800	$ 1,000	Current bills + $600
Up to 3,000 s.f. gross floor area	$ 3,125	$ 1,000	Current bills + $1,200
3,000 to 10,000 s.f. gross floor area	$ 3,000 + $0.50 per sq.ft. over 3,000	$ 2,500	Current bills + $3,000
Over 10,000 s.f. gross floor area	$ 9,000 + $0.50 per sq.ft. over 10,000	$ 2,500	Current bills + $3,000

ARCHITECTURAL REVIEW OR CERTIFICATE OF APPROPRIATENESS ***(if not currently before PB)***

* *if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Single Family House*	$500	$250	Current bills + $250
All others*	$500	$250	Current bills + $250

CITY OF BEACON
PRELIMINARY SUBDIVISION PLAT
AND CONSTRUCTION PLANS SPECIFICATION FORM

Name of Application: 45 Beekman Street & High Street Site Plan and Subdivision (Lot Merger) Application

PRELIMINARY SUBDIVISION PLAT	**YES**	**NO**
The preliminary plat shall be clearly marked "Preliminary Plat", shall be drawn to a convenient scale but not less than 1" = 100', and shall contain the following information:		
Proposed subdivision name or identifying title, name, and address of property owner and subdivider (if other than owner), name and address of the surveyor and/or engineer preparing the plan, scale, approximate true North point, and date.		
The approximate location and dimensions of all property lines, the total acreage of the proposed subdivision, the location of any zoning, special district or municipal boundary lines affecting the subdivision, and the names of owners of record of properties adjoining and directly across the street from proposed subdivision.		
The location of all existing structures and pertinent features, including railroads, water bodies, water courses, wetlands, rock outcroppings, wooded areas, major trees, and stone walls, that may influence the design of the subdivision, plus accurate topography at a vertical contour interval of not more than two (2) feet. The topographic data shall be determined by field survey unless the Planning Board specifically waives this requirement and/or permits the substitution of topographic information obtained from other sources determined satisfactory for the particular case.		
The location and status of existing streets or private roads, easements and rights-of-way (if any), proposals for the layout of new streets or private roads (including widths and approximate curve radii) and any proposed easements, rights-of-way and/or reservations.		
The names of existing streets or private roads and proposed names for new streets or private roads.		
The proposed arrangement of lots, including identifying numbers and approximate area and dimensions of each.		
Location, size and nature of any area proposed to be reserved for park purposes.		
A site location sketch, at a scale of one inch equals 400 feet, showing the general situation within 1,000 feet of the applicant's property with respect to surrounding properties, streets and private roads.		
Where the preliminary plat includes only a portion of an applicant's contiguous holding, the applicant shall also indicate, on a sketch at a scale of not less than one inch equals 200 feet, the probable future street or private road system, lot arrangement and location of park and other reservations for the remaining portion of the tract. Such sketch shall be for the purpose of guiding the Planning Board in reviewing the proposed preliminary plat and shall include topographic data with a vertical contour interval of not more than five feet plus any other information determined necessary by the Planning Board.		
Such additional information as may be required by Chapter 195 – Subdivision of Land; Chapter 223 – Zoning; or the Planning Board.		

PRELIMINARY CONSTRUCTION PLANS	YES	NO
The preliminary construction plans shall be drawn at the same scale as the preliminary plat and shall include the following information:		
Location and sizes of any existing water, sewer storm drainage and other utility lines and structures within and nearby the proposed subdivision.		
The proposed system for the provision of water supply and fire protection facilities, sewage disposal, stormwater drainage, and other utility services.		
Proposed street or private road profiles and cross-sections showing the approximate grade of proposed streets or private roads, the relationship of existing to proposed grades, and the proposed grades, and the proposed vertical curvature along the center line of all new streets or private roads.		
Location of all existing and proposed monuments and other subdivision improvements.		
Such additional information as may be required by this chapter, the Zoning chapter, or the Planning Board.		

CITY OF BEACON
FINAL SUBDIVISION PLAT
AND CONSTRUCTION PLANS SPECIFICATION FORM

Name of Application: 45 Beekman Street & High Street Site Plan and Subdivison (Lot Merger) Application

FINAL SUBDIVISION PLAT	**YES**	**NO**
The final subdivision plat shall be drawn clearly and legibly on transparent tracing cloth with black waterproof ink, at a scale no smaller than one inch equals 100 feet but preferably at a scale of one inch equals 50 feet. The sheet size shall not exceed 36 inches by 48 inches. If the size of proposed subdivision required a drawing larger than this, two or more sheets may be submitted, with match lines clearly indicated, and an index map shall be prepared on the same size sheet.		
The final plat shall contain the following information:		
Proposed subdivision name or identifying title, name, and address of owner of record and of subdivider (if other than owner), certification and seal of the registered engineer or licensed land surveyor who prepared the plat, names of the owners of record of adjoining properties and of properties directly across the street or private road, graphic scale, approximate true North point, and date.		
The location and dimensions of all boundary lines of the proposed subdivision, and all existing and proposed streets, private roads, lot lines, easements and rights-of-way, with sufficient data to readily determine the location, bearing and length of all such lines and to reproduce such lines upon the ground.		
The names of all existing and proposed streets and private roads.		
The locations of all water bodies and watercourses.		
The location of all existing buildings, including identification of all buildings to be removed as a condition of plat approval.		
The total acreage included in the entire subdivision, and the identification number and acreage of all lots and land reservations within the proposed subdivision.		
Location of all existing and proposed monuments.		
A site location map, at a scale of one inch equals 400 feet, showing the location of the subject property with respect to neighboring properties, streets and private roads.		
Notations explaining any drainage, sight slope, street widening, park area or other reservations or easements, including any self-imposed restrictions or covenants.		
Endorsement of approval by the Dutchess County Health Department.		
Plan for the provisional delivery of mail, as approved by the local postmaster.		
Endorsement of the owner as follows: "Approved for filing: _____ _____" Owner Date		

FINAL SUBDIVISION PLAT *(continued)*	**YES**	**NO**
Form for endorsement by Planning Board Chairman as follows: "Approved by Resolution of the Planning Board of the City of Beacon, New York, on the _____ day of _____, 20_____, subject to All requirements and conditions of said Resolution. Any change, erasure, modification or revision of this plat, as approved, shall void this approval. Signed this _____ day of _____, 20_____, by _____, Chairman _____, Secretary In absence of the Chairman or Secretary, the Acting Chairman or Acting Secretary Respectively may sign in this place.		
Such additional information as may be required by Chapter 195 – Subdivision of Land; Chapter 223 – Zoning; or the Planning Board.		
Stormwater pollution prevention plan. A stormwater pollution prevention plan consistent with the requirements of Chapter 190 and with the terms of preliminary plan approval shall be required for final subdivision plat approval. The SWPPP shall meet the performance and design criteria and standards in Chapter 190, Article II. The approved final subdivision plat shall be consistent with the provisions of Chapter 190.		

FINAL CONSTRUCTION PLANS	**YES**	**NO**
Final construction plans and profiles shall be prepared for all proposed streets, private roads and other required improvements. Plans shall be drawn at the same scale as the final plat and on the same size sheets, but not on the same sheets. The following information shall be shown:		
Plans and profiles showing the location and a typical cross-section of street and/or private road pavements including curbs and gutters, sidewalks, manholes and catch basins; the location of street or private road trees, lighting and signs; the location, size and invert elevations of existing and proposed sanitary sewers, stormwater drains and fire hydrants; the location and size of all water, gas or other underground utilities or structures; and the location and design of any other required improvements.		
Profiles showing existing and proposed elevations along the center line of all streets and private roads. Where a proposed street or private road intersects an existing street or private road, the elevation along the center line of the existing street or private road within 100 feet of intersection, shall be shown. All elevations must be referred to established U.S. Government of approved local benchmarks, where they exist within ½ mile of the boundary of the subdivision.		
The Planning Board may require, where steep slopes exist, cross-sections showing existing and proposed elevations of all new streets and private roads every 100 feet at five points on a line at right angles to the center line of the street or private road, said elevation points to be at the center line of the street or private road, each property line, and points 30 feet inside each property line.		
Location, size, elevation and other appropriate description of any existing facilities which will be connected to proposed facilities and utilities within the subdivision.		

FINAL CONSTRUCTION PLANS *(continued)*		
Where the design of the subdivision requires the regarding of land, the regarding of land, the regraded contours shall be shown along with estimates of the quantity of material to be added or removed and the proposed measures to be implemented by the subdivider to rehabilitate the disturbed area or areas.		
Title of all sheets, name, address, signature and seal of licensed engineer preparing the construction plans, the date prepared, including revisions dates if any, approximate true North point, scale, and consecutive numbering as sheet _____ of _____.		
A notation of approval, on all sheets as follows "Approved by: _____ _____ Owner Date and _____ _____ Planning Board Chairman Date"		
Such additional information as may be required by Chapter 195 – Subdivision of Land; Chapter 223 – Zoning; or the Planning Board.		

For all items marked "NO" above, please explain below why the required information has not been provided:

Please see enclosed Application Narrative

Applicant/Sponsor Name: Beekman Arts Center LLC and Bay Ridge Studios LLC

Signature:
Saleh Hassen, Member

Date: November 21, 2023

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: Beekman Arts Center LLC

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

Abdel Hassen, Saleh Hassen and Sam Hassen

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

45 Beekman (5955-19-706012)

Applicant Address: 268 Main Street, Beacon NY 12508

Project Address: 45 Beekman and High Street

Project Tax Grid # 5955-19-706012; 5954-26-68990 and 5954-26-781983

Type of Application Subdivision and Site Plan Application

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, Saleh Hassen, Member of Beekman Arts Center LLC, 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 — X
2. Violations are pending on a parcel or parcels owned by me situated within the City of Beacon — N/A
3. ALL tax payments due to the City of Beacon are current — X
4. Tax delinquencies exist on a parcel or parcels owned by me within the City of Beacon — N/A
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon — N/A
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current — X

Signature of Owner Beekman Arts Center LLC

Saleh Hassen, Member

Title if owner is corporation

Office Use Only:	NO	YES	Initial
Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)	X		MP
ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)		X	KLM
ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)		X	KLM

FOR OFFICE USE ONLY
Application #

CITY OF BEACON
1 Municipal Plaza, Beacon, NY
Telephone (845) 838-5000 • http://beaconny.gov/

ENTITY DISCLOSURE FORM

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

Disclosure of the names and addresses of all persons or entities owning any interest or controlling position of any Limited Liability Company, Partnership, Limited Partnership, Joint Venture, Corporation or other business entity (hereinafter referred to as the "Entity") filing a land-use application with the City is required pursuant to Section 223-61.4 of the City Code of the City of Beacon. If any Member of the Entity is not a natural person, then the names and addresses as well as all other information sought herein must be supplied about the non-natural person member of that Entity, including names, addresses and Formation filing documents. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

SECTION A.

IF AFFIANT IS A PARTNERSHIP, JOINT VENTURE OR OTHER BUSINESS ENTITY, EXCEPT A CORPORATION:

Name of Entity	Address of Entity
Beekman Arts Center LLC	268 Main Street Beacon NY 12508
Place where such business entity was created New York State DOS	Official Registrar's or Clerk's office where the documents and papers creating entity were filed New York State DOS
Date such business entity or partnership was created 4/6/2018	Telephone Contact Information 917-468-8473

IF AFFIANT IS A CORPORATION:

Name of Entity	Telephone Contact Information
Principal Place of Business of Entity	Place and Date of incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

SECTION B. List all persons, officers, limited or general partners, directors, members, shareholders, managers, and any others with any interest, mortgage, encumbrance or other interest (recorded or unrecorded) in or with the above referenced

Entity. List all persons to whom corporate stock has been pledged, mortgaged or encumbered and with whom any agreement has been made to pledge, mortgage or encumber said stock. Use a supplemental sheet to list additional persons.

Name	Resident Address	Resident Telephone Number	Nature and Extent of Interest
Abdel Hassen	153-12 80th St. Howard Beach, NY 11414	917-468-8473	50%
Saleh Hassen	157-44 84th St. Howard Beach, NY 11414	917-468-8473	25%
Sam Hassen	164-40 88th St Howard Beach, NY 11414	917-560-4026	25%

SECTION C. 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.
Beekman Arts Center LLC	268 Main Street Beacon NY 12508	(917)468-8473	Deed dated 1/18/2017	Recorded 2/8/2017 Dutchess County Clerk

SECTION D. Is any owner, of record or otherwise, an officer, director, stockholder, agent or employee of any person listed in Section B-C?

☐ **YES** ☒ **NO**

Name	**Employer**	**Position**

SECTION E. Is any party identified in Sections A- C 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 F. Was any person referred to in Sections A-D known by any other name within five (5) years preceding the date of the application?

☐ **YES** ☒ **NO**

Current Name	**Other Names**

SECTION G. List the names and addresses of each person, business entity, partnership and corporation in the chain of title of the subject premises for the five (5) years next preceding the date of the application.

Name	**Address**
Beekman Art Center LLC	268 Main Street Beacon NY 12508 Deed Doc# 02-2017-1113

SECTION H. If the applicant is not a record owner of the subject property, describe the applicant's interest in the subject property and the relationship the applicant has to the record owner(s) of the subject property.

N/A

SECTION I. 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. Any sensitive or confidential information may be redacted from the contract prior to production.

SECTION J. N/A

1. Where the record owner or contract vendee is a corporation, the following additional information shall be submitted**:**

Name of the Corporation	Telephone Contact Information
Principal Business Address	Place and Date of Incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	**Residence or business address**	**Telephone number**

3. Have any shares of the stock of the corporation or of any stockholder been pledged, mortgaged or encumbered?

☐ **YES** ☐ **NO**

If so, please list the name and address of each person having, holding, owning or claiming any such interest.

Name	**Address**

SECTION K. 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**

I, Saleh Hassen being first duly sworn, according to law, deposes and says that I am (Title) Member, an active and qualified member of the Beekman Arts Center LLC, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

(Print) Saleh Hassen, Member
Beekman Arts Center LLC

(Signature) _____

FOR OFFICE USE ONLY
Application #

CITY OF BEACON
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SECTION A.

IF AFFIANT IS A PARTNERSHIP, JOINT VENTURE OR OTHER BUSINESS ENTITY, EXCEPT A CORPORATION:

Name of Entity Bay Ridge Studios LLC	Address of Entity 268 Main Street Beacon NY 12508
Place where such business entity was created New York State DOS	Official Registrar's or Clerk's office where the documents and papers creating entity were filed New York State DOS
Date such business entity or partnership was created 7/18/2018	Telephone Contact Information 917-468-8473

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Name of Entity	Telephone Contact Information
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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.
Bay Ridge Studios LLC	268 Main Street Beacon NY 12508	917-468-8473	Deed dated 12/31/2001	Recorded 2/3/2022 Dutchess County Clerk

SECTION D. Is any owner, of record or otherwise, an officer, director, stockholder, agent or employee of any person listed in Section B-C?

☐ **YES** ☒ **NO**

Name	**Employer**	**Position**

SECTION E. Is any party identified in Sections A- C 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.

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☐ **YES** ☒ **NO**

Current Name	**Other Names**

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Name	**Address**	
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William F. Vassalo	15 Sunset Hill Road Fishkill, NY 12524	Deed Doc# 02-2002-90

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SECTION I. 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. Any sensitive or confidential information may be redacted from the contract prior to production.

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Name	**Residence or business address**	**Telephone number**

3. Have any shares of the stock of the corporation or of any stockholder been pledged, mortgaged or encumbered?

☐ **YES** ☐ **NO**

If so, please list the name and address of each person having, holding, owning or claiming any such interest.

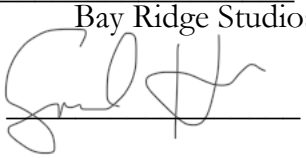
Name	**Address**

SECTION K. 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**

I, Saleh Hassen being first duly sworn, according to law, deposes and says that I am (Title) Member, an active and qualified member of the Bay Ridge Studios LLC, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

(Print) Saleh Hassen, Member
Bay Ridge Studios LLC

(Signature) 

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. 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; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: 45 Beekman Street Mixed-Use Development - Application for Site Plan and Subdivision Approval		
Project Location (describe, and attach a general location map): 45 Beekman Street & High Street, Beacon, NY 12508		
Brief Description of Proposed Action (include purpose or need): Application for Site Plan and Subdivision approval to construct two (2) 4-story mixed-use buildings with ground floor commercial space and multi-family residential units in place of the existing commercial building on the 45 Beekman parcel. The High Street parcels are vacant. The building proposed on the current 45 Beekman Street lot will include 8,670 square feet commercial space (retail/office) on the first floor and a total of 37 dwelling units. The building proposed on the current High Street lots will include 5,418 square feet commercial space (retail/office) on the first floor and a total of 28 dwelling units. These buildings will incorporate below market rate units in accordance with the City's Affordable-Workforce Housing local law. The project will include off-street surface and garage parking facilities (89 total spaces) using existing driveway connections to Tompkins Avenue and Beekman Street. The proposal also includes water and sanitary sewer service connections to City of Beacon mains, and stormwater management features necessary to support the development.		
Name of Applicant/Sponsor/Owner: Beekman Arts Center LLC & Bay Ridge Studios LLC	Telephone: 917-468-8473 E-Mail: nidalhassen7@gmail.com	
Address: 268 Main Street		
City/PO: Beacon	State: NY	Zip Code: 12508
Project Contact (if not same as sponsor; give name and title/role): Taylor Palmer, Esq., Cuddy & Feder LLP (Attorney for the Applicant)	Telephone: 914-761-1300 E-Mail: tpalmer@cuddyfeder.com	
Address: 445 Hamilton Avenue, Fl. 14		
City/PO: White Plains	State: NY	Zip Code: 10601
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)		
Government Entity	**If Yes: Identify Agency and Approval(s) Required**	**Application Date (Actual or projected)**
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes☑No		
b. City, Town or Village Planning Board or Commission ☑Yes☐No	Planning Board: Site Plan, Subdivision, LWRP Consistency, COA	November 2023
c. City, Town or Village Zoning Board of Appeals ☐Yes☑No		
d. Other local agencies ☐Yes☑No		
e. County agencies ☑Yes☐No	Dutchess County Planning: GML referral Dutchess County Health: Water Extension	
f. Regional agencies ☐Yes☑No		
g. State agencies ☑Yes☐No	NYSDEC: Stormwater SPDES NYSDOT: Hwy. Work Permit, U&O & Utility Permit	
h. Federal agencies ☐Yes☑No		

i. Coastal Resources.
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☑Yes☐No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes☑No

If Yes, identify the plan(s):

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Linkage District (L), One-Family Residential District (R1.75) and Historic District and Landmark Overlay District

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site?

C.4. Existing community services.

a. In what school district is the project site located? Beacon City School District

b. What police or other public protection forces serve the project site?
City of Beacon Police Department

c. Which fire protection and emergency medical services serve the project site?
City of Beacon Fire Department

d. What parks serve the project site?
Pete & Toshi Seeger Riverfront Park, Long Dock Park, Memorial Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Mixed-Use; commercial (office & retail) and multi-family residential

b. a. Total acreage of the site of the proposed action? 1.78 acres
b. Total acreage to be physically disturbed? +/- 2.3 acres acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 1.78 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % Units:

d. Is the proposed action a subdivision, or does it include a subdivision? ☑ Yes ☐ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
Lot line adjustment
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? 1
iv. Minimum and maximum proposed lot sizes? Minimum 1.78 Maximum 1.78

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: ±18 months
ii. If Yes:
- Total number of phases anticipated
- Anticipated commencement date of phase 1 (including demolition) month year
- Anticipated completion date of final phase month year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

f. Does the project include new residential uses? ☑ Yes ☐ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				65 Units
At completion of all phases				65 Units

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 2

ii. Dimensions (in feet) of largest proposed structure: 48 height; 65 width; and 217 length

iii. Approximate extent of building space to be heated or cooled: ±86,000 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify: _____

iii. If other than water, identify the type of impounded/contained liquids and their source. _____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): _____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. _____

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☑Yes ☐No
If Yes:

i. Total anticipated water usage/demand per day: 11,810 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑Yes ☐No
If Yes:

- Name of district or service area: City of Beacon (PWS ID# 1302780)
- Does the existing public water supply have capacity to serve the proposal? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No
- Do existing lines serve the project site? ☑Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☑No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project: N/A

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: N/A gallons/minute.

d. Will the proposed action generate liquid wastes? ☑Yes ☐No
If Yes:

i. Total anticipated liquid waste generation per day: 11,810 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): Sanitary Wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: City of Beacon WWTP
- Name of district: City of Beacon
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☑No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

N/A

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

None

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 1.36 acres (impervious surface)

_____ Square feet or 1.78 acres (parcel size)

ii. Describe types of new point sources. Drainage discharges from stormwater management facilities.

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

Stormwater runoff will be direct overland to on-site collection structures (drain inlets or catch basins) and conveyed via piping to on-site management facilities.

- If to surface waters, identify receiving water bodies or wetlands: N/A
- Will stormwater runoff flow to adjacent properties? ☑Yes ☐No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☑Yes ☐No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

Delivery vehicles

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

Power generator

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

N/A

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☑Yes ☐No The enclosed Traffic Study prepared the Applicant's traffic consultant demonstrates that the Project includes proposed mitigation measures that will prevent any adverse impacts.

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☑ Evening ☑Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): Estimate 1-2 Delivery Trucks/Day & 1 Garbage Truck/week

iii. Parking spaces: Existing 40 Proposed 89 Net increase/decrease +49

iv. Does the proposed action include any shared use parking? ☑Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: N/A

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☑Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☑Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☑Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: TBD

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): Local Utility Provider

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7AM-9PM
- Saturday: 7AM-9PM
- Sunday: 7AM-9PM
- Holidays: Varies

ii. During Operations:

- Monday - Friday: 9AM-6PM
- Saturday: 9AM-6PM
- Sunday: Varies
- Holidays: Varies

In accordance with City of Beacon Noise Ordinance (CH.149)

Will vary based on commercial tenants

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

During construction: On-site generators & construction equipment during the times & duration to comply with City Noise Ordinance

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☑ Yes ☐ No

Describe: The development proposes to remove some existing trees along Beekman Street for streetscape improvements & sidewalk connections to the project site.

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Anticipate pole mounted & building mounted fixtures for illumination of the parking & drive aisles (20 foot max. ht.) and some bollard lighting (±4 foot ht.) for some of the proposed walkways. These will all be LED light sources and full cut-off style housings.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☑ Yes ☐ No

Describe: The development proposes to remove some existing trees along Beekman Street for streetscape improvements & sidewalk connections to the project site.

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☑ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: ±2 tons per Month (unit of time)
- Operation : ±5.8 tons per Month (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: Recycle excess or scrap construction materials.
- Operation: Recycle glass, plastics and cardboard.

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: Local hauling company & solid waste landfill.
- Operation: Local hauling company & solid waste landfill.

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

Single and Multi-family Residential to the North & West, Commercial to the East and City of Beacon Hall & Police Department to the South.

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.81	1.36	+0.55
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: landscaped area	0.97	0.42	-0.55

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑Yes ☐No

If Yes,

i. Identify Facilities:

Jenny's Group Family Daycare, Astor Head Start Center

e. Does the project site contain an existing dam? ☐Yes ☑No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes ☑No

If Yes:

i. Has the facility been formally closed? ☐Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes ☑No

Not to owner's knowledge

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes ☐No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑Yes ☐No

If yes, provide DEC ID number(s): V00293, 314069, 546031

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

All locations off-site: V00293: Doral Hat Property, 1 West Main St.; 314069: CH-MGP, River Street; Hudson River PCB Sediments, Hudson River

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

DwB - Dutchess-Cardigan complex	100 %
	%
	%

d. What is the average depth to the water table on the project site? Average: >6.5 feet

e. Drainage status of project site soils:
☑ Well Drained: 100 % of site
☐ Moderately Well Drained: _____ % of site
☐ Poorly Drained _____ % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 77.5 % of site
☑ 10-15%: 6.5 % of site
☑ 15% or greater: 16 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☑ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site:
Typical Urban Wildlife

n. Does the project site contain a designated significant natural community? ☐Yes ☑No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation):
ii. Source(s) of description or evaluation:
iii. Extent of community/habitat:
- Currently: acres
- Following completion of project as proposed: acres
- Gain or loss (indicate + or -): acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐No
If Yes:
i. Species and listing (endangered or threatened):
Atlantic Sturgeon, Shortnose Sturgeon, Indiana Bat (Auto-generated by NYSDEC EAF Mapper)

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No
If Yes:
i. Species and listing:

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No
If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No
If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No
i. If Yes: acreage(s) on project site?
ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No
If Yes:
i. CEA name:
ii. Basis for designation:
iii. Designating agency and date:

e. 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? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☑ Historic Building or District

ii. Name: Bogardus--DeWindt House, Lower Main Street Historic District

iii. Brief description of attributes on which listing is based:

The site is located 0.05 miles from the Bogardus DeWindt House, and 0.10 miles from the Lower Main Street Historic District.

f. 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? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Dennings Point (State Park), Hudson Highlands (SASS)

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Dennings Point (State Park), Hudson Highlands (SASS)

iii. Distance between project and resource: 1 & 1.6 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

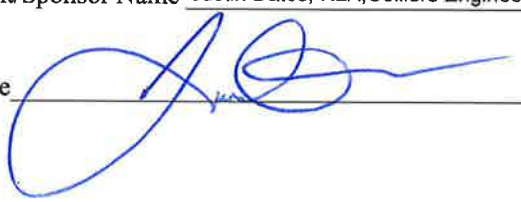
Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

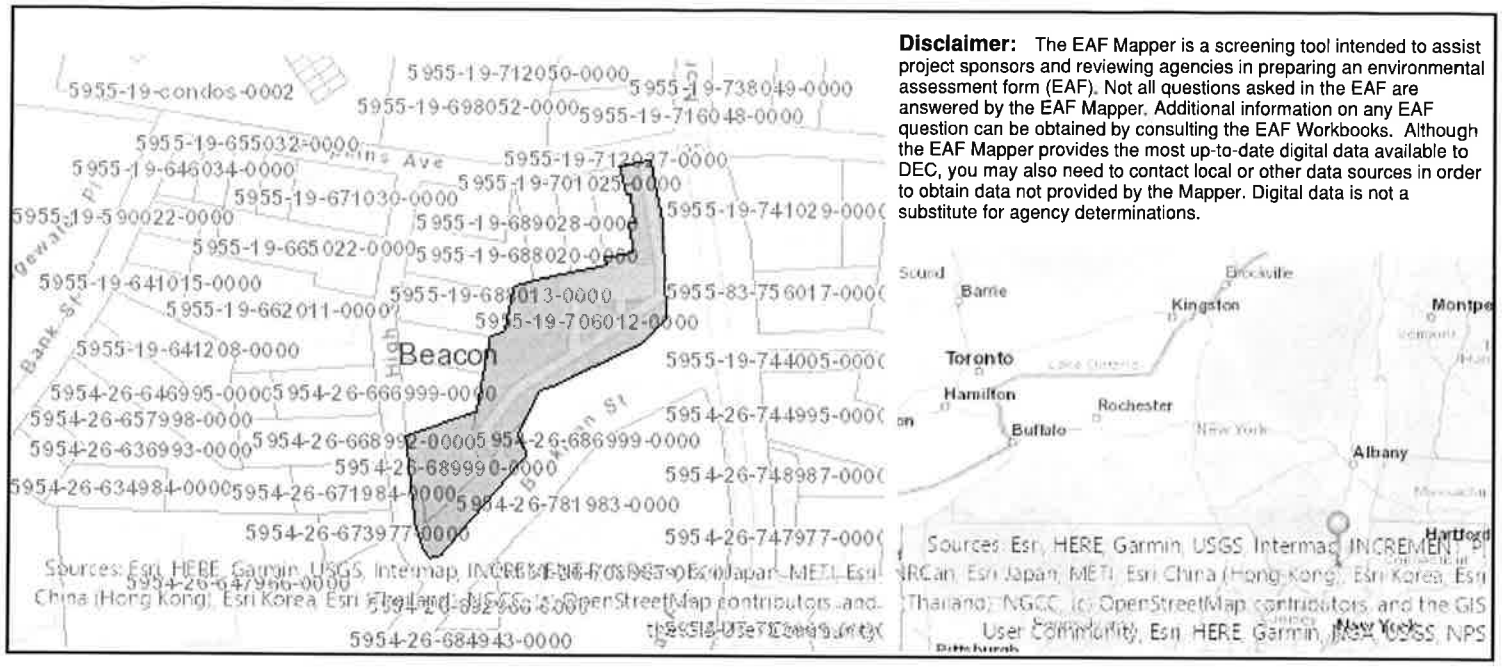
~~Applicant~~/Sponsor Name Justin Dates, RLA,Colliers Engineering&Design Date November 28, 2023

Signature  Title Department Manager

PRINT FORM

EAF Mapper Summary Report

Wednesday, October 11, 2023 11:33 AM



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.

B.i.i [Coastal or Waterfront Area]	Yes
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	V00293, 314069, 546031
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	No
E.2.h.iii [Surface Water Features]	No
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes

E.2.o. [Endangered or Threatened Species - Name]	Atlantic Sturgeon, Shortnose Sturgeon, Indiana Bat
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Bogardus--DeWindt House, Lower Main Street Historic District
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

NEW YORK STATE DEPARTMENT OF STATE
COASTAL MANAGEMENT PROGRAM

Coastal Assessment Form

A. INSTRUCTIONS (Please print or type all answers)

1. State agencies shall complete this CAF for proposed actions which are subject to Part 600 of Title 19 of the NYCRR. This assessment is intended to supplement other information used by a state agency in making a determination of significance pursuant to the State Environmental Quality Review Act (see 6 NYCRR, Part 617). If it is determined that a proposed action will not have a significant effect on the environment, this assessment is intended to assist a state agency in complying with the certification requirements of 19 NYCRR Section 600.4.

2. If any question in Section C on this form is answered "yes", then the proposed action may affect the achievement of the coastal policies contained in Article 42 of the Executive Law. Thus, the action should be analyzed in more detail and, if necessary, modified prior to either (a) making a certification of consistency pursuant to 19 NYCRR Part 600 or, (b) making the findings required under SEQR, 6 NYCRR, Section 617.11, if the action is one for which an environmental impact statement is being prepared. If an action cannot be certified as consistent with the coastal policies, it shall not be undertaken.

3. Before answering the questions in Section C, the preparer of this form should review the coastal policies contained in 19 NYCRR Section 600.5. A proposed action should be evaluated as to its significant beneficial and adverse effects upon the coastal area.

B. DESCRIPTION OF PROPOSED ACTION

1. Type of state agency action (check appropriate response):

(a) Directly undertaken (e.g. capital construction, planning activity, agency regulation, land transaction) ____
(b) Financial assistance (e.g. grant, loan, subsidy) ____
(c) Permit, license, certification __X__

2. Describe nature and extent of action: Application for Site Plan & Subdivision (Lot Merger) Approval for Mixed-Use Development.

3. Location of action:

Dutchess	Beacon	45 Beekman Street & High Street Tax Grid Nos.: 5955-19-706012; 5954-26-781983 & 689990
County	City, Town or Village	Street or Site Description

4. If an application for the proposed action has been filed with the state agency, the following information shall be provided:

(a) Name of applicant: 1. Beekman Art Center LLC; and 2. Bay Ridge Studios LLC

(b) Mailing address: 1. 114-11 Lefferts Blvd., South Ozone, NY 11420; and 2. 25-02 Francis Lewis Blvd., Flushing, NY 11358

(c) Telephone Number: Area Code (917) 468-8473 or 718-843-9550

(d) State agency application number: N/A

5. Will the action be directly undertaken, require funding, or approval by a federal agency?

Yes _____ No __X__ If yes, which federal agency?_____

C. COASTAL ASSESSMENT (Check either "YES" or "NO" for each of the following questions)

	YES	NO
1. Will the proposed activity be located in, or contiguous to, or have a significant effect upon any of the resource areas identified on the coastal area map:		
(a) Significant fish or wildlife habitats?	__	X
(b) Scenic resources of statewide significance?	__	X
(c) Important agricultural lands?	__	X
2. Will the proposed activity have a significant effect upon:		
(a) Commercial or recreational use of fish and wildlife resources?	__	X
(b) Scenic quality of the coastal environment?	__	X
(c) Development of future, or existing water dependent uses?	__	X
(d) Operation of the State's major ports?	__	X
(e) Land and water uses within the State's small harbors?	__	X
(f) Existing or potential public recreation opportunities?	__	X
(g) Structures, sites or districts of historic, archeological or cultural significance to the State or nation?	__	X

3. Will the proposed activity involve or result in any of the following:

(a) Physical alteration of two (2) acres or more of land along the shoreline, land under water or coastal waters?	___	X
(b) Physical alteration of five (5) acres or more of land located elsewhere in the coastal area?	___	X
(c) Expansion of existing public services of infrastructure in undeveloped or low density areas of the coastal area?	___	X
(d) Energy facility not subject to Article VII or VIII of the Public Service Law?	___	X
(e) Mining, excavation, filling or dredging in coastal waters?	___	X
(f) Reduction of existing or potential public access to or along the shore?	___	X
(g) Sale or change in use of state-owned lands located on the shoreline or under water?		
(h) Development within a designated flood or erosion hazard area?	___	X
(i) Development on a beach, dune, barrier island or other natural feature that provides protection against flooding or erosion?	___	X

4. Will the proposed action be located in or have a significant effect* upon an area included in an approved Local Waterfront Revitalization Program? ___ *

D. SUBMISSION REQUIREMENTS

* The Action will not have a significant effect upon an area in an approved LWRP

If any question in Section C is answered "Yes", AND either of the following two conditions is met:

Section B.1(a) or B.1(b) is checked; or
Section B.1(c) is checked AND B.5 is answered "Yes",

THEN a copy of this completed Coastal Assessment Form shall be submitted to:

New York State Department of State
Office of Coastal, Local Government and Community Sustainability
One Commerce Plaza
99 Washington Avenue, Suite 1010
Albany, New York 12231-0001

If assistance or further information is needed to complete this form, please call the Department of State at (518) 474-6000.

E. REMARKS OR ADDITIONAL INFORMATION

Preparer's Name: Taylor M. Palmer, Esq.
(Please print)

Title: Attorney Agency: Cuddy & Feder LLP (Attorney for Applicant)

Telephone Number: (914) 761-1300 Date: November 28, 2023

Local Waterfront Revitalization Program
Consistency Statement

Premises: 45 Beekman Street, High Street, & High Street, City of Beacon, New York (Tax Parcel IDs: 5955-19-706012, 5954-26-689990 & 781983)

BACKGROUND:

The Premises are comprised of three (3) lots, two (2) of which are currently vacant (High Street & High Street), and a third which is currently improved with a commercial building (45 Beekman Street), as detailed in the below map taken from the Dutchess County Tax Parcel Viewer (*see* ***Image 1*** below). All three (3) lots are classified in the Linkage ("L") Zoning District, with a small portion of 45 Beekman Street lot accessing Tompkins Ave classified in the R1-7.5 Zoning District. The northern, vacant High Street parcel is also within the City's Historic District and Landmark Overlay ("HDLO"). All three (3) lots are located within the easternmost boundary of the City of Beacon's Waterfront Revitalization Management Area Boundary, as is more fully shown in the below map (*see* ***Image 2*** below) that is excerpted from the City's Local Waterfront Revitalization Plan ("LWRP").

Image 1 – Dutchess County Tax Parcel Viewer Image of the Premises:

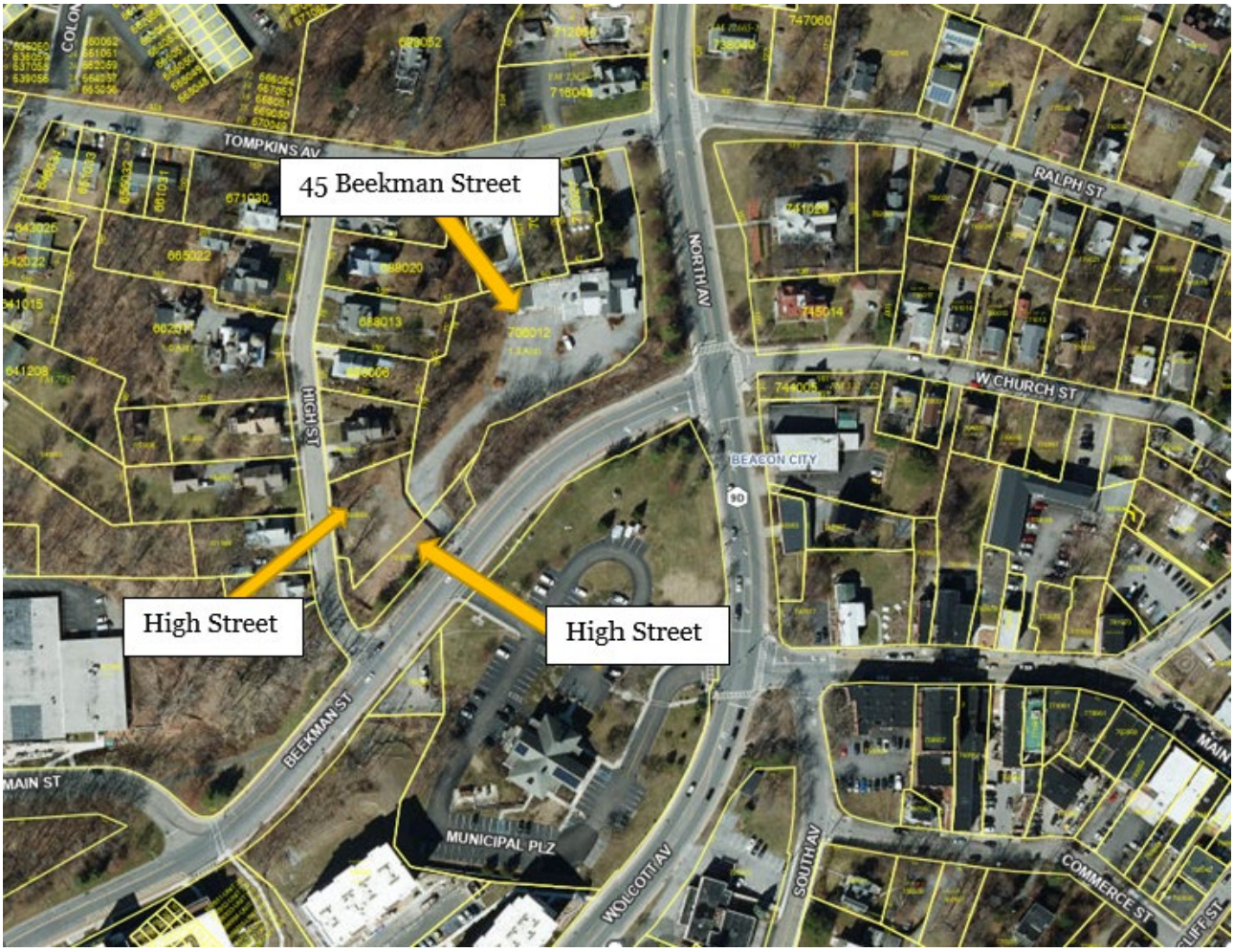
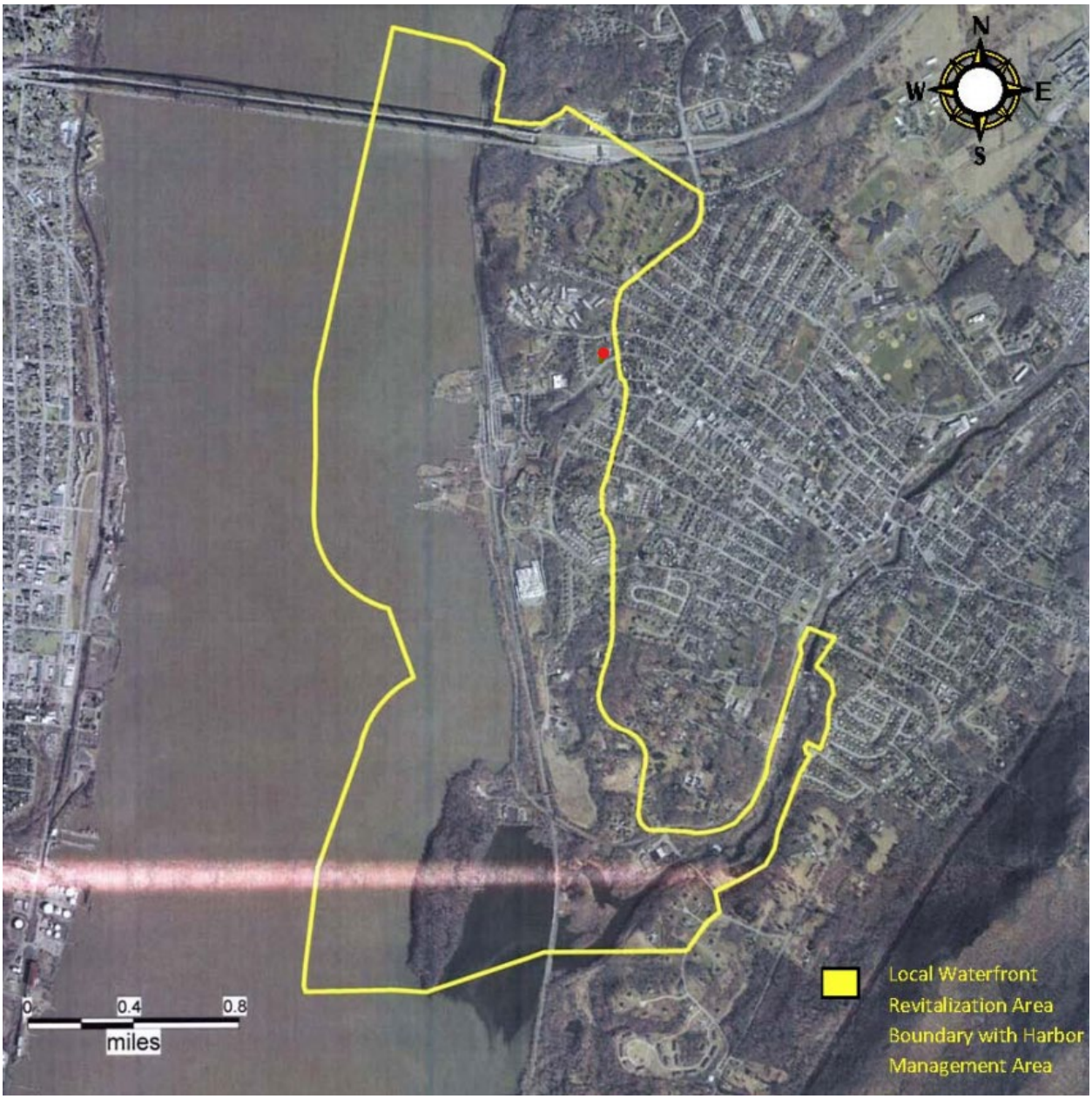


Image 2 – City of Beacon Waterfront Revitalization Management Area Boundary:



Note: The red circle shows the approximate location of the Premises within the Local Waterfront Revitalization Area Boundary.

This LWRP Consistency Statement analyzes the manner in which the Application for Site Plan and Subdivision Approval proposing to construct two (2) mixed use buildings and associated off-street parking (the "Project") is consistent with the LWRP coastal policies related to viewsheds and environmental protection.[1] This LWRP Consistency Statement is submitted by the Applicant in furtherance of the environmental review of the Project and the attendant State Environmental Quality Review Act ("SEQR") documentation submitted by the Applicant.

[1] *See* CITY OF BEACON ZONING CODE §§ 220-5, 220-6 (reviewing agencies must ensure actions impacting this coastal area are consistent with the City's LWRP).

THE PROPOSED MIXED-USE DEVELOPMENT IS CONSISTENT WITH THE POLICIES SET FORTH IN THE LWRP:

The proposed Site Plan and Subdivision Application to develop the Project is consistent with the Policies in the City's LWRP for the following reasons:[2]

POLICY 5 *Encourage the location of development in areas where public services and facilities essential to such development are adequate, except when such development has special functional requirements or other characteristics which necessitates its location in other coastal areas.*

The Project will not place undue pressure on the public water distribution and sanitary sewer system because the City's water and sewer system can adequately serve the Project.

POLICY 6 *Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.*

As is detailed in City of Beacon Zoning Code Section 223-41.19, in part, the purpose of the creation of the Linkage Zoning District is "… to provide a simplified and streamlined review process that facilitates redevelopment in accordance with its provisions and the intent of the Comprehensive Plan." In line with the state purpose of the Linkage District, the mixed-use Project is designed to increase the vitality, attractiveness and marketability of the area of Beekman Street, which lies between Main Street and the Metro-North Train Station.

POLICY 13 *The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.*

There will be no measurable increase in erosion or flooding generated by the Project. Proper drainage and land restoration practices will be followed. The Project will not result in any increased erosion risk to surrounding properties based on these restoration practices.

[2] The following LWRP Policies are inapplicable to the Project: Policy 1 (Revitalization of Waterfront Areas); Policy 2 (Facilitation of Water-Dependent Uses); Policy 7 (Restoration of Coastal Habitats); Policy 8 (Prevent Pollution in the Coastal Area); Policy 9 (Increase Access to Coastal Resources); Policy 10 (Develop Commercial Fishing); Policy 11 (Buildings in the Coastal Area); Policy 15 (Excavation and Dredging Limitations in Coastal Waters); Policy 16 (Publicly Funded Erosion Prevention Measures); Policy 17 (Non-Structural Flooding Measures); Policy 18 (Major Actions in the Coastal Area); Policy 19 (Public Access to Coastal Resources); Policy 20 (Public Access to Water's Edge); Policy 21 (Encouragement of Water-Based Recreation); Policy 22 (Provision of Water-Related Recreation); Policy 23 (Historic Restoration); Policy 25 (Scenic Quality) – the Premises are tucked down below the street level from North Avenue and Beekman Street; Policy 27 (Siting Energy Facilities); Policy 28 (Ice Management Practices); Policy 30 (Discharge of Pollutants into Coastal Waters); Policy 31 (Modifying Water Quality Standards); Policy 32 (Alternative Sanitary Waste Systems); Policy 34 (Watercraft Discharges); Policy 35 (Dredging); Policy 36 (Hazardous Material Shipment); Policy 39 (Transport/Storage/Treatment/Disposal of Solid Wastes); Policy 40 (Discharges from Electric Generating and Industrial Facilities); Policy 42 (Significant Deterioration Land Classification); Policy 43 (Acid Rain Prevention); Policy 44 (Wetland Protection).

POLICY 14 *Activities and development, including the construction or reconstruction of erosion protection structures, shall be* undertaken *so that there will be no measurable increase in erosion or flooding at the site of such activities or development or at other locations.*

There will be no measurable increase in erosion or flooding generated by the Project. Proper drainage and land restoration practices will be followed. The Project will not result in any increased erosion risk to surrounding properties based on these restoration practices.

POLICY 33 *Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.*

Best management practices will be used to ensure the control of stormwater runoff from the project site. Onsite stormwater management facilities are proposed to mitigate runoff from additional impervious surfaces where currently there is no stormwater control.

POLICY 37 *Best management practices will be utilized to minimize the nonpoint discharge of excess nutrients, nonpoint discharge of excess nutrients, organics and eroded soils into coastal waters.*

Best management practices will be utilized to minimize the nonpoint discharge of excess nutrients, organics, and eroded soils into coastal waters.

POLICY 38 *The quality and quantity of surface water and groundwater supplies will be conserved and protected particularly where such waters constitute the primary or sole source of water supply.*

The Project does not include or require wastewater discharged to groundwater, and is not known to be located within 100 feet of potable drinking water or irrigation sources based on its location within the City Water District. The Project will be connected to the existing public water distribution system. There will be no bulk storage of petroleum or chemicals on-site.

POLICY 41 *Land use or development in the coastal area will not cause national or state air quality standards to be violated.*

The Project will not lead to any violation of the National and State Air Quality Standards, and will comply with the State Implementation Plan.

CONCLUSION:

Accordingly, for the reasons set forth herein, the Applicant requests that this Board consider finding that the Site Plan and Subdivision Application is consistent with the Policies in the City's LWRP.

Colliers
Engineering
& Design

Traffic & Parking Study

November 28, 2023

45 Beekman Street & High Street
City of Beacon
Dutchess County, New York

Prepared for:

Beekman Arts Center LLC
Bay Ridge Studios LLC
268 Main Street
Beacon, NY 12508

Prepared by:

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

Joseph Muccin, P.E., PTOE
Senior Project Engineer

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Valhalla New York 10595
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Project No. 23010468A

Colliers Engineering & Design

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Colliers Engineering & Design

I. Introduction

A. Project Description and Location

(Figure No. 1)

This report has been prepared to evaluate the potential traffic and parking related impacts associated with the proposed 45 Beekman and High Street mixed-use development in the City of Beacon, Dutchess County, New York (the "Project"). The Project is proposed to be developed on three (3) adjacent parcels, one (1) parcel that has frontage along Beekman Street that is presently improved by a 15,190 sq. ft commercia/retail building and associated parking areas. This parcel setback from the ROW on North Avenue (NYS Route 9D), Tompkins Avenue and Beekman Street. The remaining two (2) vacant parcels are located along High Street, one of which is a corner lot fronting on both High Street and Beekman Street. The two (2) proposed mixed-use buildings are located entirely within the City of Beacon's Linkage ("L") Zoning District, however a portion of the Project site, which includes the existing access driveway from Tompkins Avenue falls within the R1-7.5 Zoning District.

The 45 Beekman Street parcel is proposed to consist of a 4-story building that will be comprised of approximately 8,670 square feet of commercial space and 2,410 square feet of tenant amenity space on the 1st Floor, together with37 dwelling units on Floors 2-4. The lands generally comprising the existing High Street parcels are proposed to be improved by a 4-story building comprised of approximately 5,418 square feet of commercial space and 3,420 square feet of tenant amenity space on the 1st Floor, together with approximately 28 dwelling units on Floors 2-4. The 45 Beekman Street building will also include 35 garage parking spaces located below the proposed building. In total the Project will provide 89 off-street parking spaces including the 35 garage parking spaces and a total of 54 surface parking lot spaces. It is anticipated that all parking spaces will be shared amongst the two (2) buildings. As shown on Figure No. 1, access to the development is proposed via existing driveway connections to Tompkins Avenue and Beekman Street. Additionally, the Project proposes landscaping and streetscape improvements to be completed within the NYSDOT Right-of-Way along the Project's North Avenue (NYS Route 9D) frontage. A Design Year of 2026 has been utilized to assess the potential future traffic impacts of the Project.

It should be noted that the commercial space proposed within each building is not currently defined as strictly retail or office space. For the purposes of the analysis contained herein, it has been assumed that all commercial space will be retail space, which provides a somewhat conservative analysis of traffic and parking conditions.

B. Scope of Study

This study has been prepared to identify current and future traffic operating and parking conditions on the surrounding roadway network and to assess the potential traffic and parking impacts of the proposed development.

All available traffic count data for the study area intersections were obtained from previous reports prepared by our office. These data were supplemented with new traffic counts collected by representatives of Colliers Engineering & Design CT, P.C. These data were also compared to count data obtained from the New York State Department of Transportation (NYSDOT). Together these data were utilized to establish the 2023 Existing Traffic Volumes representing existing traffic conditions in the vicinity of the site.

The 2023 Existing Traffic Volumes were then projected to a 2026 Design Year to take into account background traffic growth. In addition, traffic for other specific potential or approved developments in the area were estimated and then added to the Projected Traffic Volumes to obtain the 2026 No-Build Traffic Volumes.

Estimates were then made of the potential traffic that the proposed development would generate during each of the peak hours (see Section III-C for further discussion). The resulting site generated traffic volumes were then added to the roadway system and combined with the 2026 No-Build Traffic Volumes resulting in the 2026 Build Traffic Volumes.

The Existing, No-Build and Build Traffic Volumes were then compared to roadway capacities based on the procedures from the Highway Capacity Manual to determine existing and future Levels of Service and operating conditions. Recommendations for improvements were made where necessary to serve the existing and/or future traffic volumes.

In addition to the traffic analysis, the anticipated parking demand of the Project was computed based on the City Code requirements. The analysis of parking conditions for the Project included a shared parking analysis to assess the actual anticipated peak parking demand for the Project.

II. Existing Roadway and Traffic Descriptions

A. Project Description and Location

As shown on Figure No. 1, the Project will be accessed from Tompkins Avenue and Beekman Street via existing driveway connections. The following is a brief description of the roadways located within the study area. In addition, Section III-F provides a further description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service and any recommended improvements for each of the study area intersections. Appendix "D" contains copies of the capacity analyses which indicate the existing geometrics (including lane widths) and other characteristics for each of the individual intersections studied.

1. Wolcott Avenue/North Avenue (NYS Route 9D)

Wolcott Avenue/North Avenue (NYS Route 9D) is classified as an urban minor arterial roadway, which traverses in a generally north south direction throughout the City of Beacon. In the immediate vicinity of the Project, Wolcott Avenue/North Avenue consists of one lane in each direction with a center turn lane. There is no on-street parking along the roadway, but sidewalks are provided on both sides of the roadway. Within the study area Wolcott Avenue/North Avenue has signalized intersections with Verplanck Avenue, Beekman Street, Main Street and South Avenue. The posted speed limit within the City limits is 30 MPH.

It should be noted that the nearest bus stop to the Project site is located at the intersection of NYS Route 9D and Main Street. The Dutchess County Route B: Poughkeepsie Transit Hub to Beacon and Route G: Beacon Free Loop both make stops at this location.

2. Beekman Street

Beekman Street is a two-lane City roadway classified as an urban major collector roadway that originates at a signalized intersection with North Avenue north of the Project site. The roadway serves as a main access connection between North Avenue and the Beacon MetroNorth Train Station. Sidewalks are provided along the roadway on alternating sides of the roadway throughout its entire length. On-street parking is also provided along the east side of the roadway between North Avenue and River Street and then on the west side of the roadway between River Street and Railroad Avenue. The posted speed limit on Beekman Street is 30 MPH.

3. Tompkins Avenue

Tompkins Avenue is a two-lane City roadway that originates at an unsignalized intersection with North Avenue. One lane of travel is provided in both directions with no centerline striping. The roadway has a total pavement width of approximately 27-ft. and the City speed limit of 30 MPH prevails along the roadway. Sidewalks are provided along the south side of the roadway between North Avenue and Bank Street. On-street parking is permitted along both sides of the roadway but is limited to 4-hour parking between the hours of 6AM and 6PM.

4. **Verplanck Avenue**

   Verplanck Avenue is a two-lane City roadway classified as an urban major collector roadway that originates at a signalized intersection with North Avenue (NYS Route 9D) and continues southeast terminating at its intersection with Main Street. Sidewalks are provided along both sides of the roadway throughout its entire length. On-street parking is not provided along this roadway and the posted speed limit is 25 MPH.

B. 2023 Existing Traffic Volumes

(Figures No. 2 through 4, Appendix E)

Turning movement traffic counts were collected by representatives of Colliers Engineering & Design (CED) on Thursday, September 7, 2023, and Saturday, September 9, 2023 to determine the existing traffic volume conditions at the study area intersections during the anticipated peak operation of the Project. These traffic counts were then compared to traffic volume data from previous traffic studies conducted by our office and to traffic volume data available from the New York State Department of Transportation (NYSDOT) for the NYS Route 9D corridor. All relevant traffic volume data is provided in Appendix E for reference. Based on this information, the 2023 Existing Traffic Volumes were established for the Weekday Peak AM Hour, Weekday Peak PM Hour, and Saturday Peak Hour at the following study area intersections:

- North Avenue (NYS Route 9D) and Verplanck Avenue
- North Avenue (NYS Route 9D) and Tompkins Avenue/Ralph Street
- North Avenue (NYS Route 9D) and Beekman Street/W. Church Street
- Wolcott Avenue/North Avenue (NYS Route 9D) and Main Street/Municipal Plaza
- Beekman Street and High Street

Based upon a review of the traffic counts, the peak hours were generally identified as follows:

- Weekday Peak AM Hour — 7:30 AM – 8:30 AM
- Weekday Peak PM Hour — 4:15 PM – 5:15 PM
- Saturday Peak Hour — 1:00 PM – 2:00 PM

The resulting 2023 Existing Traffic Volumes are shown on Figures No. 2, 3, and 4 for the Weekday Peak AM Hour, Weekday Peak PM Peak Hour, and Saturday Peak Hour, respectively.

III. Evaluation of Future Traffic Conditions

A. 2026 No-Build Traffic Volumes

(Figure No. 5 through 13)

The 2023 Existing Traffic Volumes were increased by a growth factor of 2.0% per year to account for general background growth within the study area resulting in the 2026 Projected Traffic Volumes, which are shown on Figures No. 5, 6, and 7 for each of the Peak Hours. In addition, traffic from other specific potential and/or approved developments in the area including Mirbeau Beacon, 364 Main Street, Edgewater (Edgewater Place), Beacon Commons (16 West Main Street) and Prophecy Theater (1113 Wolcott Avenue) were identified. The resulting traffic volumes associated with these other developments are shown on Figures No. 8, 9, and 10 for each of the peak hours. These volumes were added to the 2026 Projected Traffic Volumes resulting in the 2026 No-Build Traffic Volumes which are shown on Figures No. 11, 12, and 13 for the AM, PM, and Saturday Peak Hours, respectively.

B. Site Generated Traffic Volumes

(Table No. 1, 1-A, 1-B, and 1-C, Appendix E)

Estimates of the amount of traffic to be generated by the proposed development during each of the peak hours were developed based on information published by the Institute of Transportation Engineers (ITE) as contained in the report entitled "Trip Generation", 11th Edition, 2021, based on Land Use Category – 220 – Multifamily Housing (Low Rise) and Land Use Category – 822 – Strip Retail Plaza (<40K). Table No. 1 summarizes the trip generation rates and corresponding site generated traffic volumes for the Weekday Peak AM, Weekday Peak PM and Saturday Peak Hours.

It is anticipated that some portion of the Project generated trips could remain internal to the site as trips may occur between the residential and commercial portions of the Project. In order to assess the potential internal trips, an internal capture analysis was conducted for each of the peak hours based on NCHRP 684 Internal Trip Capture Estimation Tool. This analysis is summarized in Tables No. 1-A, 1-B, and 1-C contained in Appendix B. The internal capture analysis results indicate that the internal capture percentage during the Weekday Peak PM and Saturday Peak Hours could approach as much as 25%, while little to no internal capture trips are anticipated during the Weekday AM Peak Hour. Based on this analysis, the traffic generation estimates presented in Table No. 1 account for a somewhat conservative internal capture percentage of 10% for the Weekday PM and Saturday Peak Hours applied to the commercial portions of the development only. No internal capture has been applied to the traffic generation estimates for the Weekday AM Peak Hour.

It should also be noted that the Project is located within approximately 2,000-ft. of the Beacon Metro-North Train Station and it is anticipated that a portion of the residents of the Project may utilize train transportation on a regular basis potentially reducing the daily and peak hour vehicular trips generated by the Project. Based on 2021 American Community Survey data for the City of Beacon available from the United States Census Bureau, approximately ten percent (10%) %of Beacon residents utilize public transportation for their means of transportation to work and considering the proximity of the Project to the train station this percentage could be somewhat higher. The American Community Survey data also indicates that approximately four percent (4%) %of Beacon residents walk or bike to work and ten percent (10%) of Beacon residents work from home. The referenced American Community Survey data is provided in Appendix E. However, no credit for these potential reductions in traffic generation has been accounted for in the analysis providing a somewhat conservative analysis of future traffic conditions associated with the Project.

C. Arrival/Departure Distribution

(Figures No. 14 through 17)

It was necessary to establish arrival and departure distributions to assign the site generated traffic volumes to the surrounding roadway network. Based on a review of the Existing Traffic Volumes and the expected travel patterns on the surrounding roadway network, the distributions were identified separately for the residential and commercial portions of the Project. The resulting anticipated residential arrival and departure distributions are shown on Figures No. 14 and 15, respectively while the commercial arrival and departure distributions are shown on Figures No. 16 and 17.

D. 2026 Build Conditions Traffic Volumes

(Figures No. 18 through 23)

The site generated traffic volumes were assigned to the roadway network based on the arrival and departure distributions referenced above. The resulting total site generated traffic volumes for each of the study area intersections are shown on Figures No. 18, 19, and 20 for each of the peak hours, respectively. The site generated traffic volumes were then added to the 2026 No-Build Traffic Volumes to obtain the 2026 Build Traffic Volumes. The resulting 2026 Build Traffic Volumes are shown on Figures No. 21, 22, and 23 for the Weekday Peak AM, Weekday Peak PM, and Saturday Peak Hours, respectively.

E. Description of Analysis Procedures

(Appendix C)

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

1. **Signalized Intersection Capacity Analysis**
   The capacity analysis for a signalized intersection was performed in accordance with the procedures described in the Highway Capacity Manual, 6th Edition, dated 2016, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service "A" represents the best condition and a Level of Service "F" represents the worst condition. A Level of Service "C" is generally used as a design standard while a Level of Service "D" is acceptable during peak periods. A Level of Service "E" represents an operation near capacity. In order to identify an intersection's Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

2. **Unsignalized Intersection Capacity Analysis**
   The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the Highway Capacity Manual, 6th Edition, dated 2016. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

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

F. Results of Analysis

(Tables No. 2, TSW-1 and TSW-2, Appendix D & E)

Capacity analyses, which take into consideration appropriate truck percentages, pedestrian activity, roadway grades and other factors, were performed at the study area intersections utilizing the procedures described above to determine the Levels of Service and average vehicle delays. Summarized below are a description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service as well as any recommended improvements.

Table No. 2 summarizes the results of the capacity analysis for the 2023 Existing, 2026 No-Build and 2026 Build Conditions. Appendix D contains copies of the capacity analysis which also indicate the existing geometrics (including lane widths) and other characteristics for each of the individual intersections studied. The traffic signal timing data for each of the signalized intersections has also been obtained from the NYSDOT and is provided in Appendix E for reference.

1. **North Avenue (NYS Route 9D) and Verplanck Avenue**

   North Avenue (NYS Route 9D) and Verplanck Avenue intersect at a "T"-shaped signalized intersection. The northbound North Avenue approach consists of a single shared through/right lane. The southbound North Avenue approach consists of a shared through/right lane and separate left turn lane with approximately 340 ft. of storage distance. The westbound Verplanck Avenue approach consists of an 85 ft. long separate left turn lane and a separate right turn lane. The intersection also has signalized pedestrian actuated crossings of the northbound and westbound approaches.

   Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service "B" during the each of the Peak Hours.

   The capacity analysis was recomputed using the 2026 No-Build and Build Traffic Volumes. These results indicate that the intersection is expected to continue to operate at an overall Level of Service "B" during the AM and Saturday Peak Hours while a Level of Service "C" will be experienced during the PM Peak Hour both with and without the Project.

2. **North Avenue (NYS Route 9D) and Tompkins Avenue/Ralph Street**

   North Avenue (NYS Route 9D) and Tompkins Avenue/Ralph Street intersect at a four-way intersection with Tompkins Avenue and Ralph Street controlled by stop-signs. The North Avenue approaches each consist of a shared through/right turn lane and separate left turn lane. The Tompkins Avenue and Ralph Street approaches each consist of one lane. Striped pedestrian crosswalks are present on the Tompkins Avenue and Ralph Street approaches.

   Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at a Level of Service "D" or better across all time periods.

   The capacity analysis was recomputed using the 2026 No-Build Traffic Volumes. These results indicate that the intersection is expected to operate at a Level of Service "F" for vehicles exiting Tompkins Avenue during all time periods. Similar operating conditions are also anticipated under future Build conditions with the Project.

   As part of the Edgewater development, this intersection was previously identified to be monitored for potential signalization after completion of that Project. In light of this, capacity analysis was conducted for the intersection under potential traffic signal control. These results indicate that the intersection would be expected to operate at an overall Level of Service "A" during each of the peak hours under future No-Build and Build conditions with traffic signal control.

A traffic signal warrant analysis has been conducted to further assess the potential need for a traffic signal at this intersection in the future. This analysis, which has been conducted in accordance with the Traffic Signal Warrant criteria specified in the Manual on Uniform Traffic Control Devices, assesses the intersection under future 2026 No-Build and 2026 Build Traffic Volume conditions. The No-Build conditions analysis is presented in Table TSW-1 while the Build conditions analysis is presented in Table TSW-2, both contained in Appendix B. Based on the results of the analysis, the intersection is projected to satisfy Warrant 2 – Four-Hour Vehicular under No-Build conditions regardless of the Project. Under future Build conditions, the intersection is projected to satisfy Warrant 1 Condition B – Minimum Vehicular Interruption of Continuous Traffic, Warrant 2 – Four-Hour Vehicular Volume and Warrant 3 – Peak Hour Volume.

Based on this analysis of future projected traffic volume conditions, it appears that a traffic signal may be warranted at the intersection upon completion of area projects and specifically the Edgewater Project and the 45 Beekman Street & High Street Project. It is the recommendation of CED that this intersection continue to be monitored after completion of these projects to assess the actual traffic volumes at that time. Signalization of this intersection would also require the review and approval of the NYSDOT. It should be noted that the critical volume for satisfaction of the traffic signal volume warrants at this intersection is the exiting volume from Tompkins Avenue. The Edgewater Project is estimated to contribute as much as 7-times the amount of traffic to the Tompkins Avenue exiting approach as the 45 Beekman Street & High Street Project. In fact, the 45 Beekman Street & High Street Project traffic is estimated to be approximately 3.0% of the total traffic at this intersection during all peak time periods analyzed under future Build conditions.

3. **North Avenue (NYS Route 9D) and Beekman Street/W. Church Street**

North Avenue (NYS Route 9D) intersects with Beekman Street and W. Church Street at a full movement signalized intersection. The northbound and southbound approaches each consist of a separate left turn lane in each direction with a shared through/right turn lane. The Beekman Street eastbound approach consists of a shared left turn/through lane and an approximately 95 ft. long separate right turn lane. The westbound W. Church Street approach consists of a single lane for all movements. The intersection also has signalized pedestrian actuated crossings of the southbound, eastbound and westbound approaches. There is no pedestrian crossing on the northbound North Avenue approach.

Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service “F” during each of the peak hours analyzed.. It should be noted that during the AM Peak Hour the southbound North Avenue approach experiences the longest delays as vehicles turn onto Beekman Street towards the Beacon Metro North train station. Conversely, during the PM Peak Hour, the eastbound Beekman Street approach experiences the longest delays resulting from exiting traffic from the train station. Furthermore, these delays on the Beekman Street approach currently meter the release of traffic onto NYS Route 9D towards the I-84 interchange.

The capacity analysis was recomputed using the 2026 No-Build and Build Traffic Volumes. These results indicate that the intersection is expected to continue to operate at an overall Level of Service "F" during the each of the peak hours.

In order to address the existing and future delays at this intersection, traffic signal phasing and timing modifications have been identified that would improve the overall operations of the intersection. The traffic signal phasing modifications include changing the northbound and southbound left turn phases from a lagging left turn phase to a leading left turn phase. In addition, the eastbound and westbound approaches are proposed to be modified from concurrent operation to split phase operation. Associated signal timing modifications have also been identified. In addition, it is proposed to move the existing signalized pedestrian crossing of North Avenue from the north side of the intersection to the south side of intersection such that crossing pedestrians do not conflict with the traffic flows to and from Beekman Street at this intersection. Based on the analysis results, the intersection would be expected to operate at an overall Level of Service "C" during all time periods under future Build conditions. These signal timing and phasing modifications as well as the modifications to the pedestrian accommodations will require review and approval by NYSDOT and will require physical changes to the traffic signal equipment and intersections striping to be implemented under an NYSDOT Highway Work Permit.

4. **Wolcott Avenue/North Avenue (NYS Route 9D) and Main Street/Municipal Plaza**

Wolcott Avenue/North Avenue (NYS Route 9D) intersects with Main Street/Municipal Plaza at a full movement signalized intersection. The northbound and southbound approaches each consist of a separate left turn lane in each direction with a shared through/right turn lane. The eastbound City Hall approach consists of a shared left/through/right lane, while the westbound Main Street approach consists of a shared left/through lane and a separate right turn lane with a storage length of approximately 70 feet. The intersection also has signalized pedestrian actuated crossings on all approaches.

Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service "B" across all time periods.

The capacity analysis was recomputed using the 2026 No-Build and Build Traffic Volumes. These results indicate that the intersection is expected to continue to operate at an overall Level of Service "B" across all time periods.

In association with the traffic signal phasing and timing modifications at the Beekman Street/ W. Church Street intersection, corresponding traffic signal timing modifications are necessary at the Main Street/Municipal Plaza intersection since these two signals are currently coordinated. The traffic signal timing modifications for the Main Street/Municipal Plaza intersection have been identified to maintain coordination of the traffic signals. These modifications do not significantly change the traffic operating conditions at the intersection.

5. **Beekman Street and High Street**

Beekman Street and High Street intersect at a "T" type intersection with High Street is controlled by a stop-sign. All approaches to the intersection consist of one lane. Sidewalks are provided on all approaches on both sides of each road, and a crosswalk is present crossing the High Street approach. Left turns from Beekman Street onto High Street are currently prohibited.

Capacity analysis was conducted for this intersection utilizing the 2023 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at a Level of Service "B" or better during the AM Peak Hour and Saturday Peak Hour, while operating at a Level of Service "A" during the PM Peak Hour.

The capacity analysis was recomputed using the 2026 No-Build and Build Traffic Volumes. These results indicate that the intersection is expected to continue to at a Level of Service "B" or better across all time periods.

6. **Beekman Street and Site Access**

The Project Site is currently accessed from Beekman Street via a driveway connection located approximately 200 feet east of High Street and 345 ft. west of North Avenue forming an unsignalized "T" type intersection. Each approach to the intersection consists of one lane. Sidewalks are provided on all approaches. This site access location will be maintained under the future Build conditions.

Capacity analysis was conducted for this intersection utilizing the 2026 Build Traffic Volumes. The analysis results indicate that the intersection is expected to operate at a Level of Service "B" or better during the AM Peak Hour and Saturday Peak Hour, while operating at a Level of Service "C" or better during the PM Peak Hour. Some pruning of vegetation on both sides of the driveway along the site frontage should be completed to ensure proper sight distance is provided.

Queueing conditions along Beekman Street from the North Avenue intersection have also been reviewed to assess potential impacts to vehicles entering and exiting the site driveway. Based on the traffic analysis results for the North Avenue/Beekman Street intersection with the proposed traffic signal improvements, queues on the Beekman Street eastbound approach from the North Avenue intersection are expected to be less than 300 ft. which will allow for the vehicles to enter and exit the site access driveway without conflict with queues along Beekman Street.

7. **Tompkins Avenue and Site Access**

   The Project Site is currently accessed from Tomkins Avenue via a driveway connection located approximately 60 feet west of North Avenue forming an unsignalized "T" type intersection. Each approach to the intersection consists of one lane. Sidewalks are provided on the south side of Tompkins Avenue in this area. This site access driveway location will be maintained under the future Build conditions.

   Capacity analysis was conducted for this intersection utilizing the 2026 Build Traffic Volumes. The analysis results indicate that the intersection is expected to operate at a Level of Service "A" across all time periods.

IV. Parking Evaluation

(Table P-1 & P-2, Appendix F)

As indicated previously, the Project development area falls within the City of Beacon Linkage District. The City of Beacon Zoning Code's (the "Zoning Code") provides specific parking requirements for Linkage District development as specified in Section 223-41.21.F. Based on the Zoning Code, 1 space is required for every residential dwelling unit, and 3 spaces are required for every 1,000 square feet of retail commercial space. The relevant code section is provided in Appendix F for reference. Exhibit No. 1 below summarizes the total parking requirements for the Project based on the City Code. It should be noted, and as previously indicated, it has been assumed that all commercial space will be retail space rather than office space, which provides a somewhat conservative analysis of traffic and parking conditions.

Exhibit No. 1 – City of Beacon Code Required Parking

Proposed Use	Size	City of Beacon Code Requirement[1]	Required Spaces
45 Beekman Street			
Residential	37 Dwelling Units	1 Space/Dwelling Unit	37 Spaces
Retail Commercial	8,670 sq. ft.	3 Space/1,000 Sq. Ft.	27 Spaces
High Street			
Residential	28 Dwelling Units	1 Space/Dwelling Unit	28 Spaces
Retail Commercial	5,418 sq. ft.	1 Space/Dwelling Unit	17 Spaces
		Total Required Parking Spaces	**109 Spaces**

Notes:
1. City of Beacon Code Requirement parking ratios based on Section 223-41.21.F of the City Code.

As indicated in the table, the Project is required to have a total of 109 off-street parking spaces per the City Code. As noted above, the Project currently proposes 89 off-street parking spaces, including 35 garages spaces within the 45 Beekman Street building and 54 surface lot parking spaces, which will result in the Project being deficient by 20 parking spaces per the City Code requirements. It should be noted that all parking spaces are anticipated to be shared spaces with no spaces designated specifically for residential or commercial uses. CED is monitoring the City Council's current draft amendments to the City's Parking Regulations that could impact the total amount of off-street parking spaces required for a mixed-use project.

The City of Beacon Zoning Code allows for the Planning Board to modify off-street parking requirements in the L District. Specifically, City Code Section 223-41.21.F.(3) indicates… *The quantity of required on-site parking in Subsection F(2) above may be modified by the Planning Board, in its discretion, based upon information submitted by the applicant or otherwise made available to the Planning Board in the public record, demonstrating one or more of the following:*

(a) That the projected operational characteristics of the proposed use and/or its proximity within walking distance of the train station and other services justify a reduction in the required amount of parking.
(b) That adequate shared parking, contractually obligated for the duration of the proposed use, is available within 500 feet of the site and in the L District.
(c) That the applicant has provided sufficient bicycle parking to reduce anticipated vehicular travel demand, as supported by a professional parking study.
(d) That there is sufficient public parking available within 800 feet of the site and in the L District to meet foreseeable parking needs of the proposed use and surrounding uses for the duration of the proposed use.
(e) That the applicant will voluntarily dedicate land for public parking on site or will acquire land by purchase or long-term lease (for the duration of the proposed use) within 800 feet of the site and in the L District and voluntarily dedicate such land to the City for public parking.
(f) That a professional parking study of the proposed use and the surrounding area demonstrates that a different amount of parking would be appropriate for the use in its particular location and/or that existing and/or proposed off-site parking is sufficient.

Item (a) above applies to the Project since it is located within approximately 2,000 ft. of the Beacon Metro-North Train Station. The previously referenced 2021 American Community Survey data for the City of Beacon indicates that approximately ten percent (10%) %of Beacon residents utilize public transportation, which could be somewhat higher for the Project given its proximity to the train station. In addition, the American Community Survey data indicates that approximately five (5%) of Beacon residents do not own a vehicle. Item (c) also applies as the Project plans provide bicycle racks in the vicinity of both proposed buildings.

Furthermore, in support of Item (b) & (f) and in order to assess the total parking requirement for the Project based on the variation of time of use of the parking spaces for each use proposed within the Project, a shared parking analysis was conducted to determine the total anticipated parking demand on an hourly basis. This analysis accounts for variations in parking demand over the course of the day for each of the proposed uses to determine a total parking demand for the Project. Hourly parking demand distributions for a typical Weekday and Saturday as published by the Institute of Transportation Engineers (ITE) contained in the ***Parking Generation Manual, 5th Edition*** were applied to the City Code required parking requirements to conduct this shared parking analysis. ITE provides parking demand distributions on an hourly basis for Land Use 220 – Multifamily Housing (Low-Rise) and Land Use 820 – Retail (Shopping Center). The hourly distribution data for each land use is provided in Appendix G for reference.

The resulting Shared Parking Analysis is summarized in Tables P-1 and P-2 for Weekday and Saturday conditions, respectively. As indicated in the tables, the peak parking demand for the Project when accounting for the shared use of parking between the residential and commercial uses will result in a total parking demand of 85 parking spaces on a weekday, occurring between 7PM – 8PM and 89 parking spaces on a Saturday also occurring between 12PM – 1PM. Therefore, it is anticipated that the 89 proposed on-site parking spaces will satisfy the total anticipated parking demand for the Project. It should also be noted that the parking analysis does not take any credit for the potential of internal trips between the residential units and commercial space, which was estimated to be as much as ten percent (10%) as noted in Section III.B above and would result in some reductions in overall parking demand.

Based on this analysis as well as the proximity to the train station and the provision of bicycle parking/storage, as permitted by City Code Section 223-41.21.F.(3), the Applicant is requesting that the Planning Board consider approval of the joint use of parking spaces for the Project and approve a modification to the overall parking requirement for the Project down to the 89 proposed parking spaces to be provided.

V. Summary and Conclusion

The traffic analysis summarized herein provides a somewhat conservative analysis of future traffic conditions since no credit has been taken for the potential reduction in the Project's traffic generation resulting from with the Project's proximity to the Beacon Metro North train station. It is anticipated that a portion of the Project residents will utilize the nearby public transportation on a regular basis reducing the overall vehicle trips generated by the Project. Based on this conservative analysis summarized above, the additional Project generated traffic is not anticipated to have a significant impact on traffic conditions in the vicinity of the site, however several the following recommendations have been identified to accommodate both existing and future traffic associated with the Project and other area projects currently under development.

- Consistent with previous findings for the North Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street intersection, this intersection should be monitored after substantial completion of this Project and other area projects to assess the actual traffic volumes at that time. Signalization of this intersection would require the review and approval of the NYSDOT.
- Traffic signal phasing and timing modifications should be considered for the intersection of North Avenue (NYS Route 9D) at Beekman Street/Church Street to improve the overall operation of the intersection and specifically the southbound North Avenue and eastbound Beekman Street approaches. In addition, it is proposed to move the existing signalized pedestrian crossing of North Avenue from the north side of the intersection to the south side of intersection such that crossing pedestrians do not conflict with the traffic flows to and from Beekman Street at this intersection. These will require review and approval by NYSDOT and will need to be implemented under an NYSDOT Highway Work Permit.
- Traffic signal timing modifications have also been identified for the intersection of North Avenue (NYS Route 9D) at Main Street/Municipal Plaza. These traffic signal timing modifications for the Main Street/Municipal Plaza intersection have been identified to maintain coordination of the traffic signal with the North Avenue (NYS Route 9D) at Beekman Street/Church Street.

In addition, the parking analysis indicates that the Project will provide sufficient parking to accommodate the residential and commercial uses on-site based on the summarized shared parking analysis, the proximity to the train station and the provision of bicycle parking on the site. Based on this analysis as permitted by City Code Section 223-41.21.F.(3), the Applicant is requesting that the Planning Board consider approval of the joint use of parking spaces for the Project and approve a modification to the overall parking requirement for the Project down to the 89 proposed parking spaces to be provided.

Lastly, the Project proposes landscaping and streetscape improvements to be completed within the NYSDOT Right-of-Way along the Project's North Avenue (NYS Route 9D) frontage. These improvements will require review and approval of the NYSDOT under a Use & Occupancy Permit and a Highway Work Permit for the installation of the improvements.

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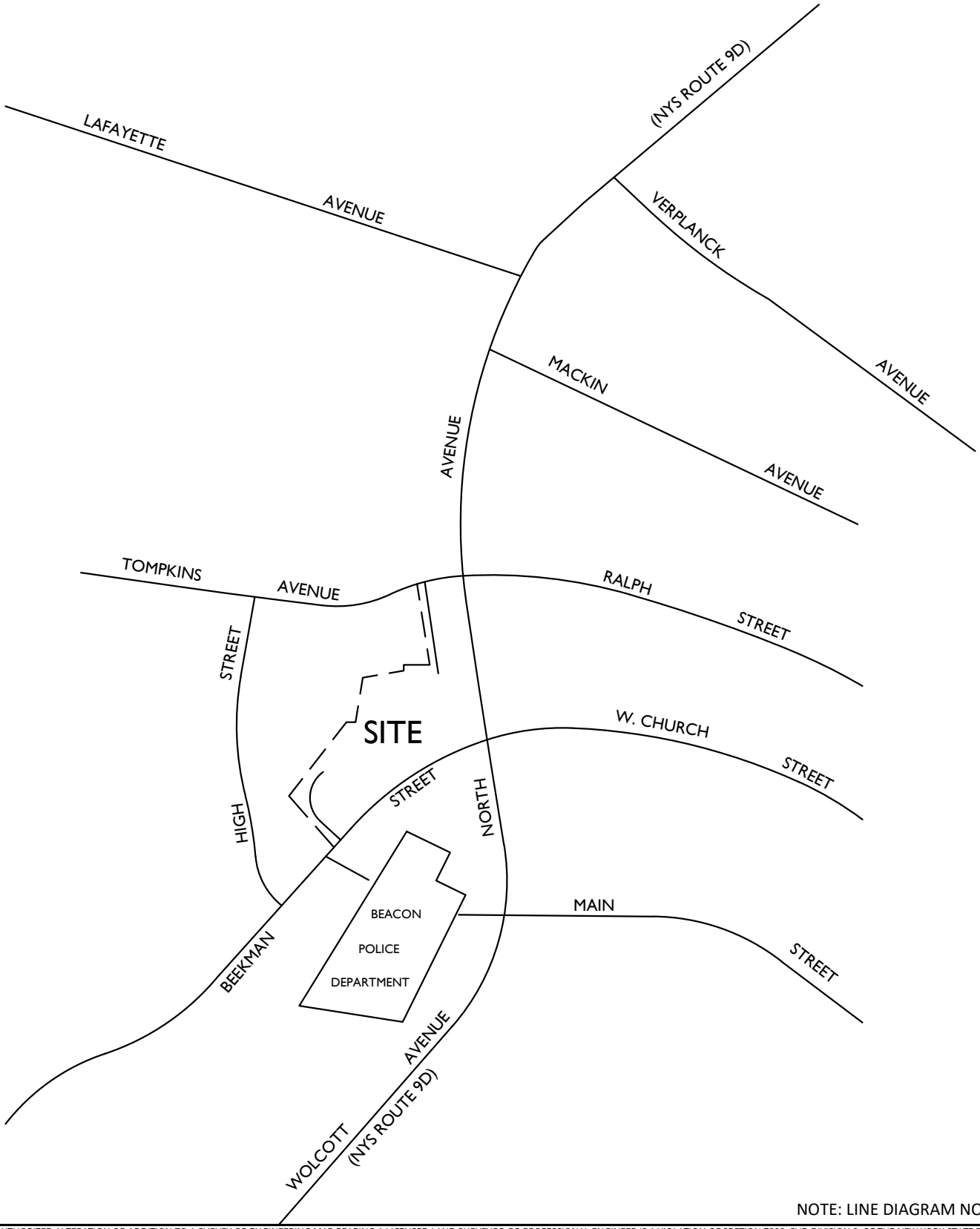
Traffic & Parking Study

Appendix A | Traffic Figures



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PROJECT NUMBER:	DRAWING NAME:
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SHEET TITLE: SITE LOCATION MAP
FIELD BOOK: XX PAGE:XX

SHEET NUMBER: 1

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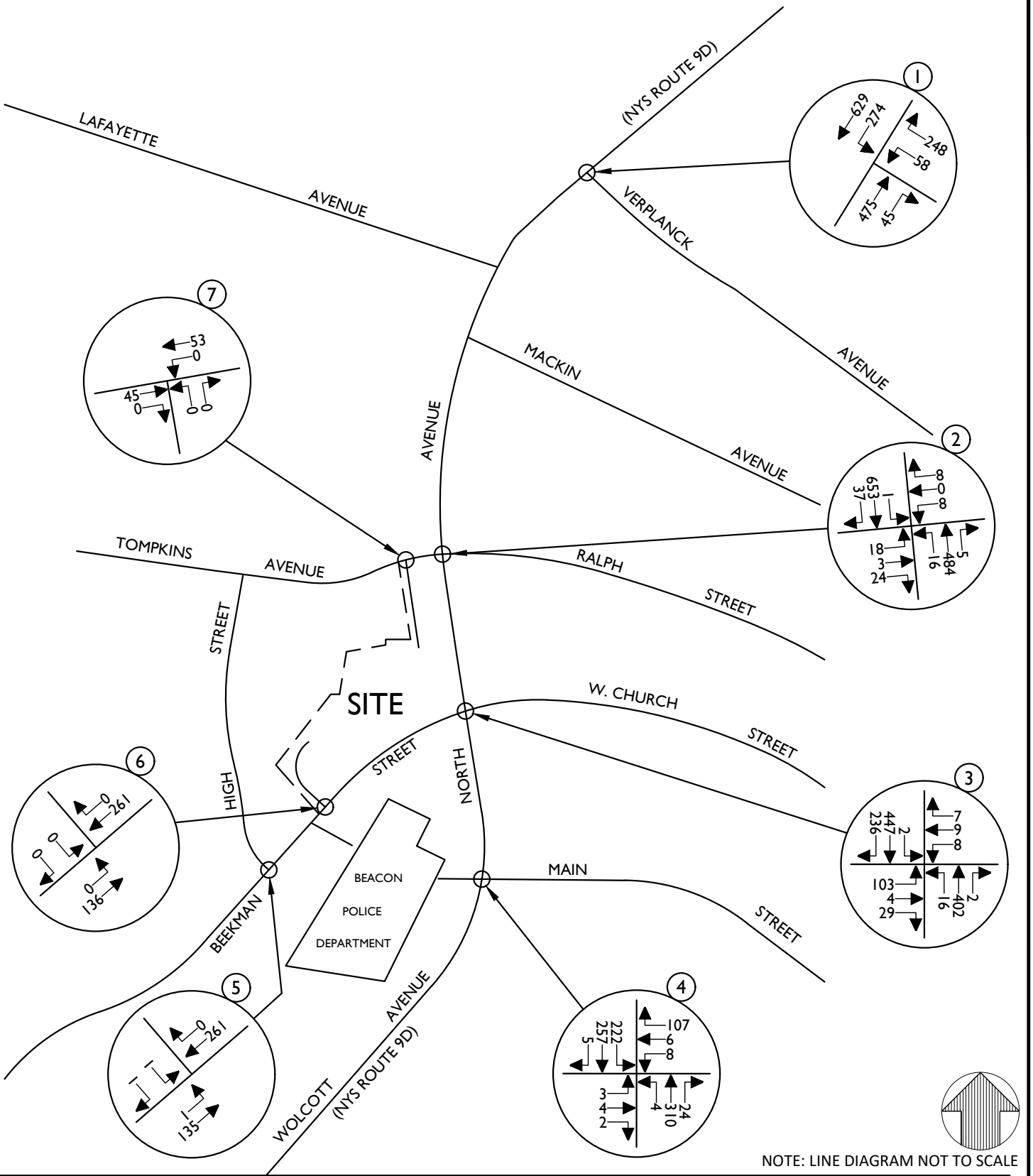

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2023 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 2

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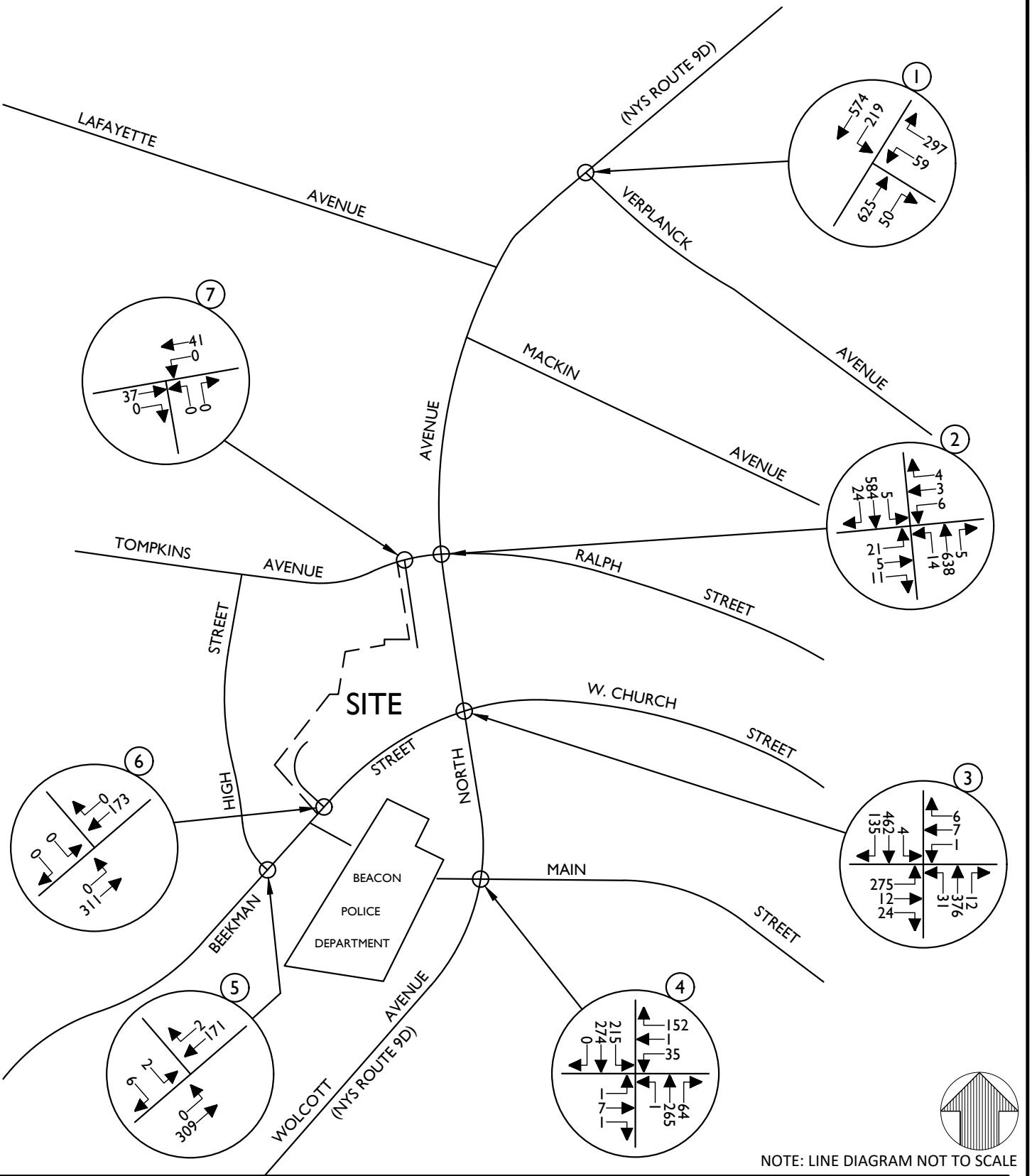

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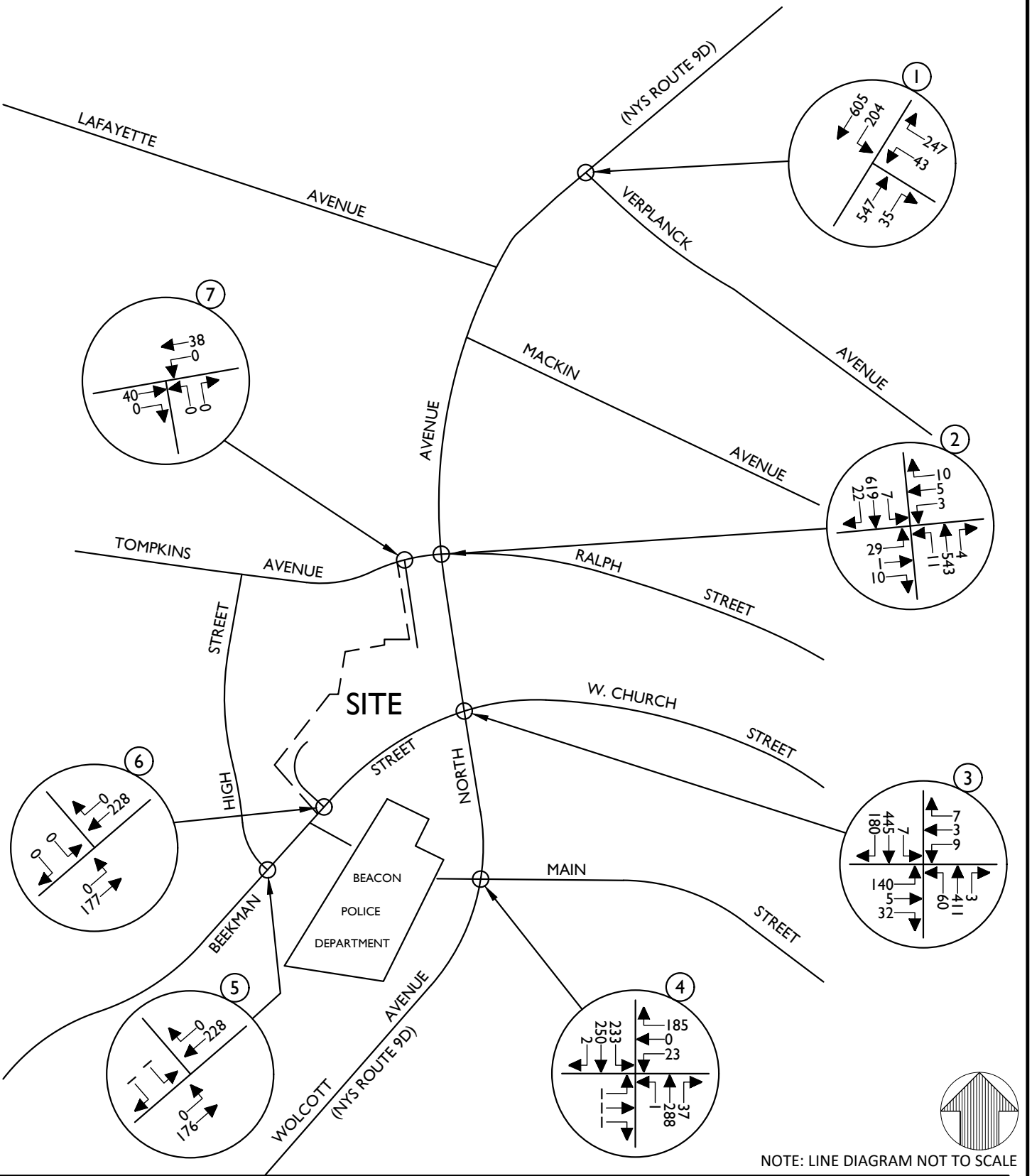
PROJECT NUMBER:	DRAWING NAME:
23010468A	230921RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX

2023 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 3

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\3 By: RHILARIO



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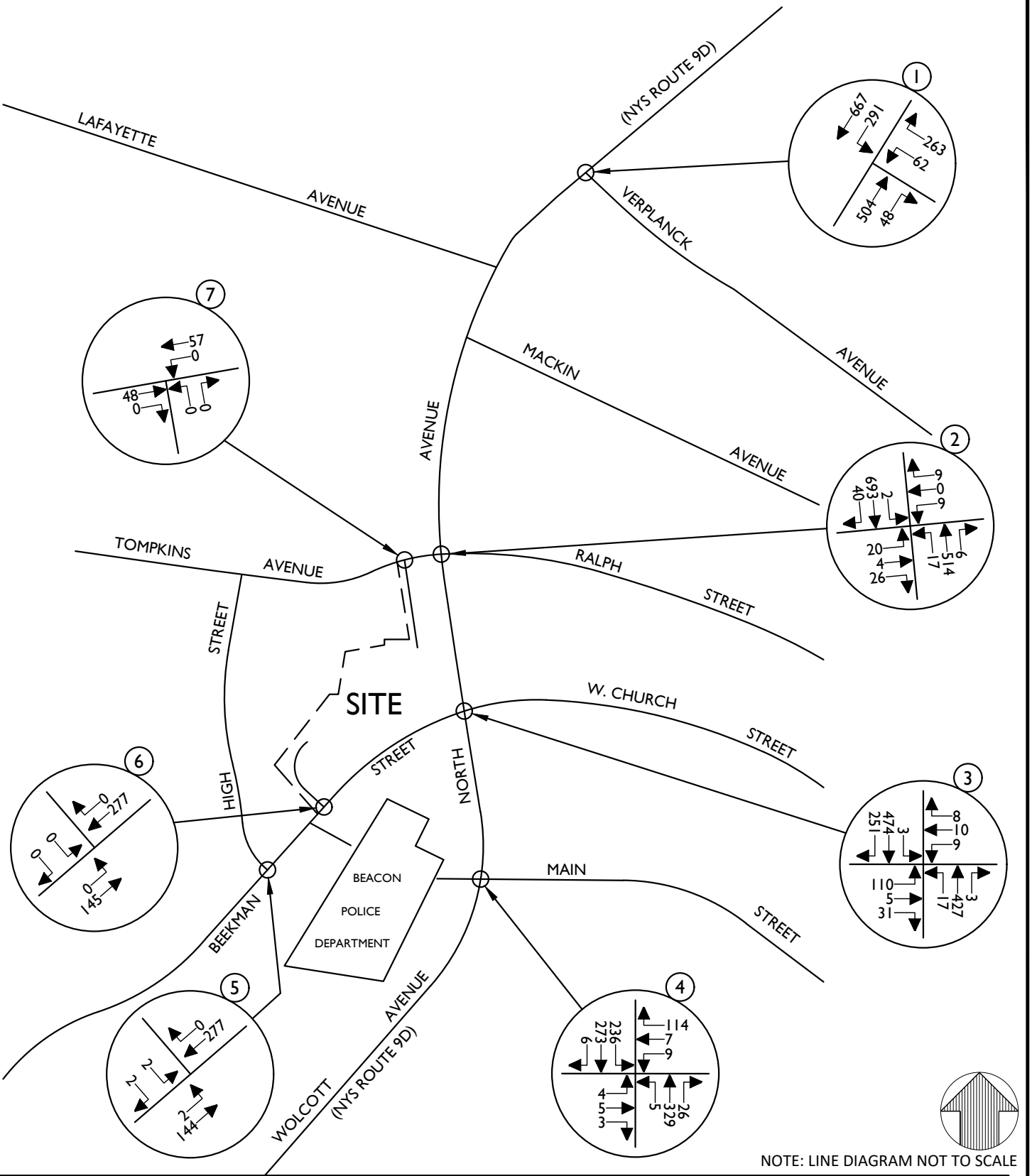
23010468A	230921RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX

2023 EXISTING TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 4

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\4 By: RHILARIO



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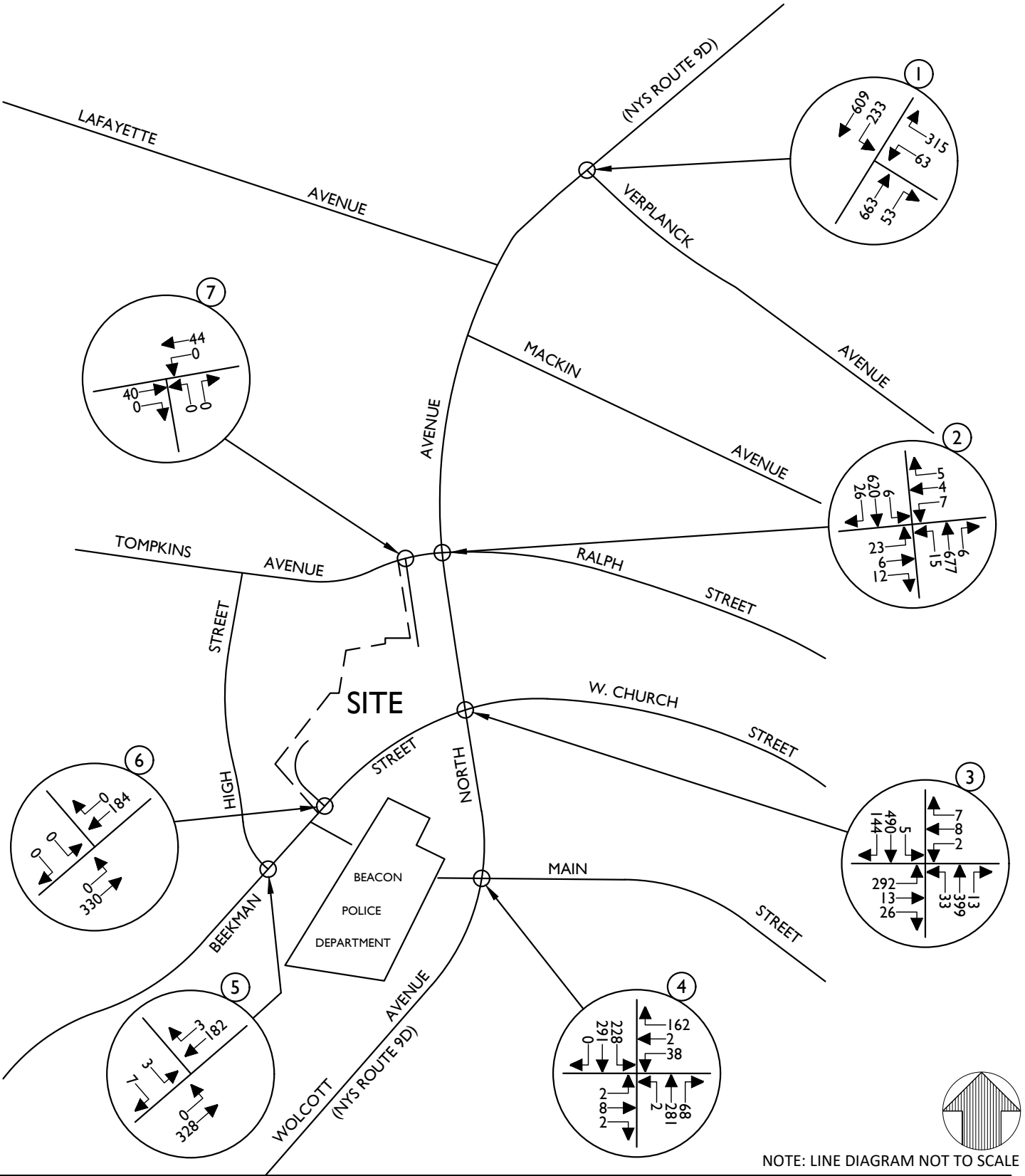
2026 PROJECTED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 5

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\5 By: RHILARIO



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23010468A	230921RH_FIGURE

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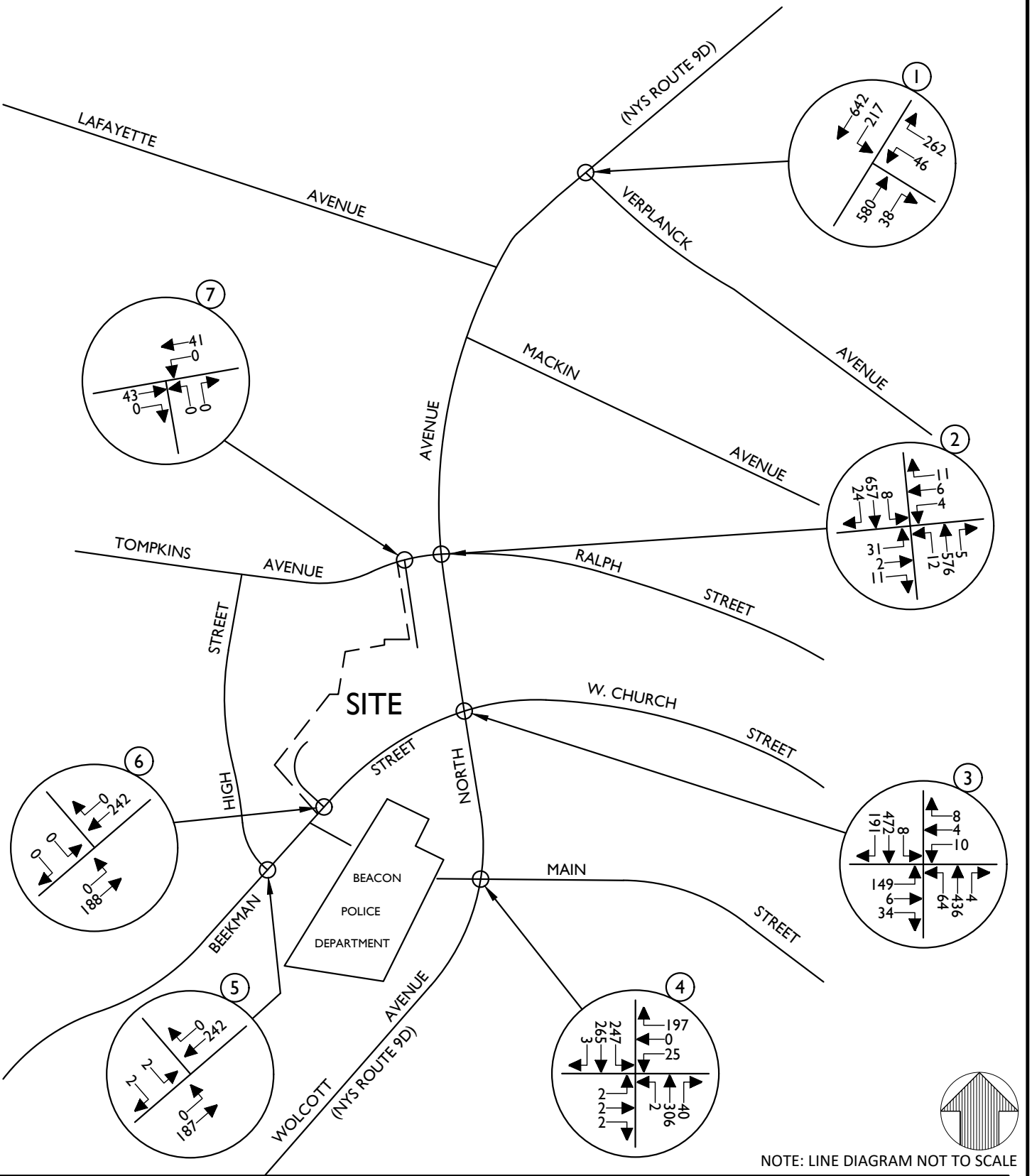
2026 PROJECTED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 6

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\6 By: RHILARIO



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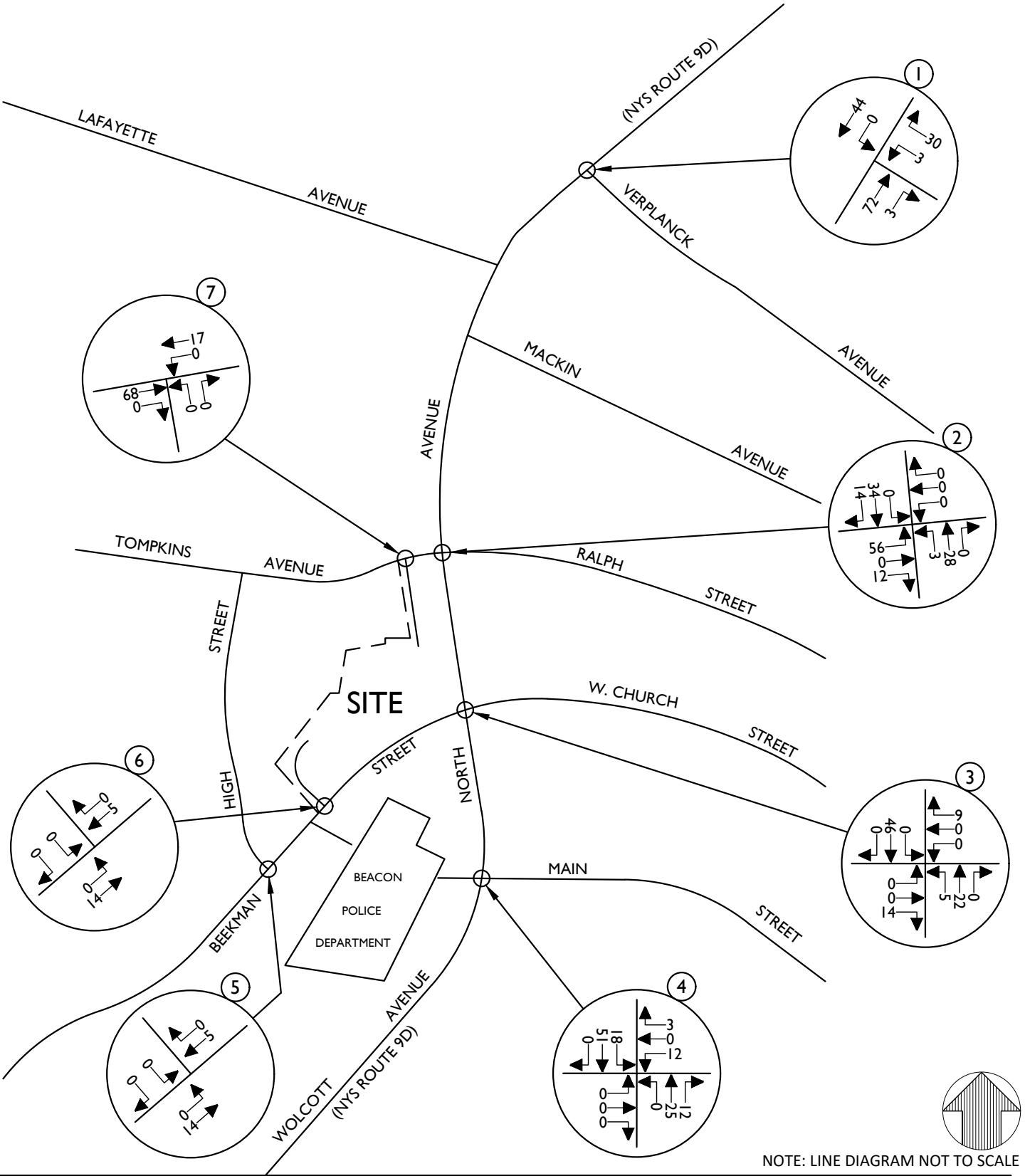
2026 PROJECTED TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 7

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\7 By: RHILARIO



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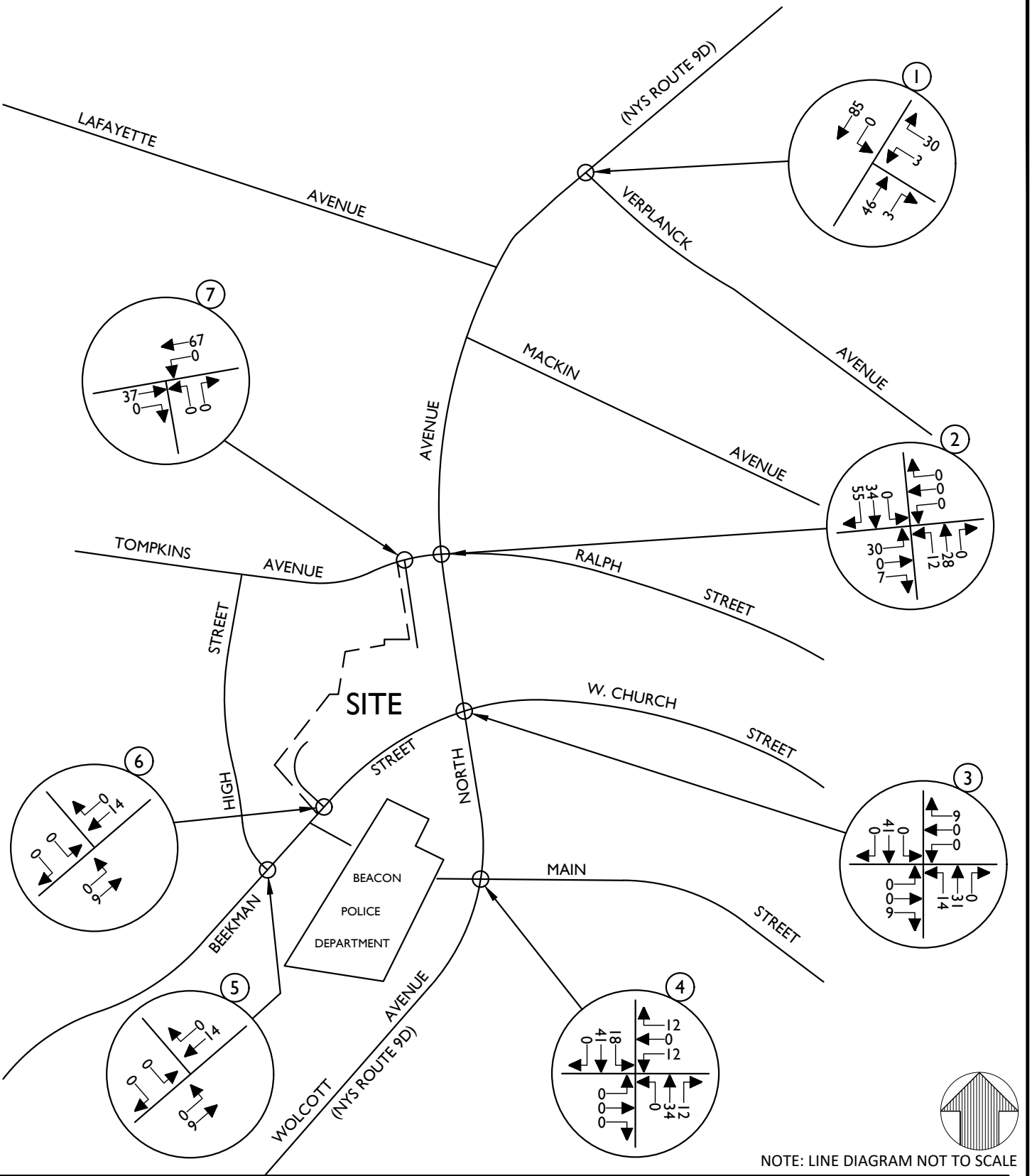
23010468A	230921RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX
OTHER DEVELOPMENT
TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 8

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\8 By: RHILARIO



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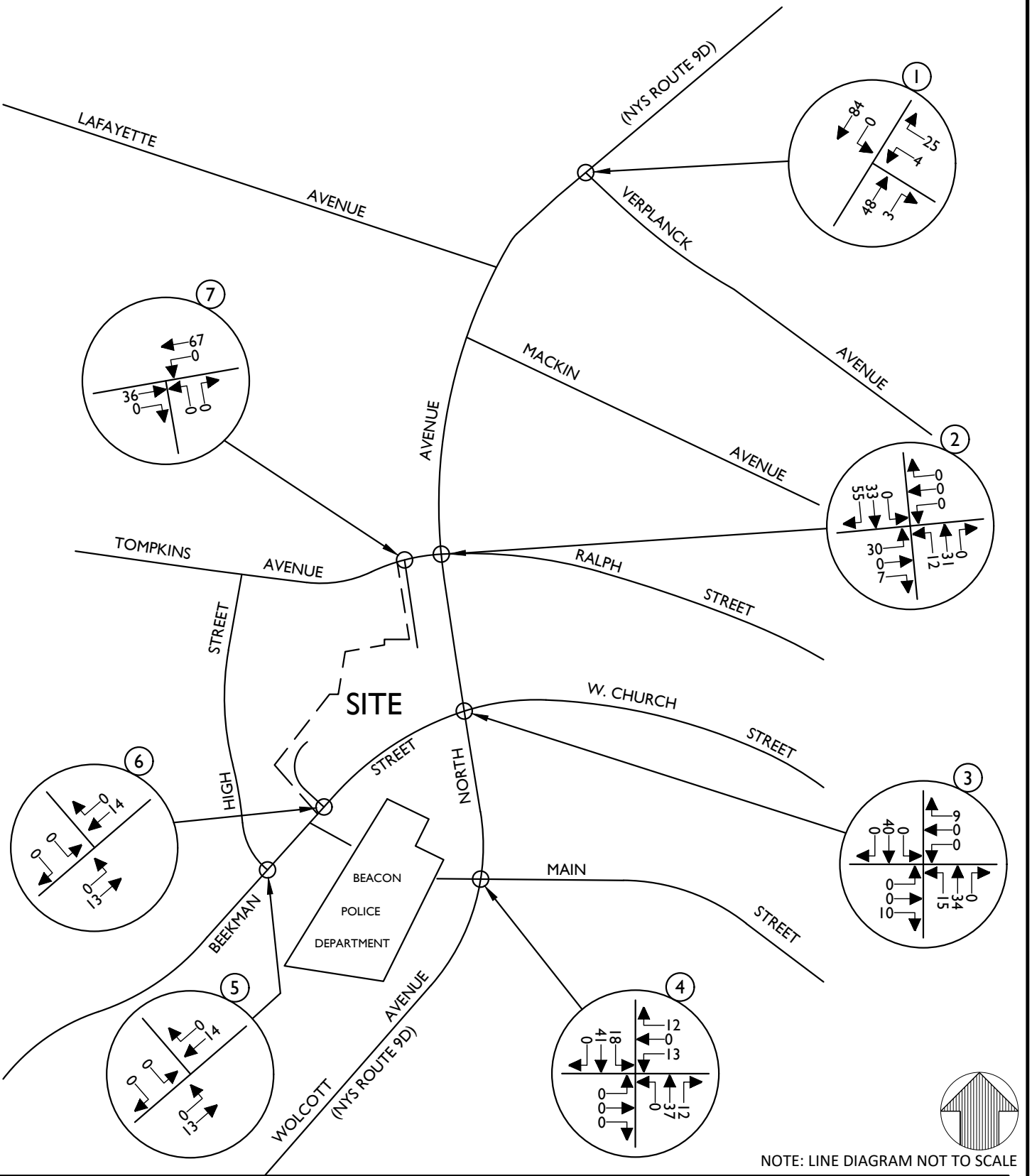
SHEET TITLE: FIELD BOOK: XX PAGE:XX
OTHER DEVELOPMENT
TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 9

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\9 By: RHILARIO



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OTHER DEVELOPMENT
TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 10

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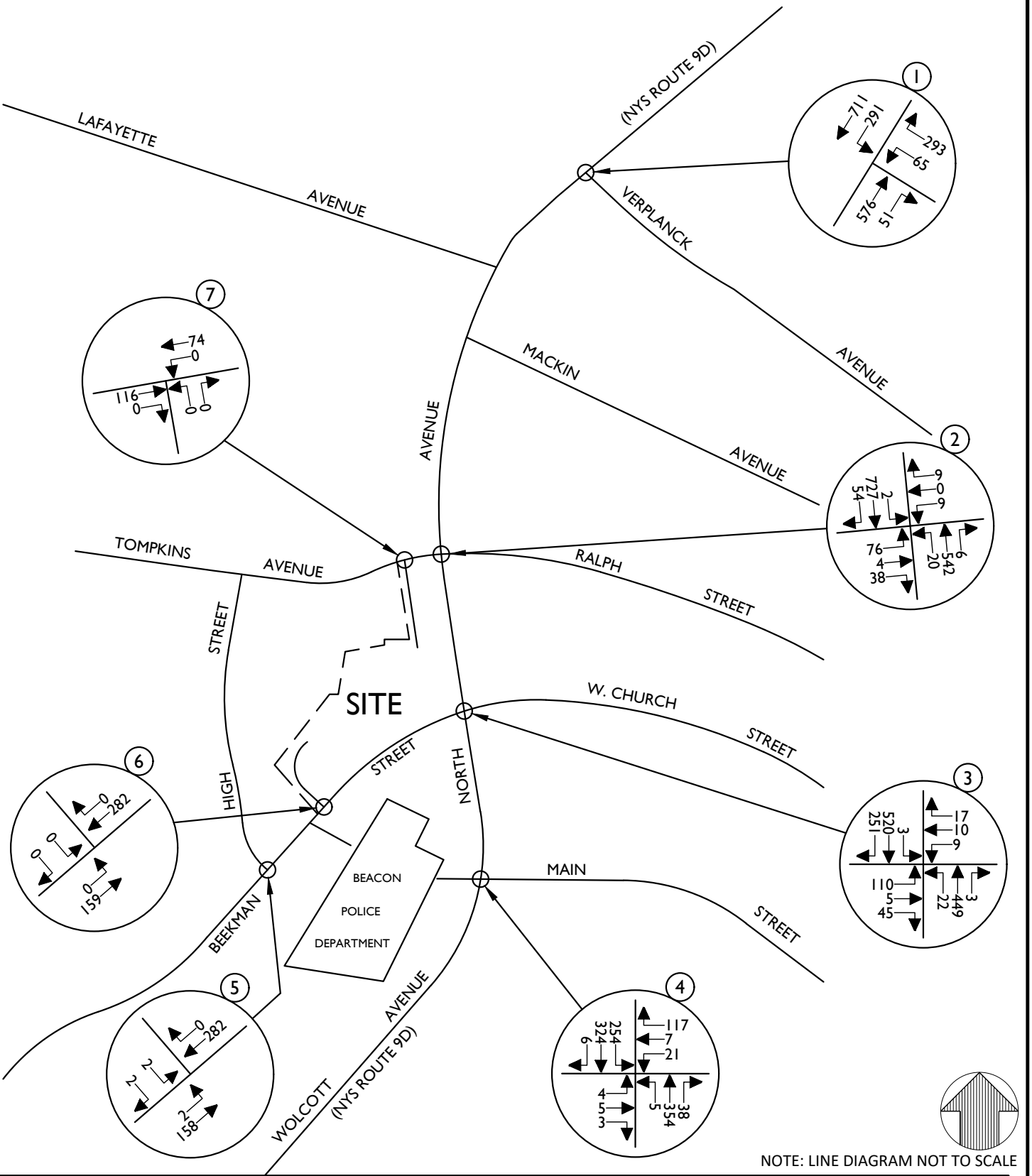

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2026 NO-BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 11

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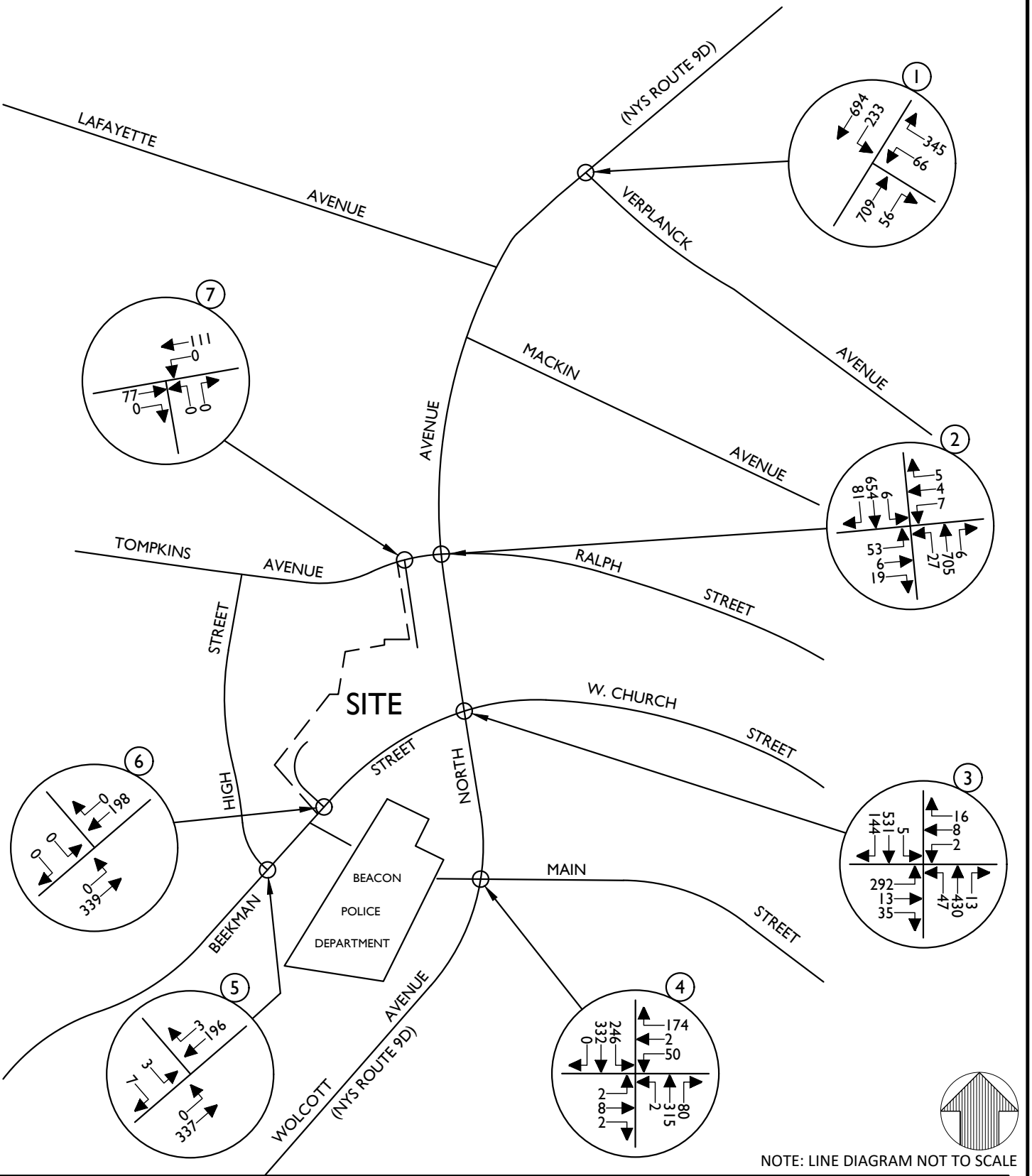

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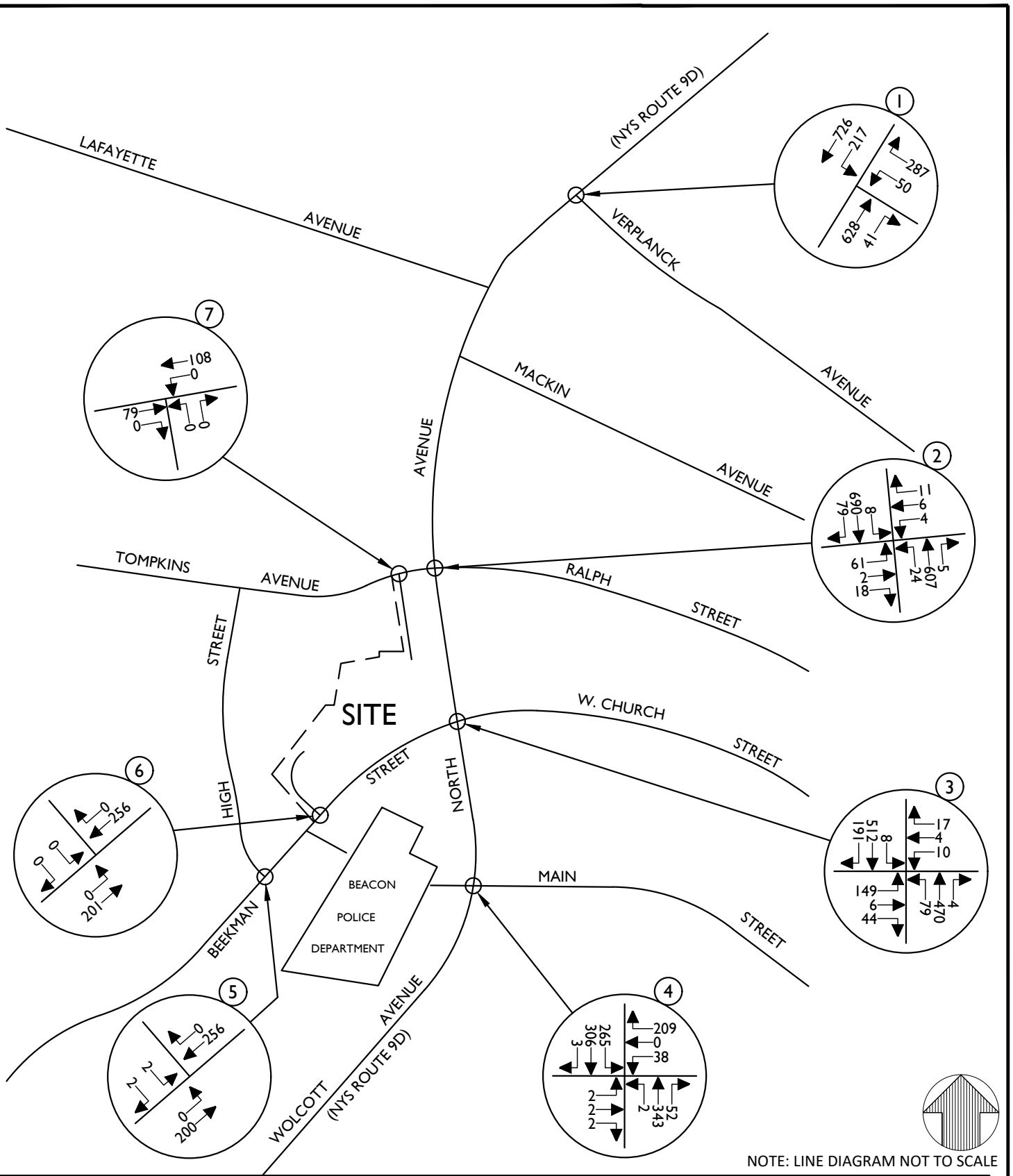
2026 NO-BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 12

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\12 By: RHILARIO



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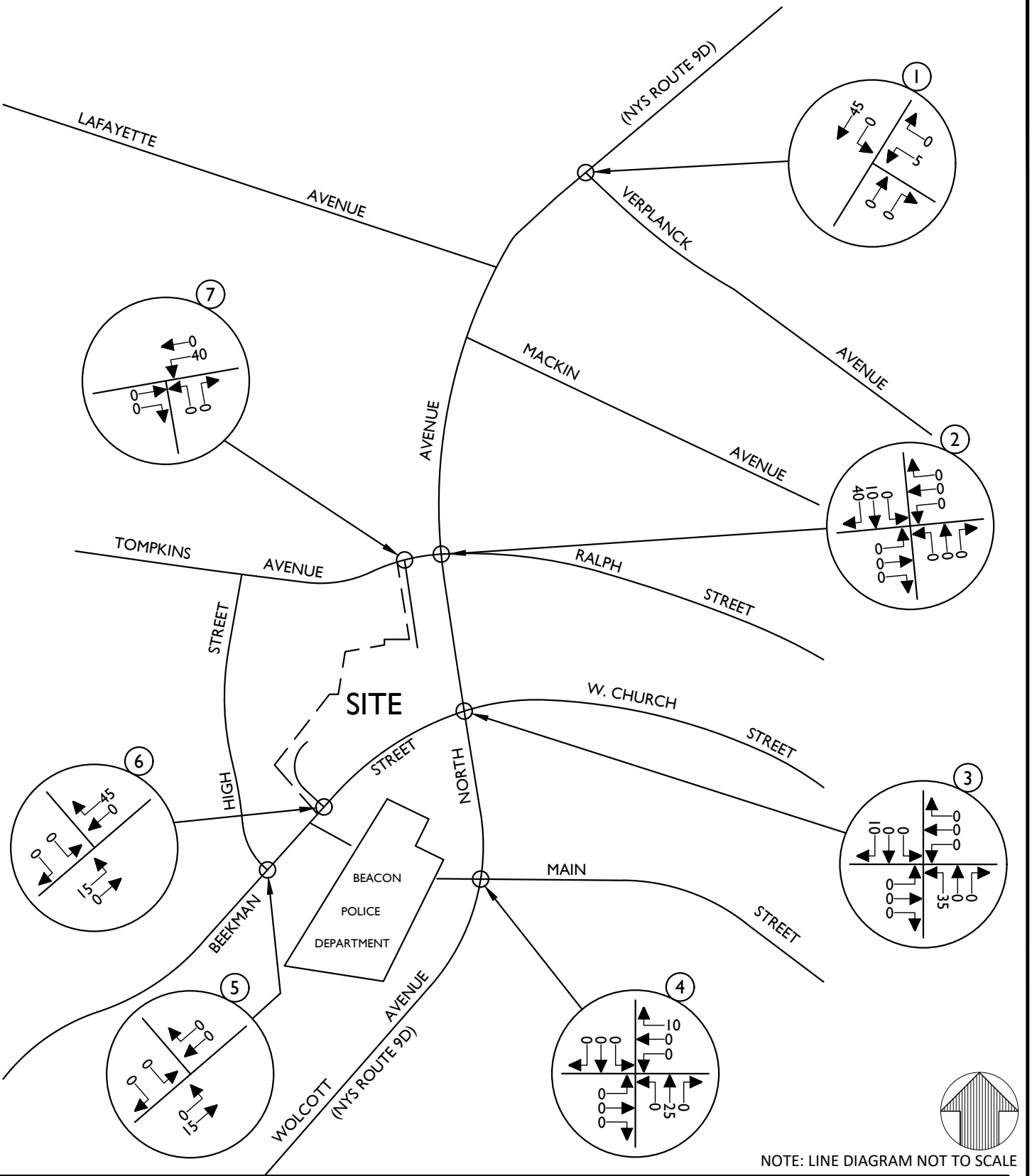
SHEET TITLE: FIELD BOOK: XX PAGE:XX

2026 NO-BUILD TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 13

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\13 By: RHILARIO



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SHEET NUMBER: 14

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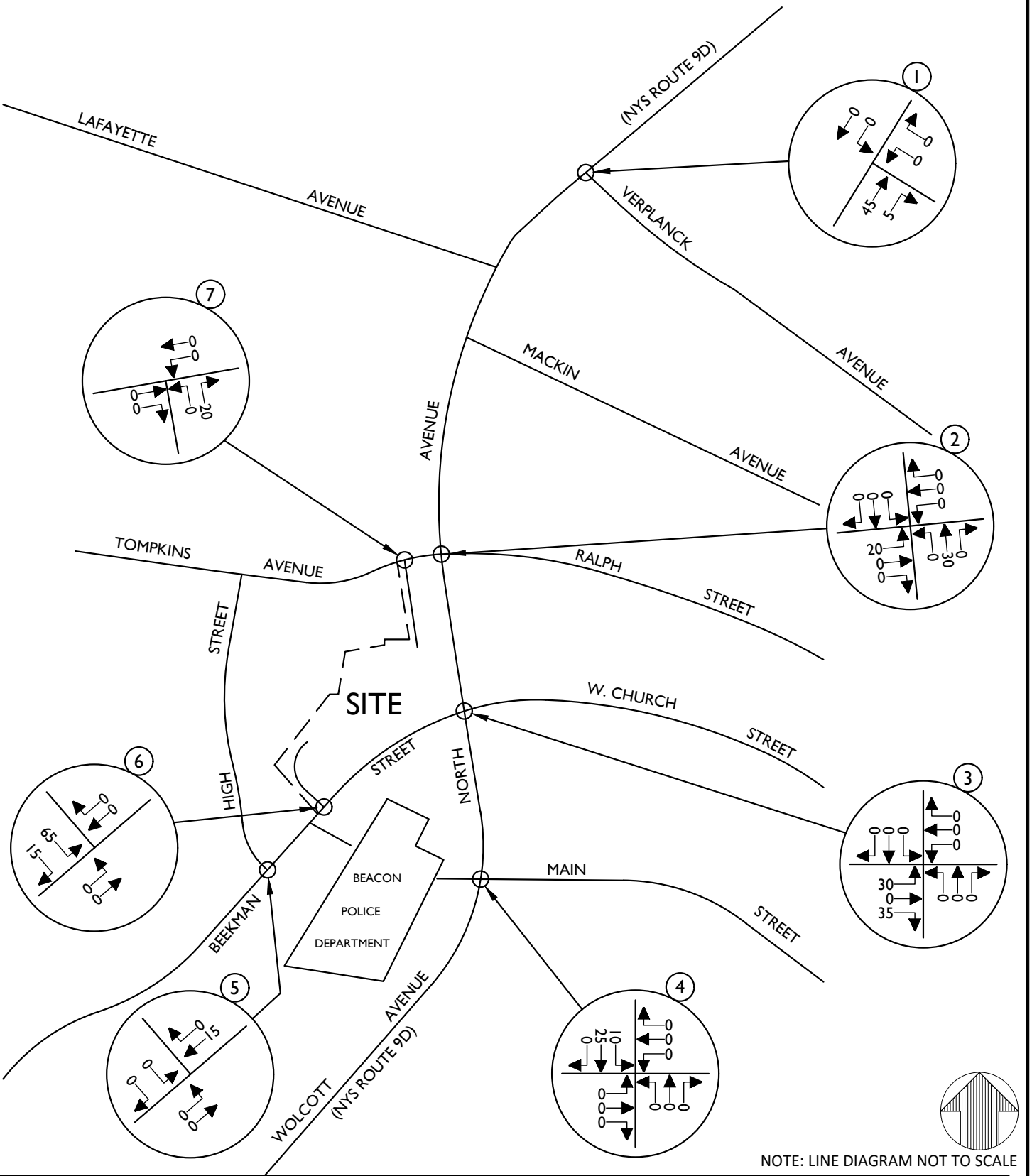

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SHEET NUMBER: 15

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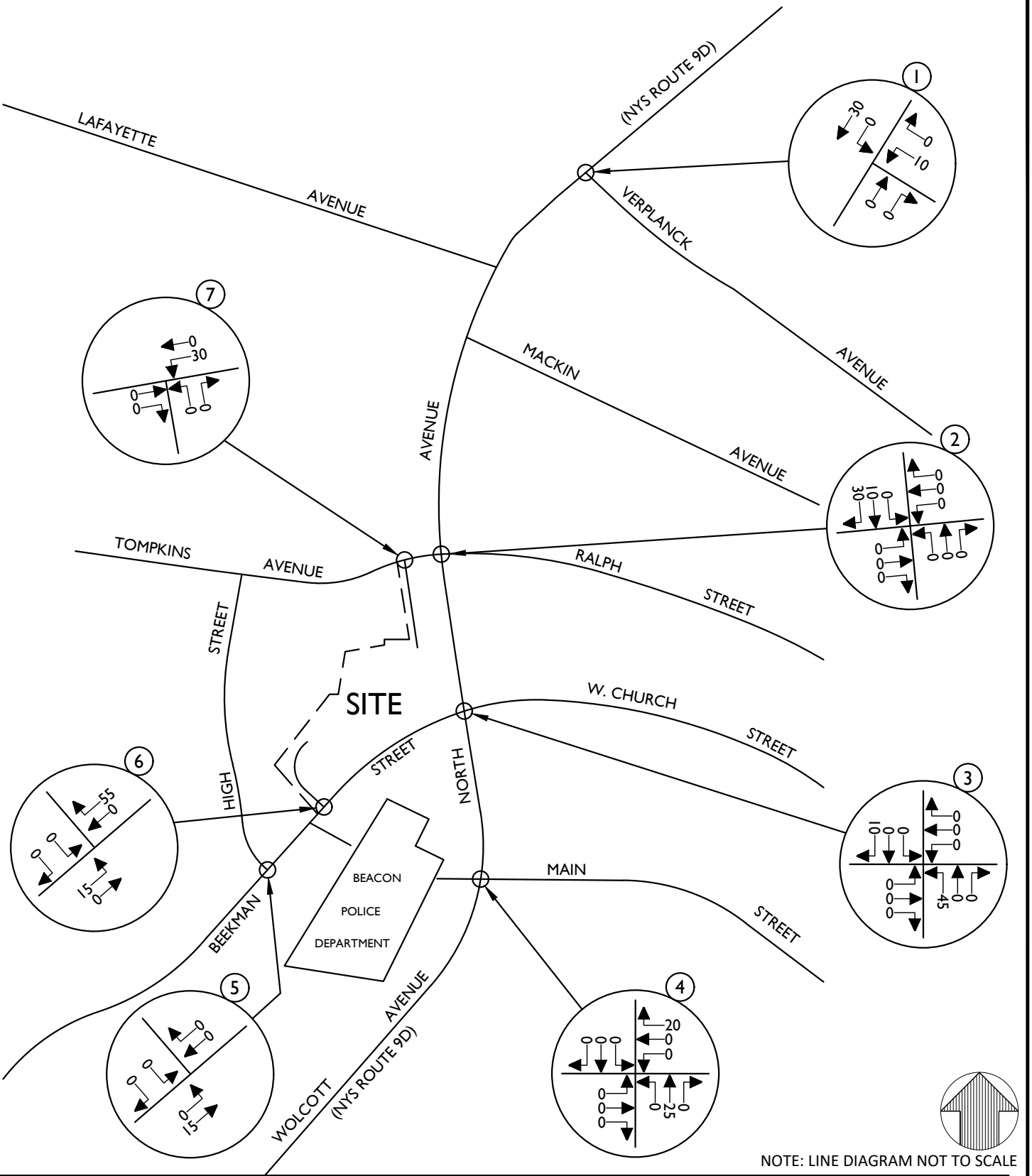

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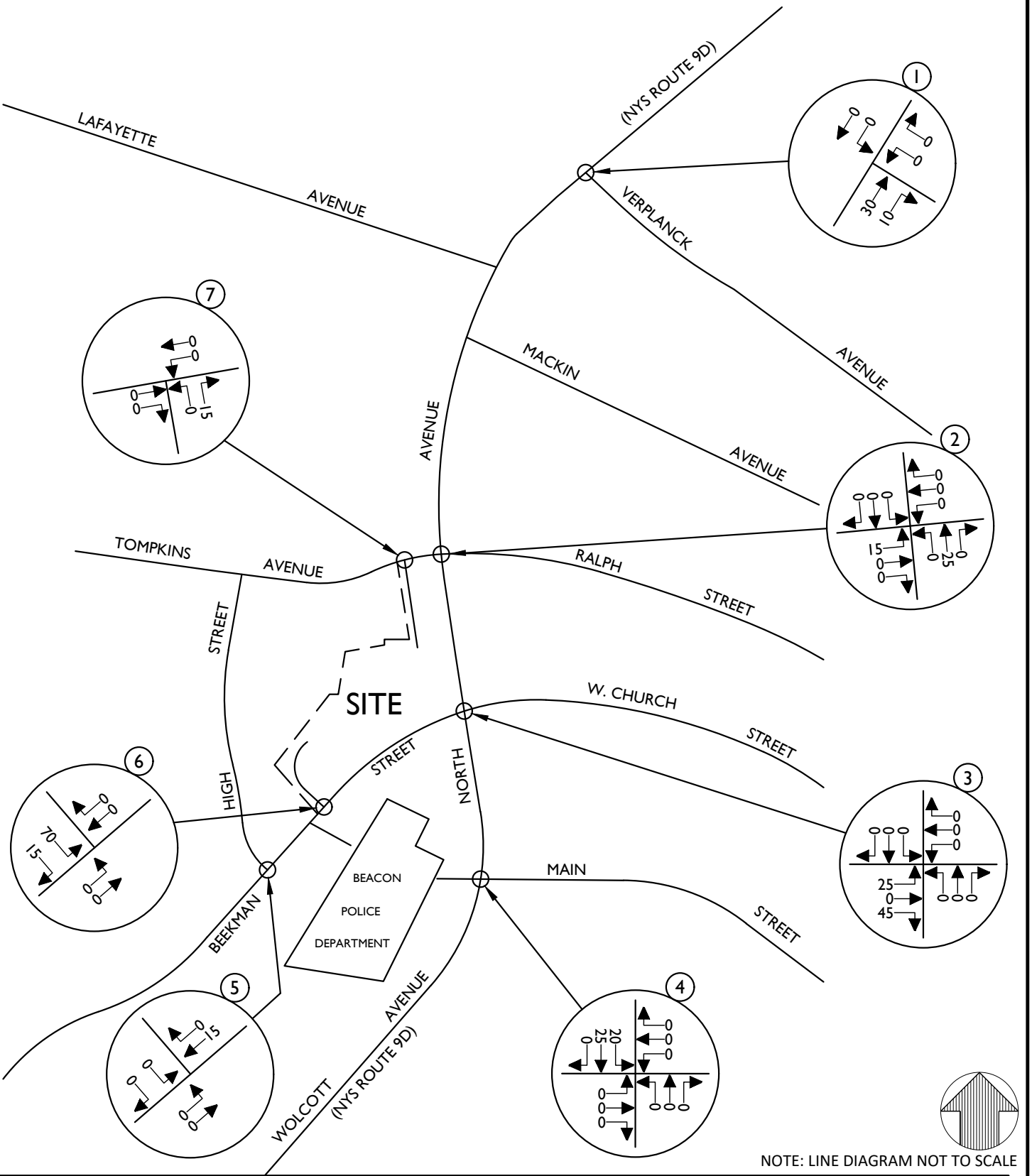

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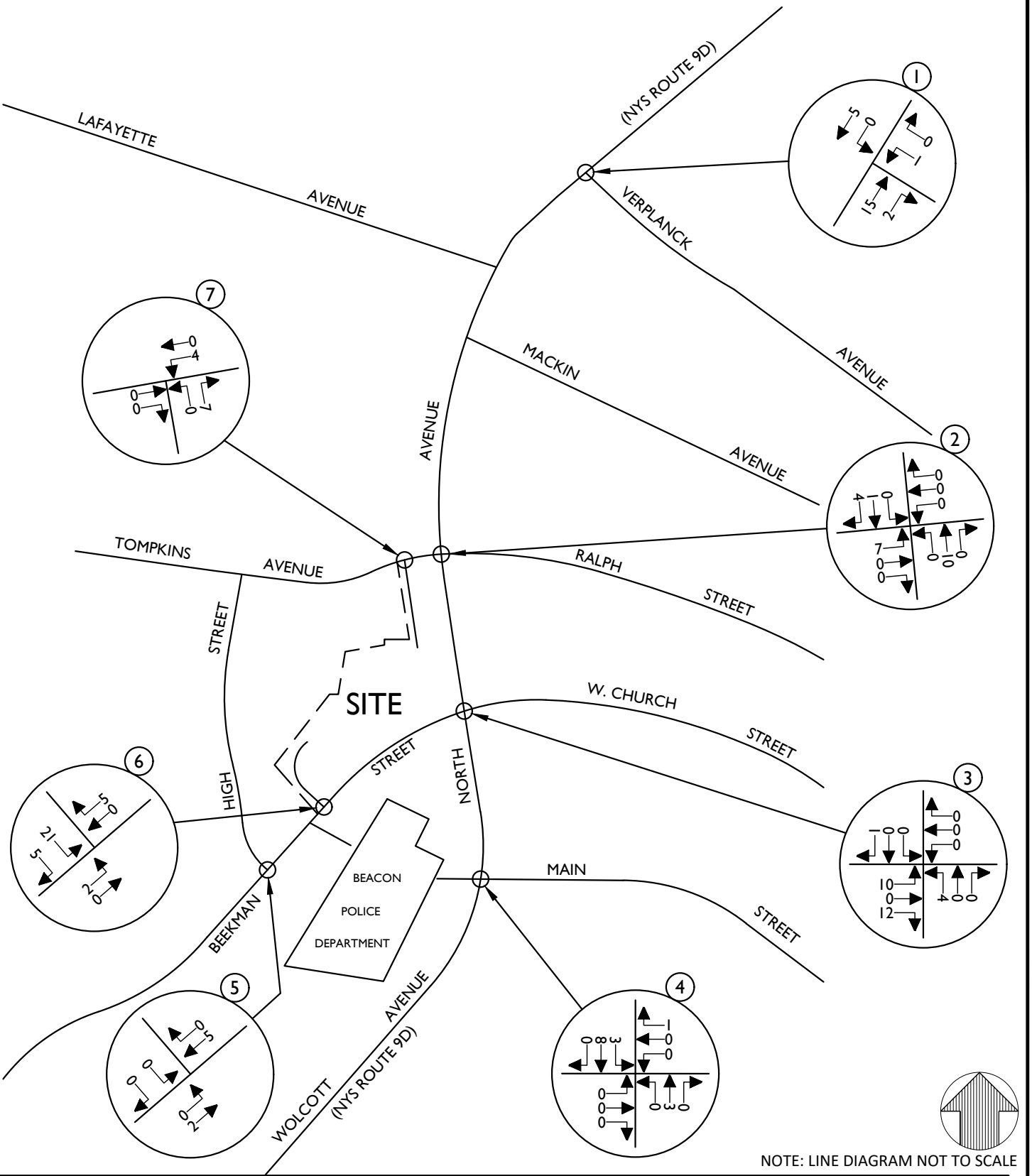

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SHEET TITLE: FIELD BOOK: XX PAGE: XX
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR
(RESIDENTIAL)

SHEET NUMBER: 18

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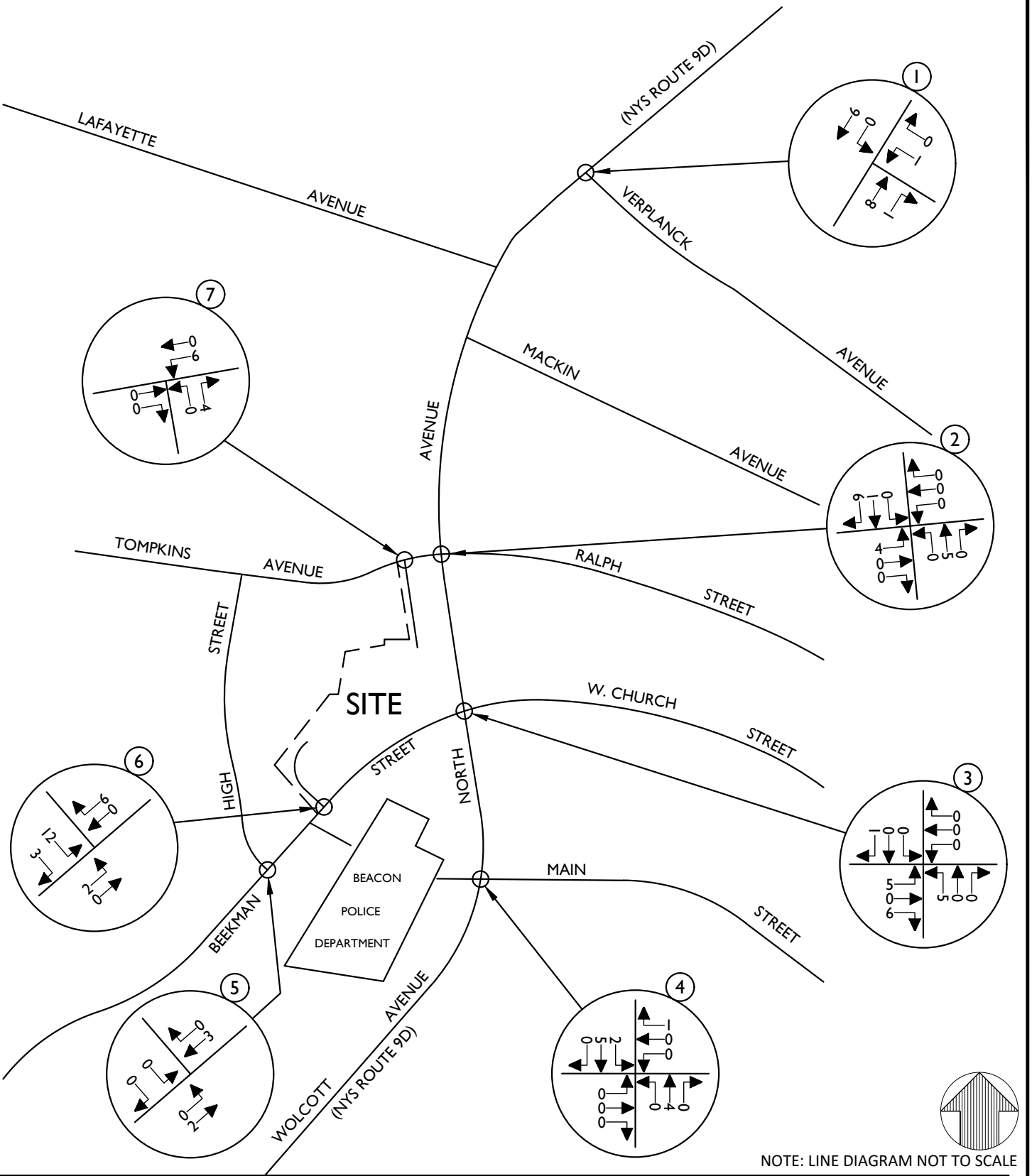

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SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR
(RESIDENTIAL)

SHEET NUMBER: 19

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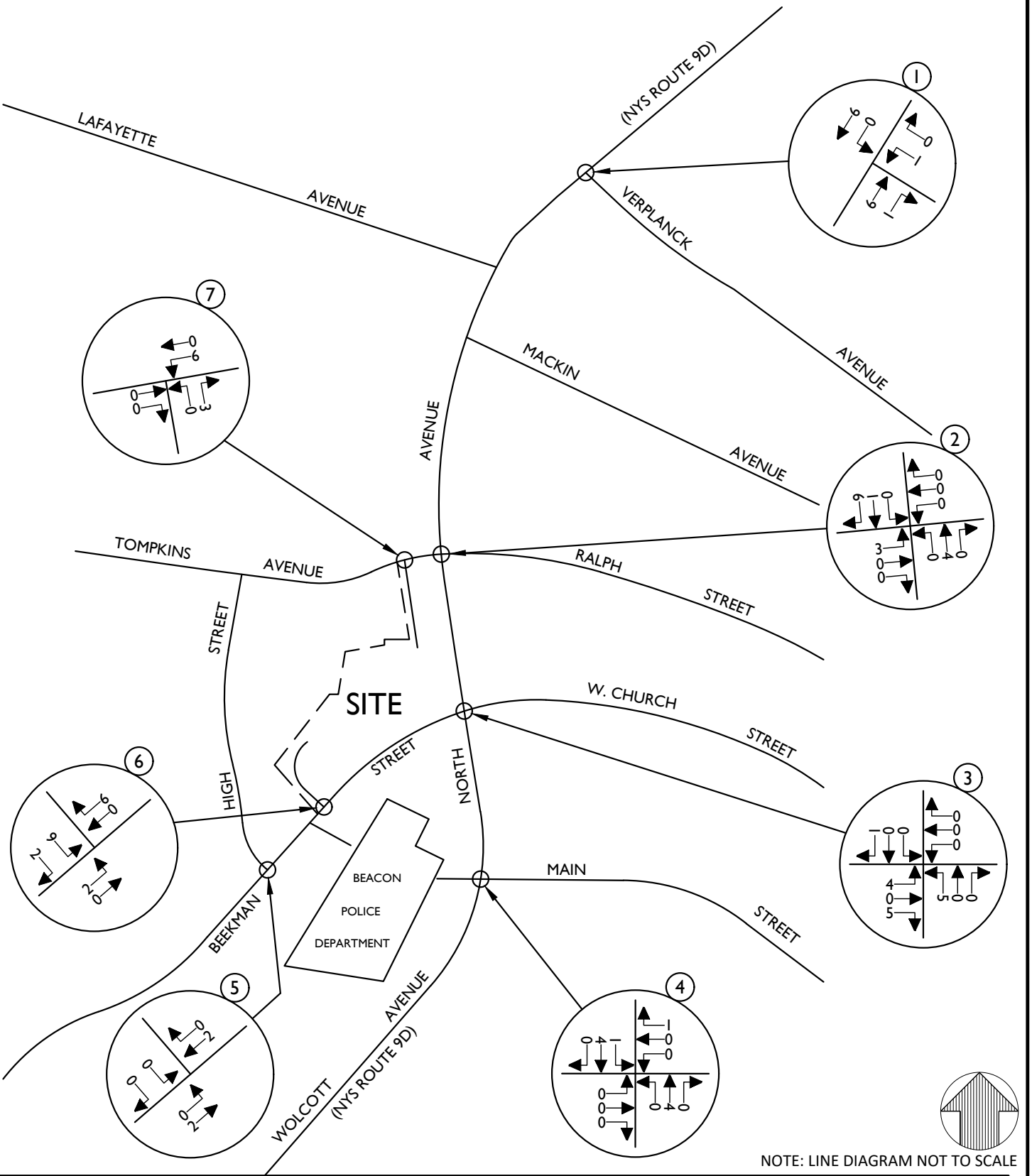

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SHEET TITLE: FIELD BOOK: XX PAGE: XX
SITE GENERATED TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR
(RESIDENTIAL)

SHEET NUMBER: 20

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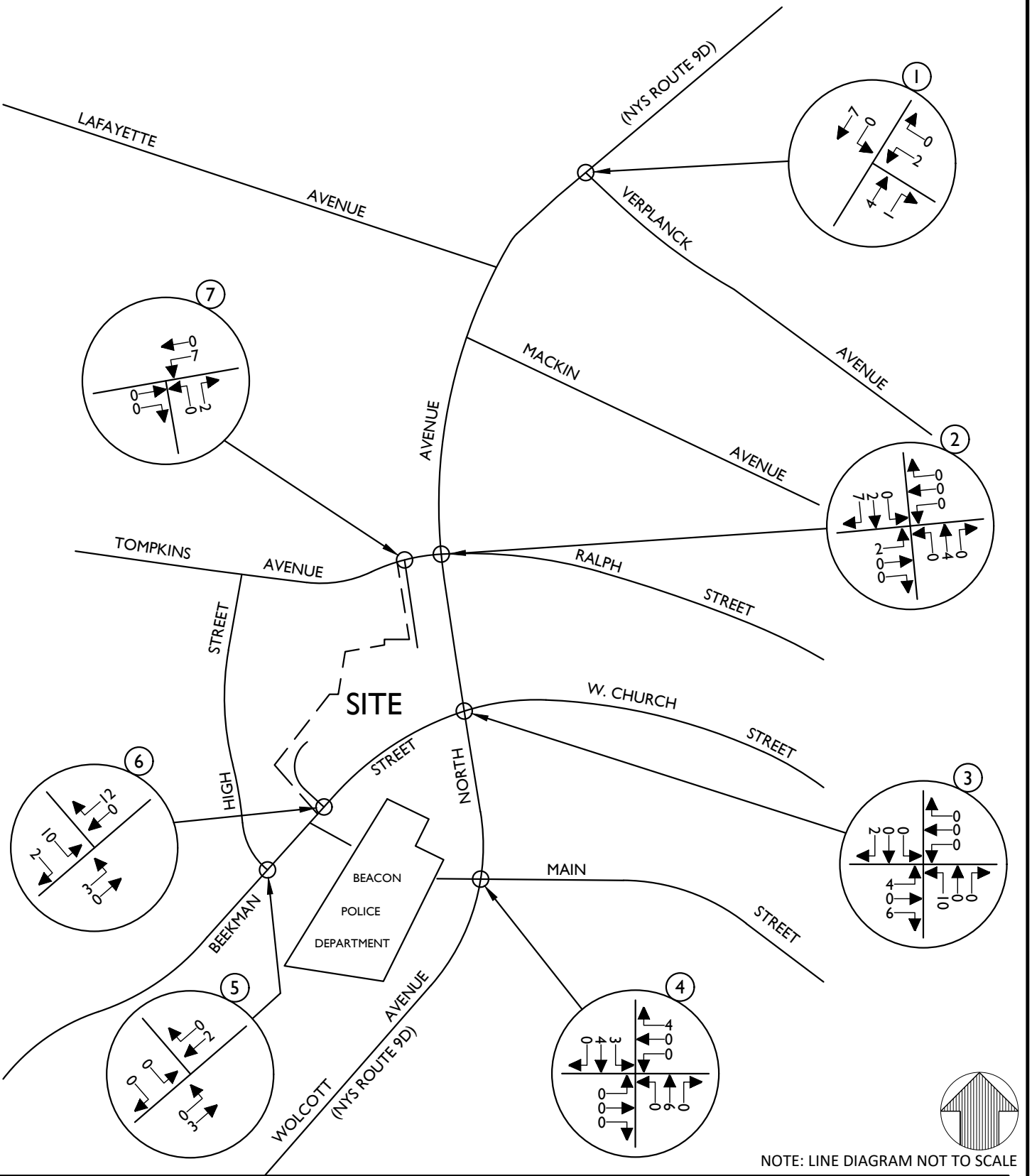

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SHEET TITLE: FIELD BOOK: XX PAGE: XX
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR
(COMMERCIAL)

SHEET NUMBER: 21

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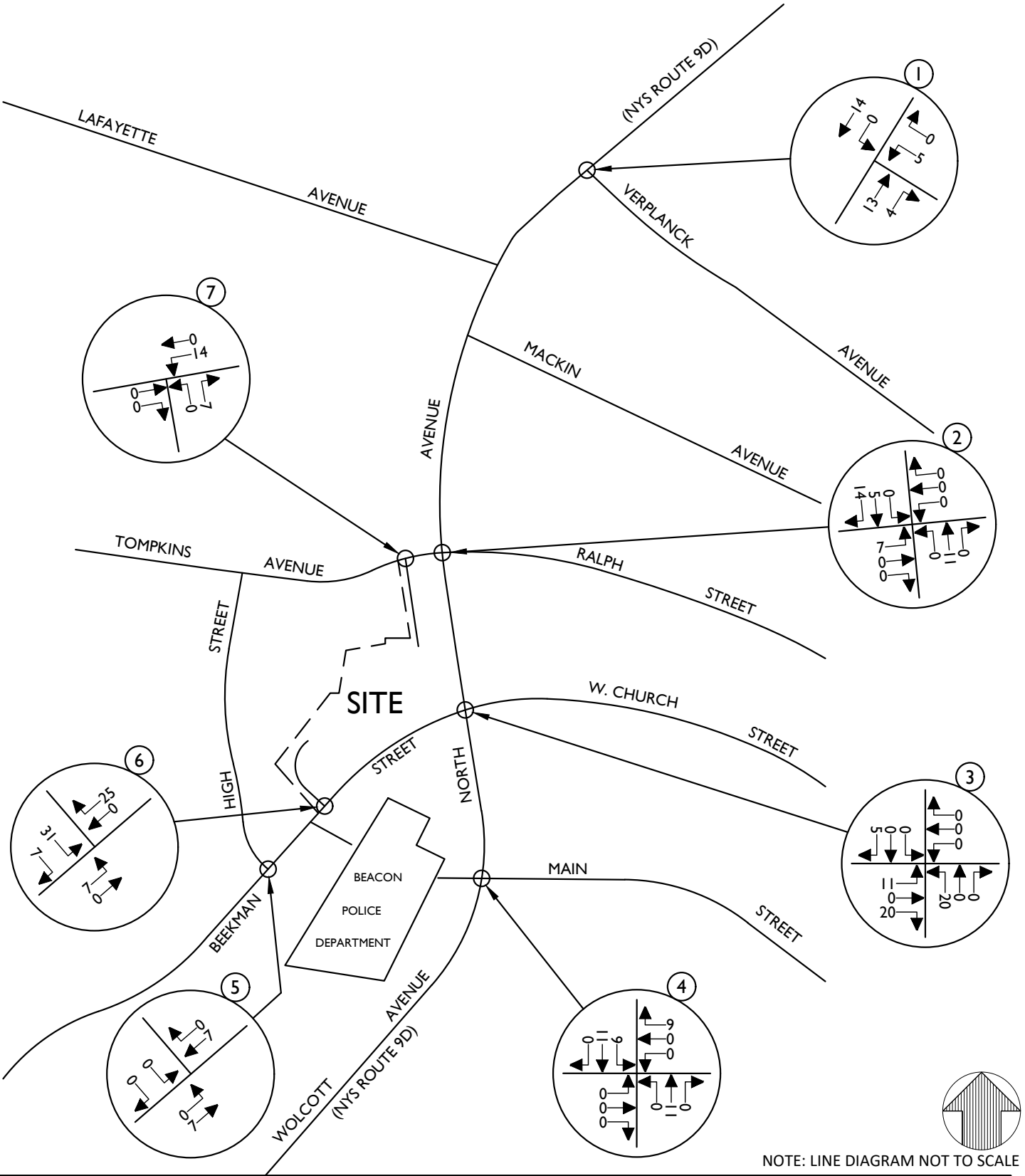

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SHEET TITLE: SITE GENERATED TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR (COMMERCIAL)

FIELD BOOK: XX PAGE: XX

SHEET NUMBER: 22

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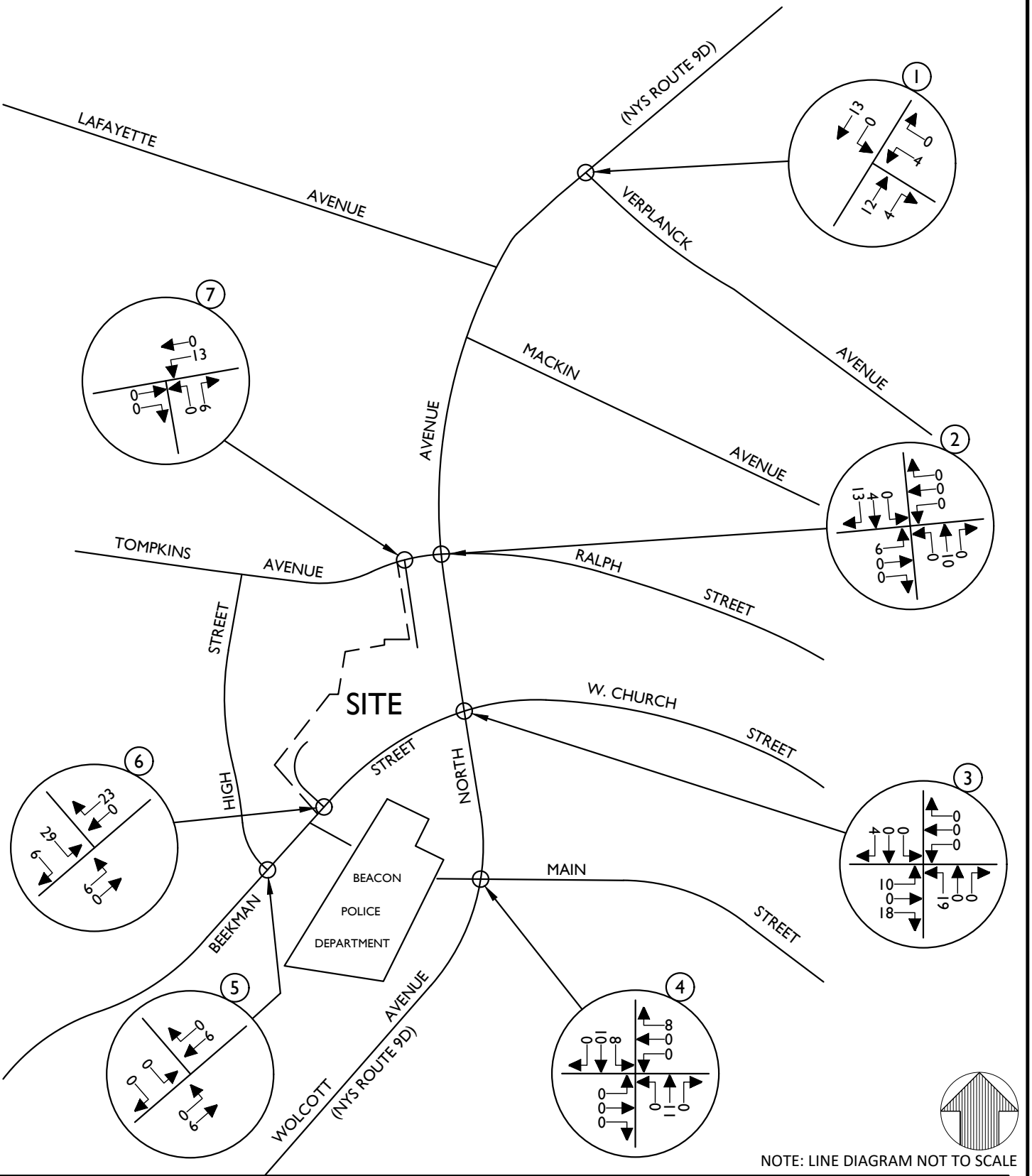

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PROJECT NUMBER:	DRAWING NAME:
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SHEET TITLE: FIELD BOOK: XX PAGE: XX
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WEEKEND PEAK SAT HOUR
(COMMERCIAL)

SHEET NUMBER: 23

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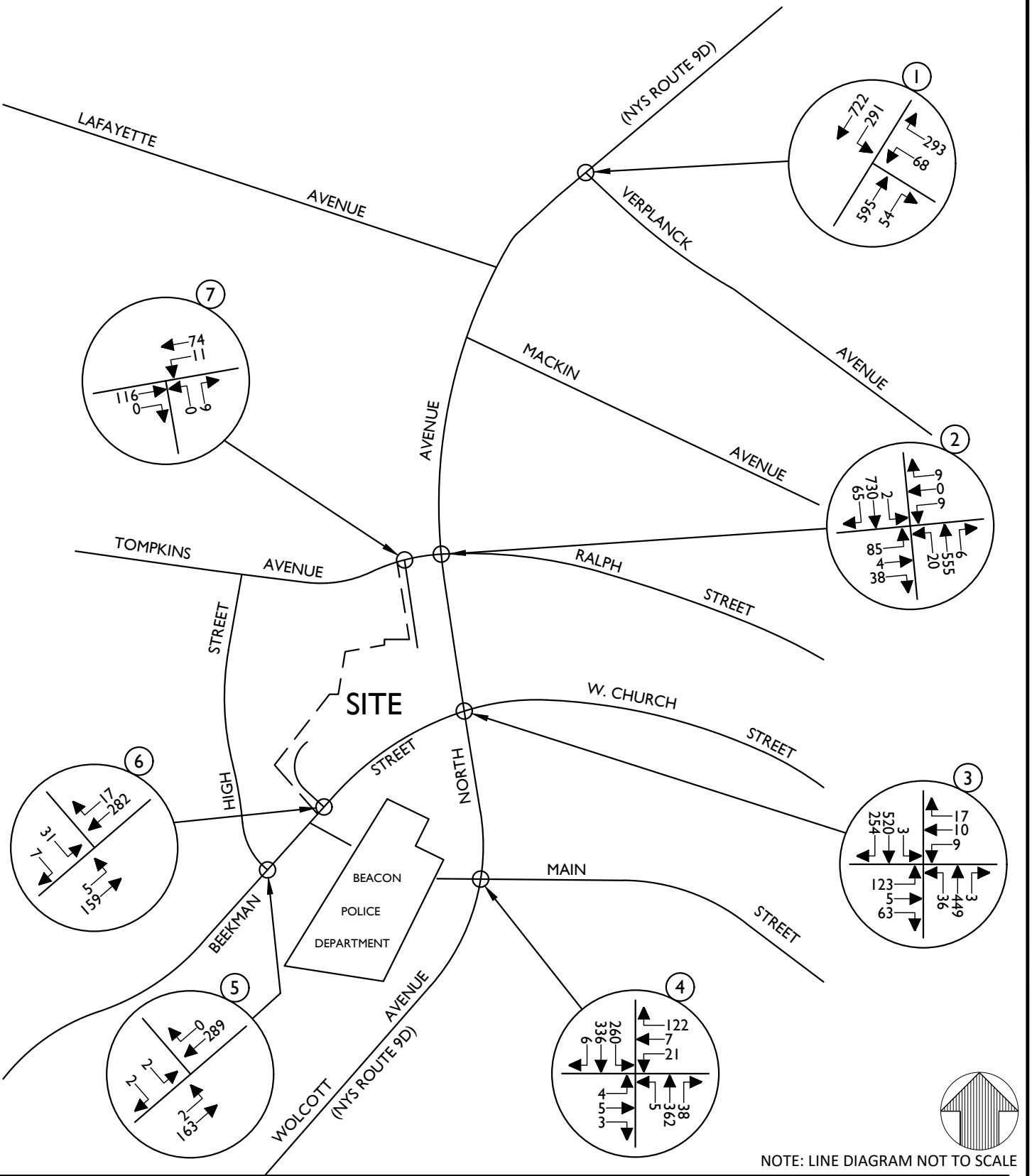

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	9/21/23	R.H.	R.G.D.

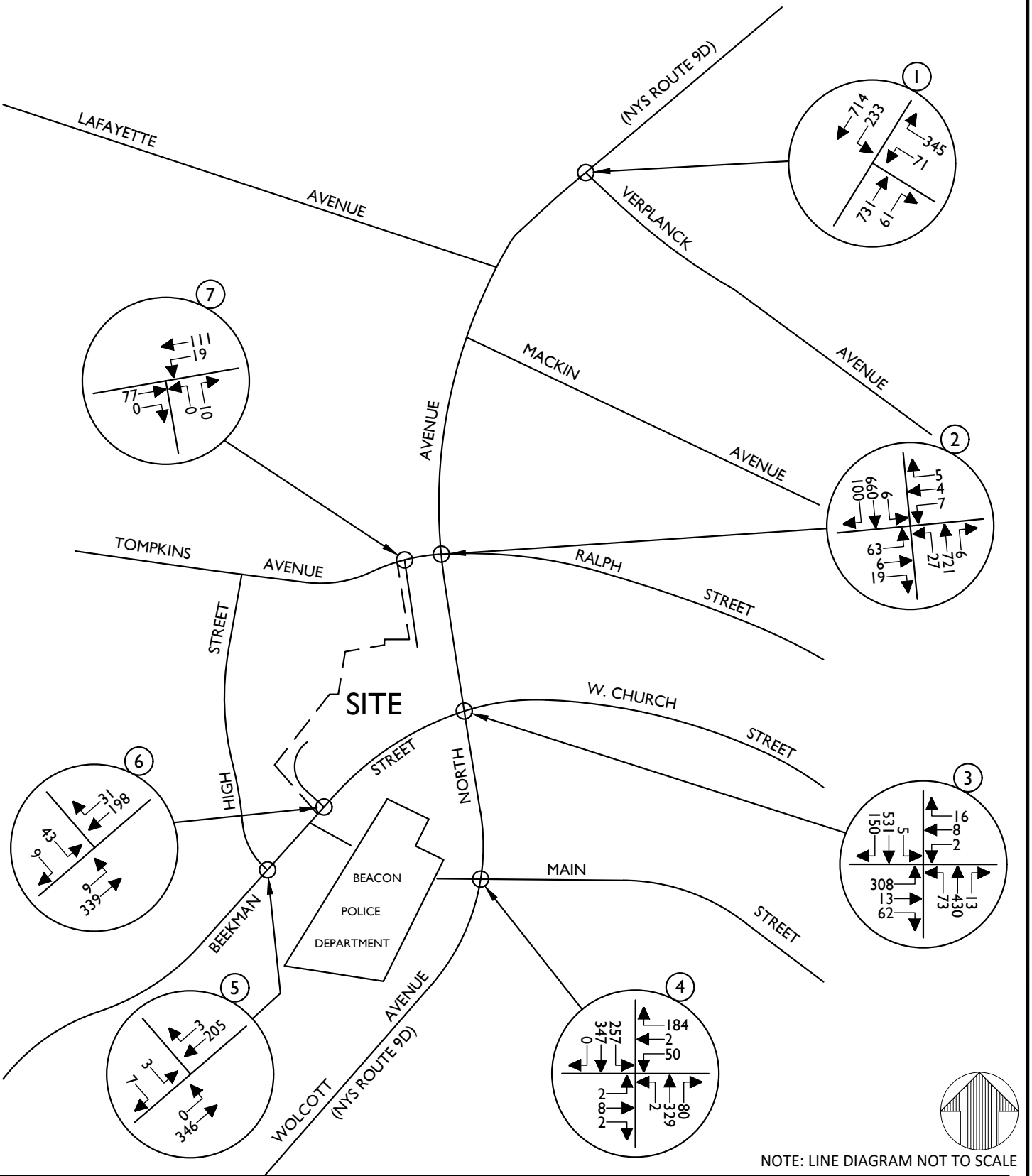
PROJECT NUMBER:	DRAWING NAME:
23010468A	230921RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX

2026 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER: 24

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\24 By: RHILARIO



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TRAFFIC IMPACT STUDY

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AS SHOWN	9/21/23	R.H.	R.G.D.

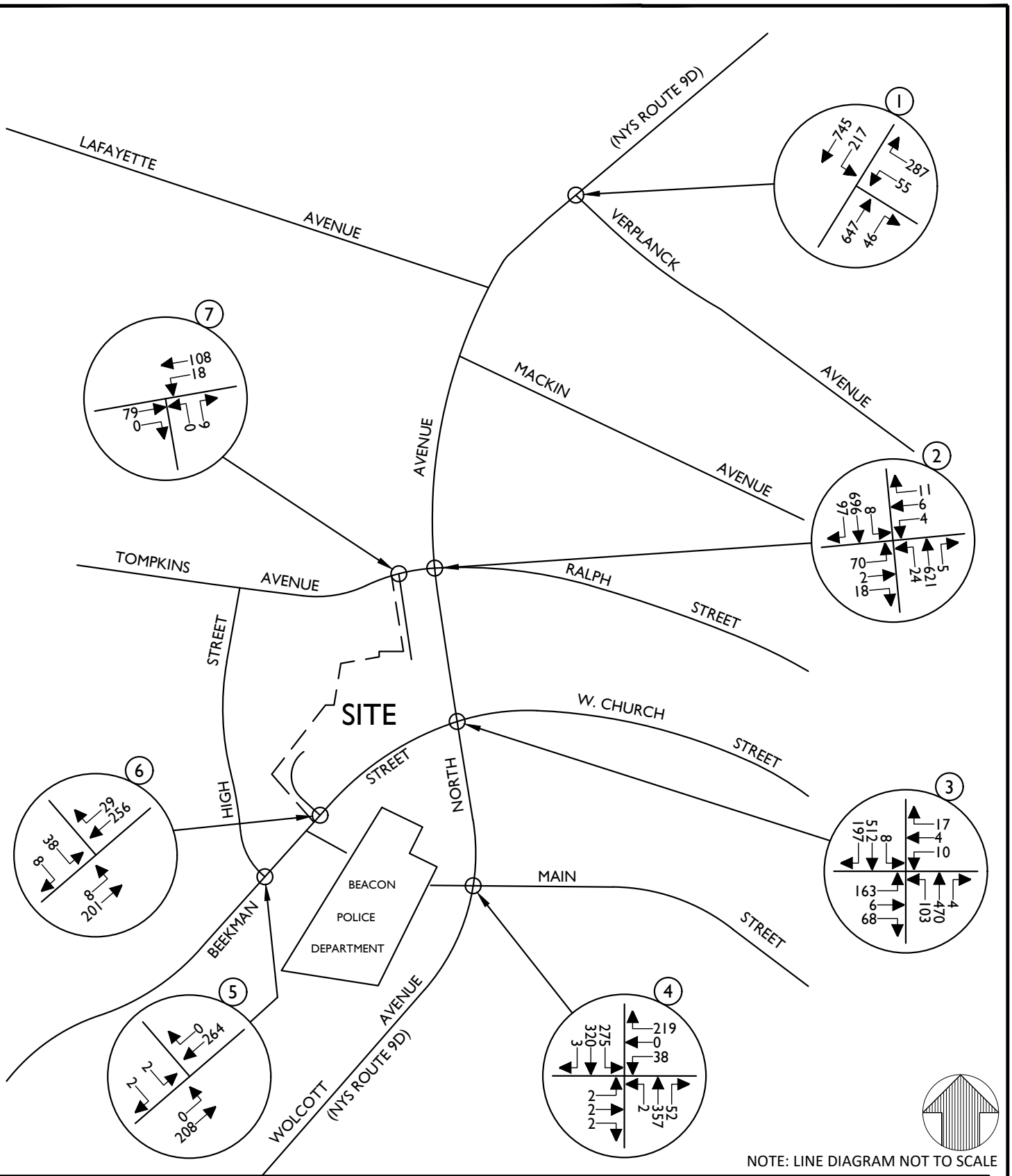
PROJECT NUMBER:	DRAWING NAME:
23010468A	230921RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX

2026 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

SHEET NUMBER: 25

0468A\Reports\Traffic\Figures\230921RH_FIGURE.dwg\25 By: RHILARIO



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TRAFFIC IMPACT STUDY

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	9/21/23	R.H.	R.G.D.

PROJECT NUMBER:	DRAWING NAME:
23010468A	230921RH_FIGURE

SHEET TITLE: FIELD BOOK: XX PAGE:XX

2026 BUILD TRAFFIC VOLUMES
WEEKEND PEAK SAT HOUR

SHEET NUMBER: 26

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Appendix B | Tables

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

45 Beekman Street & High Street City of Beacon, Dutchess County, New York	Entry			Exit		
	HTGR[1]	Volume	New Trips[2]	HTGR[1]	Volume	New Trips[2]
Residential (65 Units)						
Peak AM Hour	0.15	10	10	0.51	33	33
Peak PM Hour	0.48	31	31	0.28	18	18
Saturday Peak Hour	0.22	14	14	0.22	14	14
Commercial (14,088 Sq. Ft.)						
Peak AM Hour	1.56	22	22	0.99	14	14
Peak PM Hour	3.55	50	45	3.48	49	44
Saturday Peak Hour	3.34	47	42	3.27	46	41
Total						
Peak AM Hour	-	32	32	-	47	47
Peak PM Hour	-	81	76	-	67	62
Saturday Peak Hour	-	61	56	-	60	55

NOTES:

1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 11TH EDITION, 2021. ITE LAND USE CODE - 220 - MULTIFAMILY HOUSING (LOW-RISE) AND ITE LAND USE CODE - 822 - STRIP RETAIL PLAZA (<40K).

2) "NEW TRIPS" INCLUDES A 10% INTERNAL TRIP CREDIT APPLIED TO THE RETAIL LAND USE FOR THE PEAK PM AND SATURDAY PEAK HOURS TO ACCOUNT FOR TRIPS BETWEEN THE RESIDENTIAL AND COMMERCIAL PORTIONS OF THE SITE BASED ON NCHRP 684 INTERNAL TRIP CAPTURE ESTIMATION TOOL ANALYSIS AS SUMMARIZED ON TABLES 1-A, 1-B AND 1-C.

TABLE 1-A

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	45 Beekman Street & High Street	**Organization:**	CED
Project Location:	City of Beacon, New York	**Performed By:**	RGD
Scenario Description:	Weekday AM	**Date:**	9/28/2023
Analysis Year:	N/A	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	14,088		36	22	14
Restaurant				0		
Cinema/Entertainment				0		
Residential	220		65	43	10	33
Hotel				0		
All Other Land Uses[2]				0		
				79	32	47

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	79	32	47
Internal Capture Percentage	0%	0%	0%
External Vehicle-Trips[5]	79	32	47
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	0%	0%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

TABLE 1-A

Project Name:	45 Beekman Street & High Street
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	22	22	1.00	14	14
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	10	10	1.00	33	33
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	4		2	0	2	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	7	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	2		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	0	0		0
Hotel	0	1	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	22	22	22	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	10	10	10	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	14	14	14	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	33	33	33	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

TABLE 1-B

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	45 Beekman Street & High Street	**Organization:**	CED
Project Location:	City of Beacon, New York	**Performed By:**	RGD
Scenario Description:	Weekday PM	**Date:**	9/28/2023
Analysis Year:	N/A	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	14,088		99	50	49
Restaurant				0		
Cinema/Entertainment				0		
Residential	220		65	49	31	18
Hotel				0		
All Other Land Uses[2]				0		
				148	81	67

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	13	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	5	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	148	81	67
Internal Capture Percentage	24%	22%	27%
External Vehicle-Trips[5]	112	63	49
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	27%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	42%	28%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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TABLE 1-B

Project Name:	45 Beekman Street & High Street
Analysis Period:	**Weekday PM**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	50	50	1.00	49	49
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	31	31	1.00	18	18
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		14	2	13	2
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	8	4	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	0	0	1	0
Retail	0		0	0	14	0
Restaurant	0	25		0	5	0
Cinema/Entertainment	0	2	0		1	0
Residential	0	5	0	0		0
Hotel	0	1	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	5	45	50	45	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	13	18	31	18	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	13	36	49	36	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	5	13	18	13	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

TABLE 1-C

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	45 Beekman Street & High Street	**Organization:**	CED
Project Location:	City of Beacon, New York	**Performed By:**	RGD
Scenario Description:	Saturday Peak Hour	**Date:**	9/28/2023
Analysis Year:	N/A	**Checked By:**	
Analysis Period:	**Saturday Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	14,088		99	50	49
Restaurant				0		
Cinema/Entertainment				0		
Residential	220		65	49	31	18
Hotel				0		
All Other Land Uses[2]				0		
				148	81	67

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	13	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	5	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	148	81	67
Internal Capture Percentage	24%	22%	27%
External Vehicle-Trips[5]	112	63	49
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	27%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	42%	28%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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TABLE 1-C

Project Name:	45 Beekman Street & High Street
Analysis Period:	**Saturday Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	50	50	1.00	49	49
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	31	31	1.00	18	18
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		14	2	13	2
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	8	4	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	0	0	1	0
Retail	0		0	0	14	0
Restaurant	0	25		0	5	0
Cinema/Entertainment	0	2	0		1	0
Residential	0	5	0	0		0
Hotel	0	1	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	5	45	50	45	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	13	18	31	18	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	13	36	49	36	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	5	13	18	13	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Table No. 2
Level of Service Summary Table
Weekday Peak AM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
1	**NYS Route 9D & Verplanck Avenue**	**Signalized**											
	Verplanck Avenue	WB	L	0.27	B	17.7	0.30	C	21.7	0.32	C	22.7	1.0
			R	0.79	B	18.0	0.84	C	21.8	0.84	C	22.5	0.7
		WB Approach		***-***	***B***	***18.0***	***-***	***C***	***21.8***	***-***	***C***	***22.5***	***0.7***
	NYS Route 9D	NB	TR	0.82	B	15.2	0.87	B	17.7	0.88	B	18.0	0.3
		NB Approach		***-***	***B***	***15.2***	***-***	***B***	***17.7***	***-***	***B***	***18.0***	***0.3***
	NYS Route 9D	SB	L	0.78	B	19.9	0.82	C	24.0	0.82	C	24.7	0.7
			T	0.58	A	6.1	0.61	A	6.3	0.61	A	6.2	-0.1
		SB Approach		***-***	***B***	***10.8***	***-***	***B***	***11.4***	***-***	***B***	***11.5***	***0.1***
		Overall		**-**	**B**	**13.1**	**-**	**B**	**15.3**	**-**	**B**	**15.6**	**0.3**
2	**NYS Route 9D & Tompkins Avenue/ Ralph Street**	**Unsignalized**											
	Tompkins Avenue	EB	LTR	0.18	C	21.2	0.68	F	59.1	0.77	F	72.9	13.8
	Ralph Street	WB	LTR	0.09	D	25.4	0.13	D	34.0	0.14	D	34.9	0.9
	NYS Route 9D	NB	LTR	0.02	A	9.2	0.03	A	9.6	0.03	A	9.7	0.1
	NYS Route 9D	SB	LTR	0.00	A	8.5	0.00	A	8.7	0.00	A	8.8	0.1
	<u>With Signalization</u>												
	Tompkins Avenue	EB	LTR	-	-	-	0.49	D	38.6	0.46	D	36.8	-1.8
		EB Approach		-	-	-	***-***	***D***	***38.6***	***-***	***D***	***36.8***	**-1.8**
	Ralph Street	WB	LTR	-	-	-	0.07	D	35.7	0.06	C	33.9	-1.8
		WB Approach		-	-	-	***-***	***D***	***35.7***	***-***	***C***	***33.9***	**-1.8**
	NYS Route 9D	NB	L	-	-	-	0.05	A	5.3	0.05	A	6.2	0.9
			TR	-	-	-	0.43	A	6.1	0.45	A	1.0	-5.1
		NB Approach		-	-	-	***-***	***A***	***6.1***	***-***	***A***	***1.2***	**-4.9**
	NYS Route 9D	SB	L	-	-	-	0.00	A	4.5	0.00	A	4.5	0.0
			TR	-	-	-	0.56	A	8.0	0.59	A	9.3	1.3
		SB Approach		-	-	-	***-***	***A***	***8.0***	***-***	***A***	***9.3***	**1.3**
		Overall		**-**	**-**	**-**	**-**	**B**	**10.0**	**-**	**A**	**8.8**	**-1.2**

Table No. 2
Level of Service Summary Table
Weekday Peak AM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
3	**NYS Route 9D &**	**Signalized**											
	Beekman Street/W. Church Street												
	Beekman Street	EB	LT	0.48	C	30.0	0.50	C	27.6	0.53	C	25.9	-1.7
			R	0.11	C	25.1	0.13	C	21.5	0.15	B	19.2	-2.3
		EB Approach		**-**	***C***	***29.0***	**-**	***C***	***25.9***	**-**	***C***	***23.7***	***-2.2***
	W. Church Street	WB	LTR	0.12	C	25.4	0.15	C	22.2	0.14	C	20.2	-2.0
		WB Approach		**-**	***C***	***25.4***	**-**	***C***	***22.2***	**-**	***C***	***20.2***	***-2.0***
	NYS Route 9D	NB	L	0.03	B	19.7	0.05	C	23.4	0.09	C	26.2	2.8
			TR	0.64	C	25.4	0.71	C	27.6	0.71	C	27.5	-0.1
		NB Approach		**-**	***C***	***25.2***	**-**	***C***	***27.4***	**-**	***C***	***27.5***	***0.1***
	NYS Route 9D	SB	L	0.00	B	12.2	0.01	B	16.6	0.01	B	19.0	2.4
			TR	1.34	F	191.4	1.51	F	263.1	1.51	F	265.9	2.8
		SB Approach		**-**	***F***	***190.9***	**-**	***F***	***262.3***	**-**	***F***	***265.0***	***2.7***
		Overall		**-**	**F**	**115.3**	**-**	**F**	**153.0**	**-**	**F**	**150.5**	**-2.5**
	<u>With Signal Timing & Phasing Modifications</u>												
	Beekman Street	EB	LT	-	-	-	-	-	-	0.79	D	41.4	13.8
			R	-	-	-	-	-	-	0.32	D	35.0	13.5
		EB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***D***	***39.3***	***13.4***
	W. Church Street	WB	LTR	-	-	-	-	-	-	0.56	D	45.3	23.1
		WB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***D***	***45.3***	***23.1***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.15	B	14.4	-9.0
			TR	-	-	-	-	-	-	0.38	A	9.4	-18.2
		NB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***A***	***9.7***	***-17.7***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.01	A	7.5	-9.1
			TR	-	-	-	-	-	-	0.84	C	20.7	-242.4
		SB Approach		**-**	**-**	**-**	**-**	**-**	**-**	**-**	***C***	***20.7***	***-241.6***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**C**	**20.1**	**-132.9**

Table No. 2
Level of Service Summary Table
Weekday Peak AM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
4	**NYS Route 9D &**	**Signalized**											
	Main Street/City Hall												
	City Hall	EB	LTR	0.05	C	28.4	0.07	C	28.2	0.07	C	28.0	-0.2
		EB Approach		***-***	***C***	***28.4***	***-***	***C***	***28.2***	***-***	***C***	***28.0***	***-0.2***
	Main Street	WB	LT	0.05	C	28.4	0.09	C	28.3	0.09	C	28.1	-0.2
			R	0.31	C	25.1	0.31	C	24.2	0.32	C	24.1	-0.1
		WB Approach		***-***	***C***	***25.5***	***-***	***C***	***25.0***	***-***	***C***	***24.8***	***-0.2***
	NYS Route 9D	NB	L	0.01	A	6.3	0.01	A	6.8	0.01	A	6.9	0.1
			TR	0.37	A	9.1	0.45	B	10.6	0.46	B	10.9	0.3
		NB Approach		***-***	***A***	***9.0***	***-***	***B***	***10.5***	***-***	***B***	***10.8***	***0.3***
	NYS Route 9D	SB	L	0.37	A	5.2	0.46	B	6.2	0.48	A	6.4	0.2
			TR	0.25	A	5.5	0.31	A	6.0	0.33	A	6.2	0.2
		SB Approach		***-***	***A***	***5.4***	***-***	***A***	***6.1***	***-***	***A***	***6.3***	***0.2***
		Overall		**-**	**A**	**9.5**	**-**	**B**	**10.3**	**-**	**B**	**10.5**	**0.2**
	<u>With Signal Timing & Cooridnation Modifications</u>												
	City Hall	EB	LTR	-	-	-	-	-	-	0.08	C	34.2	6.0
		EB Approach		-	-	-	-	-	-	***-***	***C***	***34.2***	***6.0***
	Main Street	WB	LT	-	-	-	-	-	-	0.10	C	34.3	6.0
			R	-	-	-	-	-	-	0.35	C	30.3	6.1
		WB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***C***	***31.0***	***6.0***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.01	A	6.4	-0.4
			TR	-	-	-	-	-	-	0.42	A	9.9	-0.7
		NB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***A***	***9.9***	***-0.6***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.46	A	6.0	-0.2
			TR	-	-	-	-	-	-	0.31	A	5.6	-0.4
		SB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***A***	***5.8***	***-0.3***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**B**	**10.7**	**0.4**
5	**Beekman Street &**	**Unsignalized**											
	High Street	EB	LT	0.00	A	8.0	0.00	A	8.1	0.00	A	8.1	0.0
		SB	LR	0.00	B	10.2	0.01	B	10.4	0.01	B	10.5	0.1
6	**Beekman Street &**	**Unsignalized**											
	Site Access	EB	LT	-	-	-	-	-	-	0.01	A	8.1	-
		SB	LR	-	-	-	-	-	-	0.10	B	12.9	-
7	**Tompkins Avenue &**	**Unsignalized**											
	Site Access	WB	LT	-	-	-	-	-	-	0.01	A	7.5	-
		NB	LR	-	-	-	-	-	-	0.01	A	9.1	-

<u>NOTES:</u>

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"

Table No. 2
Level of Service Summary Table
Weekday Peak PM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
1	**NYS Route 9D & Verplanck Avenue**	**Signalized**											
	Verplanck Avenue	WB	L	0.21	C	21.2	0.23	C	26.6	0.26	C	28.2	1.6
			R	0.85	C	23.6	0.89	C	29.6	0.90	C	31.8	2.2
		WB Approach		***-***	***C***	***23.2***	***-***	***C***	***29.1***	***-***	***C***	***31.2***	***2.1***
	NYS Route 9D	NB	TR	0.88	B	19.2	0.93	C	30.1	0.94	C	33.1	3.0
		NB Approach		***-***	***B***	***19.2***	***-***	***C***	***30.1***	***-***	***C***	***33.1***	***3.0***
	NYS Route 9D	SB	L	0.79	C	27.5	0.83	C	34.2	0.84	D	35.7	1.5
			T	0.51	A	6.6	0.59	A	7.6	0.59	A	7.6	0.0
		SB Approach		***-***	***B***	***12.4***	***-***	***B***	***14.3***	***-***	***B***	***14.5***	***0.2***
		Overall		**-**	**B**	**17.0**	**-**	**C**	**22.9**	**-**	**C**	**24.6**	**1.7**
2	**NYS Route 9D & Tompkins Avenue/ Ralph Street**	**Unsignalized**											
	Tompkins Avenue	EB	LTR	0.20	D	27.6	0.623	F	67.6	0.75	F	90.5	22.9
	Ralph Street	WB	LTR	0.09	D	31.5	0.166	E	46.0	0.18	E	49.0	3.0
	NYS Route 9D	NB	LTR	0.02	A	9.0	0.04	A	9.6	0.04	A	9.7	0.1
	NYS Route 9D	SB	LTR	0.01	A	9.0	0.01	A	9.3	0.008	A	9.4	0.1
	<u>With Signalization</u>												
	Tompkins Avenue	EB	LTR	-	-	-	0.42	D	40.5	0.45	D	40.2	-0.3
		EB Approach		***-***	***-***	***-***	***-***	***D***	***40.5***	***-***	***D***	***40.2***	***-0.3***
	Ralph Street	WB	LTR	-	-	-	0.08	D	38.4	0.08	D	37.9	-0.5
		WB Approach		***-***	***-***	***-***	***-***	***D***	***38.4***	***-***	***D***	***37.9***	***-0.5***
	NYS Route 9D	NB	L	-	-	-	0.06	A	4.0	0.06	A	4.5	0.5
			TR	-	-	-	0.53	A	1.3	0.55	A	6.5	5.2
		NB Approach		***-***	***-***	***-***	***-***	***A***	***1.4***	***-***	***A***	***6.4***	***5.0***
	NYS Route 9D	SB	L	-	-	-	0.01	A	3	0.01	A	4.5	1.5
			TR	-	-	-	0.52	A	6.4	0.54	A	6.9	0.5
		SB Approach		***-***	***-***	***-***	***-***	***A***	***6.3***	***-***	***A***	***6.9***	***0.6***
		Overall		**-**	**-**	**-**	**-**	**A**	**6.0**	**-**	**A**	**8.8**	**2.8**

Table No. 2
Level of Service Summary Table
Weekday Peak PM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
3	**NYS Route 9D &**	**Signalized**											
	Beekman Street/W. Church Street												
	Beekman Street	EB	LT	1.75	F	394.9	18.2	F	424.3	1.92	F	468.3	44.0
			R	0.04	B	17.1	0.06	B	17.2	0.11	B	17.6	0.4
		EB Approach		***-***	***F***	***365.9***	***-***	***F***	***382.4***	***-***	***F***	***395.7***	***13.3***
	W. Church Street	WB	LTR	0.03	B	18.1	0.06	B	18.5	0.06	B	18.5	0.0
		WB Approach		***-***	***B***	***18.1***	***-***	***B***	***18.5***	***-***	***B***	***18.5***	***0.0***
	NYS Route 9D	NB	L	0.09	C	31.3	0.13	C	31.3	0.20	C	31.3	0.0
			TR	0.73	D	36.9	0.83	D	42.4	0.83	D	42.2	-0.2
		NB Approach		***-***	***D***	***36.5***	***-***	***D***	***41.3***	***-***	***D***	***40.6***	***-0.7***
	NYS Route 9D	SB	L	0.01	C	24.7	0.01	C	27.1	0.01	C	27.1	0.0
			TR	1.36	F	207.9	1.53	F	283.4	1.55	F	289.8	6.4
		SB Approach		***-***	***F***	***206.7***	***-***	***F***	***281.7***	***-***	***F***	***288.1***	***6.4***
		Overall		**-**	**F**	**188.4**	**-**	**F**	**222.9**	**-**	**F**	**230.1**	**7.2**
	<u>With Signal Timing & Phasing Modifications</u>												
	Beekman Street	EB	LT	-	-	-	-	-	-	0.90	D	51.8	-372.5
			R	-	-	-	-	-	-	0.17	C	26.0	8.8
		EB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***D***	***47.7***	***-334.7***
	W. Church Street	WB	LTR	-	-	-	-	-	-	0.51	D	45.8	27.3
		WB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***D***	***45.8***	***27.3***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.34	B	18.0	-13.3
			TR	-	-	-	-	-	-	0.44	B	14.3	-28.1
		NB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***B***	***14.8***	***-26.5***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.01	B	12.0	-15.1
			TR	-	-	-	-	-	-	0.87	C	29.9	-253.5
		SB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***C***	***29.8***	***-251.9***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**C**	**29.5**	**-193.4**

Table No. 2
Level of Service Summary Table
Weekday Peak PM Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
4	**NYS Route 9D &**	**Signalized**											
	Main Street/City Hall												
	City Hall	EB	LTR	0.05	C	33	0.06	C	32.4	0.06	C	32.1	-0.3
		EB Approach		***-***	***C***	***33.0***	***-***	***C***	***32.4***	***-***	***C***	***32.1***	***-0.3***
	Main Street	WB	LT	0.12	C	33.4	0.17	C	33.1	0.17	C	32.8	-0.3
			R	0.43	C	30.6	0.45	C	29.6	0.46	C	29.2	-0.4
		WB Approach		***-***	***C***	***31.1***	***-***	***C***	***30.4***	***-***	***C***	***30.0***	***-0.4***
	NYS Route 9D	NB	L	0.00	A	6.7	0.00	A	7.3	0.00	A	7.6	0.3
			TR	0.36	A	9.4	0.44	B	11.3	0.46	B	11.9	0.6
		NB Approach		***-***	***A***	***9.4***	***-***	***B***	***11.2***	***-***	***B***	***11.9***	***0.7***
	NYS Route 9D	SB	L	0.36	A	5.6	0.46	A	6.8	0.49	A	7.3	0.5
			TR	0.25	A	5.7	0.31	A	6.4	0.32	A	6.6	0.2
		SB Approach		***-***	***A***	***5.7***	***-***	***A***	***6.6***	***-***	***A***	***6.9***	***0.3***
		Overall		**-**	**B**	**11.7**	**-**	**B**	**12.7**	**-**	**B**	**13.0**	**0.3**
	<u>With Signal Timing & Cooridnation Modifications</u>												
	City Hall	EB	LTR	-	-	-	-	-	-	0.06	C	32.1	-0.3
		EB Approach		-	-	-	-	-	-	***-***	***C***	***32.1***	***-0.3***
	Main Street	WB	LT	-	-	-	-	-	-	0.17	C	32.8	-0.3
			R	-	-	-	-	-	-	0.46	C	29.2	-0.4
		WB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***C***	***30.0***	***-0.4***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.00	A	7.6	0.3
			TR	-	-	-	-	-	-	0.46	B	11.8	0.5
		NB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***B***	***11.8***	***0.6***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.49	A	7.3	0.5
			TR	-	-	-	-	-	-	0.32	A	6.6	0.2
		SB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***A***	***6.9***	***0.3***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**B**	**13.0**	**0.3**
5	**Beekman Street &**	**Unsignalized**											
	High Street	EB	LT	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.0
		SB	LR	0.02	A	9.9	0.02	B	10.3	0.021	B	10.4	0.1
6	**Beekman Street &**	**Unsignalized**											
	Site Access	EB	LT	-	-	-	-	-	-	0.01	A	7.9	-
		SB	LR	-	-	-	-	-	-	0.19	C	16.6	-
7	**Tompkins Avenue &**	**Unsignalized**											
	Site Access	WB	LT	-	-	-	-	-	-	0.02	A	7.5	-
		NB	LR	-	-	-	-	-	-	0.02	A	8.9	-

<u>NOTES:</u>

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"

Table No. 2
Level of Service Summary Table
Saturday Peak Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
1	**NYS Route 9D & Verplanck Avenue**	**Signalized**											
	Verplanck Avenue	WB	L	0.17	B	18.0	0.19	C	21.8	0.22	C	22.9	1.1
			R	0.81	C	20.2	0.86	C	24.1	0.86	C	25.1	1.0
		WB Approach		**-**	***B***	***19.9***	**-**	***C***	***23.8***	**-**	***C***	***24.8***	***1.0***
	NYS Route 9D	NB	TR	0.85	B	16.0	0.89	B	19.9	0.90	C	21.4	1.5
		NB Approach		**-**	***B***	***16.0***	**-**	***B***	***19.9***	**-**	***C***	***21.4***	***1.5***
	NYS Route 9D	SB	L	0.75	C	23.4	0.79	C	27.9	0.80	C	28.9	1.0
			T	0.58	A	6.8	0.65	A	7.7	0.66	A	7.7	0.0
		SB Approach		**-**	***B***	***11.0***	**-**	***B***	***12.3***	**-**	***B***	***12.5***	***0.2***
		Overall		**-**	**B**	**14.3**	**-**	**B**	**16.9**	**-**	**B**	**17.7**	**0.8**
2	**NYS Route 9D & Tompkins Avenue/ Ralph Street**	**Unsignalized**											
	Tompkins Avenue	EB	LTR	0.21	D	27.5	0.60	F	61.7	0.70	F	78.1	16.4
	Ralph Street	WB	LTR	0.08	C	21.4	0.13	D	29.5	0.139	D	30.9	1.4
	NYS Route 9D	NB	LTR	0.01	A	9.0	0.03	A	9.6	0.03	A	9.7	0.1
	NYS Route 9D	SB	LTR	0.01	A	8.7	0.01	A	8.9	0.01	A	8.9	0.0
	<u>With Signalization</u>												
	Tompkins Avenue	EB	LTR	-	-	-	0.41	D	40	0.43	D	39.8	-0.2
		EB Approach		**-**	**-**	**-**	**-**	***D***	***40.0***	**-**	***D***	***39.8***	***-0.2***
	Ralph Street	WB	LTR	-	-	-	0.11	D	38.2	0.11	D	37.7	-0.5
		WB Approach		**-**	**-**	**-**	**-**	***D***	***38.2***	**-**	***D***	***37.7***	***-0.5***
	NYS Route 9D	NB	L	-	-	-	0.05	A	4.3	0.06	A	4.6	0.3
			TR	-	-	-	0.45	A	5.5	0.47	A	1.0	-4.5
		NB Approach		**-**	**-**	**-**	**-**	***A***	***5.4***	**-**	***A***	***1.1***	***-4.3***
	NYS Route 9D	SB	L	-	-	-	0.01	A	3.8	0.01	A	3.2	-0.6
			TR	-	-	-	0.53	A	6.6	0.55	A	7.1	0.5
		SB Approach		**-**	**-**	**-**	**-**	***A***	***6.6***	**-**	***A***	***7.0***	***0.4***
		Overall		**-**	**-**	**-**	**-**	**A**	**8.3**	**-**	**A**	**6.9**	**-1.4**

Table No. 2
Level of Service Summary Table
Saturday Peak Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
3	**NYS Route 9D &**	**Signalized**											
	Beekman Street/W. Church Street												
	Beekman Street	EB	LT	0.51	C	28.6	0.56	C	26.8	0.56	C	27.7	0.9
			R	0.12	C	24.3	0.12	C	20.6	0.21	C	22.8	2.2
		EB Approach		***-***	***C***	***27.9***	***-***	***C***	***25.4***	***-***	***C***	***26.3***	***0.9***
	W. Church Street	WB	LTR	0.09	C	24.5	0.14	C	21.5	0.11	C	22.9	1.4
		WB Approach		***-***	***C***	***24.5***	***-***	***C***	***21.5***	***-***	***C***	***22.9***	***1.4***
	NYS Route 9D	NB	L	0.11	C	20.6	0.18	C	24.4	0.21	C	22.6	-1.8
			TR	0.66	C	25.9	0.76	C	28.9	0.76	C	28.9	0.0
		NB Approach		***-***	***C***	***25.2***	***-***	***C***	***28.3***	***-***	***C***	***27.7***	***-0.6***
	NYS Route 9D	SB	L	0.01	B	13.4	0.02	B	18.5	0.02	B	16.9	-1.6
			TR	1.22	F	140.8	1.37	F	204.0	1.39	F	209.1	5.1
		SB Approach		***-***	***F***	***139.4***	***-***	***F***	***201.9***	***-***	***F***	***207.0***	***5.1***
		Overall		**-**	**F**	**81.0**	**-**	**F**	**110.5**	**-**	**F**	**110.2**	**-0.3**
	<u>With Signal Timing & Phasing Modifications</u>												
	Beekman Street	EB	LT	-	-	-	-	-	-	0.74	D	38.3	11.5
			R	-	-	-	-	-	-	0.27	C	31.3	10.7
		EB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***D***	***36.3***	***10.9***
	W. Church Street	WB	LTR	-	-	-	-	-	-	0.48	D	46.0	24.5
		WB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***D***	***46.0***	***24.5***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.37	B	15.1	-9.3
			TR	-	-	-	-	-	-	0.42	B	10.6	-18.3
		NB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***B***	***11.4***	***-16.9***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.02	A	8.8	-9.7
			TR	-	-	-	-	-	-	0.82	C	22.2	-181.8
		SB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***C***	***22.1***	***-179.8***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**C**	**20.6**	**-89.9**

Table No. 2
Level of Service Summary Table
Saturday Peak Hour

				2023 Existing			2026 No-Build			2026 Build			Change in Delay
				v/c	LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	No-Build to Build
4	**NYS Route 9D &**	**Signalized**											
	Main Street/City Hall												
	City Hall	EB	LTR	0.01	C	26.3	0.03	C	25.8	0.03	C	25.5	-0.3
		EB Approach		***-***	***C***	***26.3***	***-***	***C***	***25.8***	***-***	***C***	***25.5***	***-0.3***
	Main Street	WB	LT	0.07	C	26.7	0.11	C	26.3	0.11	C	26.1	-0.2
			R	0.46	C	24.3	0.47	C	23.3	0.48	C	22.9	-0.4
		WB Approach		***-***	***C***	***24.5***	***-***	***C***	***23.7***	***-***	***C***	***23.4***	***-0.3***
	NYS Route 9D	NB	L	0.00	A	7.5	0.00	A	8.2	0.00	A	8.5	0.3
			TR	0.34	B	10.1	0.44	B	12.1	0.46	B	12.8	0.7
		NB Approach		***-***	***B***	***10.1***	***-***	***B***	***12.1***	***-***	***B***	***12.7***	***0.6***
	NYS Route 9D	SB	L	0.37	A	5.9	0.47	A	7.1	0.49	A	7.5	0.4
			TR	0.24	A	6.2	0.29	A	6.8	0.31	A	7.0	0.2
		SB Approach		***-***	***A***	***6.0***	***-***	***A***	***6.9***	***-***	***A***	***7.2***	***0.3***
		Overall		**-**	**B**	**11.2**	**-**	**B**	**12.2**	**-**	**B**	**12.5**	**0.3**
	<u>With Signal Timing & Cooridnation Modifications</u>												
	City Hall	EB	LTR	-	-	-	-	-	-	0.03	C	31.2	5.4
		EB Approach		-	-	-	-	-	-	***-***	***C***	***31.2***	***5.4***
	Main Street	WB	LT	-	-	-	-	-	-	0.12	C	31.9	5.6
			R	-	-	-	-	-	-	0.52	C	29.0	5.7
		WB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***C***	***29.4***	***5.7***
	NYS Route 9D	NB	L	-	-	-	-	-	-	0.00	A	8.0	-0.2
			TR	-	-	-	-	-	-	0.42	B	11.8	-0.3
		NB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***B***	***11.8***	***-0.3***
	NYS Route 9D	SB	L	-	-	-	-	-	-	0.47	A	7.1	0.0
			TR	-	-	-	-	-	-	0.29	A	6.7	-0.1
		SB Approach		***-***	***-***	***-***	***-***	***-***	***-***	***-***	***A***	***6.9***	***0.0***
		Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**B**	**13.3**	**1.1**
5	**Beekman Street &**	**Unsignalized**											
	High Street	EB	LT	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.0
		SB	LR	0.00	B	10.0	0.01	B	10.2	0.007	B	10.3	0.1
6	**Beekman Street &**	**Unsignalized**											
	Site Access	EB	LT	-	-	-	-	-	-	0.01	A	8.0	-
		SB	LR	-	-	-	-	-	-	0.11	B	12.9	-
7	**Tompkins Avenue &**	**Unsignalized**											
	Site Access	WB	LT	-	-	-	-	-	-	0.01	A	7.4	-
		NB	LR	-	-	-	-	-	-	0.01	A	8.8	-

<u>NOTES:</u>

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"

TABLE TSW-1

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT ANALYSIS SUMMARY

INTERSECTION DATA			
Major Street:	Wolcott Avenue (NYS Route 9D)	**Number of Lanes For Moving Traffic By Approach**	
Minor Street:	Tompkins Avenue/Ralph Street	Major Street (Excluding Auxiliary Lanes) =	1
		Minor Street (Including Auxiliary Lanes) =	1
Location:	City of Beacon, Dutchess County, New York		
		Major Street Speed	
Date:	10/12/2023	85TH Percentile Speed >= 40 mph (Y or N):	30
Volume Basis:	2026 No-Build Traffic Volumes	**Community Population**	
		Community < 10,000 (Y or N):	N
Condition:	Typical Weekday		

WARRANT ANALYSIS SUMMARY		
Warrant 1 - Eight-Hour Vehicular Volume		
Condition A - Minimum Vehicular Volume		Not Satisfied -- No Signal
Condition B - Minimum Vehicular Interruption of Continous Traffic		Not Satisfied -- No Signal
Condition A & B Combined Condition		Not Applicable
	Warrant 1 Satisfied:	**NO**
Warrant 2 - Four-Hour Vehicular Volume		
Four-Hour Vehicular Volume		Satisfied -- Criteria Met for Signalization
	Warrant 2 Satisfied:	**YES**
Warrant 3 - Peak Hour		
Peak Hour Volume		Not Satisfied -- No Signal
	Warrant 3 Satisfied:	**NO**
Warrant 4 - Pedestrian Volume Warrant		
Condition A - Pedestrian Four-Hour Volume		Not Applicable
Condition B - Pedestrian Peak Hour Volume		Not Applicable
	Warrant 4 Satisfied:	**Not Applicable**
Warrant 5 - School Crossing		
	Warrant 5 Satisfied:	**Not Applicable**
Warrant 6 - Coordinated Signal System		
	Warrant 6 Satisfied:	**Not Analyzed**
Warrant 7 - Crash Experience		
	Warrant 7 Satisfied:	**Not Analyzed**
Warrant 8 - Roadway Network		
	Warrant 7 Satisfied:	**Not Analyzed**
Warrant 9 - Intersection Near a Grade Crossing		
Condition A - Distance to Rail		Not Applicable
Condition B - Traffic Volume Warrant		Not Applicable
	Warrant 9 Satisfied:	**Not Applicable**

Colliers Engineering & Design

TABLE TSW-1

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

INTERSECTION DATA

Major Street: Wolcott Avenue (NYS Route 9D)
Minor Street: Tompkins Avenue/Ralph Street
Location: City of Beacon, Dutchess County, New York
Date: 10/12/2023
Volume Basis: 2026 No-Build Traffic Volumes
Condition: Typical Weekday

Number of Lanes For Moving Traffic By Approach
Major Street (Excluding Auxiliary Lanes) = 1
Minor Street (Including Auxiliary Lanes) = 1

Major Street Speed
85TH Percentile Speed >= 40 mph (Y or N): N

Community Population
Community < 10,000 (Y or N): N

WARRANT ANALYSIS

Time of Day	Volumes		Warrant 1 Condition A		Warrant 1 Condition B		Warrant 1 Condition A & B				Warrant Met?			
							Condition A		Condition B				Combined	
	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Warrant 1A	Warrant 1B	1A	1B
12:00 AM	153	9	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
1:00 AM	76	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
2:00 AM	55	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
3:00 AM	57	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
4:00 AM	286	22	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
5:00 AM	542	40	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
6:00 AM	1,107	95	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
7:00 AM	1,184	134	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
8:00 AM	1,347	116	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
9:00 AM	1,013	75	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
10:00 AM	800	67	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
11:00 AM	831	53	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
12:00 PM	955	53	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
1:00 PM	994	56	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
2:00 PM	1,110	62	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
3:00 PM	1,293	70	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
4:00 PM	1,475	76	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
5:00 PM	1,051	93	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
6:00 PM	1,415	81	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
7:00 PM	1,065	59	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
8:00 PM	842	49	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
9:00 PM	614	34	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
10:00 PM	444	27	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
11:00 PM	265	16	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
Total Hours Meeting Warrants											**0**	**7**	**0**	**0**
Total Hours Needed to Satisfy											**8**	**8**	**8***	**8***

WARRANT 1 SUMMARY

Warrant 1 Condition A - Minimum Vehicular Volume	**Not Satisfied -- No Signal**
Warrant 1 Condition B - Interruption of Continuous Traffic	**Not Satisfied -- No Signal**
Warrant 1A & 1B Combined Condition	**Not Applicable**

*Note: For Combined Warrant Both Conditions 1A & 1B Must Be Satisfied for a Minimum of 8 Hours.

TABLE TSW-1

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME & WARRANT 3 - PEAK HOUR

INTERSECTION DATA

Major Street:	Wolcott Avenue (NYS Route 9D)	**Number of Lanes For Moving Traffic By Approach**	
Minor Street:	Tompkins Avenue/Ralph Street	Major Street (Excluding Auxiliary Lanes) =	1
		Minor Street (Including Auxiliary Lanes) =	1
Location:	City of Beacon, Dutchess County, New York		
		Major Street Speed	
Date:	10/12/2023	85TH Percentile Speed >= 40 mph (Y or N):	N
Volume Basis:	2026 No-Build Traffic Volumes	**Community Population**	
		Community < 10,000 (Y or N):	N
Condition:	Typical Weekday		

WARRANT ANALYSIS

Time of Day	Volumes		Warrant 2[1]		Warrant 3[1]		Warrant Met?	
	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Warrant 2	Warrant 3
12:00 AM	153	9					NO	NO
1:00 AM	76	5					NO	NO
2:00 AM	55	5					NO	NO
3:00 AM	57	5					NO	NO
4:00 AM	286	22					NO	NO
5:00 AM	542	40					NO	NO
6:00 AM	1,107	95					YES	NO
7:00 AM	1,184	134					YES	NO
8:00 AM	1,347	116					YES	NO
9:00 AM	1,013	75					NO	NO
10:00 AM	800	67					NO	NO
11:00 AM	831	53					NO	NO
12:00 PM	955	53					NO	NO
1:00 PM	994	56					NO	NO
2:00 PM	1,110	62					NO	NO
3:00 PM	1,293	70					NO	NO
4:00 PM	1,475	76					NO	NO
5:00 PM	1,051	93					YES	NO
6:00 PM	1,415	81					YES	NO
7:00 PM	1,065	59					NO	NO
8:00 PM	842	49					NO	NO
9:00 PM	614	34					NO	NO
10:00 PM	444	27					NO	NO
11:00 PM	265	16					NO	NO
			See Figure 4C-1		**See Figure 4C-3**			
						Total Hours Meeting Warrants	5	0
						Total Hours Needed to Satisfy	4	1

WARRANTS 2 & 3 SUMMARY

Warrant 2 - Four Hour Vehicular Volume	**Satisfied -- Criteria Met for Signalization**
Warrant 3 - Peak Hour Volume	**Not Satisfied -- No Signal**

Notes:

1) Volumes for Warrants 2 & 3 are compared to attached MUTCD Figures 4C-1 and 4C-3, respectively.

Table TSW-1

Figure 4C-1

Wolcott Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street

Warrant 2 - Four Hour Vehicular Warrant

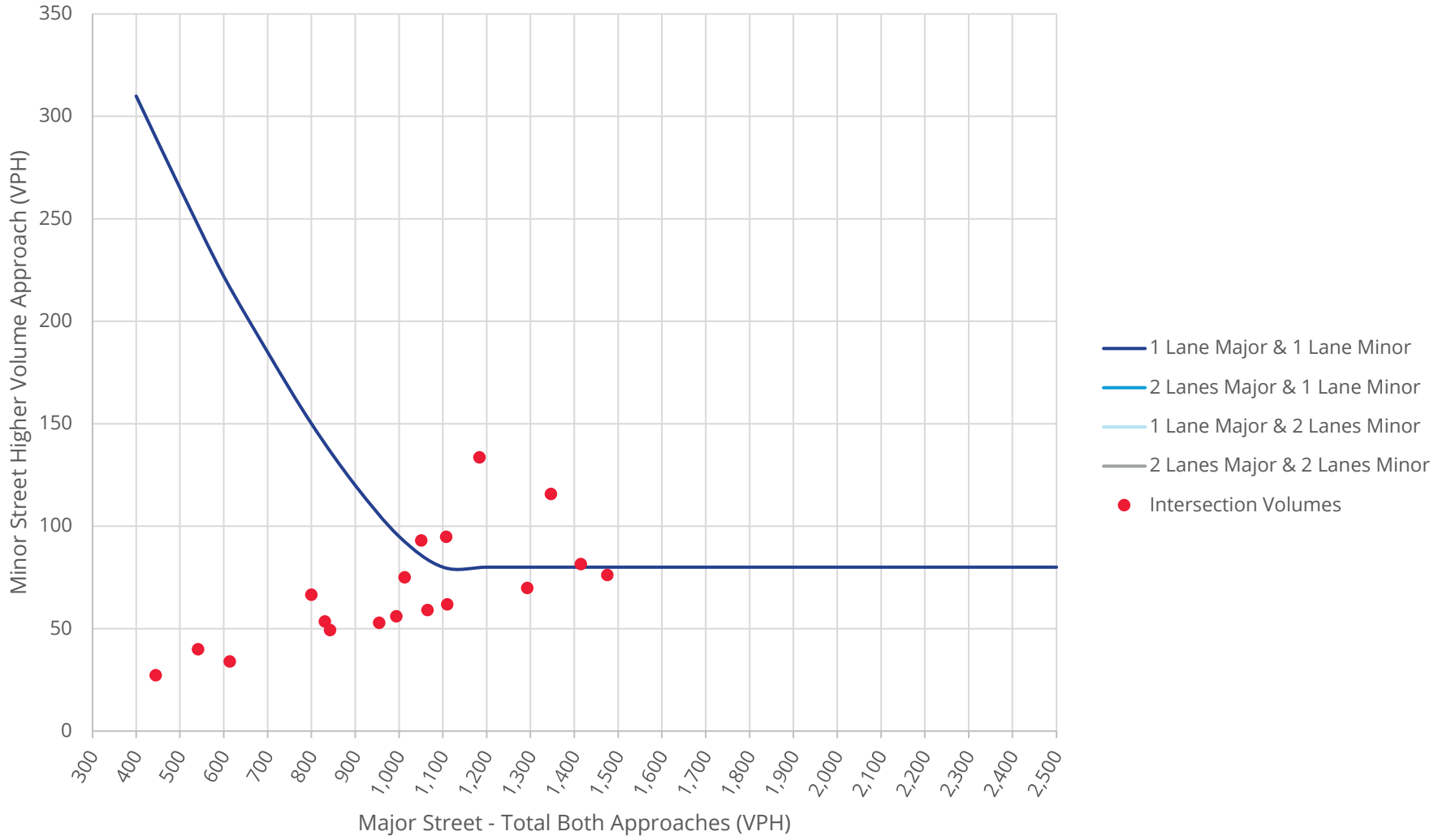


Table TSW-1

Figure 4C-3

Wolcott Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street

Warrant 3 - Peak Hour Warrant

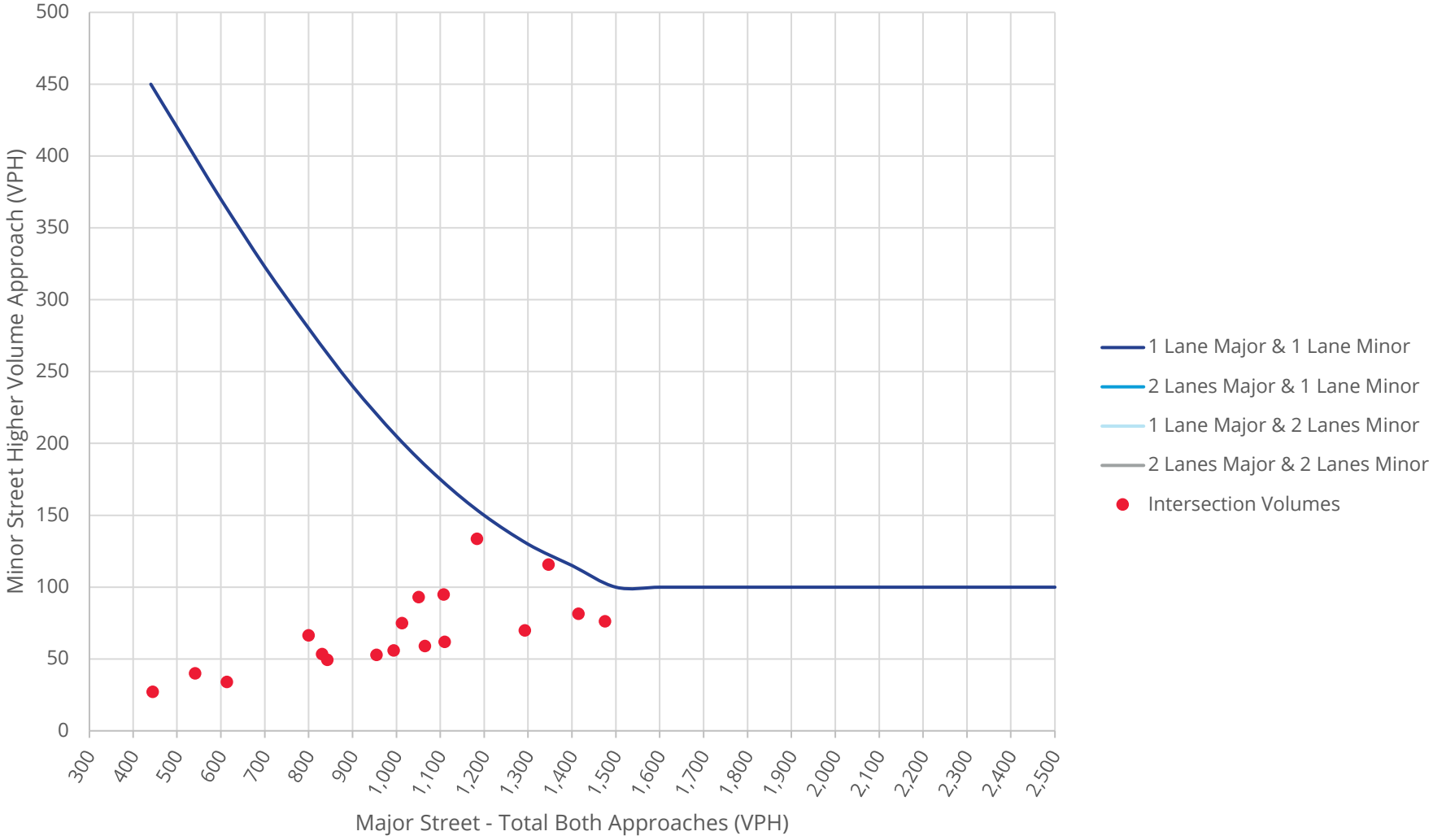


TABLE TSW-2

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT ANALYSIS SUMMARY

INTERSECTION DATA			
Major Street:	Wolcott Avenue (NYS Route 9D)	**Number of Lanes For Moving Traffic By Approach**	
Minor Street:	Tompkins Avenue/Ralph Street	Major Street (Excluding Auxiliary Lanes) =	1
		Minor Street (Including Auxiliary Lanes) =	1
Location:	City of Beacon, Dutchess County, New York		
		Major Street Speed	
Date:	10/12/2023	85TH Percentile Speed >= 40 mph (Y or N):	30
Volume Basis:	2026 Build Traffic Volumes	**Community Population**	
		Community < 10,000 (Y or N):	N
Condition:	Typical Weekday		

WARRANT ANALYSIS SUMMARY		
Warrant 1 - Eight-Hour Vehicular Volume		
Condition A - Minimum Vehicular Volume		Not Satisfied -- No Signal
Condition B - Minimum Vehicular Interruption of Continous Traffic		Satisfied -- Criteria Met for Signalization
Condition A & B Combined Condition		Not Applicable
	Warrant 1 Satisfied:	**YES**
Warrant 2 - Four-Hour Vehicular Volume		
Four-Hour Vehicular Volume		Satisfied -- Criteria Met for Signalization
	Warrant 2 Satisfied:	**YES**
Warrant 3 - Peak Hour		
Peak Hour Volume		Satisfied -- Criteria Met for Signalization
	Warrant 3 Satisfied:	**YES**
Warrant 4 - Pedestrian Volume Warrant		
Condition A - Pedestrian Four-Hour Volume		Not Applicable
Condition B - Pedestrian Peak Hour Volume		Not Applicable
	Warrant 4 Satisfied:	**Not Applicable**
Warrant 5 - School Crossing		
	Warrant 5 Satisfied:	**Not Applicable**
Warrant 6 - Coordinated Signal System		
	Warrant 6 Satisfied:	**Not Analyzed**
Warrant 7 - Crash Experience		
	Warrant 7 Satisfied:	**Not Analyzed**
Warrant 8 - Roadway Network		
	Warrant 7 Satisfied:	**Not Analyzed**
Warrant 9 - Intersection Near a Grade Crossing		
Condition A - Distance to Rail		Not Applicable
Condition B - Traffic Volume Warrant		Not Applicable
	Warrant 9 Satisfied:	**Not Applicable**

TABLE TSW-2

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

INTERSECTION DATA

Major Street: Wolcott Avenue (NYS Route 9D)
Minor Street: Tompkins Avenue/Ralph Street
Location: City of Beacon, Dutchess County, New York
Date: 10/12/2023
Volume Basis: 2026 Build Traffic Volumes
Condition: Typical Weekday

Number of Lanes For Moving Traffic By Approach
Major Street (Excluding Auxiliary Lanes) = 1
Minor Street (Including Auxiliary Lanes) = 1

Major Street Speed
85TH Percentile Speed >= 40 mph (Y or N): N

Community Population
Community < 10,000 (Y or N): N

WARRANT ANALYSIS

Time of Day	Volumes		Warrant 1 Condition A		Warrant 1 Condition B		Warrant 1 Condition A & B				Warrant Met?			
							Condition A		Condition B				Combined	
	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Warrant 1A	Warrant 1B	1A	1B
12:00 AM	155	9	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
1:00 AM	78	6	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
2:00 AM	56	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
3:00 AM	58	5	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
4:00 AM	288	23	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
5:00 AM	548	43	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
6:00 AM	1,121	101	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
7:00 AM	1,208	143	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
8:00 AM	1,374	124	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
9:00 AM	1,044	82	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
10:00 AM	840	76	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
11:00 AM	881	65	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
12:00 PM	997	62	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
1:00 PM	1,034	66	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
2:00 PM	1,151	72	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
3:00 PM	1,336	80	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
4:00 PM	1,516	87	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
5:00 PM	1,105	105	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
6:00 PM	1,462	92	500	150	750	75	400	120	600	60	NO	YES	N/A	N/A
7:00 PM	1,104	67	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
8:00 PM	875	57	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
9:00 PM	635	39	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
10:00 PM	466	32	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
11:00 PM	276	19	500	150	750	75	400	120	600	60	NO	NO	N/A	N/A
Total Hours Meeting Warrants											**0**	**9**	**0**	**0**
Total Hours Needed to Satisfy											**8**	**8**	**8***	**8***

WARRANT 1 SUMMARY

Warrant 1 Condition A - Minimum Vehicular Volume	**Not Satisfied -- No Signal**
Warrant 1 Condition B - Interruption of Continuous Traffic	**Satisfied -- Criteria Met for Signalization**
Warrant 1A & 1B Combined Condition	**Not Applicable**

*Note: For Combined Warrant Both Conditions 1A & 1B Must Be Satisfied for a Minimum of 8 Hours.

TABLE TSW-2

SIGNAL WARRANTS ANALYSIS
WOLCOTT AVENUE (NYS ROUTE 9D) AT TOMPKINS AVENUE/RALPH STREET
WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME & WARRANT 3 - PEAK HOUR

INTERSECTION DATA

Major Street:	Wolcott Avenue (NYS Route 9D)	**Number of Lanes For Moving Traffic By Approach**	
Minor Street:	Tompkins Avenue/Ralph Street	Major Street (Excluding Auxiliary Lanes) =	1
		Minor Street (Including Auxiliary Lanes) =	1
Location:	City of Beacon, Dutchess County, New York		
		Major Street Speed	
Date:	10/12/2023	85TH Percentile Speed >= 40 mph (Y or N):	N
Volume Basis:	2026 Build Traffic Volumes	**Community Population**	
		Community < 10,000 (Y or N):	N
Condition:	Typical Weekday		

WARRANT ANALYSIS

Time of Day	Volumes Major Street	Volumes Minor Street	Warrant 2[1] Major Street	Warrant 2[1] Minor Street	Warrant 3[1] Major Street	Warrant 3[1] Minor Street	Warrant Met? Warrant 2	Warrant Met? Warrant 3
12:00 AM	155	9					NO	NO
1:00 AM	78	6					NO	NO
2:00 AM	56	5					NO	NO
3:00 AM	58	5					NO	NO
4:00 AM	288	23					NO	NO
5:00 AM	548	43					NO	NO
6:00 AM	1,121	101					YES	NO
7:00 AM	1,208	143					YES	NO
8:00 AM	1,374	124					YES	YES
9:00 AM	1,044	82					NO	NO
10:00 AM	840	76					NO	NO
11:00 AM	881	65					NO	NO
12:00 PM	997	62					NO	NO
1:00 PM	1,034	66					NO	NO
2:00 PM	1,151	72					NO	NO
3:00 PM	1,336	80					YES	NO
4:00 PM	1,516	87					YES	NO
5:00 PM	1,105	105					YES	NO
6:00 PM	1,462	92					YES	NO
7:00 PM	1,104	67					NO	NO
8:00 PM	875	57					NO	NO
9:00 PM	635	39					NO	NO
10:00 PM	466	32					NO	NO
11:00 PM	276	19					NO	NO
			See Figure 4C-1		**See Figure 4C-3**			
						Total Hours Meeting Warrants	7	1
						Total Hours Needed to Satisfy	4	1

WARRANTS 2 & 3 SUMMARY

Warrant 2 - Four Hour Vehicular Volume	**Satisfied -- Criteria Met for Signalization**
Warrant 3 - Peak Hour Volume	**Satisfied -- Criteria Met for Signalization**

Notes:

1) Volumes for Warrants 2 & 3 are compared to attached MUTCD Figures 4C-1 and 4C-3, respectively.

Table TSW-2

Figure 4C-1

Wolcott Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street

Warrant 2 - Four Hour Vehicular Warrant

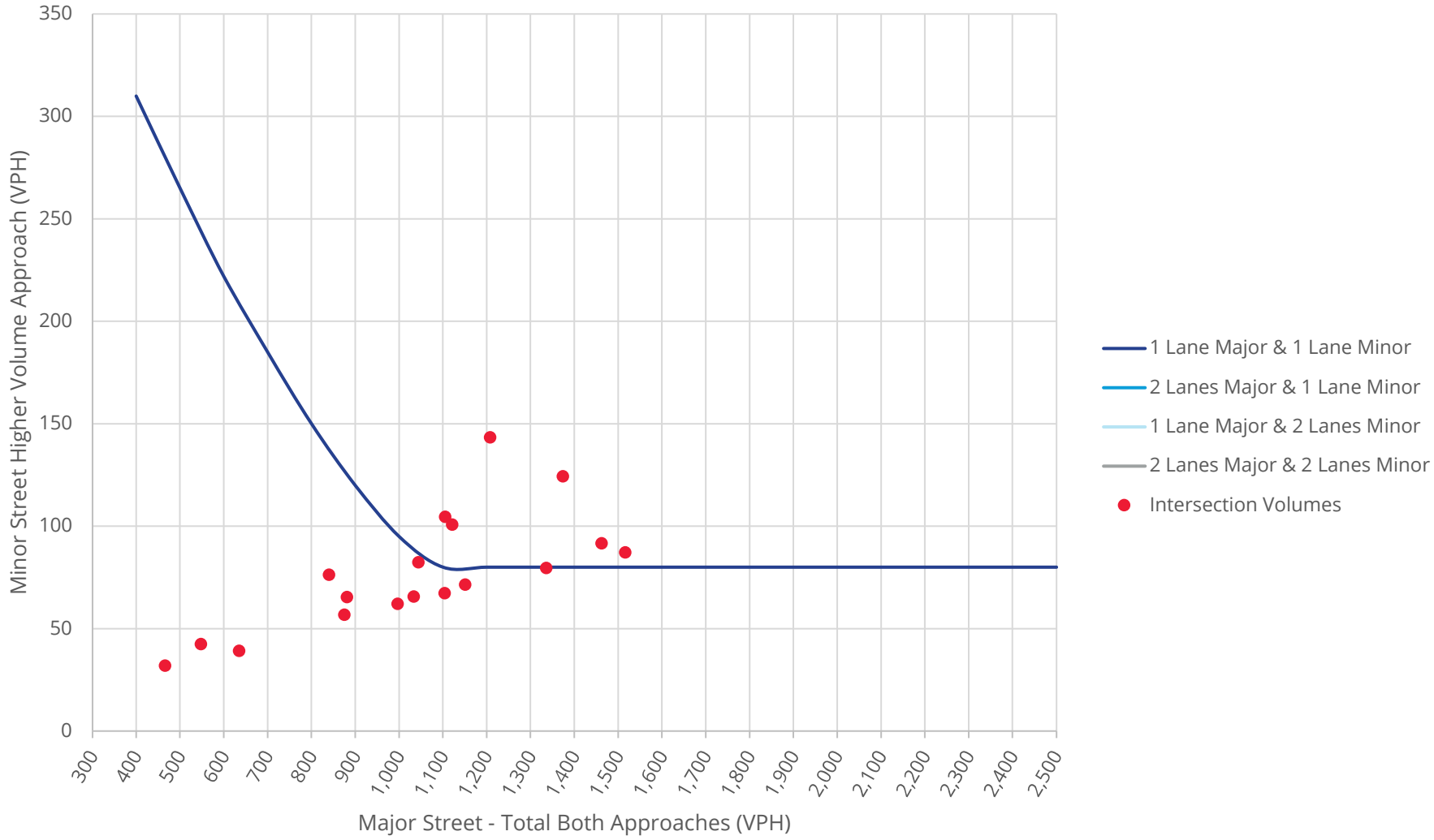
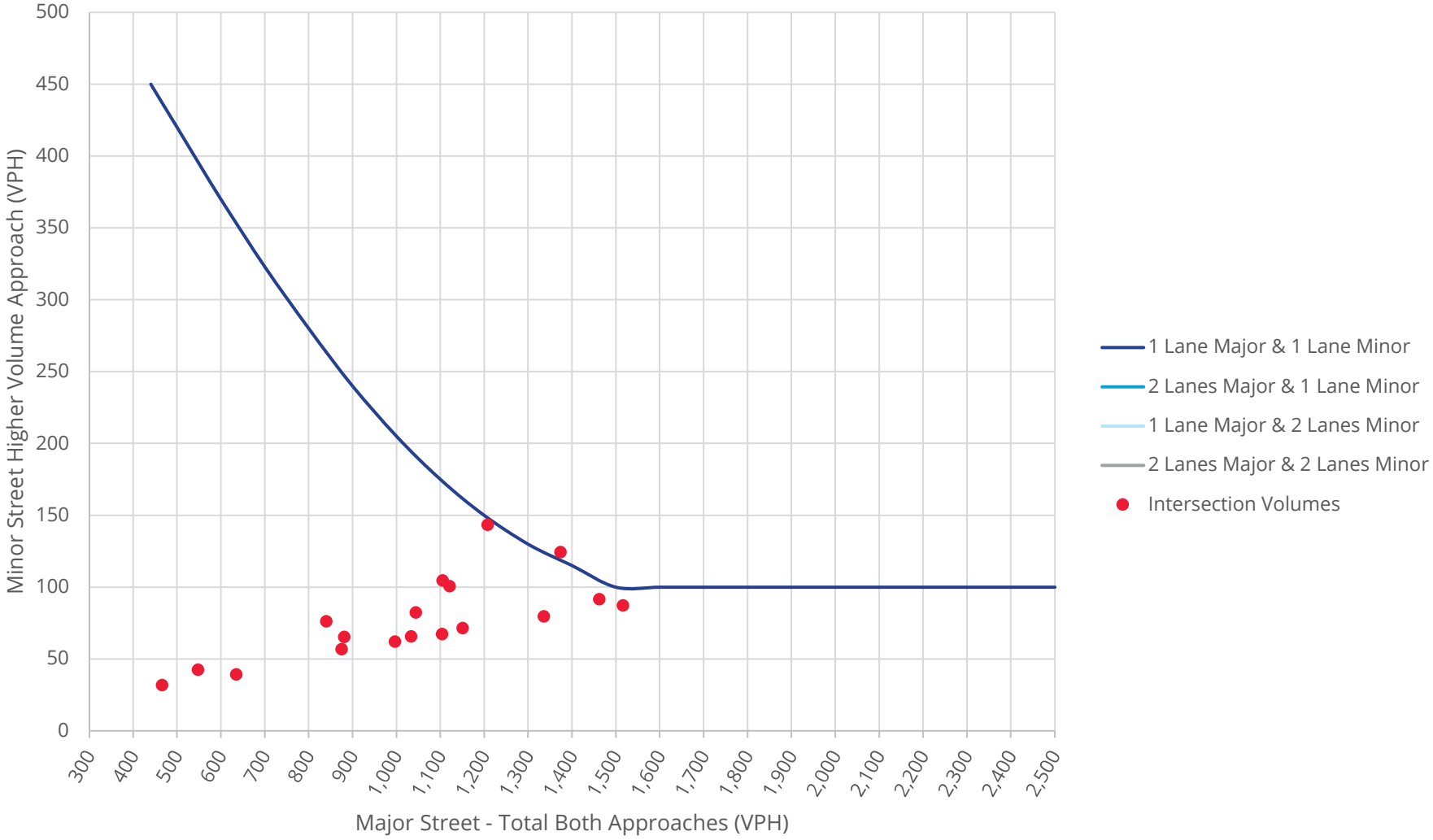


Table TSW-2

Figure 4C-3

Wolcott Avenue (NYS Route 9D) at Tompkins Avenue/Ralph Street

Warrant 3 - Peak Hour Warrant



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Appendix C | Level of Service Standards

Level of Service Standards

Level of Service for Signalized Intersections

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

- **LOS A** describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
- **LOS B** describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
- **LOS C** describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate.
- **LOS D** describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long.
- **LOS E** describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long.
- **LOS F** describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long.

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

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

Exhibit 19-8 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	v/c ≤ 1.0	v/c ≥ 1.0
≤10	A	F
>10-20	B	F
>20-35	C	F
>35-55	D	F
>55-80	E	F
>80	F	F

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

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Level of Service Criteria For Two-Way Stop-Controlled (TWSC) Unsignalized Intersections

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

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

Exhibit 20-2 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	v/c ≤ 1.0	v/c ≥ 1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

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

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

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

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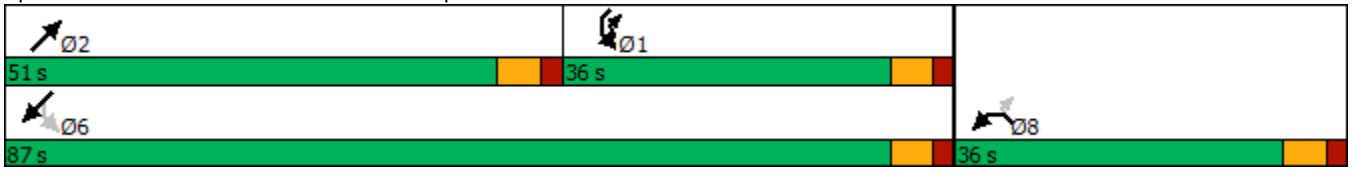
Appendix D | Capacity Analysis

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	58	248	475	45	274	629
Future Volume (vph)	58	248	475	45	274	629
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
Ped Bike Factor	0.99		1.00			
Frt		0.850	0.988			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1809	0	1778	1854
Flt Permitted	0.950				0.303	
Satd. Flow (perm)	1715	1544	1809	0	567	1854
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
Confl. Peds. (#/hr)	2			1	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	61	261	500	47	288	662
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	261	547	0	288	662
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	1	1	1		1	1
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Call	Call	Call		Call	Call
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.27	0.44	0.73		0.44	0.47
Control Delay	34.1	18.2	25.2		11.1	6.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	34.1	18.2	25.2		11.1	6.4
Queue Length 50th (ft)	22	69	171		32	95
Queue Length 95th (ft)	73	175	428		95	264
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	938	894	1294		1147	1768
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	0.07	0.29	0.42		0.25	0.37

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 66.5	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	

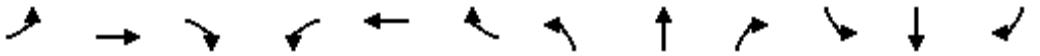
Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	58	248	475	45	274	629	
Future Volume (veh/h)	58	248	475	45	274	629	
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	1894	
Adj Flow Rate, veh/h	61	261	500	47	288	662	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	3	
Cap, veh/h	223	331	612	58	371	1132	
Arrive On Green	0.14	0.14	0.37	0.37	0.09	0.60	
Sat Flow, veh/h	1641	1460	1636	154	1818	1894	
Grp Volume(v), veh/h	61	261	0	547	288	662	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1789	1818	1894	
Q Serve(g_s), s	1.5	3.5	0.0	12.4	1.6	9.7	
Cycle Q Clear(g_c), s	1.5	3.5	0.0	12.4	1.6	9.7	
Prop In Lane	1.00	1.00		0.09	1.00		
Lane Grp Cap(c), veh/h	223	331	0	670	371	1132	
V/C Ratio(X)	0.27	0.79	0.00	0.82	0.78	0.58	
Avail Cap(c_a), veh/h	1092	1104	0	1787	1418	3405	
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	17.5	16.4	0.0	12.7	18.6	5.6	
Incr Delay (d2), s/veh	0.2	1.6	0.0	2.5	1.3	0.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.5	2.3	0.0	4.4	2.6	2.3	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	17.7	18.0	0.0	15.2	19.9	6.1	
LnGrp LOS	B	B	A	B	B	A	
Approach Vol, veh/h	322		547			950	
Approach Delay, s/veh	18.0		15.2			10.3	
Approach LOS	B		B			B	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.1	22.9			32.9	12.1
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0			81.0	30.0
Max Q Clear Time (g_c+I1), s	3.6	14.4			11.7	5.5
Green Ext Time (p_c), s	0.6	2.3			3.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	13.1
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	3	24	8	0	8	16	484	5	1	653	37
Future Volume (vph)	18	3	24	8	0	8	16	484	5	1	653	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
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		0.928			0.932			0.999			0.993	
Flt Protected		0.980			0.976		0.950					
Satd. Flow (prot)	0	1767	0	0	1661	0	1770	1851	0	0	1915	0
Flt Permitted		0.980			0.976		0.950					
Satd. Flow (perm)	0	1767	0	0	1661	0	1770	1851	0	0	1915	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	19	3	25	8	0	8	17	509	5	1	687	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	16	0	17	514	0	0	727	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

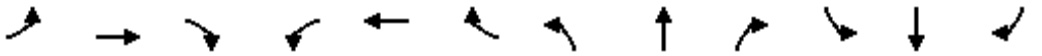
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	3	24	8	0	8	16	484	5	1	653	37
Future Vol, veh/h	18	3	24	8	0	8	16	484	5	1	653	37
Conflicting Peds, #/hr	6	0	8	14	0	12	8	0	14	12	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	13	2	2	2	6	2	2	4	11
Mvmt Flow	19	3	25	8	0	8	17	509	5	1	687	39

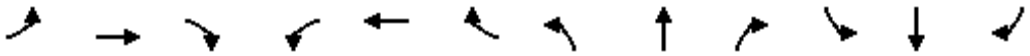
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1279	1279	729	1297	1296	538	734	0	0	528	0	0
Stage 1	717	717	-	560	560	-	-	-	-	-	-	-
Stage 2	562	562	-	737	736	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.84	7.23	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.617	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	190	221	455	132	162	543	871	-	-	1039	-	-
Stage 1	493	508	-	494	511	-	-	-	-	-	-	-
Stage 2	580	577	-	394	425	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	181	212	446	118	155	530	865	-	-	1026	-	-
Mov Cap-2 Maneuver	181	212	-	118	155	-	-	-	-	-	-	-
Stage 1	480	503	-	478	494	-	-	-	-	-	-	-
Stage 2	554	558	-	364	421	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.2	25.4	0.3	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	865	-	-	269	193	1026	-	-
HCM Lane V/C Ratio	0.019	-	-	0.176	0.087	0.001	-	-
HCM Control Delay (s)	9.2	-	-	21.2	25.4	8.5	0	-
HCM Lane LOS	A	-	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.3	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	4	29	8	9	7	16	402	2	2	447	236
Future Volume (vph)	103	4	29	8	9	7	16	402	2	2	447	236
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		1.00	0.98		0.99		1.00	1.00		0.99	0.99	
Frt			0.850		0.960			0.999			0.948	
Flt Protected		0.954			0.984		0.950			0.950		
Satd. Flow (prot)	0	1713	1494	0	1835	0	1754	1844	0	1743	1688	0
Flt Permitted		0.714			0.891		0.276			0.472		
Satd. Flow (perm)	0	1280	1460	0	1660	0	509	1844	0	860	1688	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		8						38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	1		2	2		1	7		14	14		7
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	25%	7%	2%	2%	2%	6%	6%	2%	2%	5%	2%
Adj. Flow (vph)	111	4	31	9	10	8	17	432	2	2	481	254
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	31	0	27	0	17	434	0	2	735	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	



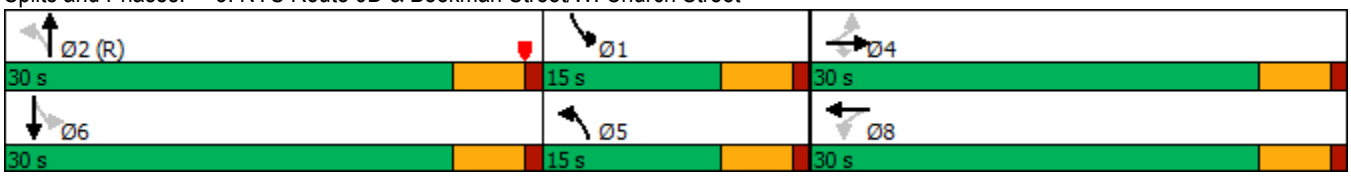
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
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	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.54	0.09		0.10		0.04	0.33		0.00	0.60	
Control Delay		36.2	0.6		18.4		3.2	7.4		5.5	12.9	
Queue Delay		0.0	0.0		0.0		0.0	0.2		0.0	0.0	
Total Delay		36.2	0.6		18.4		3.2	7.6		5.5	12.9	
Queue Length 50th (ft)		51	0		8		1	71		0	128	
Queue Length 95th (ft)		82	0		23		m5	148		3	#542	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		426	554		558		579	1325		816	1224	
Starvation Cap Reductn		0	0		0		0	274		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		0.27	0.06		0.05		0.03	0.41		0.00	0.60	

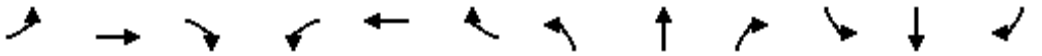
Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	4	29	8	9	7	16	402	2	2	447	236
Future Volume (veh/h)	103	4	29	8	9	7	16	402	2	2	447	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	0.99		0.96
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	1817	1506	1773	2263	2263	2263	2046	2046	2106	1817	1773	1817
Adj Flow Rate, veh/h	111	4	31	9	10	8	17	432	2	2	481	254
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	25	7	2	2	2	6	6	2	2	5	2
Cap, veh/h	231	6	286	82	96	48	633	678	3	714	358	189
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.28	0.33	0.33	0.28	0.33	0.33
Sat Flow, veh/h	716	33	1494	95	501	251	1948	2034	9	1731	1074	567
Grp Volume(v), veh/h	115	0	31	27	0	0	17	0	434	2	0	735
Grp Sat Flow(s),veh/h/ln	749	0	1494	846	0	0	1948	0	2044	1731	0	1642
Q Serve(g_s), s	0.0	0.0	1.3	0.1	0.0	0.0	0.0	0.0	13.5	0.0	0.0	25.0
Cycle Q Clear(g_c), s	12.2	0.0	1.3	12.3	0.0	0.0	0.0	0.0	13.5	0.0	0.0	25.0
Prop In Lane	0.97		1.00	0.33		0.30	1.00		0.00	1.00		0.35
Lane Grp Cap(c), veh/h	237	0	286	226	0	0	633	0	681	714	0	547
V/C Ratio(X)	0.48	0.00	0.11	0.12	0.00	0.00	0.03	0.00	0.64	0.00	0.00	1.34
Avail Cap(c_a), veh/h	398	0	498	497	0	0	633	0	681	714	0	547
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	0.94	0.00	0.94	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	25.1	25.3	0.0	0.0	19.7	0.0	21.2	12.2	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	0.0	0.0	4.2	0.0	0.0	166.4
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	2.0	0.0	0.4	0.4	0.0	0.0	0.2	0.0	6.9	0.0	0.0	34.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	0.0	25.1	25.4	0.0	0.0	19.7	0.0	25.4	12.2	0.0	191.4
LnGrp LOS	C	A	C	C	A	A	B	A	C	B	A	F
Approach Vol, veh/h		146			27			451			737	
Approach Delay, s/veh		29.0			25.4			25.2			190.9	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.7	30.0		19.3	25.7	30.0		19.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	15.5		14.2	2.0	27.0		14.3				
Green Ext Time (p_c), s	0.0	0.7		0.2	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		115.3	
HCM 6th LOS		F	

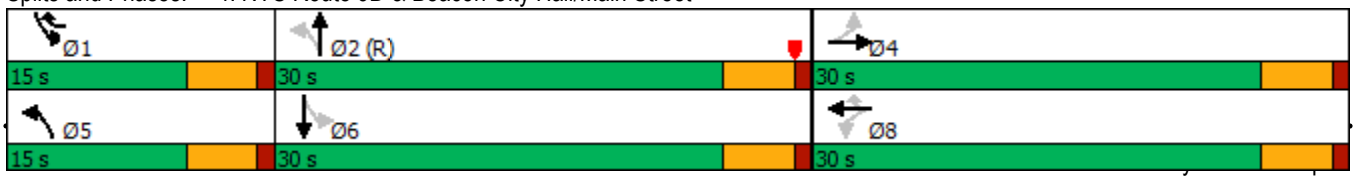
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	4	2	8	6	107	4	310	24	222	257	5
Future Volume (vph)	3	4	2	8	6	107	4	310	24	222	257	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-3%			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		0.99				0.96		1.00			1.00	
Frt		0.973				0.850		0.989			0.997	
Flt Protected		0.984			0.973		0.950			0.950		
Satd. Flow (prot)	0	1797	0	0	1923	1647	1832	1859	0	1743	1846	0
Flt Permitted		0.883			0.817		0.578			0.425		
Satd. Flow (perm)	0	1613	0	0	1614	1574	1115	1859	0	780	1846	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			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	5	7	3	9	7	118	5	392	30	252	292	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	16	118	5	422	0	252	298	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

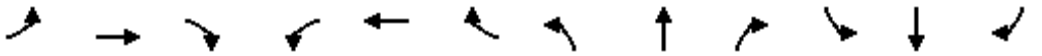
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
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	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.08			0.08	0.39	0.01	0.35		0.33	0.19	
Control Delay		23.0			26.1	25.1	5.8	11.0		4.3	4.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		23.0			26.1	25.1	5.8	11.0		4.3	4.0	
Queue Length 50th (ft)		5			7	53	0	50		0	0	
Queue Length 95th (ft)		10			19	51	5	220		59	72	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		539			538	349	969	1211		780	1560	
Starvation Cap Reductn		0			0	0	0	0		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		0.03			0.03	0.34	0.01	0.35		0.32	0.19	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4	2	8	6	107	4	310	24	222	257	5
Future Volume (veh/h)	3	4	2	8	6	107	4	310	24	222	257	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.94	0.97		0.94	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	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	5	7	3	9	7	118	5	392	30	252	292	6
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	109	129	44	191	136	381	783	1066	82	675	1185	24
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.00	0.59	0.59	0.08	0.66	0.66
Sat Flow, veh/h	334	969	326	871	1016	1747	1922	1817	139	1731	1788	37
Grp Volume(v), veh/h	15	0	0	16	0	118	5	0	422	252	0	298
Grp Sat Flow(s),veh/h/ln	1629	0	0	1887	0	1747	1922	0	1956	1731	0	1825
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	4.3	0.1	0.0	8.5	3.9	0.0	4.9
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.5	0.0	4.3	0.1	0.0	8.5	3.9	0.0	4.9
Prop In Lane	0.33		0.20	0.56		1.00	1.00		0.07	1.00		0.02
Lane Grp Cap(c), veh/h	282	0	0	327	0	381	783	0	1148	675	0	1209
V/C Ratio(X)	0.05	0.00	0.00	0.05	0.00	0.31	0.01	0.00	0.37	0.37	0.00	0.25
Avail Cap(c_a), veh/h	589	0	0	692	0	730	1032	0	1148	768	0	1209
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	0.79	0.00	0.79
Uniform Delay (d), s/veh	28.4	0.0	0.0	28.4	0.0	24.9	6.3	0.0	8.2	5.1	0.0	5.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.9	0.1	0.0	0.4
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	0.2	0.0	0.0	0.2	0.0	1.7	0.0	0.0	3.4	1.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	0.0	0.0	28.4	0.0	25.1	6.3	0.0	9.1	5.2	0.0	5.5
LnGrp LOS	C	A	A	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		15			134			427			550	
Approach Delay, s/veh		28.4			25.5			9.0			5.4	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	49.0		15.0	5.3	54.7		15.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	5.9	10.5		2.5	2.1	6.9		6.3				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		9.5	
HCM 6th LOS		A	

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	1	1	1	135	261	0
Future Volume (vph)	1	1	1	135	261	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1838	0	0	1939	1909	0
Flt Permitted	0.976					
Satd. Flow (perm)	1838	0	0	1939	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	16	16			14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	1	1	1	171	330	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	172	330	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	1	1	1	135	261	0
Future Vol, veh/h	1	1	1	135	261	0
Conflicting Peds, #/hr	14	16	16	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	1	1	1	171	330	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	533	362	346	0	-	0
Stage 1	346	-	-	-	-	-
Stage 2	187	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	682	755	1213	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	662	733	1195	-	-	-
Mov Cap-2 Maneuver	662	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	924	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.2	0.1	0
HCM LOS	B		

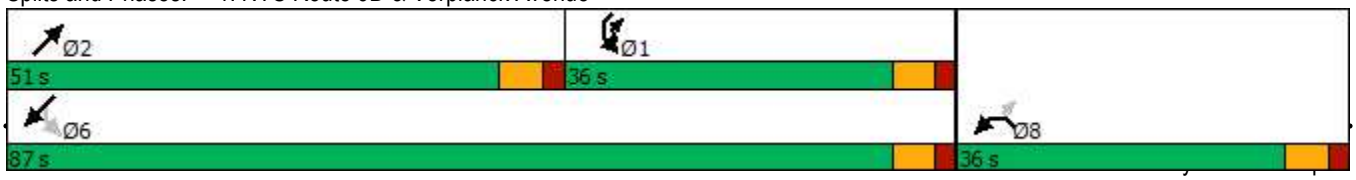
Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1195	-	696	-	-
HCM Lane V/C Ratio	0.001	-	0.004	-	-
HCM Control Delay (s)	8	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	59	297	625	50	219	574
Future Volume (vph)	59	297	625	50	219	574
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
Ped Bike Factor	1.00		1.00			
Frt		0.850	0.990			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1813	0	1778	1854
Flt Permitted	0.950				0.217	
Satd. Flow (perm)	1720	1544	1813	0	406	1854
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
Confl. Peds. (#/hr)	1			3	3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	62	313	658	53	231	604
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	313	711	0	231	604
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	1	1	1		1	1
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Call	Call	Call		Call	Call
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	3		3			
v/c Ratio	0.36	0.58	0.77		0.38	0.40
Control Delay	45.1	26.9	27.9		10.7	4.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	45.1	26.9	27.9		10.7	4.9
Queue Length 50th (ft)	34	139	313		25	85
Queue Length 95th (ft)	77	213	#728		75	229
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	589	614	928		830	1650
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	0.11	0.51	0.77		0.28	0.37

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 89.7	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 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



Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	59	297	625	50	219	574	
Future Volume (veh/h)	59	297	625	50	219	574	
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	1894	
Adj Flow Rate, veh/h	62	313	658	53	231	604	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	3	
Cap, veh/h	292	367	744	60	293	1178	
Arrive On Green	0.18	0.18	0.45	0.45	0.07	0.62	
Sat Flow, veh/h	1641	1460	1659	134	1818	1894	
Grp Volume(v), veh/h	62	313	0	711	231	604	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1793	1818	1894	
Q Serve(g_s), s	1.9	7.9	0.0	21.7	2.0	10.6	
Cycle Q Clear(g_c), s	1.9	7.9	0.0	21.7	2.0	10.6	
Prop In Lane	1.00	1.00		0.07	1.00		
Lane Grp Cap(c), veh/h	292	367	0	804	293	1178	
V/C Ratio(X)	0.21	0.85	0.00	0.88	0.79	0.51	
Avail Cap(c_a), veh/h	821	837	0	1345	1069	2557	
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	21.1	21.4	0.0	15.1	25.7	6.3	
Incr Delay (d2), s/veh	0.1	2.2	0.0	4.1	1.8	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.7	4.0	0.0	8.3	3.1	3.1	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	21.2	23.6	0.0	19.2	27.5	6.6	
LnGrp LOS	C	C	A	B	C	A	
Approach Vol, veh/h	375		711			835	
Approach Delay, s/veh	23.2		19.2			12.4	
Approach LOS	C		B			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.4	32.9				43.3	16.7
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	4.0	23.7				12.6	9.9
Green Ext Time (p_c), s	0.4	3.1				2.7	0.8

Intersection Summary		
HCM 6th Ctrl Delay		17.0
HCM 6th LOS		B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	5	11	6	3	4	14	638	5	5	584	24
Future Volume (vph)	21	5	11	6	3	4	14	638	5	5	584	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
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		0.959			0.961			0.999			0.995	
Flt Protected		0.972			0.976		0.950					
Satd. Flow (prot)	0	1830	0	0	1696	0	1770	1923	0	0	1945	0
Flt Permitted		0.972			0.976		0.950					
Satd. Flow (perm)	0	1830	0	0	1696	0	1770	1923	0	0	1945	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	23	5	12	7	3	4	15	693	5	5	635	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	14	0	15	698	0	0	666	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	5	11	6	3	4	14	638	5	5	584	24
Future Vol, veh/h	21	5	11	6	3	4	14	638	5	5	584	24
Conflicting Peds, #/hr	4	0	4	2	0	2	4	0	2	2	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	25	2	2	2	2	3	2
Mvmt Flow	23	5	12	7	3	4	15	693	5	5	635	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1395	1392	656	1399	1403	702	665	0	0	700	0	0
Stage 1	662	662	-	728	728	-	-	-	-	-	-	-
Stage 2	733	730	-	671	675	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.82	7.12	6.52	6.45	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.525	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	162	193	501	118	140	401	924	-	-	897	-	-
Stage 1	522	532	-	415	429	-	-	-	-	-	-	-
Stage 2	485	503	-	446	453	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	153	187	497	110	136	399	921	-	-	895	-	-
Mov Cap-2 Maneuver	153	187	-	110	136	-	-	-	-	-	-	-
Stage 1	512	525	-	408	421	-	-	-	-	-	-	-
Stage 2	467	494	-	425	447	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.6	31.5	0.2	0.1
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	921	-	-	199	150	895	-	-
HCM Lane V/C Ratio	0.017	-	-	0.202	0.094	0.006	-	-
HCM Control Delay (s)	9	-	-	27.6	31.5	9	0	-
HCM Lane LOS	A	-	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	12	24	1	7	6	31	376	12	4	462	135
Future Volume (vph)	275	12	24	1	7	6	31	376	12	4	462	135
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		1.00			0.99		1.00	1.00		1.00	0.99	
Frt			0.850		0.941			0.995			0.966	
Flt Protected		0.954			0.997		0.950			0.950		
Satd. Flow (prot)	0	1759	1567	0	1815	0	1690	1890	0	1743	1746	0
Flt Permitted		0.723			0.985		0.241			0.426		
Satd. Flow (perm)	0	1328	1567	0	1793	0	428	1890	0	781	1746	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		7			2			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	2					2	6		2	2		6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	10%	3%	2%	2%	3%	2%
Adj. Flow (vph)	299	13	26	1	8	7	34	409	13	4	502	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312	26	0	16	0	34	422	0	4	649	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		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	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%	44.4%	44.4%	44.4%		22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0		15.0	25.0		15.0	25.0	
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	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.82	0.05		0.03		0.11	0.38		0.01	0.68	
Control Delay		46.3	0.2		14.3		9.8	12.0		10.5	22.9	
Queue Delay		0.0	0.0		0.0		0.0	0.4		0.0	0.0	
Total Delay		46.3	0.2		14.3		9.8	12.3		10.5	22.9	
Queue Length 50th (ft)		164	0		4		7	172		1	272	
Queue Length 95th (ft)		230	0		16		16	142		6	#554	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		516	661		701		523	1099		714	954	
Starvation Cap Reductn		0	0		0		0	265		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		0.60	0.04		0.02		0.07	0.51		0.01	0.68	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	12	24	1	7	6	31	376	12	4	462	135
Future Volume (veh/h)	275	12	24	1	7	6	31	376	12	4	462	135
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		0.98	1.00		0.97	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	1847	1847	2263	2263	2263	1986	2091	2106	1817	1803	1817
Adj Flow Rate, veh/h	299	13	26	1	8	7	34	409	13	4	502	147
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	10	3	2	2	3	2
Cap, veh/h	174	4	607	43	263	205	395	559	18	456	369	108
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.17	0.28	0.28	0.17	0.28	0.28
Sat Flow, veh/h	246	11	1561	0	677	526	1891	2013	64	1731	1328	389
Grp Volume(v), veh/h	312	0	26	16	0	0	34	0	422	4	0	649
Grp Sat Flow(s),veh/h/ln	257	0	1561	1203	0	0	1891	0	2077	1731	0	1717
Q Serve(g_s), s	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	16.6	0.0	0.0	25.0
Cycle Q Clear(g_c), s	35.0	0.0	0.9	35.0	0.0	0.0	0.0	0.0	16.6	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.06		0.44	1.00		0.03	1.00		0.23
Lane Grp Cap(c), veh/h	178	0	607	510	0	0	395	0	577	456	0	477
V/C Ratio(X)	1.75	0.00	0.04	0.03	0.00	0.00	0.09	0.00	0.73	0.01	0.00	1.36
Avail Cap(c_a), veh/h	178	0	607	510	0	0	395	0	577	456	0	477
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	0.93	0.00	0.93	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	17.1	18.1	0.0	0.0	31.3	0.0	29.5	24.7	0.0	32.5
Incr Delay (d2), s/veh	359.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	175.4
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	21.7	0.0	0.3	0.2	0.0	0.0	0.6	0.0	9.2	0.1	0.0	33.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	394.9	0.0	17.1	18.1	0.0	0.0	31.3	0.0	36.9	24.7	0.0	207.9
LnGrp LOS	F	A	B	B	A	A	C	A	D	C	A	F
Approach Vol, veh/h		338			16			456			653	
Approach Delay, s/veh		365.9			18.1			36.5			206.7	
Approach LOS		F			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	30.0		40.0	20.0	30.0		40.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	18.6		37.0	2.0	27.0		37.0				
Green Ext Time (p_c), s	0.0	0.5		0.0	0.0	0.0		0.0				

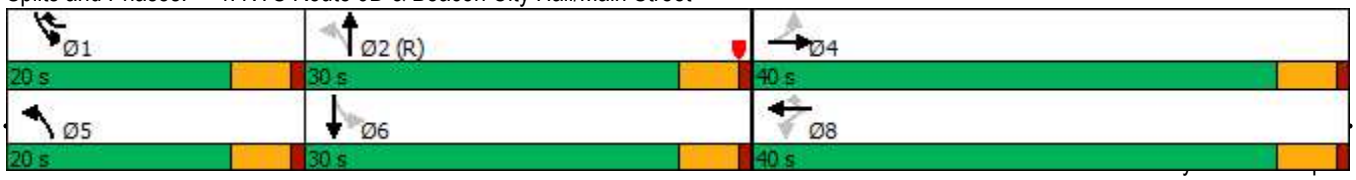
Intersection Summary			
HCM 6th Ctrl Delay		188.4	
HCM 6th LOS		F	

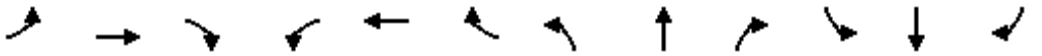
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	7	1	35	1	152	1	265	64	215	274	0
Future Volume (vph)	1	7	1	35	1	152	1	265	64	215	274	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-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		1.00				0.95		0.99				
Frt		0.983				0.850		0.971				
Flt Protected		0.994			0.954		0.950			0.950		
Satd. Flow (prot)	0	1838	0	0	1885	1647	1832	1804	0	1743	1853	0
Flt Permitted		0.969			0.720		0.571			0.418		
Satd. Flow (perm)	0	1792	0	0	1423	1566	1101	1804	0	767	1853	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		2										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			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	12	2	38	1	167	1	335	81	244	311	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	16	0	0	39	167	1	416	0	244	311	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	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		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0		40.0	40.0	20.0	20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%		44.4%	44.4%	22.2%	22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0	15.0	15.0	25.0		15.0	25.0	
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	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	9	9		15	15			21				
v/c Ratio		0.06			0.20	0.42	0.00	0.38		0.33	0.21	
Control Delay		25.9			32.2	26.2	7.0	14.7		5.8	4.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.2	
Total Delay		25.9			32.2	26.2	7.0	14.7		5.8	4.7	
Queue Length 50th (ft)		8			22	80	0	99		16	20	
Queue Length 95th (ft)		14			43	89	2	232		69	73	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		698			553	464	969	1100		775	1476	
Starvation Cap Reductn		0			0	0	0	0		0	560	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.02			0.07	0.36	0.00	0.38		0.31	0.34	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	7	1	35	1	152	1	265	64	215	274	0
Future Volume (veh/h)	1	7	1	35	1	152	1	265	64	215	274	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.95	0.99		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	2	12	2	38	1	167	1	335	81	244	311	0
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	57	219	33	314	7	392	786	942	228	679	1255	0
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.61	0.61	0.07	0.68	0.00
Sat Flow, veh/h	81	1485	224	1592	51	1757	1922	1533	371	1731	1832	0
Grp Volume(v), veh/h	16	0	0	39	0	167	1	0	416	244	311	0
Grp Sat Flow(s),veh/h/ln	1791	0	0	1643	0	1757	1922	0	1904	1731	1832	0
Q Serve(g_s), s	0.0	0.0	0.0	1.0	0.0	7.4	0.0	0.0	9.7	4.3	5.8	0.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.7	0.0	7.4	0.0	0.0	9.7	4.3	5.8	0.0
Prop In Lane	0.12		0.12	0.97		1.00	1.00		0.19	1.00		0.00
Lane Grp Cap(c), veh/h	309	0	0	322	0	392	786	0	1170	679	1255	0
V/C Ratio(X)	0.05	0.00	0.00	0.12	0.00	0.43	0.00	0.00	0.36	0.36	0.25	0.00
Avail Cap(c_a), veh/h	723	0	0	712	0	816	1104	0	1170	844	1255	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	1.00	1.00	0.00	1.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	33.0	0.0	0.0	33.4	0.0	30.3	6.7	0.0	8.6	5.5	5.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.8	0.1	0.3	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	0.3	0.0	0.0	0.7	0.0	3.1	0.0	0.0	3.9	1.3	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	0.0	33.4	0.0	30.6	6.7	0.0	9.4	5.6	5.7	0.0
LnGrp LOS	C	A	A	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		16			206			417			555	
Approach Delay, s/veh		33.0			31.1			9.4			5.7	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.4	60.3		18.3	5.1	66.6		18.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	6.3	11.7		2.7	2.0	7.8		9.4				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		11.7	
HCM 6th LOS		B	

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	6	0	309	171	2
Future Volume (vph)	2	6	0	309	171	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.902				0.998	
Flt Protected	0.987					
Satd. Flow (prot)	1799	0	0	1977	1869	0
Flt Permitted	0.987					
Satd. Flow (perm)	1799	0	0	1977	1869	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	8	8			14
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	3	8	0	435	241	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	0	435	244	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	6	0	309	171	2
Future Vol, veh/h	2	6	0	309	171	2
Conflicting Peds, #/hr	14	8	8	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	3	8	0	435	241	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	706	265	258	0	-	0
Stage 1	257	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	595	833	1307	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	580	816	1290	-	-	-
Mov Cap-2 Maneuver	580	-	-	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1290	-	741	-	-
HCM Lane V/C Ratio	-	-	0.015	-	-
HCM Control Delay (s)	0	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	311	173	0
Future Volume (vph)	0	0	0	311	173	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	2049	0	0	2090	1766	0
Flt Permitted						
Satd. Flow (perm)	2049	0	0	2090	1766	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	0	0	0	438	244	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	438	244	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

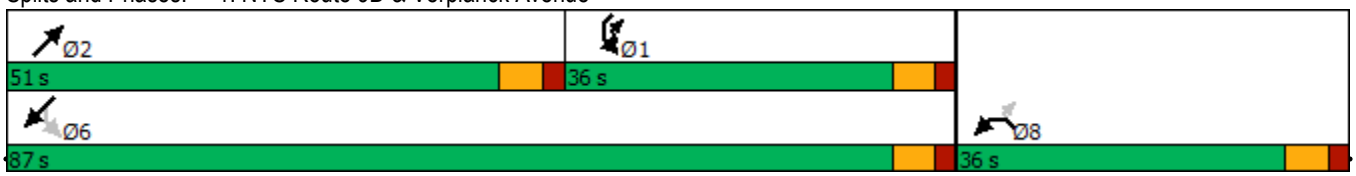
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	43	247	547	35	204	605
Future Volume (vph)	43	247	547	35	204	605
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98		1.00			
Frt		0.850	0.992			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1818	0	1778	1872
Flt Permitted	0.950				0.264	
Satd. Flow (perm)	1688	1544	1818	0	494	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
Confl. Peds. (#/hr)	7			1	1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	268	595	38	222	658
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	268	633	0	222	658
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	1	1	1		1	1
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	Call	Call	Call		Call	Call
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
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

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.23	0.52	0.72		0.33	0.42
Control Delay	37.3	23.2	23.6		8.3	4.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	37.3	23.2	23.6		8.3	4.9
Queue Length 50th (ft)	21	93	223		22	90
Queue Length 95th (ft)	60	181	#571		73	260
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	790	769	1232		1045	1769
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	0.06	0.35	0.51		0.21	0.37

Intersection Summary

Area Type: Other
Cycle Length: 123
Actuated Cycle Length: 72.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

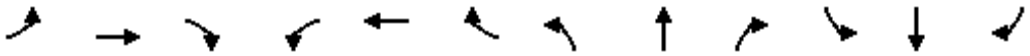
Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	43	247	547	35	204	605	
Future Volume (veh/h)	43	247	547	35	204	605	
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	47	268	595	38	222	658	
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	276	330	701	45	295	1131	
Arrive On Green	0.17	0.17	0.41	0.41	0.06	0.59	
Sat Flow, veh/h	1641	1460	1690	108	1818	1909	
Grp Volume(v), veh/h	47	268	0	633	222	658	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1798	1818	1909	
Q Serve(g_s), s	1.2	5.8	0.0	15.9	0.6	10.7	
Cycle Q Clear(g_c), s	1.2	5.8	0.0	15.9	0.6	10.7	
Prop In Lane	1.00	1.00		0.06	1.00		
Lane Grp Cap(c), veh/h	276	330	0	746	295	1131	
V/C Ratio(X)	0.17	0.81	0.00	0.85	0.75	0.58	
Avail Cap(c_a), veh/h	983	959	0	1614	1279	3086	
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	17.8	18.4	0.0	13.2	22.0	6.4	
Incr Delay (d2), s/veh	0.1	1.9	0.0	2.8	1.5	0.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	2.7	0.0	5.7	2.4	3.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.0	20.2	0.0	16.0	23.4	6.8	
LnGrp LOS	B	C	A	B	C	A	
Approach Vol, veh/h	315		633			880	
Approach Delay, s/veh	19.9		16.0			11.0	
Approach LOS	B		B			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.9	26.8				35.7	14.4
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	2.6	17.9				12.7	7.8
Green Ext Time (p_c), s	0.4	2.8				3.0	0.7

Intersection Summary		
HCM 6th Ctrl Delay	14.3	
HCM 6th LOS	B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	1	10	3	5	10	11	543	4	7	619	22
Future Volume (vph)	29	1	10	3	5	10	11	543	4	7	619	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
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		0.965			0.922			0.999			0.995	
Flt Protected		0.965			0.992		0.950				0.999	
Satd. Flow (prot)	0	1815	0	0	1761	0	1770	1923	0	0	1961	0
Flt Permitted		0.965			0.992		0.950				0.999	
Satd. Flow (perm)	0	1815	0	0	1761	0	1770	1923	0	0	1961	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	31	1	11	3	5	11	12	578	4	7	659	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	19	0	12	582	0	0	689	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
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	

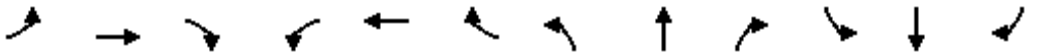
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	1	10	3	5	10	11	543	4	7	619	22
Future Vol, veh/h	29	1	10	3	5	10	11	543	4	7	619	22
Conflicting Peds, #/hr	6	0	6	2	0	2	6	0	2	2	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	1	11	3	5	11	12	578	4	7	659	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1309	1299	683	1303	1308	588	688	0	0	584	0	0
Stage 1	691	691	-	606	606	-	-	-	-	-	-	-
Stage 2	618	608	-	697	702	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.72	5.82	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	181	215	485	138	159	509	906	-	-	991	-	-
Stage 1	505	520	-	484	487	-	-	-	-	-	-	-
Stage 2	545	556	-	431	440	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	168	208	480	131	154	505	901	-	-	989	-	-
Mov Cap-2 Maneuver	168	208	-	131	154	-	-	-	-	-	-	-
Stage 1	495	512	-	477	480	-	-	-	-	-	-	-
Stage 2	518	548	-	414	433	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.5	21.4	0.2	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	901	-	-	202	239	989	-	-
HCM Lane V/C Ratio	0.013	-	-	0.211	0.08	0.008	-	-
HCM Control Delay (s)	9	-	-	27.5	21.4	8.7	0	-
HCM Lane LOS	A	-	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.3	0	-	-

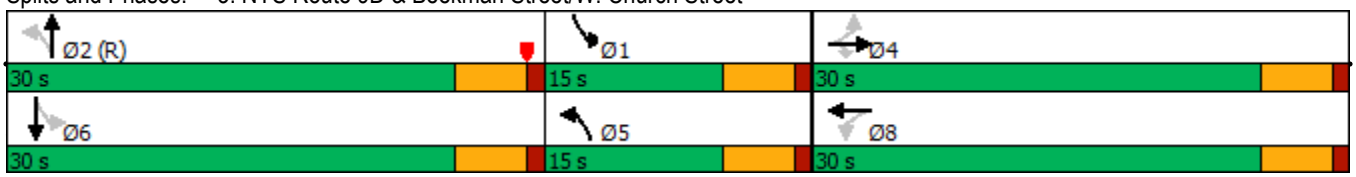


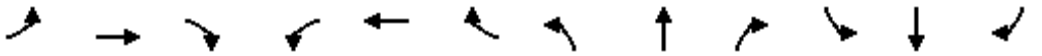
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	5	32	9	3	7	60	411	3	7	445	180
Future Volume (vph)	140	5	32	9	3	7	60	411	3	7	445	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-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		0.98		1.00	1.00		1.00	0.99	
Frt			0.850		0.949			0.999			0.957	
Flt Protected		0.954			0.977		0.950			0.950		
Satd. Flow (prot)	0	1759	1567	0	1787	0	1823	1916	0	1743	1741	0
Flt Permitted		0.719			0.856		0.237			0.425		
Satd. Flow (perm)	0	1304	1524	0	1563	0	454	1916	0	777	1741	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		8						29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	11		3	3		11	6		9	9		6
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	157	6	36	10	3	8	67	462	3	8	500	202
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	36	0	21	0	67	465	0	8	702	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0	0.0		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	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
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	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				11	11							
v/c Ratio		0.65	0.10		0.07		0.18	0.38		0.01	0.69	
Control Delay		38.8	0.5		16.6		8.4	10.7		6.4	18.9	
Queue Delay		0.0	0.0		0.0		0.0	0.3		0.0	0.0	
Total Delay		38.8	0.5		16.6		8.4	11.0		6.4	18.9	
Queue Length 50th (ft)		71	0		5		14	152		1	208	
Queue Length 95th (ft)		111	0		19		m21	176		7	#504	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		434	576		526		522	1238		679	1015	
Starvation Cap Reductn		0	0		0		0	300		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		0.38	0.06		0.04		0.13	0.50		0.01	0.69	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

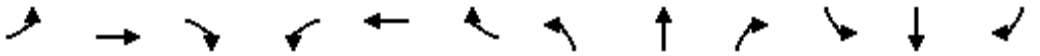




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	5	32	9	3	7	60	411	3	7	445	180
Future Volume (veh/h)	140	5	32	9	3	7	60	411	3	7	445	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.98		0.97	1.00		0.99	0.99		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	1847	1847	1847	2263	2263	2263	2106	2106	2106	1817	1817	1817
Adj Flow Rate, veh/h	157	6	36	10	3	8	67	462	3	8	500	202
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	8	307	116	51	59	618	697	5	675	408	165
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.26	0.33	0.33	0.26	0.33	0.33
Sat Flow, veh/h	1056	40	1485	217	248	286	2006	2090	14	1731	1225	495
Grp Volume(v), veh/h	163	0	36	21	0	0	67	0	465	8	0	702
Grp Sat Flow(s),veh/h/ln	1097	0	1485	752	0	0	2006	0	2103	1731	0	1720
Q Serve(g_s), s	0.0	0.0	1.5	0.1	0.0	0.0	0.0	0.0	14.2	0.0	0.0	25.0
Cycle Q Clear(g_c), s	11.5	0.0	1.5	11.6	0.0	0.0	0.0	0.0	14.2	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.48		0.38	1.00		0.01	1.00		0.29
Lane Grp Cap(c), veh/h	321	0	307	226	0	0	618	0	701	675	0	573
V/C Ratio(X)	0.51	0.00	0.12	0.09	0.00	0.00	0.11	0.00	0.66	0.01	0.00	1.22
Avail Cap(c_a), veh/h	495	0	495	452	0	0	618	0	701	675	0	573
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	0.91	0.00	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	0.0	24.2	24.4	0.0	0.0	20.5	0.0	21.4	13.4	0.0	25.0
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.1	0.0	0.0	0.0	0.0	4.5	0.0	0.0	115.8
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	2.7	0.0	0.5	0.3	0.0	0.0	0.8	0.0	7.4	0.1	0.0	27.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	0.0	24.3	24.5	0.0	0.0	20.6	0.0	25.9	13.4	0.0	140.8
LnGrp LOS	C	A	C	C	A	A	C	A	C	B	A	F
Approach Vol, veh/h		199			21			532			710	
Approach Delay, s/veh		27.9			24.5			25.2			139.4	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.5	30.0		20.5	24.5	30.0		20.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	16.2		13.5	2.0	27.0		13.6				
Green Ext Time (p_c), s	0.0	0.7		0.3	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		81.0	
HCM 6th LOS		F	

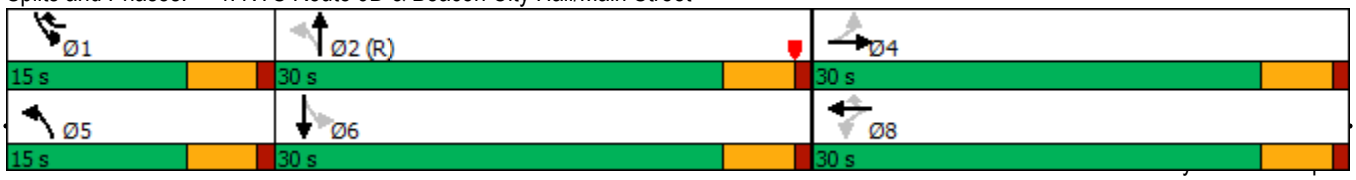


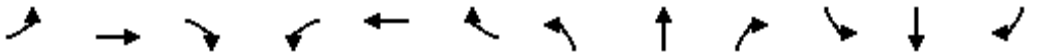
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	23	0	185	1	288	37	233	250	2
Future Volume (vph)	1	1	1	23	0	185	1	288	37	233	250	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-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		0.99				0.97		0.99			1.00	
Frt		0.955				0.850		0.983			0.999	
Flt Protected		0.984			0.950		0.950			0.950		
Satd. Flow (prot)	0	1751	0	0	1877	1663	1832	1832	0	1760	1851	0
Flt Permitted		0.890			0.756		0.591			0.451		
Satd. Flow (perm)	0	1584	0	0	1494	1614	1140	1832	0	836	1851	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		1									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	1	1	1	26	0	208	1	327	42	253	272	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	26	208	1	369	0	253	274	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0	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		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
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	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	14	14		6	6			48				
v/c Ratio		0.02			0.14	0.58	0.00	0.32		0.31	0.18	
Control Delay		21.0			27.5	29.2	6.0	11.3		4.2	4.1	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		21.0			27.5	29.2	6.0	11.3		4.2	4.1	
Queue Length 50th (ft)		1			12	92	0	55		0	0	
Queue Length 95th (ft)		5			25	83	2	220		m57	m65	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		528			498	377	952	1138		829	1561	
Starvation Cap Reductn		0			0	0	0	0		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		0.01			0.05	0.55	0.00	0.32		0.31	0.18	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	23	0	185	1	288	37	233	250	2
Future Volume (veh/h)	1	1	1	23	0	185	1	288	37	233	250	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.96		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	1	1	1	26	0	208	1	327	42	253	272	2
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	120	113	85	357	0	455	754	949	122	681	1156	9
Arrive On Green	0.16	0.16	0.16	0.16	0.00	0.16	0.00	0.55	0.55	0.08	0.64	0.64
Sat Flow, veh/h	344	696	520	1607	0	1830	1922	1716	220	1745	1816	13
Grp Volume(v), veh/h	3	0	0	26	0	208	1	0	369	253	0	274
Grp Sat Flow(s),veh/h/ln	1561	0	0	1608	0	1830	1922	0	1936	1745	0	1830
Q Serve(g_s), s	0.0	0.0	0.0	0.9	0.0	7.2	0.0	0.0	7.9	4.3	0.0	4.8
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.0	0.0	7.2	0.0	0.0	7.9	4.3	0.0	4.8
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.11	1.00		0.01
Lane Grp Cap(c), veh/h	318	0	0	357	0	455	754	0	1071	681	0	1165
V/C Ratio(X)	0.01	0.00	0.00	0.07	0.00	0.46	0.00	0.00	0.34	0.37	0.00	0.24
Avail Cap(c_a), veh/h	570	0	0	631	0	767	1007	0	1071	767	0	1165
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	0.70	0.00	0.70
Uniform Delay (d), s/veh	26.3	0.0	0.0	26.7	0.0	24.0	7.5	0.0	9.3	5.8	0.0	5.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.9	0.1	0.0	0.3
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	0.0	0.0	0.0	0.4	0.0	3.0	0.0	0.0	3.2	1.2	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	0.0	0.0	26.7	0.0	24.3	7.5	0.0	10.1	5.9	0.0	6.2
LnGrp LOS	C	A	A	C	A	C	A	A	B	A	A	A
Approach Vol, veh/h		3			234			370			527	
Approach Delay, s/veh		26.3			24.5			10.1			6.0	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	46.5		17.2	5.1	52.7		17.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	6.3	9.9		2.1	2.0	6.8		9.2				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		11.2	
HCM 6th LOS		B	

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	1	1	0	176	228	0
Future Volume (vph)	1	1	0	176	228	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1838	0	0	1977	1909	0
Flt Permitted	0.976					
Satd. Flow (perm)	1838	0	0	1977	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	17	17			14
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	1	1	0	205	265	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	205	265	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
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

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	1	1	0	176	228	0
Future Vol, veh/h	1	1	0	176	228	0
Conflicting Peds, #/hr	14	17	17	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	0	205	265	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	501	299	282	0	-	0
Stage 1	282	-	-	-	-	-
Stage 2	219	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	700	805	1280	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	679	780	1260	-	-	-
Mov Cap-2 Maneuver	679	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	909	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10	0	0
HCM LOS	B		

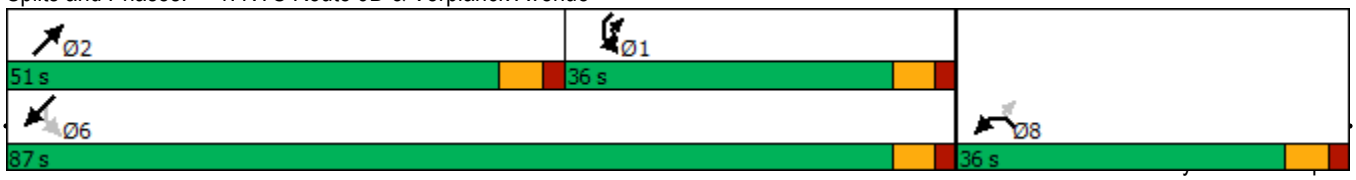
Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1260	-	726	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	0	-	10	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	65	293	576	51	291	711
Future Volume (vph)	65	293	576	51	291	711
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
Ped Bike Factor	0.99		1.00			
Frt		0.850	0.989			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1811	0	1778	1854
Flt Permitted	0.950				0.238	
Satd. Flow (perm)	1715	1544	1811	0	446	1854
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
Confl. Peds. (#/hr)	2			1	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	68	308	606	54	306	748
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	308	660	0	306	748
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.36	0.55	0.75		0.48	0.50
Control Delay	44.1	24.6	27.6		13.6	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	44.1	24.6	27.6		13.6	6.1
Queue Length 50th (ft)	36	131	278		36	123
Queue Length 95th (ft)	83	208	#657		100	320
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	637	659	1004		888	1674
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	0.11	0.47	0.66		0.34	0.45

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 85.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

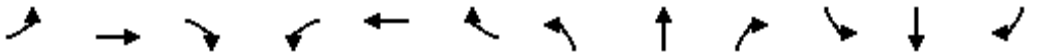
Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	65	293	576	51	291	711	
Future Volume (veh/h)	65	293	576	51	291	711	
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	1894	
Adj Flow Rate, veh/h	68	308	606	54	306	748	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	3	
Cap, veh/h	228	367	699	62	375	1222	
Arrive On Green	0.14	0.14	0.42	0.42	0.11	0.64	
Sat Flow, veh/h	1641	1460	1644	147	1818	1894	
Grp Volume(v), veh/h	68	308	0	660	306	748	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1791	1818	1894	
Q Serve(g_s), s	2.1	4.9	0.0	18.7	3.7	12.9	
Cycle Q Clear(g_c), s	2.1	4.9	0.0	18.7	3.7	12.9	
Prop In Lane	1.00	1.00		0.08	1.00		
Lane Grp Cap(c), veh/h	228	367	0	761	375	1222	
V/C Ratio(X)	0.30	0.84	0.00	0.87	0.82	0.61	
Avail Cap(c_a), veh/h	886	952	0	1450	1153	2761	
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	21.5	19.7	0.0	14.6	22.3	5.8	
Incr Delay (d2), s/veh	0.3	2.0	0.0	3.2	1.7	0.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.8	3.6	0.0	6.9	3.6	3.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	21.7	21.8	0.0	17.7	24.0	6.3	
LnGrp LOS	C	C	A	B	C	A	
Approach Vol, veh/h	376		660			1054	
Approach Delay, s/veh	21.8		17.7			11.4	
Approach LOS	C		B			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.2	29.6				41.8	13.7
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	5.7	20.7				14.9	6.9
Green Ext Time (p_c), s	0.6	2.9				3.6	0.9

Intersection Summary		
HCM 6th Ctrl Delay	15.3	
HCM 6th LOS	B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	4	38	9	0	9	20	542	6	2	727	54
Future Volume (vph)	76	4	38	9	0	9	20	542	6	2	727	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
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		0.956			0.932			0.998			0.991	
Flt Protected		0.969			0.976		0.950					
Satd. Flow (prot)	0	1807	0	0	1661	0	1770	1849	0	0	1909	0
Flt Permitted		0.969			0.976		0.950					
Satd. Flow (perm)	0	1807	0	0	1661	0	1770	1849	0	0	1909	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	80	4	40	9	0	9	21	571	6	2	765	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	18	0	21	577	0	0	824	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

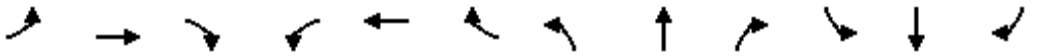
Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	4	38	9	0	9	20	542	6	2	727	54
Future Vol, veh/h	76	4	38	9	0	9	20	542	6	2	727	54
Conflicting Peds, #/hr	6	0	8	14	0	12	8	0	14	12	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	13	2	2	2	6	2	2	4	11
Mvmt Flow	80	4	40	9	0	9	21	571	6	2	765	57

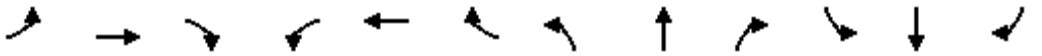
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1439	1439	816	1464	1464	600	830	0	0	591	0	0
Stage 1	806	806	-	630	630	-	-	-	-	-	-	-
Stage 2	633	633	-	834	834	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.84	7.23	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.617	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	152	183	409	100	128	501	802	-	-	985	-	-
Stage 1	449	472	-	452	475	-	-	-	-	-	-	-
Stage 2	538	545	-	347	383	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	143	174	401	84	122	489	796	-	-	973	-	-
Mov Cap-2 Maneuver	143	174	-	84	122	-	-	-	-	-	-	-
Stage 1	434	467	-	434	456	-	-	-	-	-	-	-
Stage 2	508	524	-	304	379	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	59.1	34	0.3	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	796	-	-	182	143	973	-	-
HCM Lane V/C Ratio	0.026	-	-	0.682	0.132	0.002	-	-
HCM Control Delay (s)	9.6	-	-	59.1	34	8.7	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.1	0.4	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	45	9	10	17	22	449	3	3	520	251
Future Volume (vph)	110	5	45	9	10	17	22	449	3	3	520	251
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		1.00	0.98		0.99		1.00	1.00		0.99	0.99	
Frt			0.850		0.938			0.999			0.951	
Flt Protected		0.954			0.987		0.950			0.950		
Satd. Flow (prot)	0	1711	1494	0	1792	0	1754	1844	0	1743	1693	0
Flt Permitted		0.706			0.911		0.205			0.431		
Satd. Flow (perm)	0	1265	1460	0	1653	0	378	1844	0	786	1693	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		18						35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	1		2	2		1	7		14	14		7
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	25%	7%	2%	2%	2%	6%	6%	2%	2%	5%	2%
Adj. Flow (vph)	118	5	48	10	11	18	24	483	3	3	559	270
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	123	48	0	39	0	24	486	0	3	829	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

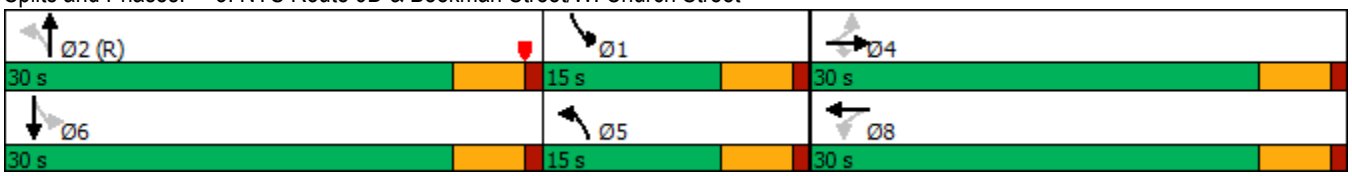


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
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	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.57	0.14		0.13		0.07	0.37		0.00	0.70	
Control Delay		36.9	1.5		15.7		3.9	7.7		6.0	17.2	
Queue Delay		0.0	0.0		0.0		0.0	0.1		0.0	0.0	
Total Delay		36.9	1.5		15.7		3.9	7.8		6.0	17.2	
Queue Length 50th (ft)		54	0		8		1	70		0	168	
Queue Length 95th (ft)		87	4		27		m5	169		4	#646	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		421	554		563		484	1316		743	1179	
Starvation Cap Reductn		0	0		0		0	161		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		0.29	0.09		0.07		0.05	0.42		0.00	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 60
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	5	45	9	10	17	22	449	3	3	520	251
Future Volume (veh/h)	110	5	45	9	10	17	22	449	3	3	520	251
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		0.97	1.00		0.96	0.99		0.96
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	1817	1506	1773	2263	2263	2263	2046	2046	2106	1817	1773	1817
Adj Flow Rate, veh/h	118	5	48	10	11	18	24	483	3	3	559	270
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	25	7	2	2	2	6	6	2	2	5	2
Cap, veh/h	237	8	383	75	97	95	507	677	4	571	371	179
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.21	0.33	0.33	0.21	0.33	0.33
Sat Flow, veh/h	559	30	1496	56	379	373	1948	2030	13	1731	1112	537
Grp Volume(v), veh/h	123	0	48	39	0	0	24	0	486	3	0	829
Grp Sat Flow(s),veh/h/ln	589	0	1496	808	0	0	1948	0	2043	1731	0	1649
Q Serve(g_s), s	0.0	0.0	1.9	0.2	0.0	0.0	0.0	0.0	15.6	0.0	0.0	25.0
Cycle Q Clear(g_c), s	16.9	0.0	1.9	17.2	0.0	0.0	0.0	0.0	15.6	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.26		0.46	1.00		0.01	1.00		0.33
Lane Grp Cap(c), veh/h	245	0	383	267	0	0	507	0	681	571	0	550
V/C Ratio(X)	0.50	0.00	0.13	0.15	0.00	0.00	0.05	0.00	0.71	0.01	0.00	1.51
Avail Cap(c_a), veh/h	332	0	499	414	0	0	507	0	681	571	0	550
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	0.91	0.00	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	21.5	22.1	0.0	0.0	23.3	0.0	21.9	16.6	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	0.0	0.0	5.7	0.0	0.0	238.1
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	2.1	0.0	0.6	0.5	0.0	0.0	0.3	0.0	8.1	0.0	0.0	45.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	0.0	21.5	22.2	0.0	0.0	23.4	0.0	27.6	16.6	0.0	263.1
LnGrp LOS	C	A	C	C	A	A	C	A	C	B	A	F
Approach Vol, veh/h		171			39			510			832	
Approach Delay, s/veh		25.9			22.2			27.4			262.3	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.9	30.0		24.1	20.9	30.0		24.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	17.6		18.9	2.0	27.0		19.2				
Green Ext Time (p_c), s	0.0	0.7		0.2	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		153.0	
HCM 6th LOS		F	

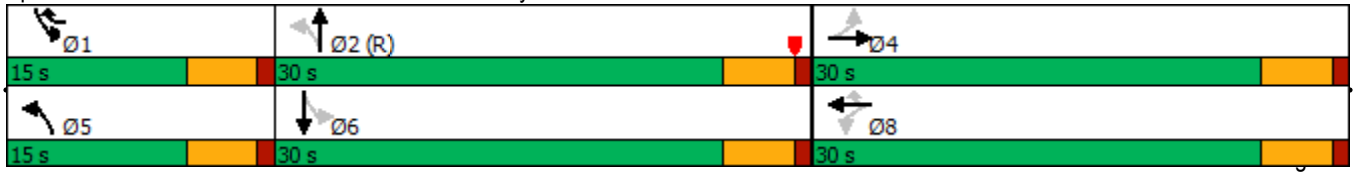
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	3	21	7	117	5	354	38	254	324	6
Future Volume (vph)	4	5	3	21	7	117	5	354	38	254	324	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-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		0.99				0.96		0.99			1.00	
Frt		0.966				0.850		0.985			0.997	
Flt Protected		0.983			0.964		0.950			0.950		
Satd. Flow (prot)	0	1779	0	0	1905	1647	1832	1847	0	1743	1846	0
Flt Permitted		0.882			0.769		0.539			0.358		
Satd. Flow (perm)	0	1596	0	0	1520	1574	1039	1847	0	657	1846	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		5									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	7	8	5	23	8	129	6	448	48	289	368	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	31	129	6	496	0	289	375	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

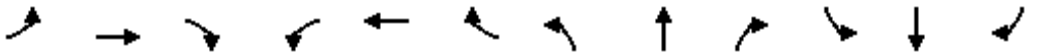
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
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	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.10			0.17	0.35	0.01	0.45		0.43	0.25	
Control Delay		21.7			28.0	20.7	6.2	14.9		7.9	4.7	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.2	
Total Delay		21.7			28.0	20.7	6.2	14.9		7.9	4.8	
Queue Length 50th (ft)		7			14	45	1	123		19	24	
Queue Length 95th (ft)		12			29	54	5	267		m96	91	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		535			506	399	863	1101		688	1476	
Starvation Cap Reductn		0			0	0	0	0		0	410	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.04			0.06	0.32	0.01	0.45		0.42	0.35	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 65
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	3	21	7	117	5	354	38	254	324	6
Future Volume (veh/h)	4	5	3	21	7	117	5	354	38	254	324	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.95	0.99		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	7	8	5	23	8	129	6	448	48	289	368	7
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	115	116	55	250	78	410	718	1003	107	622	1176	22
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.57	0.57	0.09	0.66	0.66
Sat Flow, veh/h	359	837	399	1199	565	1751	1922	1757	188	1731	1792	34
Grp Volume(v), veh/h	20	0	0	31	0	129	6	0	496	289	0	375
Grp Sat Flow(s),veh/h/ln	1594	0	0	1764	0	1751	1922	0	1945	1731	0	1826
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	4.6	0.1	0.0	11.0	4.7	0.0	6.7
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.0	0.0	4.6	0.1	0.0	11.0	4.7	0.0	6.7
Prop In Lane	0.35		0.25	0.74		1.00	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	286	0	0	328	0	410	718	0	1111	622	0	1199
V/C Ratio(X)	0.07	0.00	0.00	0.09	0.00	0.31	0.01	0.00	0.45	0.46	0.00	0.31
Avail Cap(c_a), veh/h	579	0	0	665	0	751	966	0	1111	697	0	1199
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	0.69	0.00	0.69
Uniform Delay (d), s/veh	28.1	0.0	0.0	28.2	0.0	24.1	6.8	0.0	9.3	6.1	0.0	5.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.3	0.1	0.0	0.5
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	0.3	0.0	0.0	0.5	0.0	1.8	0.0	0.0	4.4	1.3	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	0.0	0.0	28.3	0.0	24.2	6.8	0.0	10.6	6.2	0.0	6.0
LnGrp LOS	C	A	A	C	A	C	A	A	B	A	A	A
Approach Vol, veh/h		20			160			502			664	
Approach Delay, s/veh		28.2			25.0			10.5			6.1	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	47.8		15.4	5.4	54.2		15.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	6.7	13.0		2.7	2.1	8.7		6.6				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		10.3	
HCM 6th LOS		B	

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	2	158	282	0
Future Volume (vph)	2	2	2	158	282	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976			0.999		
Satd. Flow (prot)	1838	0	0	1938	1909	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1838	0	0	1938	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	16	16			14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	3	3	3	200	357	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	203	357	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	158	282	0
Future Vol, veh/h	2	2	2	158	282	0
Conflicting Peds, #/hr	14	16	16	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	3	3	3	200	357	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	593	389	373	0	-	0
Stage 1	373	-	-	-	-	-
Stage 2	220	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	651	735	1185	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	631	713	1168	-	-	-
Mov Cap-2 Maneuver	631	-	-	-	-	-
Stage 1	842	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.4	0.1	0
HCM LOS	B		

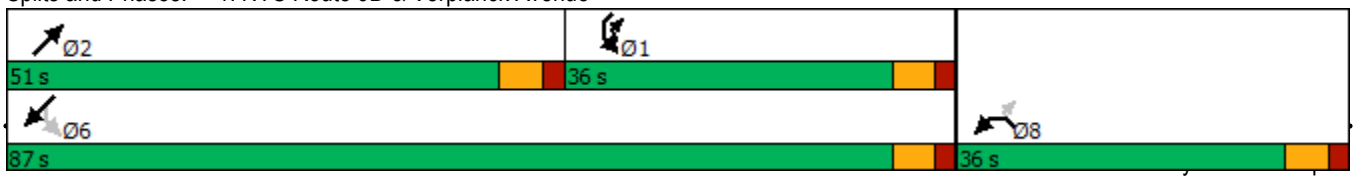
Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1168	-	669	-	-
HCM Lane V/C Ratio	0.002	-	0.008	-	-
HCM Control Delay (s)	8.1	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	66	345	709	56	233	694
Future Volume (vph)	66	345	709	56	233	694
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
Ped Bike Factor	1.00		1.00			
Frt		0.850	0.990			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1813	0	1778	1854
Flt Permitted	0.950				0.131	
Satd. Flow (perm)	1720	1544	1813	0	245	1854
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
Confl. Peds. (#/hr)	1			3	3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	69	363	746	59	245	731
Shared Lane Traffic (%)						
Lane Group Flow (vph)	69	363	805	0	245	731
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	3		3			
v/c Ratio	0.39	0.63	0.90		0.44	0.49
Control Delay	47.4	27.7	39.8		18.5	5.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	47.4	27.7	39.8		18.5	5.7
Queue Length 50th (ft)	40	168	428		35	120
Queue Length 95th (ft)	86	251	#909		126	305
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	567	637	894		715	1601
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	0.12	0.57	0.90		0.34	0.46

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 93.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

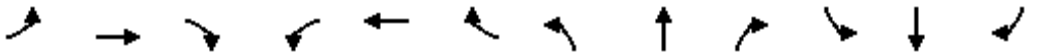
Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	66	345	709	56	233	694	
Future Volume (veh/h)	66	345	709	56	233	694	
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	1894	
Adj Flow Rate, veh/h	69	363	746	59	245	731	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	3	
Cap, veh/h	300	406	806	64	295	1249	
Arrive On Green	0.18	0.18	0.48	0.48	0.10	0.66	
Sat Flow, veh/h	1641	1460	1662	131	1818	1894	
Grp Volume(v), veh/h	69	363	0	805	245	731	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1793	1818	1894	
Q Serve(g_s), s	2.7	10.9	0.0	31.8	4.8	16.2	
Cycle Q Clear(g_c), s	2.7	10.9	0.0	31.8	4.8	16.2	
Prop In Lane	1.00	1.00		0.07	1.00		
Lane Grp Cap(c), veh/h	300	406	0	870	295	1249	
V/C Ratio(X)	0.23	0.89	0.00	0.93	0.83	0.59	
Avail Cap(c_a), veh/h	649	717	0	1063	841	2022	
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	26.5	26.3	0.0	18.3	31.9	7.2	
Incr Delay (d2), s/veh	0.1	3.2	0.0	11.8	2.3	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.0	3.4	0.0	14.5	4.4	5.3	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	26.6	29.6	0.0	30.1	34.2	7.6	
LnGrp LOS	C	C	A	C	C	A	
Approach Vol, veh/h	432		805			976	
Approach Delay, s/veh	29.1		30.1			14.3	
Approach LOS	C		C			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.2	42.8				56.0	19.9
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	6.8	33.8				18.2	12.9
Green Ext Time (p_c), s	0.5	3.0				3.5	1.0

Intersection Summary			
HCM 6th Ctrl Delay		22.9	
HCM 6th LOS		C	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	6	19	7	4	5	27	705	6	6	654	81
Future Volume (vph)	53	6	19	7	4	5	27	705	6	6	654	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
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		0.967			0.960			0.999			0.985	
Flt Protected		0.967			0.977		0.950					
Satd. Flow (prot)	0	1836	0	0	1693	0	1770	1923	0	0	1927	0
Flt Permitted		0.967			0.977		0.950					
Satd. Flow (perm)	0	1836	0	0	1693	0	1770	1923	0	0	1927	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	58	7	21	8	4	5	29	766	7	7	711	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	17	0	29	773	0	0	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

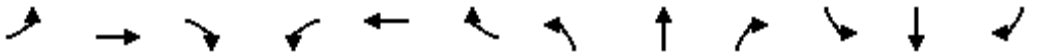
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	6	19	7	4	5	27	705	6	6	654	81
Future Vol, veh/h	53	6	19	7	4	5	27	705	6	6	654	81
Conflicting Peds, #/hr	4	0	4	2	0	2	4	0	2	2	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	25	2	2	2	2	3	2
Mvmt Flow	58	7	21	8	4	5	29	766	7	7	711	88

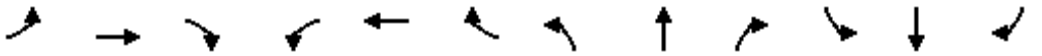
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1609	1606	763	1617	1647	776	803	0	0	775	0	0
Stage 1	773	773	-	830	830	-	-	-	-	-	-	-
Stage 2	836	833	-	787	817	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.82	7.12	6.52	6.45	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.525	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	120	150	440	83	99	363	821	-	-	841	-	-
Stage 1	465	485	-	364	385	-	-	-	-	-	-	-
Stage 2	435	462	-	385	390	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	109	142	437	73	94	361	818	-	-	839	-	-
Mov Cap-2 Maneuver	109	142	-	73	94	-	-	-	-	-	-	-
Stage 1	447	476	-	351	371	-	-	-	-	-	-	-
Stage 2	407	445	-	355	383	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	67.6	46	0.3	0.1
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	818	-	-	136	105	839	-	-
HCM Lane V/C Ratio	0.036	-	-	0.623	0.166	0.008	-	-
HCM Control Delay (s)	9.6	-	-	67.6	46	9.3	0	-
HCM Lane LOS	A	-	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.3	0.6	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	292	13	35	2	8	16	47	430	13	5	531	144
Future Volume (vph)	292	13	35	2	8	16	47	430	13	5	531	144
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		1.00			0.98		1.00	1.00		1.00	0.99	
Frt			0.850		0.918			0.996			0.968	
Flt Protected		0.954			0.996		0.950			0.950		
Satd. Flow (prot)	0	1759	1567	0	1761	0	1690	1892	0	1743	1750	0
Flt Permitted		0.715			0.981		0.161			0.367		
Satd. Flow (perm)	0	1314	1567	0	1735	0	286	1892	0	673	1750	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		17			2			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	2					2	6		2	2		6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	10%	3%	2%	2%	3%	2%
Adj. Flow (vph)	317	14	38	2	9	17	51	467	14	5	577	157
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	331	38	0	28	0	51	481	0	5	734	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

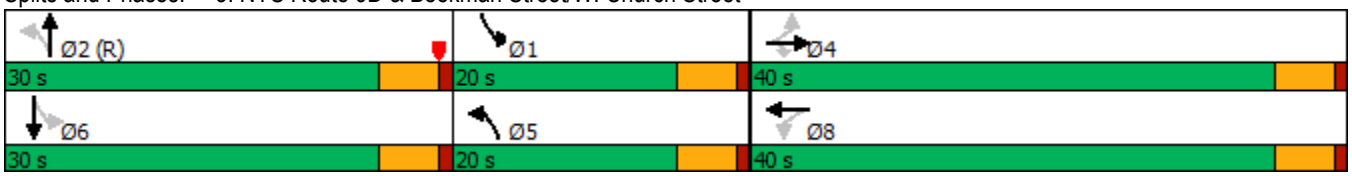


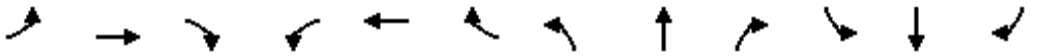
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%	44.4%	44.4%	44.4%		22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0		15.0	25.0		15.0	25.0	
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	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.83	0.07		0.05		0.22	0.45		0.01	0.79	
Control Delay		46.4	0.5		11.2		11.6	14.2		11.2	29.2	
Queue Delay		0.0	0.0		0.0		0.0	0.4		0.0	0.0	
Total Delay		46.4	0.5		11.2		11.6	14.6		11.2	29.2	
Queue Length 50th (ft)		173	0		4		10	139		1	348	
Queue Length 95th (ft)		242	2		20		m19	203		7	#696	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		514	665		689		437	1066		643	924	
Starvation Cap Reductn		0	0		0		0	200		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		0.64	0.06		0.04		0.12	0.56		0.01	0.79	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

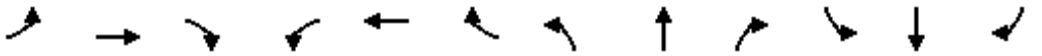




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	13	35	2	8	16	47	430	13	5	531	144
Future Volume (veh/h)	292	13	35	2	8	16	47	430	13	5	531	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	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	1847	1847	2263	2263	2263	1986	2091	2106	1817	1803	1817
Adj Flow Rate, veh/h	317	14	38	2	9	17	51	467	14	5	577	157
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	10	3	2	2	3	2
Cap, veh/h	178	4	607	43	166	256	395	560	17	422	376	102
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.17	0.28	0.28	0.17	0.28	0.28
Sat Flow, veh/h	255	11	1561	0	426	658	1891	2017	60	1731	1354	368
Grp Volume(v), veh/h	331	0	38	28	0	0	51	0	481	5	0	734
Grp Sat Flow(s),veh/h/ln	267	0	1561	1084	0	0	1891	0	2078	1731	0	1722
Q Serve(g_s), s	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	19.6	0.0	0.0	25.0
Cycle Q Clear(g_c), s	35.0	0.0	1.4	35.0	0.0	0.0	0.0	0.0	19.6	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.07		0.61	1.00		0.03	1.00		0.21
Lane Grp Cap(c), veh/h	182	0	607	465	0	0	395	0	577	422	0	478
V/C Ratio(X)	1.82	0.00	0.06	0.06	0.00	0.00	0.13	0.00	0.83	0.01	0.00	1.53
Avail Cap(c_a), veh/h	182	0	607	465	0	0	395	0	577	422	0	478
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	0.88	0.00	0.88	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	17.2	18.5	0.0	0.0	31.3	0.0	30.5	27.1	0.0	32.5
Incr Delay (d2), s/veh	389.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	0.0	250.9
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	23.7	0.0	0.5	0.4	0.0	0.0	0.9	0.0	11.4	0.1	0.0	43.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	424.3	0.0	17.2	18.5	0.0	0.0	31.3	0.0	42.4	27.1	0.0	283.4
LnGrp LOS	F	A	B	B	A	A	C	A	D	C	A	F
Approach Vol, veh/h		369			28			532			739	
Approach Delay, s/veh		382.4			18.5			41.3			281.7	
Approach LOS		F			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	30.0		40.0	20.0	30.0		40.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	21.6		37.0	2.0	27.0		37.0				
Green Ext Time (p_c), s	0.0	0.4		0.0	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			222.9									
HCM 6th LOS			F									



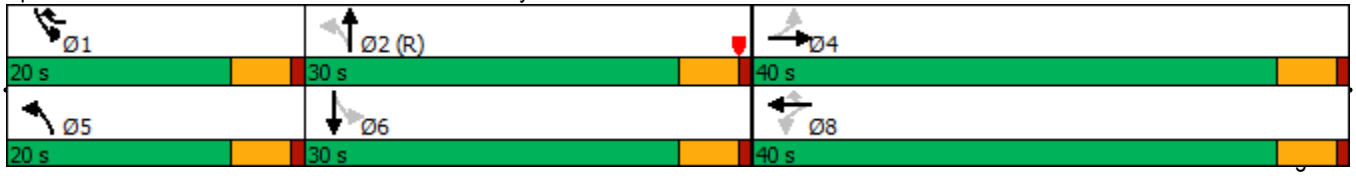
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	8	2	50	2	174	2	315	80	246	332	0
Future Volume (vph)	2	8	2	50	2	174	2	315	80	246	332	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-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		0.99				0.95		0.99				
Frt		0.979				0.850		0.970				
Flt Protected		0.992			0.954		0.950			0.950		
Satd. Flow (prot)	0	1825	0	0	1885	1647	1832	1800	0	1743	1853	0
Flt Permitted		0.961			0.720		0.538			0.338		
Satd. Flow (perm)	0	1768	0	0	1423	1566	1038	1800	0	620	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			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	3	13	3	55	2	191	3	399	101	280	377	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	57	191	3	500	0	280	377	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

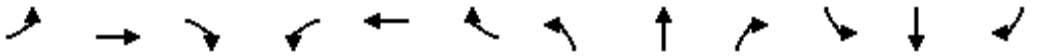
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0		40.0	40.0	20.0	20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%		44.4%	44.4%	22.2%	22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0	15.0	15.0	25.0		15.0	25.0	
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	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	9	9		15	15			21				
v/c Ratio		0.07			0.28	0.41	0.00	0.50		0.43	0.27	
Control Delay		25.3			34.0	22.4	8.0	19.7		11.4	5.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.3	
Total Delay		25.3			34.0	22.4	8.0	19.7		11.4	5.9	
Queue Length 50th (ft)		9			31	85	0	150		18	25	
Queue Length 95th (ft)		15			57	92	3	309		m107	m88	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		689			553	510	874	995		679	1402	
Starvation Cap Reductn		0			0	0	0	0		0	534	
Spillback Cap Reductn		0			0	0	0	12		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.10	0.37	0.00	0.51		0.41	0.43	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 65
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	8	2	50	2	174	2	315	80	246	332	0
Future Volume (veh/h)	2	8	2	50	2	174	2	315	80	246	332	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.95	0.99		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	3	13	3	55	2	191	3	399	101	280	377	0
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	66	211	43	326	11	427	721	903	228	614	1236	0
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.60	0.60	0.08	0.67	0.00
Sat Flow, veh/h	123	1350	276	1581	69	1763	1922	1517	384	1731	1832	0
Grp Volume(v), veh/h	19	0	0	57	0	191	3	0	500	280	377	0
Grp Sat Flow(s),veh/h/ln	1750	0	0	1650	0	1763	1922	0	1901	1731	1832	0
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	8.3	0.1	0.0	13.0	5.2	7.6	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.5	0.0	8.3	0.1	0.0	13.0	5.2	7.6	0.0
Prop In Lane	0.16		0.16	0.96		1.00	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	320	0	0	337	0	427	721	0	1131	614	1236	0
V/C Ratio(X)	0.06	0.00	0.00	0.17	0.00	0.45	0.00	0.00	0.44	0.46	0.31	0.00
Avail Cap(c_a), veh/h	707	0	0	714	0	837	1037	0	1131	760	1236	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	1.00	1.00	0.00	1.00	0.57	0.57	0.00
Uniform Delay (d), s/veh	32.4	0.0	0.0	33.0	0.0	29.3	7.3	0.0	10.0	6.7	6.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	1.3	0.1	0.4	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	0.4	0.0	0.0	1.1	0.0	3.5	0.0	0.0	5.3	1.6	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	0.0	0.0	33.1	0.0	29.6	7.3	0.0	11.3	6.8	6.4	0.0
LnGrp LOS	C	A	A	C	A	C	A	A	B	A	A	A
Approach Vol, veh/h		19			248			503			657	
Approach Delay, s/veh		32.4			30.4			11.2			6.6	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	58.6		19.1	5.2	65.7		19.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	7.2	15.0		2.8	2.1	9.6		10.3				
Green Ext Time (p_c), s	0.2	0.3		0.0	0.0	0.2		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		12.7	
HCM 6th LOS		B	

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	3	7	0	337	196	3
Future Volume (vph)	3	7	0	337	196	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.904				0.998	
Flt Protected	0.986					
Satd. Flow (prot)	1801	0	0	1977	1869	0
Flt Permitted	0.986					
Satd. Flow (perm)	1801	0	0	1977	1869	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	8	8			14
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	4	10	0	475	276	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	475	280	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	3	7	0	337	196	3
Future Vol, veh/h	3	7	0	337	196	3
Conflicting Peds, #/hr	14	8	8	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	4	10	0	475	276	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	781	300	294	0	-	0
Stage 1	292	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	561	804	1268	-	-	-
Stage 1	891	-	-	-	-	-
Stage 2	809	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	546	788	1252	-	-	-
Mov Cap-2 Maneuver	546	-	-	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	798	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

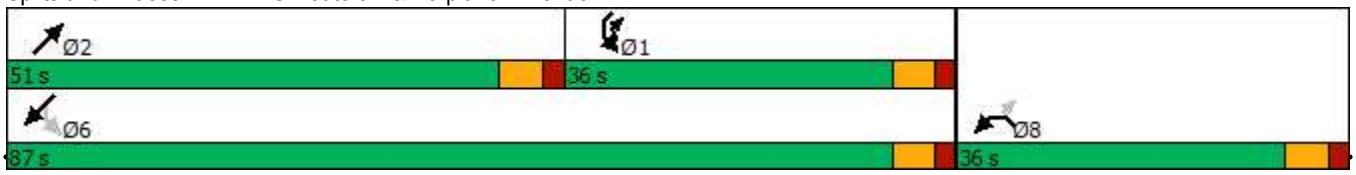
Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1252	-	696	-	-
HCM Lane V/C Ratio	-	-	0.02	-	-
HCM Control Delay (s)	0	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	50	287	628	41	217	726
Future Volume (vph)	50	287	628	41	217	726
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
Ped Bike Factor	0.98		1.00			
Frt		0.850	0.992			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1818	0	1778	1872
Flt Permitted	0.950				0.205	
Satd. Flow (perm)	1688	1544	1818	0	384	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
Confl. Peds. (#/hr)	7			1	1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	312	683	45	236	789
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	312	728	0	236	789
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
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

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.32	0.58	0.78		0.39	0.52
Control Delay	44.1	26.9	28.7		11.6	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	44.1	26.9	28.7		11.6	6.1
Queue Length 50th (ft)	29	139	325		25	127
Queue Length 95th (ft)	69	211	#754		77	347
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	589	614	931		818	1667
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	0.09	0.51	0.78		0.29	0.47

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 89.7	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 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



Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	50	287	628	41	217	726	
Future Volume (veh/h)	50	287	628	41	217	726	
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	54	312	683	45	236	789	
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	283	365	768	51	297	1205	
Arrive On Green	0.17	0.17	0.46	0.46	0.08	0.63	
Sat Flow, veh/h	1641	1460	1686	111	1818	1909	
Grp Volume(v), veh/h	54	312	0	728	236	789	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1797	1818	1909	
Q Serve(g_s), s	1.7	7.7	0.0	22.6	2.4	15.9	
Cycle Q Clear(g_c), s	1.7	7.7	0.0	22.6	2.4	15.9	
Prop In Lane	1.00	1.00		0.06	1.00		
Lane Grp Cap(c), veh/h	283	365	0	819	297	1205	
V/C Ratio(X)	0.19	0.86	0.00	0.89	0.79	0.65	
Avail Cap(c_a), veh/h	806	830	0	1324	1050	2531	
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	21.6	21.9	0.0	15.2	26.0	7.1	
Incr Delay (d2), s/veh	0.1	2.3	0.0	4.7	1.8	0.6	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.6	4.1	0.0	8.8	3.2	4.7	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	21.8	24.1	0.0	19.9	27.9	7.7	
LnGrp LOS	C	C	A	B	C	A	
Approach Vol, veh/h	366		728			1025	
Approach Delay, s/veh	23.8		19.9			12.3	
Approach LOS	C		B			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.7	33.8				44.6	16.5
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	4.4	24.6				17.9	9.7
Green Ext Time (p_c), s	0.5	3.2				3.9	0.8

Intersection Summary		
HCM 6th Ctrl Delay		16.9
HCM 6th LOS		B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	2	18	4	6	11	24	607	5	8	690	79
Future Volume (vph)	61	2	18	4	6	11	24	607	5	8	690	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
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		0.970			0.926			0.999			0.986	
Flt Protected		0.964			0.991		0.950				0.999	
Satd. Flow (prot)	0	1822	0	0	1766	0	1770	1923	0	0	1943	0
Flt Permitted		0.964			0.991		0.950				0.999	
Satd. Flow (perm)	0	1822	0	0	1766	0	1770	1923	0	0	1943	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	65	2	19	4	6	12	26	646	5	9	734	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	22	0	26	651	0	0	827	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
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	

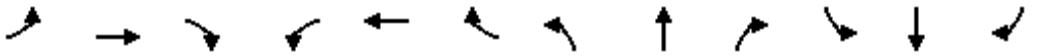
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	2	18	4	6	11	24	607	5	8	690	79
Future Vol, veh/h	61	2	18	4	6	11	24	607	5	8	690	79
Conflicting Peds, #/hr	6	0	6	2	0	2	6	0	2	2	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	2	19	4	6	12	26	646	5	9	734	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1516	1505	788	1514	1545	657	824	0	0	653	0	0
Stage 1	800	800	-	703	703	-	-	-	-	-	-	-
Stage 2	716	705	-	811	842	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.72	5.82	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	136	169	427	98	115	465	806	-	-	934	-	-
Stage 1	450	475	-	428	440	-	-	-	-	-	-	-
Stage 2	492	514	-	373	380	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	120	160	422	88	109	462	802	-	-	932	-	-
Mov Cap-2 Maneuver	120	160	-	88	109	-	-	-	-	-	-	-
Stage 1	433	464	-	413	425	-	-	-	-	-	-	-
Stage 2	455	497	-	346	371	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	61.7	29.5	0.4	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	802	-	-	144	169	932	-	-
HCM Lane V/C Ratio	0.032	-	-	0.598	0.132	0.009	-	-
HCM Control Delay (s)	9.6	-	-	61.7	29.5	8.9	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.1	0.4	0	-	-

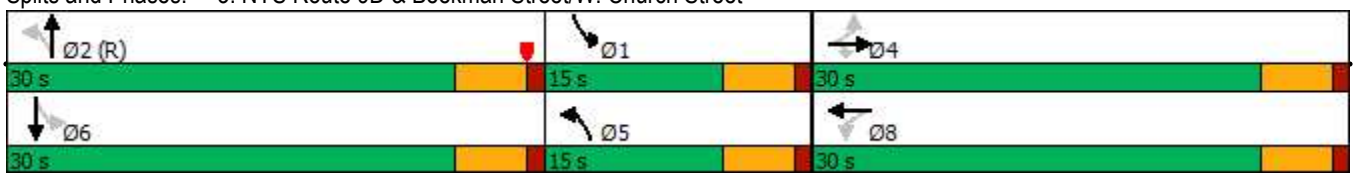


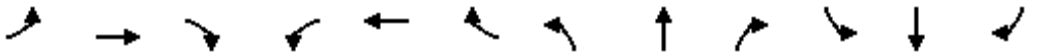
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	6	44	10	4	17	79	470	4	8	512	191
Future Volume (vph)	149	6	44	10	4	17	79	470	4	8	512	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-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		0.98		1.00	1.00		1.00	0.99	
Frt			0.850		0.925			0.999			0.959	
Flt Protected		0.954			0.984		0.950			0.950		
Satd. Flow (prot)	0	1759	1567	0	1743	0	1823	1916	0	1743	1746	0
Flt Permitted		0.710			0.892		0.166			0.367		
Satd. Flow (perm)	0	1288	1524	0	1578	0	318	1916	0	671	1746	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		19			1			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	11		3	3		11	6		9	9		6
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	167	7	49	11	4	19	89	528	4	9	575	215
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	49	0	34	0	89	532	0	9	790	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0	0.0		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	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
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	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				11	11							
v/c Ratio		0.68	0.13		0.10		0.30	0.44		0.02	0.79	
Control Delay		39.9	1.3		13.6		10.9	11.4		6.8	23.9	
Queue Delay		0.0	0.0		0.0		0.0	0.3		0.0	0.0	
Total Delay		39.9	1.3		13.6		10.9	11.6		6.8	23.9	
Queue Length 50th (ft)		76	0		6		16	105		1	266	
Queue Length 95th (ft)		119	4		23		m26	219		7	#616	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		429	576		538		435	1218		610	995	
Starvation Cap Reductn		0	0		0		0	217		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		0.41	0.09		0.06		0.20	0.53		0.01	0.79	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

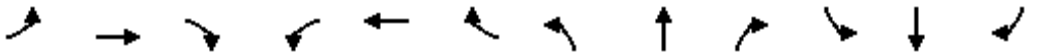




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	6	44	10	4	17	79	470	4	8	512	191
Future Volume (veh/h)	149	6	44	10	4	17	79	470	4	8	512	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.98	1.00		0.99	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	1847	1847	1847	2263	2263	2263	2106	2106	2106	1817	1817	1817
Adj Flow Rate, veh/h	167	7	49	11	4	19	89	528	4	9	575	215
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	301	11	407	86	57	101	486	696	5	524	419	157
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.19	0.33	0.33	0.19	0.33	0.33
Sat Flow, veh/h	759	39	1497	82	210	371	2006	2087	16	1731	1256	470
Grp Volume(v), veh/h	174	0	49	34	0	0	89	0	532	9	0	790
Grp Sat Flow(s),veh/h/ln	799	0	1497	663	0	0	2006	0	2103	1731	0	1725
Q Serve(g_s), s	0.0	0.0	1.8	0.3	0.0	0.0	0.0	0.0	16.9	0.0	0.0	25.0
Cycle Q Clear(g_c), s	17.5	0.0	1.8	17.8	0.0	0.0	0.0	0.0	16.9	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.32		0.56	1.00		0.01	1.00		0.27
Lane Grp Cap(c), veh/h	311	0	407	244	0	0	486	0	701	524	0	575
V/C Ratio(X)	0.56	0.00	0.12	0.14	0.00	0.00	0.18	0.00	0.76	0.02	0.00	1.37
Avail Cap(c_a), veh/h	395	0	499	355	0	0	486	0	701	524	0	575
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	0.87	0.00	0.87	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	20.5	21.4	0.0	0.0	24.3	0.0	22.3	18.5	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	0.0	0.1	0.0	6.6	0.0	0.0	179.0
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	2.9	0.0	0.6	0.4	0.0	0.0	1.2	0.0	9.1	0.1	0.0	38.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	0.0	20.6	21.5	0.0	0.0	24.4	0.0	28.9	18.5	0.0	204.0
LnGrp LOS	C	A	C	C	A	A	C	A	C	B	A	F
Approach Vol, veh/h		223			34			621			799	
Approach Delay, s/veh		25.4			21.5			28.3			201.9	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	30.0		25.4	19.6	30.0		25.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	18.9		19.5	2.0	27.0		19.8				
Green Ext Time (p_c), s	0.0	0.7		0.2	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		110.5	
HCM 6th LOS		F	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	2	38	0	209	2	343	52	265	306	3
Future Volume (vph)	2	2	2	38	0	209	2	343	52	265	306	3
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		0.99				0.97		0.99			1.00	
Frt		0.955				0.850		0.980			0.999	
Flt Protected		0.984			0.950		0.950			0.950		
Satd. Flow (prot)	0	1751	0	0	1877	1663	1832	1822	0	1760	1851	0
Flt Permitted		0.898			0.752		0.558			0.385		
Satd. Flow (perm)	0	1598	0	0	1486	1614	1076	1822	0	713	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			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	3	3	3	43	0	235	2	390	59	288	333	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	43	235	2	449	0	288	336	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0	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		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
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	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	14	14		6	6			48				
v/c Ratio		0.04			0.23	0.59	0.00	0.42		0.41	0.23	
Control Delay		20.5			28.9	27.3	6.5	14.0		8.0	5.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		20.5			28.9	27.3	6.5	14.0		8.0	5.0	
Queue Length 50th (ft)		3			19	91	0	103		18	21	
Queue Length 95th (ft)		9			36	94	3	278		m78	m74	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		534			495	408	874	1067		719	1472	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	6		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.02			0.09	0.58	0.00	0.42		0.40	0.23	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	2	38	0	209	2	343	52	265	306	3
Future Volume (veh/h)	2	2	2	38	0	209	2	343	52	265	306	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.96		0.98	0.99		0.95	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	3	3	3	43	0	235	2	390	59	288	333	3
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	124	118	89	375	0	496	694	889	135	618	1134	10
Arrive On Green	0.17	0.17	0.17	0.17	0.00	0.17	0.00	0.53	0.53	0.10	0.63	0.63
Sat Flow, veh/h	348	684	516	1614	0	1832	1922	1675	253	1745	1813	16
Grp Volume(v), veh/h	9	0	0	43	0	235	2	0	449	288	0	336
Grp Sat Flow(s),veh/h/ln	1548	0	0	1614	0	1832	1922	0	1928	1745	0	1829
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	8.1	0.0	0.0	10.7	5.1	0.0	6.3
Cycle Q Clear(g_c), s	0.3	0.0	0.0	1.6	0.0	8.1	0.0	0.0	10.7	5.1	0.0	6.3
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.13	1.00		0.01
Lane Grp Cap(c), veh/h	332	0	0	375	0	496	694	0	1024	618	0	1144
V/C Ratio(X)	0.03	0.00	0.00	0.11	0.00	0.47	0.00	0.00	0.44	0.47	0.00	0.29
Avail Cap(c_a), veh/h	567	0	0	632	0	790	947	0	1024	683	0	1144
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	0.57	0.00	0.57
Uniform Delay (d), s/veh	25.8	0.0	0.0	26.3	0.0	23.0	8.2	0.0	10.8	7.0	0.0	6.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.4	0.1	0.0	0.4
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	0.1	0.0	0.0	0.6	0.0	3.4	0.0	0.0	4.4	1.5	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	0.0	0.0	26.3	0.0	23.3	8.2	0.0	12.1	7.1	0.0	6.8
LnGrp LOS	C	A	A	C	A	C	A	A	B	A	A	A
Approach Vol, veh/h		9			278			451			624	
Approach Delay, s/veh		25.8			23.7			12.1			6.9	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	44.8		18.0	5.1	51.9		18.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	7.1	12.7		2.3	2.0	8.3		10.1				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		12.2	
HCM 6th LOS		B	

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	0	200	256	0
Future Volume (vph)	2	2	0	200	256	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1838	0	0	1977	1909	0
Flt Permitted	0.976					
Satd. Flow (perm)	1838	0	0	1977	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	17	17			14
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	2	2	0	233	298	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	233	298	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
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	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	0	200	256	0
Future Vol, veh/h	2	2	0	200	256	0
Conflicting Peds, #/hr	14	17	17	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	0	233	298	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	562	332	315	0	-	0
Stage 1	315	-	-	-	-	-
Stage 2	247	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	667	778	1245	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	647	753	1226	-	-	-
Mov Cap-2 Maneuver	647	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	897	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

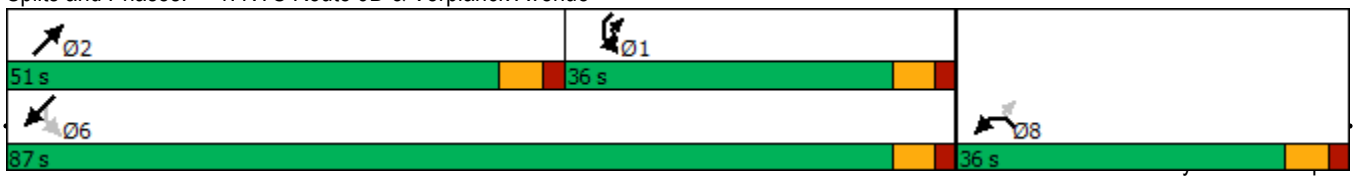
Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1226	-	696	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	0	-	10.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	68	293	595	54	291	722
Future Volume (vph)	68	293	595	54	291	722
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
Ped Bike Factor	0.99		1.00			
Frt		0.850	0.989			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1811	0	1778	1854
Flt Permitted	0.950				0.232	
Satd. Flow (perm)	1715	1544	1811	0	434	1854
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
Confl. Peds. (#/hr)	2			1	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	72	308	626	57	306	760
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	308	683	0	306	760
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.39	0.56	0.75		0.49	0.51
Control Delay	45.7	26.0	27.5		14.1	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	45.7	26.0	27.5		14.1	6.1
Queue Length 50th (ft)	40	136	299		37	129
Queue Length 95th (ft)	88	208	#692		100	328
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	595	624	937		847	1640
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	0.12	0.49	0.73		0.36	0.46

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 89.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

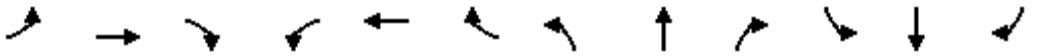
Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	68	293	595	54	291	722
Future Volume (veh/h)	68	293	595	54	291	722
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	1894
Adj Flow Rate, veh/h	72	308	626	57	306	760
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	3
Cap, veh/h	224	365	715	65	373	1239
Arrive On Green	0.14	0.14	0.44	0.44	0.11	0.65
Sat Flow, veh/h	1641	1460	1641	149	1818	1894
Grp Volume(v), veh/h	72	308	0	683	306	760
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1790	1818	1894
Q Serve(g_s), s	2.3	5.0	0.0	20.0	4.0	13.3
Cycle Q Clear(g_c), s	2.3	5.0	0.0	20.0	4.0	13.3
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	224	365	0	781	373	1239
V/C Ratio(X)	0.32	0.84	0.00	0.88	0.82	0.61
Avail Cap(c_a), veh/h	859	930	0	1405	1118	2676
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	22.4	20.4	0.0	14.7	23.0	5.7
Incr Delay (d2), s/veh	0.3	2.1	0.0	3.3	1.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.7	0.0	7.4	3.8	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.7	22.5	0.0	18.0	24.7	6.2
LnGrp LOS	C	C	A	B	C	A
Approach Vol, veh/h	380		683			1066
Approach Delay, s/veh	22.5		18.0			11.5
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.5	31.0				43.5	13.8
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	6.0	22.0				15.3	7.0
Green Ext Time (p_c), s	0.6	3.0				3.7	0.9

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	4	38	9	0	9	20	555	6	2	730	65
Future Volume (vph)	85	4	38	9	0	9	20	555	6	2	730	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
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		0.959			0.932			0.998			0.989	
Flt Protected		0.968			0.976		0.950					
Satd. Flow (prot)	0	1812	0	0	1661	0	1770	1849	0	0	1903	0
Flt Permitted		0.968			0.976		0.950					
Satd. Flow (perm)	0	1812	0	0	1661	0	1770	1849	0	0	1903	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	89	4	40	9	0	9	21	584	6	2	768	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	18	0	21	590	0	0	838	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6.6

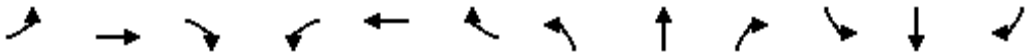
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	4	38	9	0	9	20	555	6	2	730	65
Future Vol, veh/h	85	4	38	9	0	9	20	555	6	2	730	65
Conflicting Peds, #/hr	6	0	8	14	0	12	8	0	14	12	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	13	2	2	2	6	2	2	4	11
Mvmt Flow	89	4	40	9	0	9	21	584	6	2	768	68

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1460	1460	824	1485	1491	613	844	0	0	604	0	0
Stage 1	814	814	-	643	643	-	-	-	-	-	-	-
Stage 2	646	646	-	842	848	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.84	7.23	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.23	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.617	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	148	179	405	97	124	492	792	-	-	974	-	-
Stage 1	446	469	-	444	468	-	-	-	-	-	-	-
Stage 2	531	539	-	344	378	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	139	170	397	81	118	481	786	-	-	962	-	-
Mov Cap-2 Maneuver	139	170	-	81	118	-	-	-	-	-	-	-
Stage 1	431	464	-	427	449	-	-	-	-	-	-	-
Stage 2	501	517	-	301	374	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	72.9	34.9	0.3	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	786	-	-	174	139	962	-	-
HCM Lane V/C Ratio	0.027	-	-	0.768	0.136	0.002	-	-
HCM Control Delay (s)	9.7	-	-	72.9	34.9	8.8	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	5	0.5	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	5	63	9	10	17	36	449	3	3	520	254
Future Volume (vph)	123	5	63	9	10	17	36	449	3	3	520	254
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		1.00	0.98		0.99		1.00	1.00		0.99	0.99	
Frt			0.850		0.938			0.999			0.951	
Flt Protected		0.954			0.987		0.950			0.950		
Satd. Flow (prot)	0	1713	1494	0	1792	0	1754	1844	0	1743	1693	0
Flt Permitted		0.705			0.910		0.187			0.427		
Satd. Flow (perm)	0	1264	1460	0	1651	0	345	1844	0	779	1693	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		18						35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	1		2	2		1	7		14	14		7
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	25%	7%	2%	2%	2%	6%	6%	2%	2%	5%	2%
Adj. Flow (vph)	132	5	68	10	11	18	39	483	3	3	559	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	137	68	0	39	0	39	486	0	3	832	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

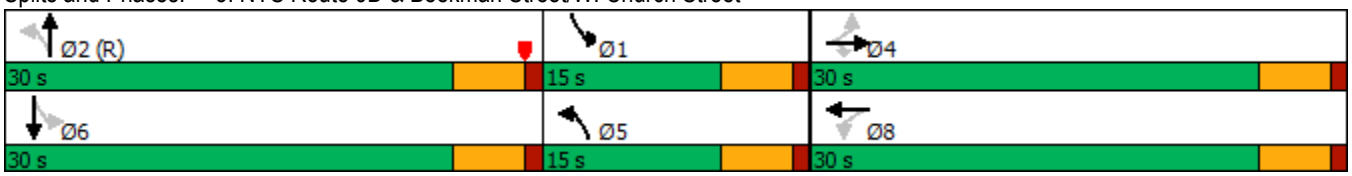


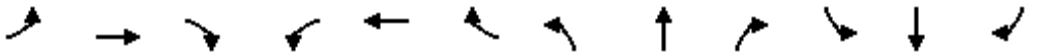
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
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	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.60	0.20		0.13		0.12	0.37		0.01	0.74	
Control Delay		37.8	3.3		15.4		4.7	7.8		6.3	19.5	
Queue Delay		0.0	0.0		0.0		0.0	0.1		0.0	0.0	
Total Delay		37.8	3.3		15.4		4.7	7.9		6.3	19.5	
Queue Length 50th (ft)		60	0		8		4	54		0	275	
Queue Length 95th (ft)		96	15		27		m8	169		4	#650	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		421	554		562		456	1302		715	1128	
Starvation Cap Reductn		0	0		0		0	151		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		0.33	0.12		0.07		0.09	0.42		0.00	0.74	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

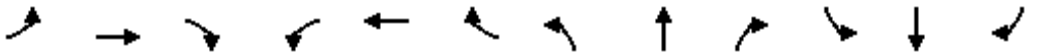




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	5	63	9	10	17	36	449	3	3	520	254
Future Volume (veh/h)	123	5	63	9	10	17	36	449	3	3	520	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.96	0.99		0.96
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	1817	1506	1773	2263	2263	2263	2046	2046	2106	1817	1773	1817
Adj Flow Rate, veh/h	132	5	68	10	11	18	39	483	3	3	559	273
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	25	7	2	2	2	6	6	2	2	5	2
Cap, veh/h	250	7	453	75	99	97	415	677	4	490	369	180
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.16	0.33	0.33	0.16	0.33	0.33
Sat Flow, veh/h	516	25	1497	48	326	321	1948	2030	13	1731	1107	541
Grp Volume(v), veh/h	137	0	68	39	0	0	39	0	486	3	0	832
Grp Sat Flow(s),veh/h/ln	540	0	1497	695	0	0	1948	0	2043	1731	0	1648
Q Serve(g_s), s	0.0	0.0	2.5	0.3	0.0	0.0	0.0	0.0	15.6	0.0	0.0	25.0
Cycle Q Clear(g_c), s	20.5	0.0	2.5	20.8	0.0	0.0	0.0	0.0	15.6	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.26		0.46	1.00		0.01	1.00		0.33
Lane Grp Cap(c), veh/h	258	0	453	271	0	0	415	0	681	490	0	549
V/C Ratio(X)	0.53	0.00	0.15	0.14	0.00	0.00	0.09	0.00	0.71	0.01	0.00	1.51
Avail Cap(c_a), veh/h	292	0	499	328	0	0	415	0	681	490	0	549
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	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	19.1	20.1	0.0	0.0	26.2	0.0	21.9	19.0	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	0.0	0.0	5.7	0.0	0.0	240.9
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	2.3	0.0	0.8	0.5	0.0	0.0	0.6	0.0	8.1	0.0	0.0	45.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	0.0	19.2	20.2	0.0	0.0	26.2	0.0	27.5	19.0	0.0	265.9
LnGrp LOS	C	A	B	C	A	A	C	A	C	B	A	F
Approach Vol, veh/h		205			39			525			835	
Approach Delay, s/veh		23.7			20.2			27.5			265.0	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.3	30.0		27.7	17.3	30.0		27.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	17.6		22.5	2.0	27.0		22.8				
Green Ext Time (p_c), s	0.0	0.7		0.1	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			150.5									
HCM 6th LOS			F									



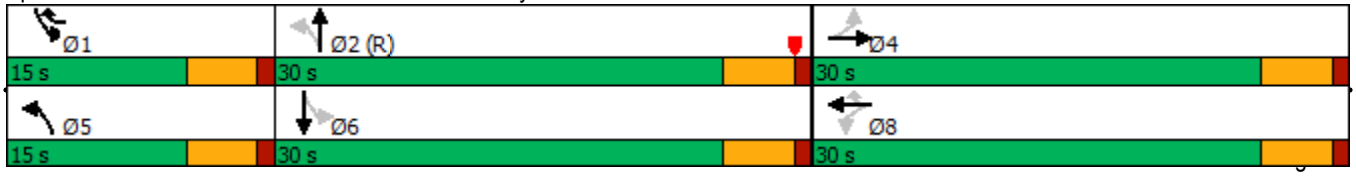
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	3	21	7	122	5	362	38	260	336	6
Future Volume (vph)	4	5	3	21	7	122	5	362	38	260	336	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-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		0.99				0.96		0.99			1.00	
Frt		0.966				0.850		0.986			0.997	
Flt Protected		0.983			0.964		0.950			0.950		
Satd. Flow (prot)	0	1779	0	0	1905	1647	1832	1849	0	1743	1846	0
Flt Permitted		0.882			0.769		0.532			0.346		
Satd. Flow (perm)	0	1596	0	0	1520	1574	1026	1849	0	635	1846	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		5									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	7	8	5	23	8	134	6	458	48	295	382	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	31	134	6	506	0	295	389	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	40		20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

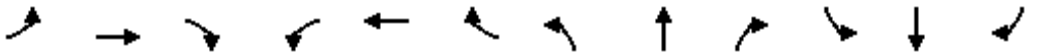
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
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	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.10			0.17	0.35	0.01	0.47		0.44	0.26	
Control Delay		21.7			28.0	20.3	6.4	15.4		8.1	4.8	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.2	
Total Delay		21.7			28.0	20.3	6.4	15.4		8.1	5.0	
Queue Length 50th (ft)		7			14	46	1	132		19	25	
Queue Length 95th (ft)		12			29	56	5	273		m95	m96	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		535			506	407	846	1085		678	1476	
Starvation Cap Reductn		0			0	0	0	0		0	413	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.04			0.06	0.33	0.01	0.47		0.44	0.37	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	3	21	7	122	5	362	38	260	336	6
Future Volume (veh/h)	4	5	3	21	7	122	5	362	38	260	336	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.95	0.99		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	7	8	5	23	8	134	6	458	48	295	382	7
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	115	117	56	253	79	417	703	999	105	614	1174	22
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.57	0.57	0.09	0.65	0.65
Sat Flow, veh/h	360	834	398	1200	563	1753	1922	1761	185	1731	1793	33
Grp Volume(v), veh/h	20	0	0	31	0	134	6	0	506	295	0	389
Grp Sat Flow(s),veh/h/ln	1592	0	0	1764	0	1753	1922	0	1946	1731	0	1826
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	4.8	0.1	0.0	11.4	4.8	0.0	7.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.0	0.0	4.8	0.1	0.0	11.4	4.8	0.0	7.0
Prop In Lane	0.35		0.25	0.74		1.00	1.00		0.09	1.00		0.02
Lane Grp Cap(c), veh/h	289	0	0	332	0	417	703	0	1103	614	0	1195
V/C Ratio(X)	0.07	0.00	0.00	0.09	0.00	0.32	0.01	0.00	0.46	0.48	0.00	0.33
Avail Cap(c_a), veh/h	578	0	0	665	0	755	951	0	1103	685	0	1195
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	0.65	0.00	0.65
Uniform Delay (d), s/veh	28.0	0.0	0.0	28.1	0.0	23.9	6.9	0.0	9.5	6.3	0.0	5.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.4	0.1	0.0	0.5
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	0.3	0.0	0.0	0.5	0.0	1.9	0.0	0.0	4.6	1.3	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	0.0	0.0	28.1	0.0	24.1	6.9	0.0	10.9	6.4	0.0	6.2
LnGrp LOS	C	A	A	C	A	C	A	A	B	A	A	A
Approach Vol, veh/h		20			165			512			684	
Approach Delay, s/veh		28.0			24.8			10.8			6.3	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.9	47.5		15.6	5.4	54.1		15.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	6.8	13.4		2.7	2.1	9.0		6.8				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.3		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		10.5	
HCM 6th LOS		B	

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	2	163	289	0
Future Volume (vph)	2	2	2	163	289	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976			0.999		
Satd. Flow (prot)	1838	0	0	1938	1909	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1838	0	0	1938	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	16	16			14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	3	3	3	206	366	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	209	366	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	163	289	0
Future Vol, veh/h	2	2	2	163	289	0
Conflicting Peds, #/hr	14	16	16	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	3	3	3	206	366	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	608	398	382	0	-	0
Stage 1	382	-	-	-	-	-
Stage 2	226	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	643	728	1176	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	623	706	1159	-	-	-
Mov Cap-2 Maneuver	623	-	-	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	907	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1159	-	662	-	-
HCM Lane V/C Ratio	0.002	-	0.008	-	-
HCM Control Delay (s)	8.1	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	31	7	5	159	282	17
Future Volume (vph)	31	7	5	159	282	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975				0.992	
Flt Protected	0.961			0.999		
Satd. Flow (prot)	1920	0	0	2049	1786	0
Flt Permitted	0.961			0.999		
Satd. Flow (perm)	1920	0	0	2049	1786	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	39	9	6	201	357	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	0	207	379	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	31	7	5	159	282	17
Future Vol, veh/h	31	7	5	159	282	17
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	-	-	2	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	39	9	6	201	357	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	581	368	379	0	-	0
Stage 1	368	-	-	-	-	-
Stage 2	213	-	-	-	-	-
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	476	677	1179	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	473	677	1179	-	-	-
Mov Cap-2 Maneuver	473	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	12.9	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1179	-	501	-	-
HCM Lane V/C Ratio	0.005	-	0.096	-	-
HCM Control Delay (s)	8.1	0	12.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	116	0	11	74	0	9
Future Volume (vph)	116	0	11	74	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	9	12
Grade (%)	-5%			3%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1973	0	0	1885	1428	0
Flt Permitted				0.994		
Satd. Flow (perm)	1973	0	0	1885	1428	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	341			103	156	
Travel Time (s)	7.8			2.3	3.5	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	147	0	14	94	0	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	0	108	11	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	9	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.97	1.02	0.98	1.17	1.02
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	116	0	11	74	0	9
Future Vol, veh/h	116	0	11	74	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	3	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	147	0	14	94	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	147	0	269	147
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	122	-
Critical Hdwy	-	-	4.12	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1435	-	689	889
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	885	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1435	-	682	889
Mov Cap-2 Maneuver	-	-	-	-	682	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	876	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.1
HCM LOS			A

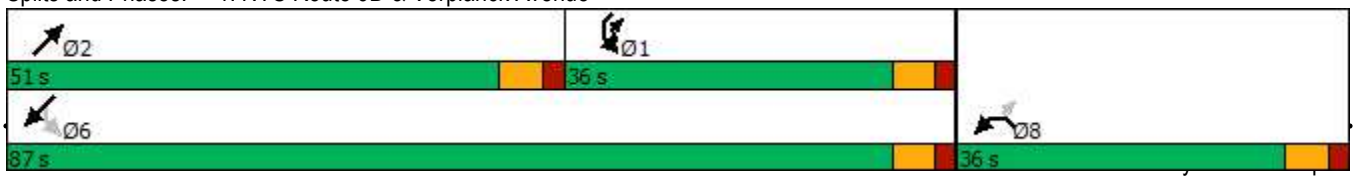
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	889	-	-	1435	-
HCM Lane V/C Ratio	0.013	-	-	0.01	-
HCM Control Delay (s)	9.1	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	71	345	731	61	233	714
Future Volume (vph)	71	345	731	61	233	714
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
Ped Bike Factor	1.00		1.00			
Frt		0.850	0.990			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1813	0	1778	1854
Flt Permitted	0.950				0.109	
Satd. Flow (perm)	1720	1544	1813	0	204	1854
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
Confl. Peds. (#/hr)	1			3	3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	75	363	769	64	245	752
Shared Lane Traffic (%)						
Lane Group Flow (vph)	75	363	833	0	245	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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	3		3			
v/c Ratio	0.41	0.62	0.93		0.46	0.50
Control Delay	48.0	27.6	44.4		21.2	6.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	48.0	27.6	44.4		21.2	6.0
Queue Length 50th (ft)	43	168	458		49	129
Queue Length 95th (ft)	92	251	#954		144	320
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	565	639	892		692	1597
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	0.13	0.57	0.93		0.35	0.47

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 93.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 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



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	71	345	731	61	233	714
Future Volume (veh/h)	71	345	731	61	233	714
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	1894
Adj Flow Rate, veh/h	75	363	769	64	245	752
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	3
Cap, veh/h	292	404	821	68	293	1271
Arrive On Green	0.18	0.18	0.50	0.50	0.10	0.67
Sat Flow, veh/h	1641	1460	1654	138	1818	1894
Grp Volume(v), veh/h	75	363	0	833	245	752
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1792	1818	1894
Q Serve(g_s), s	3.1	11.1	0.0	34.7	5.4	17.2
Cycle Q Clear(g_c), s	3.1	11.1	0.0	34.7	5.4	17.2
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	292	404	0	889	293	1271
V/C Ratio(X)	0.26	0.90	0.00	0.94	0.84	0.59
Avail Cap(c_a), veh/h	621	697	0	1018	802	1936
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	28.1	27.6	0.0	18.8	33.2	7.1
Incr Delay (d2), s/veh	0.2	4.2	0.0	14.3	2.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.6	0.0	16.3	4.6	5.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.2	31.8	0.0	33.1	35.7	7.6
LnGrp LOS	C	C	A	C	D	A
Approach Vol, veh/h	438		833			997
Approach Delay, s/veh	31.2		33.1			14.5
Approach LOS	C		C			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.8	45.3				59.2	20.1
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	7.4	36.7				19.2	13.1
Green Ext Time (p_c), s	0.5	2.6				3.7	1.0

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	6	19	7	4	5	27	721	6	6	660	100
Future Volume (vph)	63	6	19	7	4	5	27	721	6	6	660	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
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		0.970			0.960			0.999			0.982	
Flt Protected		0.966			0.977		0.950					
Satd. Flow (prot)	0	1840	0	0	1693	0	1770	1923	0	0	1921	0
Flt Permitted		0.966			0.977		0.950					
Satd. Flow (perm)	0	1840	0	0	1693	0	1770	1923	0	0	1921	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	68	7	21	8	4	5	29	784	7	7	717	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	96	0	0	17	0	29	791	0	0	833	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

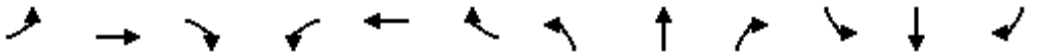
Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	6	19	7	4	5	27	721	6	6	660	100
Future Vol, veh/h	63	6	19	7	4	5	27	721	6	6	660	100
Conflicting Peds, #/hr	4	0	4	2	0	2	4	0	2	2	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	25	2	2	2	2	3	2
Mvmt Flow	68	7	21	8	4	5	29	784	7	7	717	109

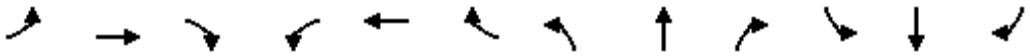
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1644	1641	780	1652	1692	794	830	0	0	793	0	0
Stage 1	790	790	-	848	848	-	-	-	-	-	-	-
Stage 2	854	851	-	804	844	-	-	-	-	-	-	-
Critical Hdwy	6.32	5.72	5.82	7.12	6.52	6.45	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.32	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.525	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	115	144	431	79	93	354	802	-	-	828	-	-
Stage 1	457	479	-	356	378	-	-	-	-	-	-	-
Stage 2	427	455	-	377	379	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	104	136	428	69	88	352	799	-	-	827	-	-
Mov Cap-2 Maneuver	104	136	-	69	88	-	-	-	-	-	-	-
Stage 1	439	469	-	342	364	-	-	-	-	-	-	-
Stage 2	399	438	-	347	371	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	90.5	49	0.3	0.1
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	799	-	-	127	99	827	-	-
HCM Lane V/C Ratio	0.037	-	-	0.753	0.176	0.008	-	-
HCM Control Delay (s)	9.7	-	-	90.5	49	9.4	0	-
HCM Lane LOS	A	-	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.3	0.6	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	13	62	2	8	16	73	430	13	5	531	150
Future Volume (vph)	308	13	62	2	8	16	73	430	13	5	531	150
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		1.00			0.98		1.00	1.00		1.00	0.99	
Frt			0.850		0.918			0.996			0.967	
Flt Protected		0.954			0.996		0.950			0.950		
Satd. Flow (prot)	0	1759	1567	0	1761	0	1690	1892	0	1743	1748	0
Flt Permitted		0.714			0.980		0.124			0.349		
Satd. Flow (perm)	0	1312	1567	0	1733	0	220	1892	0	640	1748	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		17			2			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	2					2	6		2	2		6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	10%	3%	2%	2%	3%	2%
Adj. Flow (vph)	335	14	67	2	9	17	79	467	14	5	577	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	349	67	0	28	0	79	481	0	5	740	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

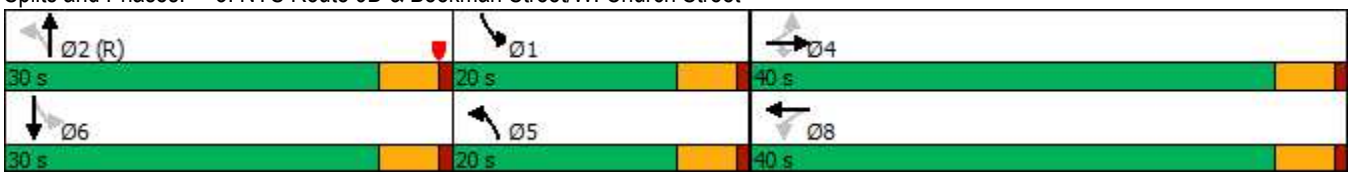


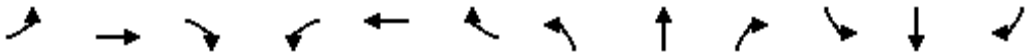
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%	44.4%	44.4%	44.4%		22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0		15.0	25.0		15.0	25.0	
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	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				2	2							
v/c Ratio		0.85	0.12		0.05		0.39	0.47		0.01	0.87	
Control Delay		46.8	3.3		10.7		20.7	16.0		11.8	36.6	
Queue Delay		0.0	0.0		0.0		0.0	0.4		0.0	0.0	
Total Delay		46.8	3.3		10.7		20.7	16.4		11.8	36.6	
Queue Length 50th (ft)		182	0		4		16	147		1	364	
Queue Length 95th (ft)		255	18		20		m35	245		7	#741	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		515	667		691		395	1034		600	854	
Starvation Cap Reductn		0	0		0		0	184		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		0.68	0.10		0.04		0.20	0.57		0.01	0.87	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

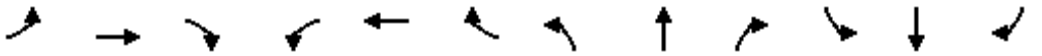




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	13	62	2	8	16	73	430	13	5	531	150
Future Volume (veh/h)	308	13	62	2	8	16	73	430	13	5	531	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	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	1847	1847	2263	2263	2263	1986	2091	2106	1817	1803	1817
Adj Flow Rate, veh/h	335	14	67	2	9	17	79	467	14	5	577	163
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	10	3	2	2	3	2
Cap, veh/h	178	4	607	43	166	256	395	560	17	422	372	105
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.17	0.28	0.28	0.17	0.28	0.28
Sat Flow, veh/h	255	11	1561	0	426	658	1891	2017	60	1731	1341	379
Grp Volume(v), veh/h	349	0	67	28	0	0	79	0	481	5	0	740
Grp Sat Flow(s),veh/h/ln	266	0	1561	1084	0	0	1891	0	2078	1731	0	1720
Q Serve(g_s), s	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	19.6	0.0	0.0	25.0
Cycle Q Clear(g_c), s	35.0	0.0	2.5	35.0	0.0	0.0	0.0	0.0	19.6	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.07		0.61	1.00		0.03	1.00		0.22
Lane Grp Cap(c), veh/h	182	0	607	465	0	0	395	0	577	422	0	478
V/C Ratio(X)	1.92	0.00	0.11	0.06	0.00	0.00	0.20	0.00	0.83	0.01	0.00	1.55
Avail Cap(c_a), veh/h	182	0	607	465	0	0	395	0	577	422	0	478
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	0.86	0.00	0.86	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	17.6	18.5	0.0	0.0	31.3	0.0	30.5	27.1	0.0	32.5
Incr Delay (d2), s/veh	433.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	11.6	0.0	0.0	257.3
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	25.9	0.0	0.9	0.4	0.0	0.0	1.4	0.0	11.3	0.1	0.0	44.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	468.3	0.0	17.6	18.5	0.0	0.0	31.3	0.0	42.2	27.1	0.0	289.8
LnGrp LOS	F	A	B	B	A	A	C	A	D	C	A	F
Approach Vol, veh/h		416			28			560			745	
Approach Delay, s/veh		395.7			18.5			40.6			288.1	
Approach LOS		F			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	30.0		40.0	20.0	30.0		40.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	2.0	21.6		37.0	2.0	27.0		37.0				
Green Ext Time (p_c), s	0.0	0.4		0.0	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			230.1									
HCM 6th LOS			F									



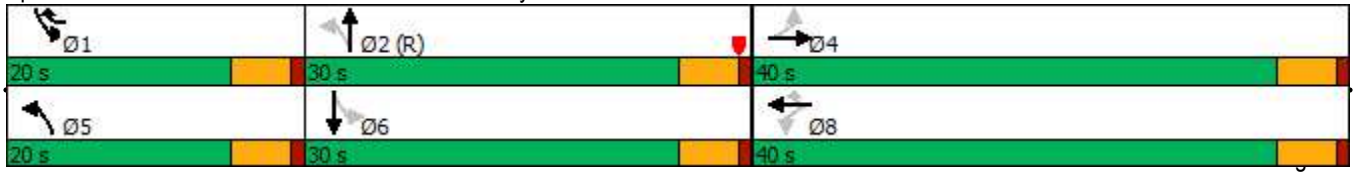
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	8	2	50	2	184	2	329	80	257	347	0
Future Volume (vph)	2	8	2	50	2	184	2	329	80	257	347	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-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		0.99				0.95		0.99				
Frt		0.979				0.850		0.971				
Flt Protected		0.992			0.954		0.950			0.950		
Satd. Flow (prot)	0	1825	0	0	1885	1647	1832	1803	0	1743	1853	0
Flt Permitted		0.961			0.720		0.529			0.322		
Satd. Flow (perm)	0	1768	0	0	1423	1566	1020	1803	0	591	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			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	3	13	3	55	2	202	3	416	101	292	394	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	57	202	3	517	0	292	394	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	40		20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

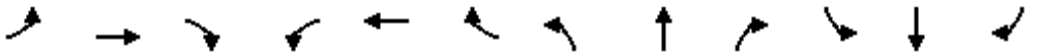
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	40.0	40.0		40.0	40.0	20.0	20.0	30.0		20.0	30.0	
Total Split (%)	44.4%	44.4%		44.4%	44.4%	22.2%	22.2%	33.3%		22.2%	33.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0	15.0	15.0	25.0		15.0	25.0	
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	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	9	9		15	15			21				
v/c Ratio		0.07			0.28	0.42	0.00	0.53		0.45	0.28	
Control Delay		25.3			34.0	22.3	8.0	20.7		13.4	6.1	
Queue Delay		0.0			0.0	0.0	0.0	0.1		0.0	0.4	
Total Delay		25.3			34.0	22.3	8.0	20.8		13.4	6.5	
Queue Length 50th (ft)		9			31	90	0	161		31	30	
Queue Length 95th (ft)		15			57	96	3	326		m115	m98	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		689			553	516	857	983		666	1402	
Starvation Cap Reductn		0			0	0	0	0		0	543	
Spillback Cap Reductn		0			0	0	0	32		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.10	0.39	0.00	0.54		0.44	0.46	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	8	2	50	2	184	2	329	80	257	347	0
Future Volume (veh/h)	2	8	2	50	2	184	2	329	80	257	347	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.95	0.99		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	3	13	3	55	2	202	3	416	101	292	394	0
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	66	216	44	332	11	442	701	900	218	600	1229	0
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.59	0.59	0.09	0.67	0.00
Sat Flow, veh/h	125	1347	276	1582	69	1765	1922	1532	372	1731	1832	0
Grp Volume(v), veh/h	19	0	0	57	0	202	3	0	517	292	394	0
Grp Sat Flow(s),veh/h/ln	1748	0	0	1650	0	1765	1922	0	1904	1731	1832	0
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	8.8	0.1	0.0	13.8	5.6	8.1	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.5	0.0	8.8	0.1	0.0	13.8	5.6	8.1	0.0
Prop In Lane	0.16		0.16	0.96		1.00	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	326	0	0	343	0	442	701	0	1118	600	1229	0
V/C Ratio(X)	0.06	0.00	0.00	0.17	0.00	0.46	0.00	0.00	0.46	0.49	0.32	0.00
Avail Cap(c_a), veh/h	706	0	0	715	0	845	1017	0	1118	740	1229	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	1.00	1.00	0.00	1.00	0.49	0.49	0.00
Uniform Delay (d), s/veh	32.1	0.0	0.0	32.7	0.0	28.9	7.6	0.0	10.5	7.1	6.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	1.4	0.1	0.3	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	0.3	0.0	0.0	1.1	0.0	3.7	0.0	0.0	5.7	1.7	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	0.0	0.0	32.8	0.0	29.2	7.6	0.0	11.9	7.3	6.6	0.0
LnGrp LOS	C	A	A	C	A	C	A	A	B	A	A	A
Approach Vol, veh/h		19			259			520			686	
Approach Delay, s/veh		32.1			30.0			11.9			6.9	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.7	57.9		19.4	5.2	65.4		19.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	25.0		35.0	15.0	25.0		35.0				
Max Q Clear Time (g_c+I1), s	7.6	15.8		2.8	2.1	10.1		10.8				
Green Ext Time (p_c), s	0.2	0.4		0.0	0.0	0.3		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	3	7	0	346	205	3
Future Volume (vph)	3	7	0	346	205	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.904				0.998	
Flt Protected	0.986					
Satd. Flow (prot)	1801	0	0	1977	1869	0
Flt Permitted	0.986					
Satd. Flow (perm)	1801	0	0	1977	1869	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	8	8			14
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	4	10	0	487	289	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	487	293	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	3	7	0	346	205	3
Future Vol, veh/h	3	7	0	346	205	3
Conflicting Peds, #/hr	14	8	8	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	4	10	0	487	289	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	806	313	307	0	-	0
Stage 1	305	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	550	793	1254	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	804	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	536	777	1238	-	-	-
Mov Cap-2 Maneuver	536	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1238	-	685	-	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s)	0	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	43	9	9	339	198	31
Future Volume (vph)	43	9	9	339	198	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.976				0.982	
Flt Protected	0.960			0.999		
Satd. Flow (prot)	1920	0	0	2088	1739	0
Flt Permitted	0.960			0.999		
Satd. Flow (perm)	1920	0	0	2088	1739	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	61	13	13	477	279	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	0	0	490	323	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.5

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	43	9	9	339	198	31
Future Vol, veh/h	43	9	9	339	198	31
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	-	-	2	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	61	13	13	477	279	44

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	804	301	323	0	-	0
Stage 1	301	-	-	-	-	-
Stage 2	503	-	-	-	-	-
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	352	739	1237	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	347	739	1237	-	-	-
Mov Cap-2 Maneuver	347	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	607	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	16.6	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1237	-	382	-	-
HCM Lane V/C Ratio	0.01	-	0.192	-	-
HCM Control Delay (s)	7.9	0	16.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	77	0	19	111	0	10
Future Volume (vph)	77	0	19	111	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	9	12
Grade (%)	-5%			3%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.993		
Satd. Flow (prot)	1973	0	0	1883	1428	0
Flt Permitted				0.993		
Satd. Flow (perm)	1973	0	0	1883	1428	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	341			103	156	
Travel Time (s)	7.8			2.3	3.5	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Adj. Flow (vph)	108	0	27	156	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	108	0	0	183	14	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	9	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.97	1.02	0.98	1.17	1.02
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	0	19	111	0	10
Future Vol, veh/h	77	0	19	111	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	3	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	0	27	156	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	108	0	318	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	-	-	4.12	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1483	-	640	937
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	797	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1483	-	627	937
Mov Cap-2 Maneuver	-	-	-	-	627	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	781	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	8.9
HCM LOS			A

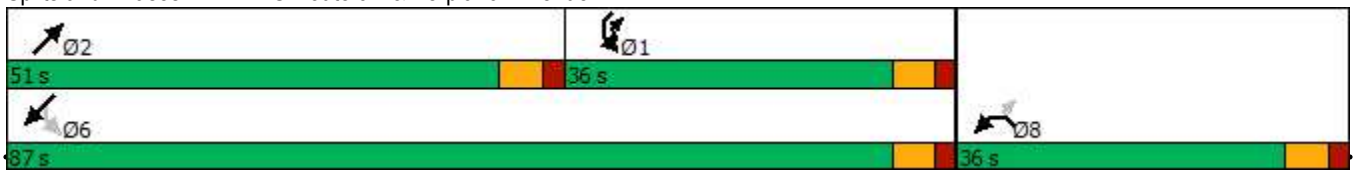
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	937	-	-	1483	-
HCM Lane V/C Ratio	0.015	-	-	0.018	-
HCM Control Delay (s)	8.9	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	55	287	647	46	217	745
Future Volume (vph)	55	287	647	46	217	745
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
Ped Bike Factor	0.98		1.00			
Frt		0.850	0.991			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1816	0	1778	1872
Flt Permitted	0.950				0.186	
Satd. Flow (perm)	1688	1544	1816	0	348	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
Confl. Peds. (#/hr)	7			1	1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	312	703	50	236	810
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	312	753	0	236	810
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
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

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.34	0.57	0.81		0.41	0.53
Control Delay	44.7	26.8	30.4		13.2	6.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	44.7	26.8	30.4		13.2	6.3
Queue Length 50th (ft)	33	139	347		26	136
Queue Length 95th (ft)	75	211	#793		77	364
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	588	615	928		796	1663
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	0.10	0.51	0.81		0.30	0.49

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 89.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

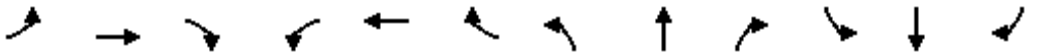
Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	55	287	647	46	217	745	
Future Volume (veh/h)	55	287	647	46	217	745	
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	60	312	703	50	236	810	
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	278	363	784	56	295	1225	
Arrive On Green	0.17	0.17	0.47	0.47	0.08	0.64	
Sat Flow, veh/h	1641	1460	1676	119	1818	1909	
Grp Volume(v), veh/h	60	312	0	753	236	810	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1796	1818	1909	
Q Serve(g_s), s	2.0	7.9	0.0	24.4	2.7	16.8	
Cycle Q Clear(g_c), s	2.0	7.9	0.0	24.4	2.7	16.8	
Prop In Lane	1.00	1.00		0.07	1.00		
Lane Grp Cap(c), veh/h	278	363	0	840	295	1225	
V/C Ratio(X)	0.22	0.86	0.00	0.90	0.80	0.66	
Avail Cap(c_a), veh/h	776	806	0	1274	1011	2438	
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	22.7	22.8	0.0	15.5	27.0	7.1	
Incr Delay (d2), s/veh	0.1	2.3	0.0	5.9	1.9	0.6	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.7	4.3	0.0	9.8	3.4	5.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	22.9	25.1	0.0	21.4	28.9	7.7	
LnGrp LOS	C	C	A	C	C	A	
Approach Vol, veh/h	372		753			1046	
Approach Delay, s/veh	24.8		21.4			12.5	
Approach LOS	C		C			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	35.7				46.7	16.7
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	4.7	26.4				18.8	9.9
Green Ext Time (p_c), s	0.5	3.3				4.1	0.8

Intersection Summary		
HCM 6th Ctrl Delay		17.7
HCM 6th LOS		B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	2	18	4	6	11	24	621	5	8	696	97
Future Volume (vph)	70	2	18	4	6	11	24	621	5	8	696	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			86			25		
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		0.973			0.926			0.999			0.984	
Flt Protected		0.963			0.991		0.950				0.999	
Satd. Flow (prot)	0	1826	0	0	1766	0	1770	1923	0	0	1939	0
Flt Permitted		0.963			0.991		0.950				0.999	
Satd. Flow (perm)	0	1826	0	0	1766	0	1770	1923	0	0	1939	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	74	2	19	4	6	12	26	661	5	9	740	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	22	0	26	666	0	0	852	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
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	

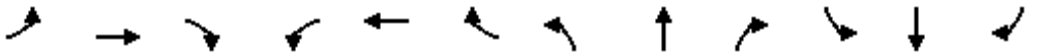
Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	2	18	4	6	11	24	621	5	8	696	97
Future Vol, veh/h	70	2	18	4	6	11	24	621	5	8	696	97
Conflicting Peds, #/hr	6	0	6	2	0	2	6	0	2	2	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-4	-	-	0	-	-	0	-	-	-5	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	2	19	4	6	12	26	661	5	9	740	103

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1547	1536	804	1544	1585	672	849	0	0	668	0	0
Stage 1	816	816	-	718	718	-	-	-	-	-	-	-
Stage 2	731	720	-	826	867	-	-	-	-	-	-	-
Critical Hdwy	6.33	5.72	5.82	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.33	4.72	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	131	163	419	94	108	456	789	-	-	922	-	-
Stage 1	443	468	-	420	433	-	-	-	-	-	-	-
Stage 2	484	507	-	366	370	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	116	154	414	85	102	453	785	-	-	920	-	-
Mov Cap-2 Maneuver	116	154	-	85	102	-	-	-	-	-	-	-
Stage 1	426	457	-	405	418	-	-	-	-	-	-	-
Stage 2	446	489	-	339	361	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	78.1	30.9	0.4	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	785	-	-	136	161	920	-	-
HCM Lane V/C Ratio	0.033	-	-	0.704	0.139	0.009	-	-
HCM Control Delay (s)	9.7	-	-	78.1	30.9	8.9	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4	0.5	0	-	-

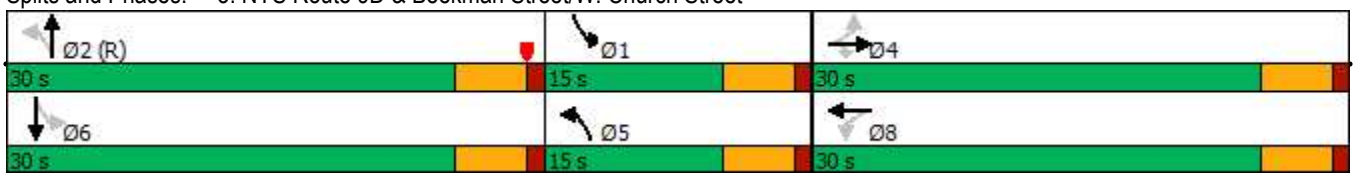


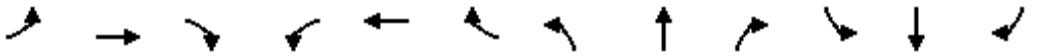
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	6	68	10	4	8	103	470	4	8	512	197
Future Volume (vph)	163	6	68	10	4	8	103	470	4	8	512	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-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		0.98		1.00	1.00		1.00	0.99	
Frt			0.850		0.949			0.999			0.958	
Flt Protected		0.954			0.978		0.950			0.950		
Satd. Flow (prot)	0	1759	1567	0	1790	0	1823	1916	0	1743	1744	0
Flt Permitted		0.716			0.856		0.147			0.358		
Satd. Flow (perm)	0	1298	1524	0	1564	0	282	1916	0	655	1744	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		9			1			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	11		3	3		11	6		9	9		6
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	183	7	76	11	4	9	116	528	4	9	575	221
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	76	0	24	0	116	532	0	9	796	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0	0.0		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	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		10.0	25.0		10.0	25.0	
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	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)				8.0	8.0							
Flash Dont Walk (s)				15.0	15.0							
Pedestrian Calls (#/hr)				11	11							
v/c Ratio		0.70	0.19		0.07		0.40	0.45		0.02	0.82	
Control Delay		40.6	3.9		16.0		16.7	12.2		7.1	27.1	
Queue Delay		0.0	0.0		0.0		0.0	0.3		0.0	0.0	
Total Delay		40.6	3.9		16.0		16.7	12.5		7.1	27.1	
Queue Length 50th (ft)		83	0		6		21	104		1	280	
Queue Length 95th (ft)		130	18		21		m0	220		7	#641	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		432	576		527		408	1193		590	965	
Starvation Cap Reductn		0	0		0		0	203		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		0.44	0.13		0.05		0.28	0.54		0.02	0.82	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street

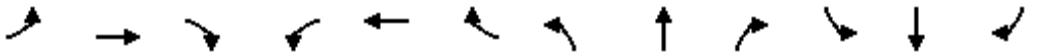




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	6	68	10	4	8	103	470	4	8	512	197
Future Volume (veh/h)	163	6	68	10	4	8	103	470	4	8	512	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	0.99		0.98	1.00		0.99	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	1847	1847	1847	2263	2263	2263	2106	2106	2106	1817	1817	1817
Adj Flow Rate, veh/h	183	7	76	11	4	9	116	528	4	9	575	221
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	9	361	107	55	55	547	696	5	576	415	160
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.22	0.33	0.33	0.22	0.33	0.33
Sat Flow, veh/h	969	37	1492	153	226	227	2006	2087	16	1731	1245	479
Grp Volume(v), veh/h	190	0	76	24	0	0	116	0	532	9	0	796
Grp Sat Flow(s),veh/h/ln	1006	0	1492	607	0	0	2006	0	2103	1731	0	1723
Q Serve(g_s), s	0.0	0.0	3.1	0.2	0.0	0.0	0.0	0.0	16.9	0.0	0.0	25.0
Cycle Q Clear(g_c), s	14.7	0.0	3.1	14.9	0.0	0.0	0.0	0.0	16.9	0.0	0.0	25.0
Prop In Lane	0.96		1.00	0.46		0.37	1.00		0.01	1.00		0.28
Lane Grp Cap(c), veh/h	337	0	361	217	0	0	547	0	701	576	0	574
V/C Ratio(X)	0.56	0.00	0.21	0.11	0.00	0.00	0.21	0.00	0.76	0.02	0.00	1.39
Avail Cap(c_a), veh/h	464	0	497	379	0	0	547	0	701	576	0	574
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	0.86	0.00	0.86	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.1	0.0	22.7	22.8	0.0	0.0	22.5	0.0	22.3	16.9	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	0.1	0.0	6.6	0.0	0.0	184.1
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	3.1	0.0	1.0	0.3	0.0	0.0	1.5	0.0	9.1	0.1	0.0	38.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	0.0	22.8	22.9	0.0	0.0	22.6	0.0	28.9	16.9	0.0	209.1
LnGrp LOS	C	A	C	C	A	A	C	A	C	B	A	F
Approach Vol, veh/h		266			24			648			805	
Approach Delay, s/veh		26.3			22.9			27.7			207.0	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.9	30.0		23.1	21.9	30.0		23.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	18.9		16.7	2.0	27.0		16.9				
Green Ext Time (p_c), s	0.0	0.7		0.4	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		110.2	
HCM 6th LOS		F	

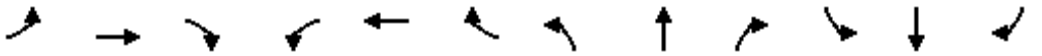


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	2	38	0	219	2	357	52	275	320	3
Future Volume (vph)	2	2	2	38	0	219	2	357	52	275	320	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-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		0.99				0.97		0.99			1.00	
Frt		0.955				0.850		0.981			0.999	
Flt Protected		0.984			0.950		0.950			0.950		
Satd. Flow (prot)	0	1751	0	0	1877	1663	1832	1825	0	1760	1851	0
Flt Permitted		0.898			0.752		0.551			0.370		
Satd. Flow (perm)	0	1598	0	0	1486	1614	1063	1825	0	686	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			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	3	3	3	43	0	246	2	406	59	299	348	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	43	246	2	465	0	299	351	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	-7	-7		-7	-7	
Detector 1 Size(ft)	20	40		20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0	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		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		28.0	28.0	8.0	8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0	15.0	15.0	30.0		15.0	30.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%	20.0%	20.0%	40.0%		20.0%	40.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0	10.0	10.0	25.0		10.0	25.0	
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	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	14	14		6	6			48				
v/c Ratio		0.04			0.23	0.60	0.00	0.44		0.43	0.24	
Control Delay		20.5			28.9	27.0	6.5	14.8		8.7	5.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		20.5			28.9	27.0	6.5	14.8		8.7	5.2	
Queue Length 50th (ft)		3			19	94	0	113		19	22	
Queue Length 95th (ft)		9			36	99	3	#318		m91	m82	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		534			495	416	857	1053		707	1472	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	19		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.02			0.09	0.59	0.00	0.45		0.42	0.24	

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	2	38	0	219	2	357	52	275	320	3
Future Volume (veh/h)	2	2	2	38	0	219	2	357	52	275	320	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.96		0.98	0.99		0.95	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	3	3	3	43	0	246	2	406	59	299	348	3
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	126	120	91	382	0	511	677	881	128	605	1127	10
Arrive On Green	0.18	0.18	0.18	0.18	0.00	0.18	0.00	0.52	0.52	0.10	0.62	0.62
Sat Flow, veh/h	349	679	514	1615	0	1832	1922	1685	245	1745	1814	16
Grp Volume(v), veh/h	9	0	0	43	0	246	2	0	465	299	0	351
Grp Sat Flow(s),veh/h/ln	1543	0	0	1615	0	1832	1922	0	1930	1745	0	1829
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	8.4	0.0	0.0	11.4	5.4	0.0	6.7
Cycle Q Clear(g_c), s	0.3	0.0	0.0	1.6	0.0	8.4	0.0	0.0	11.4	5.4	0.0	6.7
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.13	1.00		0.01
Lane Grp Cap(c), veh/h	337	0	0	382	0	511	677	0	1010	605	0	1137
V/C Ratio(X)	0.03	0.00	0.00	0.11	0.00	0.48	0.00	0.00	0.46	0.49	0.00	0.31
Avail Cap(c_a), veh/h	565	0	0	633	0	797	930	0	1010	663	0	1137
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	0.55	0.00	0.55
Uniform Delay (d), s/veh	25.5	0.0	0.0	26.0	0.0	22.6	8.5	0.0	11.2	7.3	0.0	6.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.5	0.1	0.0	0.4
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	0.1	0.0	0.0	0.6	0.0	3.5	0.0	0.0	4.7	1.6	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	0.0	0.0	26.1	0.0	22.9	8.5	0.0	12.8	7.5	0.0	7.0
LnGrp LOS	C	A	A	C	A	C	A	A	B	A	A	A
Approach Vol, veh/h		9			289			467			650	
Approach Delay, s/veh		25.5			23.4			12.7			7.2	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.5	44.2		18.3	5.1	51.6		18.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	25.0		25.0	10.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	7.4	13.4		2.3	2.0	8.7		10.4				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		12.5	
HCM 6th LOS		B	

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	0	208	264	0
Future Volume (vph)	2	2	0	208	264	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1838	0	0	1977	1909	0
Flt Permitted	0.976					
Satd. Flow (perm)	1838	0	0	1977	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	17	17			14
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	2	2	0	242	307	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	242	307	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
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	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	0	208	264	0
Future Vol, veh/h	2	2	0	208	264	0
Conflicting Peds, #/hr	14	17	17	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	0	242	307	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	580	341	324	0	-	0
Stage 1	324	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	658	771	1236	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	638	747	1217	-	-	-
Mov Cap-2 Maneuver	638	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1217	-	688	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	0	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	38	8	8	201	256	29
Future Volume (vph)	38	8	8	201	256	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.977				0.986	
Flt Protected	0.960			0.998		
Satd. Flow (prot)	1922	0	0	2086	1775	0
Flt Permitted	0.960			0.998		
Satd. Flow (perm)	1922	0	0	2086	1775	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	44	9	9	234	298	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	0	0	243	332	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	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	1.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	38	8	8	201	256	29
Future Vol, veh/h	38	8	8	201	256	29
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	-	-	2	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	9	9	234	298	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	567	315	332	0	-	0
Stage 1	315	-	-	-	-	-
Stage 2	252	-	-	-	-	-
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	485	725	1227	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	481	725	1227	-	-	-
Mov Cap-2 Maneuver	481	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	790	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	12.9	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1227	-	511	-	-
HCM Lane V/C Ratio	0.008	-	0.105	-	-
HCM Control Delay (s)	8	0	12.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	79	0	18	108	0	9
Future Volume (vph)	79	0	18	108	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	9	12
Grade (%)	-5%			3%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.993		
Satd. Flow (prot)	1973	0	0	1883	1428	0
Flt Permitted				0.993		
Satd. Flow (perm)	1973	0	0	1883	1428	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	341			103	156	
Travel Time (s)	7.8			2.3	3.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	92	0	21	126	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	0	147	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	9	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.97	1.02	0.98	1.17	1.02
Turning Speed (mph)		60	60		60	60
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

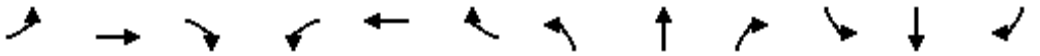
Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	79	0	18	108	0	9
Future Vol, veh/h	79	0	18	108	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	3	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	0	21	126	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	92	0	260	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	168	-
Critical Hdwy	-	-	4.12	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1503	-	698	958
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	838	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1503	-	688	958
Mov Cap-2 Maneuver	-	-	-	-	688	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	825	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	958	-	-	1503	-
HCM Lane V/C Ratio	0.011	-	-	0.014	-
HCM Control Delay (s)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

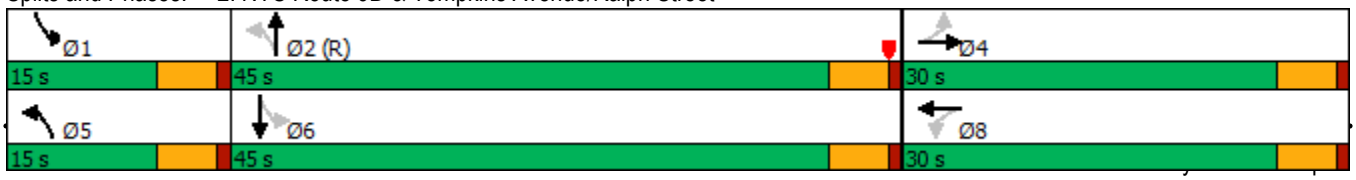


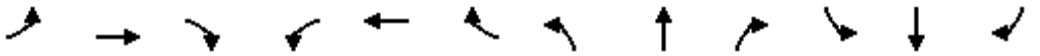
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	4	38	9	0	9	20	542	6	2	727	54
Future Volume (vph)	76	4	38	9	0	9	20	542	6	2	727	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			25		
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			1.00			1.00	
Frt		0.956			0.932			0.998			0.990	
Flt Protected		0.969			0.976		0.950			0.950		
Satd. Flow (prot)	0	1783	0	0	1617	0	1770	1848	0	1814	1902	0
Flt Permitted		0.794			0.870		0.250			0.400		
Satd. Flow (perm)	0	1445	0	0	1420	0	466	1848	0	764	1902	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			85			1			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	80	4	40	9	0	9	21	571	6	2	765	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	18	0	21	577	0	2	822	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
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		0.0	0.0	
Total Lost Time (s)		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)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	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	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.64			0.07		0.05	0.42		0.00	0.59	
Control Delay		44.0			0.6		3.5	6.4		3.5	10.0	
Queue Delay		0.0			0.0		0.0	1.7		0.0	0.0	
Total Delay		44.0			0.6		3.5	8.1		3.5	10.0	
Queue Length 50th (ft)		54			0		2	85		0	147	
Queue Length 95th (ft)		104			0		9	250		2	439	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		420			455		503	1387		705	1388	
Starvation Cap Reductn		0			0		0	610		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.30			0.04		0.04	0.74		0.00	0.59	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street

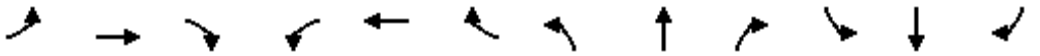




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	4	38	9	0	9	20	542	6	2	727	54
Future Volume (veh/h)	76	4	38	9	0	9	20	542	6	2	727	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.94		0.97	0.98		0.94	1.00		0.99	1.00		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	2027	2108	1997	1707	1945	1870	1870	1884	1870	2067	2118	1932
Adj Flow Rate, veh/h	80	4	40	9	0	9	21	571	6	2	765	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	4	13	2	2	2	6	2	2	4	11
Cap, veh/h	175	16	60	137	19	95	446	1333	14	629	1371	102
Arrive On Green	0.12	0.12	0.12	0.12	0.00	0.12	0.01	0.72	0.72	0.00	0.70	0.70
Sat Flow, veh/h	947	142	519	668	162	830	1781	1860	20	1968	1946	145
Grp Volume(v), veh/h	124	0	0	18	0	0	21	0	577	2	0	822
Grp Sat Flow(s),veh/h/ln	1608	0	0	1660	0	0	1781	0	1880	1968	0	2091
Q Serve(g_s), s	5.7	0.0	0.0	0.0	0.0	0.0	0.3	0.0	11.3	0.0	0.0	17.2
Cycle Q Clear(g_c), s	6.6	0.0	0.0	0.8	0.0	0.0	0.3	0.0	11.3	0.0	0.0	17.2
Prop In Lane	0.65		0.32	0.50		0.50	1.00		0.01	1.00		0.07
Lane Grp Cap(c), veh/h	251	0	0	251	0	0	446	0	1347	629	0	1473
V/C Ratio(X)	0.49	0.00	0.00	0.07	0.00	0.00	0.05	0.00	0.43	0.00	0.00	0.56
Avail Cap(c_a), veh/h	507	0	0	489	0	0	620	0	1347	844	0	1473
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	0.94	0.00	0.94	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.1	0.0	0.0	35.6	0.0	0.0	5.3	0.0	5.2	4.5	0.0	6.5
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.5
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	2.6	0.0	0.0	0.4	0.0	0.0	0.1	0.0	3.8	0.0	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	0.0	0.0	35.7	0.0	0.0	5.3	0.0	6.1	4.5	0.0	8.0
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		124			18			598			824	
Approach Delay, s/veh		38.6			35.7			6.1			8.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	69.5		15.4	6.2	68.4		15.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	13.3		8.6	2.3	19.2		2.8				
Green Ext Time (p_c), s	0.0	1.2		0.2	0.0	2.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									



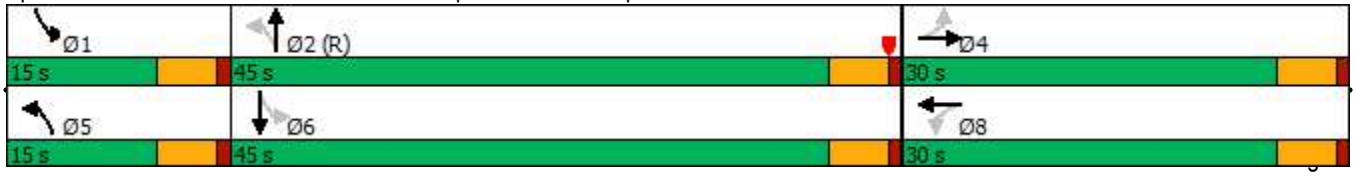
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	6	19	7	4	5	27	705	6	6	654	81
Future Volume (vph)	53	6	19	7	4	5	27	705	6	6	654	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			25		
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			1.00			1.00	
Frt		0.967			0.960			0.999			0.983	
Flt Protected		0.967			0.977		0.950			0.950		
Satd. Flow (prot)	0	1823	0	0	1681	0	1770	1922	0	1814	1917	0
Flt Permitted		0.787			0.886		0.257			0.299		
Satd. Flow (perm)	0	1476	0	0	1522	0	479	1922	0	571	1917	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			5			1			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	58	7	21	8	4	5	29	766	7	7	711	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	17	0	29	773	0	7	799	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

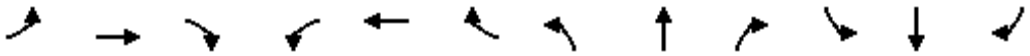
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
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		0.0	0.0	
Total Lost Time (s)		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)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.45			0.09		0.07	0.51		0.01	0.56	
Control Delay		34.7			26.0		2.8	5.2		4.7	11.2	
Queue Delay		0.0			0.0		0.0	0.3		0.0	0.8	
Total Delay		34.7			26.0		2.8	5.5		4.7	12.0	
Queue Length 50th (ft)		37			6		1	33		1	203	
Queue Length 95th (ft)		69			21		m6	307		6	516	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		423			426		522	1503		590	1420	
Starvation Cap Reductn		0			0		0	267		0	0	
Spillback Cap Reductn		2			0		0	0		0	316	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.20			0.04		0.06	0.63		0.01	0.72	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 55
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	6	19	7	4	5	27	705	6	6	654	81
Future Volume (veh/h)	53	6	19	7	4	5	27	705	6	6	654	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.98		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2027	2108	2027	1870	1945	1530	1870	1945	1870	2067	2134	2067
Adj Flow Rate, veh/h	58	7	21	8	4	5	29	766	7	7	711	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	25	2	2	2	2	3	2
Cap, veh/h	152	18	33	106	53	42	500	1438	13	656	1369	169
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	1.00	1.00	0.01	0.74	0.74
Sat Flow, veh/h	1050	221	410	582	653	515	1781	1924	18	1968	1861	230
Grp Volume(v), veh/h	86	0	0	17	0	0	29	0	773	7	0	799
Grp Sat Flow(s),veh/h/ln	1681	0	0	1750	0	0	1781	0	1942	1968	0	2091
Q Serve(g_s), s	3.6	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0	14.7
Cycle Q Clear(g_c), s	4.4	0.0	0.0	0.8	0.0	0.0	0.4	0.0	0.0	0.1	0.0	14.7
Prop In Lane	0.67		0.24	0.47		0.29	1.00		0.01	1.00		0.11
Lane Grp Cap(c), veh/h	203	0	0	200	0	0	500	0	1451	656	0	1538
V/C Ratio(X)	0.42	0.00	0.00	0.08	0.00	0.00	0.06	0.00	0.53	0.01	0.00	0.52
Avail Cap(c_a), veh/h	526	0	0	511	0	0	667	0	1451	865	0	1538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.89	0.00	0.89	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	0.0	0.0	38.4	0.0	0.0	4.0	0.0	0.0	3.0	0.0	5.1
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.3	0.0	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	1.8	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.5	0.0	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	0.0	0.0	38.4	0.0	0.0	4.0	0.0	1.3	3.0	0.0	6.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		86			17			802			806	
Approach Delay, s/veh		40.5			38.4			1.4			6.3	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	72.3		12.3	6.5	71.2		12.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		6.4	2.4	16.7		2.8				
Green Ext Time (p_c), s	0.0	1.8		0.1	0.0	1.9		0.0				

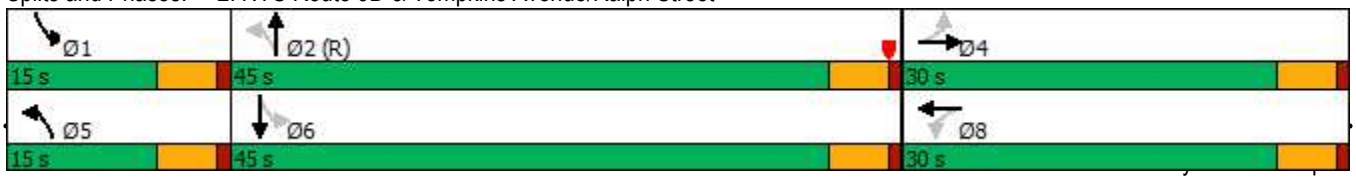
Intersection Summary												
HCM 6th Ctrl Delay			6.0									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	2	18	4	6	11	24	607	5	8	690	79
Future Volume (vph)	61	2	18	4	6	11	24	607	5	8	690	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			86			25		
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			0.99			1.00			1.00	
Frt		0.970			0.926			0.999			0.985	
Flt Protected		0.964			0.991		0.950			0.950		
Satd. Flow (prot)	0	1810	0	0	1743	0	1770	1923	0	1814	1937	0
Flt Permitted		0.764			0.942		0.256			0.360		
Satd. Flow (perm)	0	1422	0	0	1656	0	477	1923	0	687	1937	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			12			1			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	65	2	19	4	6	12	26	646	5	9	734	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	22	0	26	651	0	9	818	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
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		0.0	0.0	
Total Lost Time (s)		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)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.46			0.10		0.06	0.43		0.02	0.56	
Control Delay		36.0			21.0		4.4	7.5		4.6	10.5	
Queue Delay		0.0			0.0		0.0	1.3		0.0	0.0	
Total Delay		36.0			21.0		4.4	8.8		4.6	10.5	
Queue Length 50th (ft)		38			5		2	88		1	125	
Queue Length 95th (ft)		70			23		14	363		7	530	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		406			468		520	1500		667	1470	
Starvation Cap Reductn		0			0		0	608		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.21			0.05		0.05	0.73		0.01	0.56	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	2	18	4	6	11	24	607	5	8	690	79
Future Volume (veh/h)	61	2	18	4	6	11	24	607	5	8	690	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2012	2108	2027	1870	1945	1870	1870	1945	1870	2067	2149	2067
Adj Flow Rate, veh/h	65	2	19	4	6	12	26	646	5	9	734	84
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	10	31	59	55	80	484	1428	11	619	1385	158
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.02	0.74	0.74	0.01	0.73	0.73
Sat Flow, veh/h	1172	118	366	134	647	936	1781	1927	15	1968	1893	217
Grp Volume(v), veh/h	86	0	0	22	0	0	26	0	651	9	0	818
Grp Sat Flow(s),veh/h/ln	1656	0	0	1716	0	0	1781	0	1942	1968	0	2109
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	11.8	0.1	0.0	15.3
Cycle Q Clear(g_c), s	4.4	0.0	0.0	1.0	0.0	0.0	0.3	0.0	11.8	0.1	0.0	15.3
Prop In Lane	0.76		0.22	0.18		0.55	1.00		0.01	1.00		0.10
Lane Grp Cap(c), veh/h	212	0	0	194	0	0	484	0	1439	619	0	1543
V/C Ratio(X)	0.41	0.00	0.00	0.11	0.00	0.00	0.05	0.00	0.45	0.01	0.00	0.53
Avail Cap(c_a), veh/h	519	0	0	512	0	0	653	0	1439	825	0	1543
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	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	0.0	38.1	0.0	0.0	4.3	0.0	4.5	3.8	0.0	5.3
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.9	0.0	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	1.8	0.0	0.0	0.5	0.0	0.0	0.1	0.0	3.9	0.0	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	0.0	0.0	38.2	0.0	0.0	4.3	0.0	5.5	3.8	0.0	6.6
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		86			22			677			827	
Approach Delay, s/veh		40.0			38.2			5.4			6.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	71.7		12.7	6.4	70.9		12.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.1	13.8		6.4	2.3	17.3		3.0				
Green Ext Time (p_c), s	0.0	1.4		0.1	0.0	2.0		0.0				

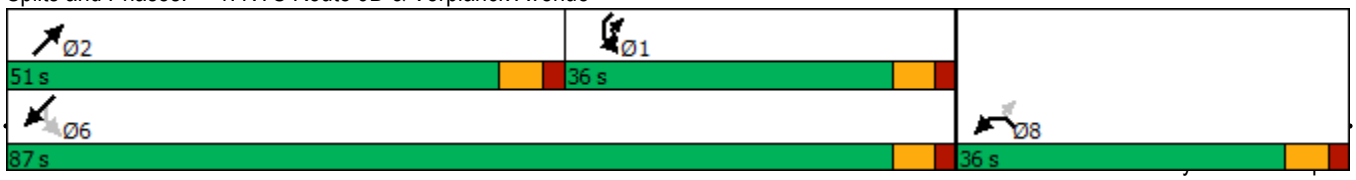
Intersection Summary			
HCM 6th Ctrl Delay		8.3	
HCM 6th LOS		A	

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	68	293	595	54	291	722
Future Volume (vph)	68	293	595	54	291	722
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
Ped Bike Factor	0.99		1.00			
Frt		0.850	0.989			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1811	0	1778	1854
Flt Permitted	0.950				0.232	
Satd. Flow (perm)	1715	1544	1811	0	434	1854
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
Confl. Peds. (#/hr)	2			1	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	72	308	626	57	306	760
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	308	683	0	306	760
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.39	0.56	0.75		0.49	0.51
Control Delay	45.7	26.0	27.5		14.1	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	45.7	26.0	27.5		14.1	6.1
Queue Length 50th (ft)	40	136	299		37	129
Queue Length 95th (ft)	88	208	#692		100	328
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	595	624	937		847	1640
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	0.12	0.49	0.73		0.36	0.46

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 89.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

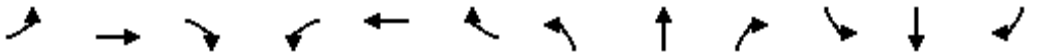
Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



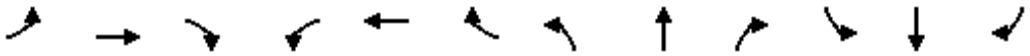
Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	68	293	595	54	291	722	
Future Volume (veh/h)	68	293	595	54	291	722	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1894	
Adj Flow Rate, veh/h	72	308	626	57	306	760	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	3	
Cap, veh/h	224	365	715	65	373	1239	
Arrive On Green	0.14	0.14	0.44	0.44	0.11	0.65	
Sat Flow, veh/h	1641	1460	1641	149	1818	1894	
Grp Volume(v), veh/h	72	308	0	683	306	760	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1790	1818	1894	
Q Serve(g_s), s	2.3	5.0	0.0	20.0	4.0	13.3	
Cycle Q Clear(g_c), s	2.3	5.0	0.0	20.0	4.0	13.3	
Prop In Lane	1.00	1.00		0.08	1.00		
Lane Grp Cap(c), veh/h	224	365	0	781	373	1239	
V/C Ratio(X)	0.32	0.84	0.00	0.88	0.82	0.61	
Avail Cap(c_a), veh/h	859	930	0	1405	1118	2676	
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	22.4	20.4	0.0	14.7	23.0	5.7	
Incr Delay (d2), s/veh	0.3	2.1	0.0	3.3	1.7	0.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.8	3.7	0.0	7.4	3.8	3.5	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	22.7	22.5	0.0	18.0	24.7	6.2	
LnGrp LOS	C	C	A	B	C	A	
Approach Vol, veh/h	380		683			1066	
Approach Delay, s/veh	22.5		18.0			11.5	
Approach LOS	C		B			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.5	31.0				43.5	13.8
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	6.0	22.0				15.3	7.0
Green Ext Time (p_c), s	0.6	3.0				3.7	0.9

Intersection Summary			
HCM 6th Ctrl Delay		15.6	
HCM 6th LOS		B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	4	38	9	0	9	20	555	6	2	730	65
Future Volume (vph)	85	4	38	9	0	9	20	555	6	2	730	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	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	1.00	
Frt		0.959			0.932			0.998			0.988	
Flt Protected		0.968			0.976		0.950			0.950		
Satd. Flow (prot)	0	1793	0	0	1626	0	1770	1848	0	1814	1897	0
Flt Permitted		0.788			0.883		0.229			0.385		
Satd. Flow (perm)	0	1448	0	0	1455	0	427	1848	0	731	1897	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			85			1			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		8	14		12	8		14	12		6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	2%	6%	2%	2%	4%	11%
Adj. Flow (vph)	89	4	40	9	0	9	21	584	6	2	768	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	18	0	21	590	0	2	836	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

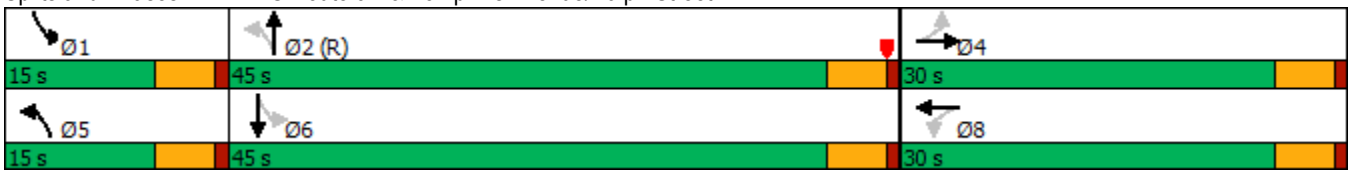


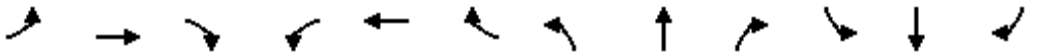
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
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		0.0	0.0	
Total Lost Time (s)		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)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.60			0.07		0.06	0.44		0.00	0.62	
Control Delay		39.3			0.5		4.8	6.4		5.0	12.7	
Queue Delay		0.0			0.0		0.0	0.2		0.0	3.1	
Total Delay		39.3			0.5		4.8	6.5		5.0	15.8	
Queue Length 50th (ft)		60			0		2	95		0	158	
Queue Length 95th (ft)		102			0		m11	174		3	#625	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		419			465		469	1348		668	1343	
Starvation Cap Reductn		0			0		0	178		0	0	
Spillback Cap Reductn		4			17		0	0		0	390	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.32			0.04		0.04	0.50		0.00	0.88	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street

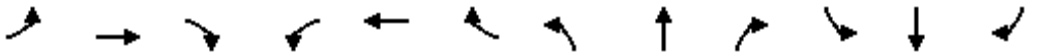




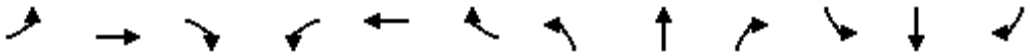
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	4	38	9	0	9	20	555	6	2	730	65
Future Volume (veh/h)	85	4	38	9	0	9	20	555	6	2	730	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.97	0.98		0.95	1.00		0.99	1.00		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	2027	2108	1997	1707	1945	1870	1870	1884	1870	2067	2118	1932
Adj Flow Rate, veh/h	89	4	40	9	0	9	21	584	6	2	768	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	4	13	2	2	2	6	2	2	4	11
Cap, veh/h	200	21	66	153	19	112	413	1293	13	704	1308	116
Arrive On Green	0.14	0.14	0.14	0.14	0.00	0.14	0.03	1.00	1.00	0.00	0.68	0.68
Sat Flow, veh/h	976	153	486	679	139	818	1781	1861	19	1968	1916	170
Grp Volume(v), veh/h	133	0	0	18	0	0	21	0	590	2	0	836
Grp Sat Flow(s),veh/h/ln	1615	0	0	1636	0	0	1781	0	1880	1968	0	2086
Q Serve(g_s), s	5.9	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	19.1
Cycle Q Clear(g_c), s	6.9	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.0	0.0	0.0	19.1
Prop In Lane	0.67		0.30	0.50		0.50	1.00		0.01	1.00		0.08
Lane Grp Cap(c), veh/h	288	0	0	284	0	0	413	0	1306	704	0	1424
V/C Ratio(X)	0.46	0.00	0.00	0.06	0.00	0.00	0.05	0.00	0.45	0.00	0.00	0.59
Avail Cap(c_a), veh/h	511	0	0	491	0	0	587	0	1306	919	0	1424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.00	0.92	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	0.0	33.9	0.0	0.0	6.2	0.0	0.0	4.5	0.0	7.6
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.4	0.0	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	0.0	0.0	33.9	0.0	0.0	6.2	0.0	1.0	4.5	0.0	9.3
LnGrp LOS	D	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		133			18			611			838	
Approach Delay, s/veh		36.8			33.9			1.2			9.3	
Approach LOS		D			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	67.5		17.3	6.2	66.5		17.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.0	2.0		8.9	2.3	21.1		2.8				
Green Ext Time (p_c), s	0.0	1.3		0.2	0.0	2.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		8.8	
HCM 6th LOS		A	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	5	63	9	10	17	36	449	3	3	520	254
Future Volume (vph)	123	5	63	9	10	17	36	449	3	3	520	254
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		1.00	0.98		0.98		1.00	1.00		0.99	0.99	
Frt			0.850		0.938			0.999			0.951	
Flt Protected		0.954			0.987		0.950			0.950		
Satd. Flow (prot)	0	1713	1494	0	1785	0	1754	1844	0	1743	1693	0
Flt Permitted		0.954			0.987		0.129			0.429		
Satd. Flow (perm)	0	1710	1459	0	1783	0	238	1844	0	782	1693	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					18						29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	1		2	2		1	7		14	14		7
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	25%	7%	2%	2%	2%	6%	6%	2%	2%	5%	2%
Adj. Flow (vph)	132	5	68	10	11	18	39	483	3	3	559	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	137	68	0	39	0	39	486	0	3	832	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

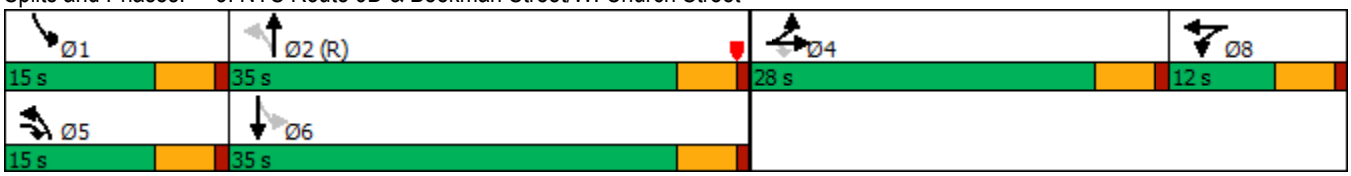


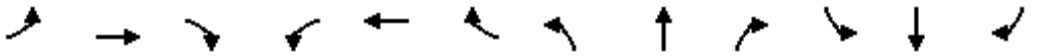
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	8.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	28.0	28.0	15.0	12.0	12.0		15.0	35.0		15.0	35.0	
Total Split (%)	31.1%	31.1%	16.7%	13.3%	13.3%		16.7%	38.9%		16.7%	38.9%	
Maximum Green (s)	23.0	23.0	10.0	7.0	7.0		10.0	30.0		10.0	30.0	
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				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0										
Flash Dont Walk (s)	15.0	15.0										
Pedestrian Calls (#/hr)	2	2										
v/c Ratio		0.55	0.24		0.29		0.17	0.41		0.01	0.84	
Control Delay		42.9	20.6		31.4		9.1	9.1		6.7	22.9	
Queue Delay		0.0	0.0		0.0		0.0	0.2		0.0	0.0	
Total Delay		42.9	20.6		31.4		9.1	9.3		6.7	22.9	
Queue Length 50th (ft)		75	26		12		7	93		0	401	
Queue Length 95th (ft)		114	40		42		m19	156		m0	#804	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		437	377		155		327	1194		627	994	
Starvation Cap Reductn		0	0		0		0	199		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		0.31	0.18		0.25		0.12	0.49		0.00	0.84	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	5	63	9	10	17	36	449	3	3	520	254
Future Volume (veh/h)	123	5	63	9	10	17	36	449	3	3	520	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	1.00		0.97	0.99		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	1817	1506	1773	2263	2263	2263	2046	2046	2106	1817	1773	1817
Adj Flow Rate, veh/h	132	5	68	10	11	18	39	483	3	3	559	273
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	25	7	2	2	2	6	6	2	2	5	2
Cap, veh/h	168	6	212	18	20	32	263	1258	8	524	668	326
Arrive On Green	0.12	0.12	0.12	0.03	0.03	0.03	0.02	0.62	0.62	0.00	0.60	0.60
Sat Flow, veh/h	1384	52	1490	518	569	932	1948	2031	13	1731	1111	543
Grp Volume(v), veh/h	137	0	68	39	0	0	39	0	486	3	0	832
Grp Sat Flow(s),veh/h/ln	1437	0	1490	2019	0	0	1948	0	2043	1731	0	1654
Q Serve(g_s), s	8.3	0.0	3.7	1.7	0.0	0.0	0.7	0.0	10.7	0.1	0.0	36.3
Cycle Q Clear(g_c), s	8.3	0.0	3.7	1.7	0.0	0.0	0.7	0.0	10.7	0.1	0.0	36.3
Prop In Lane	0.96		1.00	0.26		0.46	1.00		0.01	1.00		0.33
Lane Grp Cap(c), veh/h	174	0	212	70	0	0	263	0	1266	524	0	994
V/C Ratio(X)	0.79	0.00	0.32	0.56	0.00	0.00	0.15	0.00	0.38	0.01	0.00	0.84
Avail Cap(c_a), veh/h	367	0	412	157	0	0	439	0	1266	712	0	994
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	0.91	0.00	0.91	0.74	0.00	0.74
Uniform Delay (d), s/veh	38.4	0.0	34.7	42.8	0.0	0.0	14.3	0.0	8.6	7.5	0.0	14.4
Incr Delay (d2), s/veh	3.0	0.0	0.3	2.6	0.0	0.0	0.1	0.0	0.8	0.0	0.0	6.3
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	3.0	0.0	1.3	0.9	0.0	0.0	0.3	0.0	4.5	0.0	0.0	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.4	0.0	35.0	45.3	0.0	0.0	14.4	0.0	9.4	7.5	0.0	20.7
LnGrp LOS	D	A	D	D	A	A	B	A	A	A	A	C
Approach Vol, veh/h		205			39			525			835	
Approach Delay, s/veh		39.3			45.3			9.7			20.7	
Approach LOS		D			D			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	60.8		15.9	6.9	59.1		8.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		23.0	10.0	30.0		7.0				
Max Q Clear Time (g_c+I1), s	2.1	12.7		10.3	2.7	38.3		3.7				
Green Ext Time (p_c), s	0.0	0.9		0.3	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		20.1
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

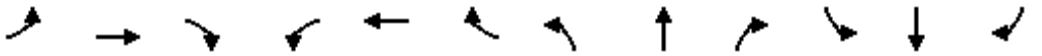
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	3	21	7	122	5	362	38	260	336	6
Future Volume (vph)	4	5	3	21	7	122	5	362	38	260	336	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-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		0.99				0.95		0.99			1.00	
Frt		0.966				0.850		0.986			0.997	
Flt Protected		0.983			0.964		0.950			0.950		
Satd. Flow (prot)	0	1778	0	0	1905	1647	1832	1848	0	1743	1847	0
Flt Permitted		0.907			0.785		0.532			0.362		
Satd. Flow (perm)	0	1641	0	0	1551	1566	1026	1848	0	664	1847	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		5									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			350			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	7	8	5	23	8	134	6	458	48	295	382	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	31	134	6	506	0	295	389	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	1	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	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		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	8.0	8.0	15.0		8.0	15.0	
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						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.09			0.14	0.35	0.01	0.44		0.45	0.26	
Control Delay		23.7			31.0	24.8	7.0	15.3		9.0	5.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.3	
Total Delay		23.7			31.0	24.8	7.0	15.3		9.0	5.9	
Queue Length 50th (ft)		8			17	63	1	124		16	22	
Queue Length 95th (ft)		15			36	73	5	287		m95	m99	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		550			517	400	838	1143		670	1473	
Starvation Cap Reductn		0			0	0	0	0		0	574	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.04			0.06	0.34	0.01	0.44		0.44	0.43	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 45
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	3	21	7	122	5	362	38	260	336	6
Future Volume (veh/h)	4	5	3	21	7	122	5	362	38	260	336	6
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	0.99		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	7	8	5	23	8	134	6	458	48	295	382	7
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	104	109	53	232	74	383	742	1091	114	639	1246	23
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.00	0.62	0.62	0.08	0.69	0.69
Sat Flow, veh/h	376	811	395	1213	550	1748	1922	1762	185	1731	1793	33
Grp Volume(v), veh/h	20	0	0	31	0	134	6	0	506	295	0	389
Grp Sat Flow(s),veh/h/ln	1582	0	0	1762	0	1748	1922	0	1946	1731	0	1826
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	5.9	0.1	0.0	12.0	5.1	0.0	7.4
Cycle Q Clear(g_c), s	0.9	0.0	0.0	1.2	0.0	5.9	0.1	0.0	12.0	5.1	0.0	7.4
Prop In Lane	0.35		0.25	0.74		1.00	1.00		0.09	1.00		0.02
Lane Grp Cap(c), veh/h	266	0	0	306	0	383	742	0	1205	639	0	1268
V/C Ratio(X)	0.08	0.00	0.00	0.10	0.00	0.35	0.01	0.00	0.42	0.46	0.00	0.31
Avail Cap(c_a), veh/h	565	0	0	650	0	731	947	0	1205	692	0	1268
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	0.51	0.00	0.51
Uniform Delay (d), s/veh	34.1	0.0	0.0	34.2	0.0	30.1	6.4	0.0	8.8	5.9	0.0	5.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	1.1	0.1	0.0	0.3
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	0.4	0.0	0.0	0.6	0.0	2.5	0.0	0.0	4.9	1.4	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	0.0	0.0	34.3	0.0	30.3	6.4	0.0	9.9	6.0	0.0	5.6
LnGrp LOS	C	A	A	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		20			165			512			684	
Approach Delay, s/veh		34.2			31.0			9.9			5.8	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	60.7		17.1	5.4	67.5		17.1				
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	7.1	14.0		2.9	2.1	9.4		7.9				
Green Ext Time (p_c), s	0.1	0.4		0.0	0.0	0.3		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			10.7									
HCM 6th LOS			B									

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	2	163	289	0
Future Volume (vph)	2	2	2	163	289	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976			0.999		
Satd. Flow (prot)	1838	0	0	1938	1909	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1838	0	0	1938	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	16	16			14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	3	3	3	206	366	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	209	366	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	163	289	0
Future Vol, veh/h	2	2	2	163	289	0
Conflicting Peds, #/hr	14	16	16	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	3	3	3	206	366	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	608	398	382	0	-	0
Stage 1	382	-	-	-	-	-
Stage 2	226	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	643	728	1176	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	623	706	1159	-	-	-
Mov Cap-2 Maneuver	623	-	-	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	907	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1159	-	662	-	-
HCM Lane V/C Ratio	0.002	-	0.008	-	-
HCM Control Delay (s)	8.1	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	31	7	5	159	282	17
Future Volume (vph)	31	7	5	159	282	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975				0.992	
Flt Protected	0.961			0.999		
Satd. Flow (prot)	1920	0	0	2049	1786	0
Flt Permitted	0.961			0.999		
Satd. Flow (perm)	1920	0	0	2049	1786	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%
Adj. Flow (vph)	39	9	6	201	357	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	0	207	379	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	31	7	5	159	282	17
Future Vol, veh/h	31	7	5	159	282	17
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	-	-	2	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	39	9	6	201	357	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	581	368	379	0	-	0
Stage 1	368	-	-	-	-	-
Stage 2	213	-	-	-	-	-
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	476	677	1179	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	473	677	1179	-	-	-
Mov Cap-2 Maneuver	473	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	12.9	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1179	-	501	-	-
HCM Lane V/C Ratio	0.005	-	0.096	-	-
HCM Control Delay (s)	8.1	0	12.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	116	0	11	74	0	9
Future Volume (vph)	116	0	11	74	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	9	12
Grade (%)	-5%			3%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1973	0	0	1885	1428	0
Flt Permitted				0.994		
Satd. Flow (perm)	1973	0	0	1885	1428	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	341			103	156	
Travel Time (s)	7.8			2.3	3.5	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	147	0	14	94	0	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	0	108	11	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	9	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.97	1.02	0.98	1.17	1.02
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	116	0	11	74	0	9
Future Vol, veh/h	116	0	11	74	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	3	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	147	0	14	94	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	147	0	269	147
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	122	-
Critical Hdwy	-	-	4.12	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1435	-	689	889
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	885	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1435	-	682	889
Mov Cap-2 Maneuver	-	-	-	-	682	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	876	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.1
HCM LOS			A

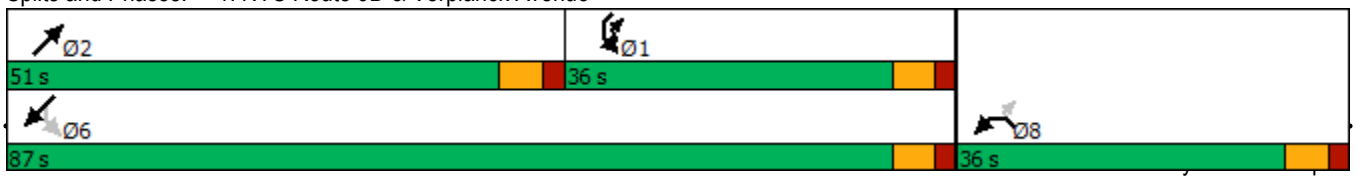
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	889	-	-	1435	-
HCM Lane V/C Ratio	0.013	-	-	0.01	-
HCM Control Delay (s)	9.1	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	71	345	731	61	233	714
Future Volume (vph)	71	345	731	61	233	714
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
Ped Bike Factor	1.00		1.00			
Frt		0.850	0.990			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1813	0	1778	1854
Flt Permitted	0.950				0.109	
Satd. Flow (perm)	1720	1544	1813	0	204	1854
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
Confl. Peds. (#/hr)	1			3	3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	75	363	769	64	245	752
Shared Lane Traffic (%)						
Lane Group Flow (vph)	75	363	833	0	245	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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel						

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Detector 2 Extend (s)	0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	36.0	36.0	51.0		36.0	87.0
Total Split (%)	29.3%	29.3%	41.5%		29.3%	70.7%
Maximum Green (s)	30.0	30.0	45.0		30.0	81.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.41	0.62	0.93		0.46	0.50
Control Delay	48.0	27.6	44.4		21.2	6.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	48.0	27.6	44.4		21.2	6.0
Queue Length 50th (ft)	43	168	458		49	129
Queue Length 95th (ft)	92	251	#954		144	320
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	565	639	892		692	1597
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	0.13	0.57	0.93		0.35	0.47

Intersection Summary	
Area Type:	Other
Cycle Length: 123	
Actuated Cycle Length: 93.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
# 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

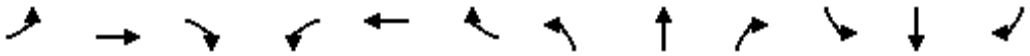


Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	71	345	731	61	233	714	
Future Volume (veh/h)	71	345	731	61	233	714	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1894	
Adj Flow Rate, veh/h	75	363	769	64	245	752	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	3	
Cap, veh/h	292	404	821	68	293	1271	
Arrive On Green	0.18	0.18	0.50	0.50	0.10	0.67	
Sat Flow, veh/h	1641	1460	1654	138	1818	1894	
Grp Volume(v), veh/h	75	363	0	833	245	752	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1792	1818	1894	
Q Serve(g_s), s	3.1	11.1	0.0	34.7	5.4	17.2	
Cycle Q Clear(g_c), s	3.1	11.1	0.0	34.7	5.4	17.2	
Prop In Lane	1.00	1.00		0.08	1.00		
Lane Grp Cap(c), veh/h	292	404	0	889	293	1271	
V/C Ratio(X)	0.26	0.90	0.00	0.94	0.84	0.59	
Avail Cap(c_a), veh/h	621	697	0	1018	802	1936	
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	28.1	27.6	0.0	18.8	33.2	7.1	
Incr Delay (d2), s/veh	0.2	4.2	0.0	14.3	2.4	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.2	3.6	0.0	16.3	4.6	5.6	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	28.2	31.8	0.0	33.1	35.7	7.6	
LnGrp LOS	C	C	A	C	D	A	
Approach Vol, veh/h	438		833			997	
Approach Delay, s/veh	31.2		33.1			14.5	
Approach LOS	C		C			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.8	45.3				59.2	20.1
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	30.0	45.0				81.0	30.0
Max Q Clear Time (g_c+I1), s	7.4	36.7				19.2	13.1
Green Ext Time (p_c), s	0.5	2.6				3.7	1.0

Intersection Summary		
HCM 6th Ctrl Delay		24.6
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	6	19	7	4	5	27	721	6	6	660	100
Future Volume (vph)	63	6	19	7	4	5	27	721	6	6	660	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	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		0.99			0.99			1.00			1.00	
Frt		0.970			0.960			0.999			0.980	
Flt Protected		0.966			0.977		0.950			0.950		
Satd. Flow (prot)	0	1829	0	0	1681	0	1770	1923	0	1814	1910	0
Flt Permitted		0.779			0.889		0.241			0.287		
Satd. Flow (perm)	0	1467	0	0	1527	0	449	1923	0	548	1910	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			5			1			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	4		4	2		2	4		2	2		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	25%	2%	2%	2%	2%	3%	2%
Adj. Flow (vph)	68	7	21	8	4	5	29	784	7	7	717	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	96	0	0	17	0	29	791	0	7	826	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

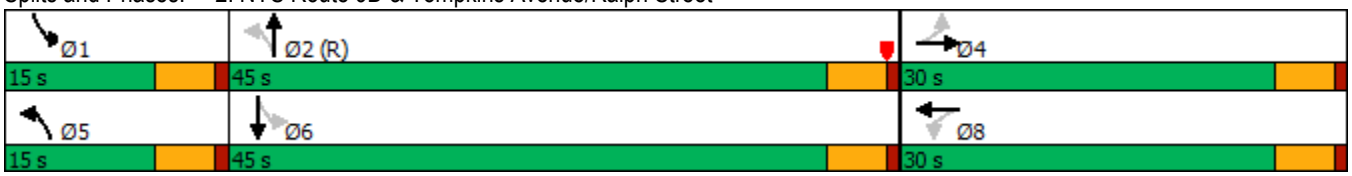


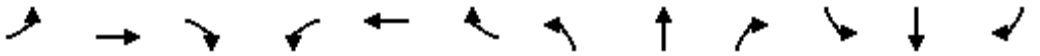
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
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		0.0	0.0	
Total Lost Time (s)		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)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.49			0.09		0.07	0.53		0.02	0.59	
Control Delay		36.7			25.6		4.1	9.9		4.7	12.0	
Queue Delay		0.4			0.1		0.0	0.8		0.0	21.9	
Total Delay		37.1			25.7		4.1	10.6		4.7	34.0	
Queue Length 50th (ft)		44			6		2	71		1	223	
Queue Length 95th (ft)		77			21		m10	602		6	#566	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		419			427		499	1494		571	1405	
Starvation Cap Reductn		0			0		0	382		0	0	
Spillback Cap Reductn		101			100		0	0		0	595	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.30			0.05		0.06	0.71		0.01	1.02	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street



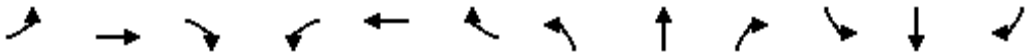


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	6	19	7	4	5	27	721	6	6	660	100
Future Volume (veh/h)	63	6	19	7	4	5	27	721	6	6	660	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.98		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2027	2108	2027	1870	1945	1530	1870	1945	1870	2067	2134	2067
Adj Flow Rate, veh/h	68	7	21	8	4	5	29	784	7	7	717	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	25	2	2	2	2	3	2
Cap, veh/h	166	16	32	111	56	45	476	1426	13	516	1318	200
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.02	0.74	0.74	0.01	0.73	0.73
Sat Flow, veh/h	1118	188	366	600	642	517	1781	1925	17	1968	1808	275
Grp Volume(v), veh/h	96	0	0	17	0	0	29	0	791	7	0	826
Grp Sat Flow(s),veh/h/ln	1672	0	0	1759	0	0	1781	0	1942	1968	0	2083
Q Serve(g_s), s	4.2	0.0	0.0	0.0	0.0	0.0	0.4	0.0	16.0	0.1	0.0	16.0
Cycle Q Clear(g_c), s	4.9	0.0	0.0	0.8	0.0	0.0	0.4	0.0	16.0	0.1	0.0	16.0
Prop In Lane	0.71		0.22	0.47		0.29	1.00		0.01	1.00		0.13
Lane Grp Cap(c), veh/h	214	0	0	212	0	0	476	0	1438	516	0	1518
V/C Ratio(X)	0.45	0.00	0.00	0.08	0.00	0.00	0.06	0.00	0.55	0.01	0.00	0.54
Avail Cap(c_a), veh/h	526	0	0	513	0	0	643	0	1438	725	0	1518
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	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	0.0	37.8	0.0	0.0	4.4	0.0	5.1	4.4	0.0	5.5
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.4
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	2.1	0.0	0.0	0.3	0.0	0.0	0.1	0.0	5.4	0.0	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	0.0	0.0	37.9	0.0	0.0	4.5	0.0	6.5	4.5	0.0	6.9
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		96			17			820			833	
Approach Delay, s/veh		40.2			37.9			6.4			6.9	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	71.7		12.9	6.5	70.6		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	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.1	18.0		6.9	2.4	18.0		2.8				
Green Ext Time (p_c), s	0.0	1.8		0.1	0.0	2.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		8.8	
HCM 6th LOS		A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	13	62	2	8	16	73	430	13	5	531	150
Future Volume (vph)	308	13	62	2	8	16	73	430	13	5	531	150
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		1.00			0.98		1.00	1.00		1.00	0.99	
Frt			0.850		0.918			0.996			0.967	
Flt Protected		0.954			0.996		0.950			0.950		
Satd. Flow (prot)	0	1759	1567	0	1748	0	1690	1892	0	1743	1749	0
Flt Permitted		0.954			0.996		0.109			0.405		
Satd. Flow (perm)	0	1753	1567	0	1748	0	194	1892	0	742	1749	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					17			2			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	2					2	6		2	2		6
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	10%	3%	2%	2%	3%	2%
Adj. Flow (vph)	335	14	67	2	9	17	79	467	14	5	577	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	349	67	0	28	0	79	481	0	5	740	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

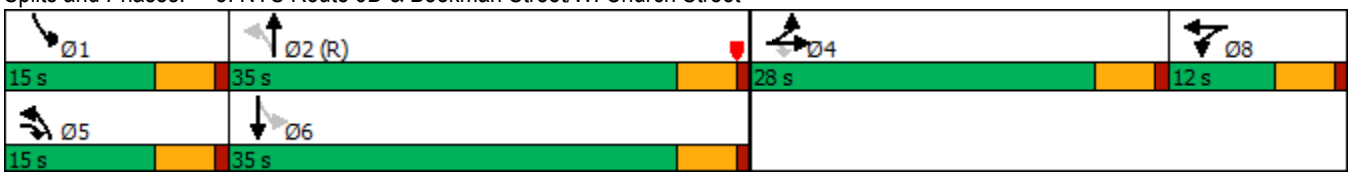


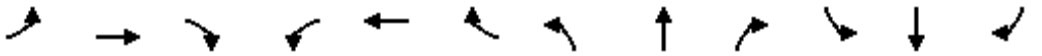
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	8.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	28.0	28.0	15.0	12.0	12.0		15.0	35.0		15.0	35.0	
Total Split (%)	31.1%	31.1%	16.7%	13.3%	13.3%		16.7%	38.9%		16.7%	38.9%	
Maximum Green (s)	23.0	23.0	10.0	7.0	7.0		10.0	30.0		10.0	30.0	
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				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0										
Flash Dont Walk (s)	15.0	15.0										
Pedestrian Calls (#/hr)	2	2										
v/c Ratio		0.86	0.13		0.22		0.37	0.43		0.01	0.83	
Control Delay		54.3	15.5		28.1		13.8	15.6		16.0	38.8	
Queue Delay		4.8	0.0		0.0		0.0	0.9		0.0	51.0	
Total Delay		59.2	15.5		28.1		13.8	16.4		16.0	89.8	
Queue Length 50th (ft)		185	25		6		22	156		2	410	
Queue Length 95th (ft)		#316	37		32		43	384		m3	#751	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		449	587		151		283	1109		553	896	
Starvation Cap Reductn		0	0		0		0	355		0	332	
Spillback Cap Reductn		54	65		1		0	99		0	7	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.88	0.13		0.19		0.28	0.64		0.01	1.31	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 40 (44%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	13	62	2	8	16	73	430	13	5	531	150
Future Volume (veh/h)	308	13	62	2	8	16	73	430	13	5	531	150
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		0.97	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	1847	1847	2263	2263	2263	1986	2091	2106	1817	1803	1817
Adj Flow Rate, veh/h	335	14	67	2	9	17	79	467	14	5	577	163
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	10	3	2	2	3	2
Cap, veh/h	372	16	401	4	18	34	234	1061	32	426	662	187
Arrive On Green	0.22	0.22	0.22	0.03	0.03	0.03	0.04	0.53	0.53	0.00	0.49	0.49
Sat Flow, veh/h	1692	71	1558	141	635	1199	1891	2018	60	1731	1343	379
Grp Volume(v), veh/h	349	0	67	28	0	0	79	0	481	5	0	740
Grp Sat Flow(s),veh/h/ln	1762	0	1558	1975	0	0	1891	0	2078	1731	0	1722
Q Serve(g_s), s	17.3	0.0	3.0	1.3	0.0	0.0	1.8	0.0	12.8	0.1	0.0	34.4
Cycle Q Clear(g_c), s	17.3	0.0	3.0	1.3	0.0	0.0	1.8	0.0	12.8	0.1	0.0	34.4
Prop In Lane	0.96		1.00	0.07		0.61	1.00		0.03	1.00		0.22
Lane Grp Cap(c), veh/h	388	0	401	55	0	0	234	0	1093	426	0	849
V/C Ratio(X)	0.90	0.00	0.17	0.51	0.00	0.00	0.34	0.00	0.44	0.01	0.00	0.87
Avail Cap(c_a), veh/h	450	0	456	154	0	0	375	0	1093	612	0	849
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	0.87	0.00	0.87	0.78	0.00	0.78
Uniform Delay (d), s/veh	34.1	0.0	26.0	43.1	0.0	0.0	17.7	0.0	13.2	12.0	0.0	20.3
Incr Delay (d2), s/veh	17.7	0.0	0.1	2.7	0.0	0.0	0.3	0.0	1.1	0.0	0.0	9.6
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	9.1	0.0	1.1	0.6	0.0	0.0	0.7	0.0	6.0	0.0	0.0	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.8	0.0	26.0	45.8	0.0	0.0	18.0	0.0	14.3	12.0	0.0	29.9
LnGrp LOS	D	A	C	D	A	A	B	A	B	B	A	C
Approach Vol, veh/h		416			28			560			745	
Approach Delay, s/veh		47.7			45.8			14.8			29.8	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	52.3		24.8	8.3	49.4		7.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	30.0		23.0	10.0	30.0		7.0				
Max Q Clear Time (g_c+I1), s	2.1	14.8		19.3	3.8	36.4		3.3				
Green Ext Time (p_c), s	0.0	0.9		0.4	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		29.5	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.

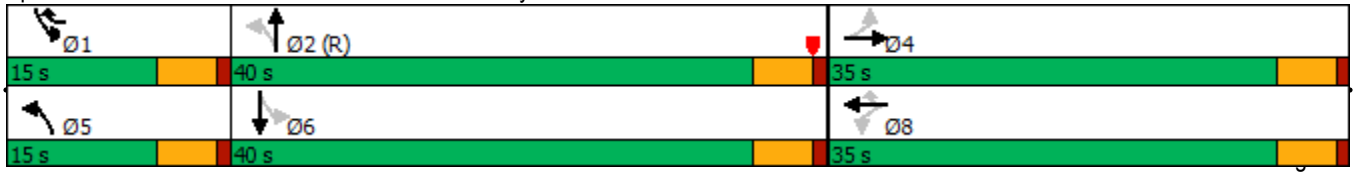
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	8	2	50	2	184	2	329	80	257	347	0
Future Volume (vph)	2	8	2	50	2	184	2	329	80	257	347	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			-8%			-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		0.99				0.95		0.99				
Frt		0.979				0.850		0.971				
Flt Protected		0.992			0.954		0.950			0.950		
Satd. Flow (prot)	0	1825	0	0	1885	1647	1832	1804	0	1743	1853	0
Flt Permitted		0.961			0.720		0.529			0.344		
Satd. Flow (perm)	0	1768	0	0	1423	1566	1020	1804	0	631	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			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	3	13	3	55	2	202	3	416	101	292	394	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	57	202	3	517	0	292	394	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	1	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

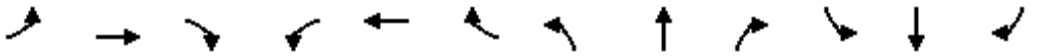
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	8.0	8.0	15.0		8.0	15.0	
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						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.07			0.28	0.49	0.00	0.49		0.47	0.28	
Control Delay		25.3			33.9	26.6	7.0	17.0		9.0	10.7	
Queue Delay		0.0			0.0	0.9	0.0	0.0		0.0	0.9	
Total Delay		25.3			33.9	27.5	7.0	17.1		9.0	11.6	
Queue Length 50th (ft)		9			31	97	0	138		65	103	
Queue Length 95th (ft)		15			57	106	3	301		m140	m289	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		591			474	431	800	1055		632	1403	
Starvation Cap Reductn		0			0	0	0	0		0	722	
Spillback Cap Reductn		0			0	77	0	9		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.03			0.12	0.57	0.00	0.49		0.46	0.58	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 45
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	8	2	50	2	184	2	329	80	257	347	0
Future Volume (veh/h)	2	8	2	50	2	184	2	329	80	257	347	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.95	0.99		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1894	1894	1894	2215	2215	2185	2018	1988	1943	1817	1832	1847
Adj Flow Rate, veh/h	3	13	3	55	2	202	3	416	101	292	394	0
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	66	216	44	332	11	440	701	901	219	599	1229	0
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.59	0.59	0.08	0.67	0.00
Sat Flow, veh/h	125	1347	276	1582	69	1765	1922	1532	372	1731	1832	0
Grp Volume(v), veh/h	19	0	0	57	0	202	3	0	517	292	394	0
Grp Sat Flow(s),veh/h/ln	1748	0	0	1650	0	1765	1922	0	1904	1731	1832	0
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	8.8	0.1	0.0	13.8	5.6	8.1	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.5	0.0	8.8	0.1	0.0	13.8	5.6	8.1	0.0
Prop In Lane	0.16		0.16	0.96		1.00	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	326	0	0	343	0	440	701	0	1120	599	1229	0
V/C Ratio(X)	0.06	0.00	0.00	0.17	0.00	0.46	0.00	0.00	0.46	0.49	0.32	0.00
Avail Cap(c_a), veh/h	614	0	0	624	0	745	910	0	1120	645	1229	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	1.00	1.00	0.00	1.00	0.55	0.55	0.00
Uniform Delay (d), s/veh	32.1	0.0	0.0	32.7	0.0	29.0	7.5	0.0	10.5	7.1	6.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	1.4	0.1	0.4	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	0.3	0.0	0.0	1.1	0.0	3.7	0.0	0.0	5.7	1.7	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	0.0	0.0	32.8	0.0	29.2	7.6	0.0	11.8	7.3	6.6	0.0
LnGrp LOS	C	A	A	C	A	C	A	A	B	A	A	A
Approach Vol, veh/h		19			259			520			686	
Approach Delay, s/veh		32.1			30.0			11.8			6.9	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	58.0		19.4	5.2	65.4		19.4				
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		30.0	10.0	35.0		30.0				
Max Q Clear Time (g_c+I1), s	7.6	15.8		2.8	2.1	10.1		10.8				
Green Ext Time (p_c), s	0.1	0.4		0.0	0.0	0.3		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	3	7	0	346	205	3
Future Volume (vph)	3	7	0	346	205	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.904				0.998	
Flt Protected	0.986					
Satd. Flow (prot)	1801	0	0	1977	1869	0
Flt Permitted	0.986					
Satd. Flow (perm)	1801	0	0	1977	1869	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	8	8			14
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	4	10	0	487	289	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	487	293	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	3	7	0	346	205	3
Future Vol, veh/h	3	7	0	346	205	3
Conflicting Peds, #/hr	14	8	8	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	4	10	0	487	289	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	806	313	307	0	-	0
Stage 1	305	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	550	793	1254	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	804	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	536	777	1238	-	-	-
Mov Cap-2 Maneuver	536	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1238	-	685	-	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s)	0	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	43	9	9	339	198	31
Future Volume (vph)	43	9	9	339	198	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.976				0.982	
Flt Protected	0.960			0.999		
Satd. Flow (prot)	1920	0	0	2088	1739	0
Flt Permitted	0.960			0.999		
Satd. Flow (perm)	1920	0	0	2088	1739	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	61	13	13	477	279	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	0	0	490	323	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.5

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	43	9	9	339	198	31
Future Vol, veh/h	43	9	9	339	198	31
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	-	-	2	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	4	2
Mvmt Flow	61	13	13	477	279	44

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	804	301	323	0	-	0
Stage 1	301	-	-	-	-	-
Stage 2	503	-	-	-	-	-
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	352	739	1237	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	347	739	1237	-	-	-
Mov Cap-2 Maneuver	347	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	607	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	16.6	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1237	-	382	-	-
HCM Lane V/C Ratio	0.01	-	0.192	-	-
HCM Control Delay (s)	7.9	0	16.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	77	0	19	111	0	10
Future Volume (vph)	77	0	19	111	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	9	12
Grade (%)	-5%			3%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.993		
Satd. Flow (prot)	1973	0	0	1883	1428	0
Flt Permitted				0.993		
Satd. Flow (perm)	1973	0	0	1883	1428	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	341			103	156	
Travel Time (s)	7.8			2.3	3.5	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Adj. Flow (vph)	108	0	27	156	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	108	0	0	183	14	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	9	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.97	1.02	0.98	1.17	1.02
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	0	19	111	0	10
Future Vol, veh/h	77	0	19	111	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	3	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	0	27	156	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	108	0	318	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	-	-	4.12	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1483	-	640	937
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	797	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1483	-	627	937
Mov Cap-2 Maneuver	-	-	-	-	627	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	781	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	937	-	-	1483	-
HCM Lane V/C Ratio	0.015	-	-	0.018	-
HCM Control Delay (s)	8.9	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-

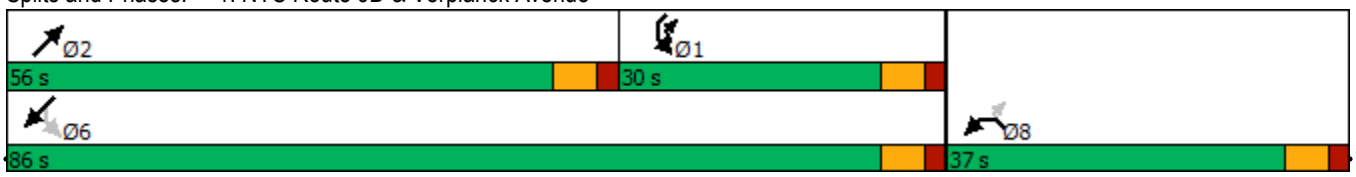
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	55	287	647	46	217	745
Future Volume (vph)	55	287	647	46	217	745
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	5%		3%			-1%
Storage Length (ft)	85	0		0	340	
Storage Lanes	1	1		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98		1.00			
Frt		0.850	0.991			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1725	1544	1816	0	1778	1872
Flt Permitted	0.950				0.195	
Satd. Flow (perm)	1688	1544	1816	0	365	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
Confl. Peds. (#/hr)	7			1	1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	312	703	50	236	810
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	312	753	0	236	810
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	
Number of Detectors	2	2	2		2	2
Detector Template						
Leading Detector (ft)	41	41	41		41	41
Trailing Detector (ft)	-7	-7	-7		-7	-7
Detector 1 Position(ft)	-7	-7	-7		-7	-7
Detector 1 Size(ft)	6	6	6		6	6
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)	1	1	1		1	1
Detector 2 Size(ft)	40	40	40		40	40
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

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Turn Type	Prot	pm+ov	NA		pm+pt	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	15.0		3.0	15.0
Minimum Split (s)	9.0	9.0	21.0		9.0	21.0
Total Split (s)	37.0	30.0	56.0		30.0	86.0
Total Split (%)	30.1%	24.4%	45.5%		24.4%	69.9%
Maximum Green (s)	31.0	24.0	50.0		24.0	80.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	13.0		21.0			
Pedestrian Calls (#/hr)	2		2			
v/c Ratio	0.35	0.59	0.79		0.40	0.53
Control Delay	47.3	29.4	28.5		12.6	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	47.3	29.4	28.5		12.6	6.1
Queue Length 50th (ft)	36	152	360		26	138
Queue Length 95th (ft)	76	231	#754		76	362
Internal Link Dist (ft)	347		382			449
Turn Bay Length (ft)	85				340	
Base Capacity (vph)	585	551	994		678	1576
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	0.10	0.57	0.76		0.35	0.51

Intersection Summary

Area Type: Other
Cycle Length: 123
Actuated Cycle Length: 93.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

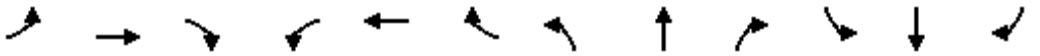
Splits and Phases: 1: NYS Route 9D & Verplanck Avenue



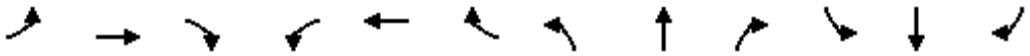
Movement	NWL	NWR	NET	NER	SWL	SWT	
Lane Configurations							
Traffic Volume (veh/h)	55	287	647	46	217	745	
Future Volume (veh/h)	55	287	647	46	217	745	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1817	1817	1909	1909	
Adj Flow Rate, veh/h	60	312	703	50	236	810	
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	280	363	786	56	294	1224	
Arrive On Green	0.17	0.17	0.47	0.47	0.08	0.64	
Sat Flow, veh/h	1641	1460	1676	119	1818	1909	
Grp Volume(v), veh/h	60	312	0	753	236	810	
Grp Sat Flow(s),veh/h/ln	1641	1460	0	1796	1818	1909	
Q Serve(g_s), s	2.0	8.0	0.0	24.4	2.6	16.8	
Cycle Q Clear(g_c), s	2.0	8.0	0.0	24.4	2.6	16.8	
Prop In Lane	1.00	1.00		0.07	1.00		
Lane Grp Cap(c), veh/h	280	363	0	842	294	1224	
V/C Ratio(X)	0.21	0.86	0.00	0.89	0.80	0.66	
Avail Cap(c_a), veh/h	798	824	0	1409	837	2396	
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	22.8	22.9	0.0	15.5	27.2	7.1	
Incr Delay (d2), s/veh	0.1	2.4	0.0	4.5	1.9	0.6	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.7	0.2	0.0	9.5	3.4	5.1	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	22.9	25.2	0.0	19.9	29.1	7.7	
LnGrp LOS	C	C	A	B	C	A	
Approach Vol, veh/h	372		753			1046	
Approach Delay, s/veh	24.9		19.9			12.6	
Approach LOS	C		B			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	35.9				46.9	16.9
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	24.0	50.0				80.0	31.0
Max Q Clear Time (g_c+I1), s	4.6	26.4				18.8	10.0
Green Ext Time (p_c), s	0.4	3.5				4.1	0.8

Intersection Summary		
HCM 6th Ctrl Delay	17.2	
HCM 6th LOS	B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	2	18	4	6	11	24	621	5	8	696	97
Future Volume (vph)	70	2	18	4	6	11	24	621	5	8	696	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	13	12	12	13	12
Grade (%)		-4%			0%			0%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	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			0.99			1.00			1.00	
Frt		0.973			0.926			0.999			0.982	
Flt Protected		0.963			0.991		0.950			0.950		
Satd. Flow (prot)	0	1814	0	0	1743	0	1770	1923	0	1814	1930	0
Flt Permitted		0.759			0.942		0.240			0.349		
Satd. Flow (perm)	0	1417	0	0	1656	0	447	1923	0	666	1930	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			12			1			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		103			662			335			490	
Travel Time (s)		2.3			15.0			7.6			11.1	
Confl. Peds. (#/hr)	6		6	2		2	6		2	2		6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	74	2	19	4	6	12	26	661	5	9	740	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	22	0	26	666	0	9	843	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	0.97	0.93	0.97	1.00	0.96	1.00	1.00	0.96	1.00	0.97	0.93	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41		41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6		6	6		6	6	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)		1			1		1	1		1	1	
Detector 2 Size(ft)		40			40		40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

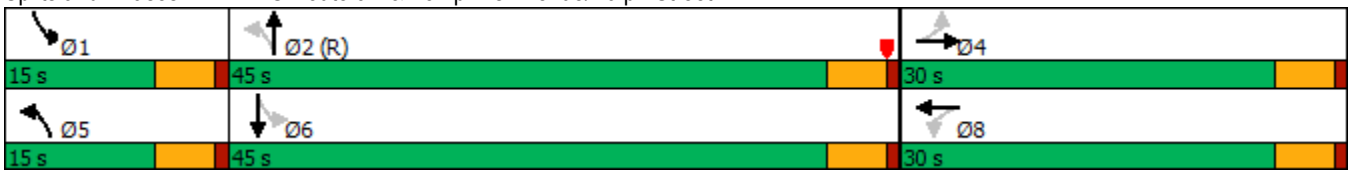


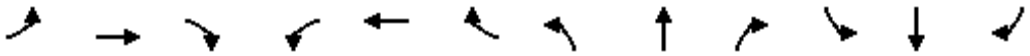
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	40.0		10.0	40.0	
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		0.0	0.0	
Total Lost Time (s)		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)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None		None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0			15.0	
Pedestrian Calls (#/hr)	8	8		12	12			14			6	
v/c Ratio		0.50			0.10		0.06	0.45		0.02	0.58	
Control Delay		38.0			20.7		4.4	6.0		4.6	11.2	
Queue Delay		0.0			0.0		0.0	0.2		0.0	0.7	
Total Delay		38.0			20.7		4.4	6.3		4.6	11.8	
Queue Length 50th (ft)		44			5		1	117		1	139	
Queue Length 95th (ft)		78			23		m14	208		7	#583	
Internal Link Dist (ft)		23			582			255			410	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		403			468		497	1490		650	1456	
Starvation Cap Reductn		0			0		0	252		0	0	
Spillback Cap Reductn		1			0		0	0		0	282	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.24			0.05		0.05	0.54		0.01	0.72	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NYS Route 9D & Tompkins Avenue/Ralph Street

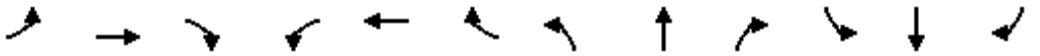




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	2	18	4	6	11	24	621	5	8	696	97
Future Volume (veh/h)	70	2	18	4	6	11	24	621	5	8	696	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2012	2108	2027	1870	1945	1870	1870	1945	1870	2067	2149	2067
Adj Flow Rate, veh/h	74	2	19	4	6	12	26	661	5	9	740	103
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	9	30	59	60	86	462	1417	11	710	1339	186
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.03	1.00	1.00	0.01	0.73	0.73
Sat Flow, veh/h	1224	96	330	129	653	939	1781	1928	15	1968	1845	257
Grp Volume(v), veh/h	95	0	0	22	0	0	26	0	666	9	0	843
Grp Sat Flow(s),veh/h/ln	1650	0	0	1721	0	0	1781	0	1942	1968	0	2102
Q Serve(g_s), s	3.8	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	16.5
Cycle Q Clear(g_c), s	4.9	0.0	0.0	1.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	16.5
Prop In Lane	0.78		0.20	0.18		0.55	1.00		0.01	1.00		0.12
Lane Grp Cap(c), veh/h	222	0	0	205	0	0	462	0	1428	710	0	1526
V/C Ratio(X)	0.43	0.00	0.00	0.11	0.00	0.00	0.06	0.00	0.47	0.01	0.00	0.55
Avail Cap(c_a), veh/h	520	0	0	514	0	0	632	0	1428	915	0	1526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.91	0.00	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	0.0	37.6	0.0	0.0	4.5	0.0	0.0	3.2	0.0	5.6
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.4
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	2.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0	0.4	0.0	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	0.0	0.0	37.7	0.0	0.0	4.6	0.0	1.0	3.2	0.0	7.1
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		95			22			692			852	
Approach Delay, s/veh		39.8			37.7			1.1			7.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	71.2		13.2	6.4	70.3		13.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	40.0		25.0	10.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		6.9	2.3	18.5		3.0				
Green Ext Time (p_c), s	0.0	1.5		0.1	0.0	2.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		6.9	
HCM 6th LOS		A	



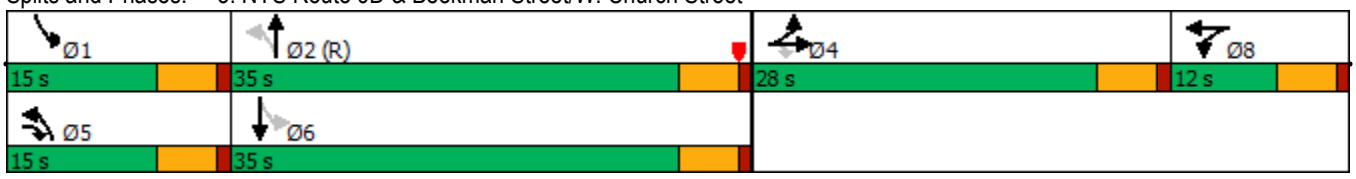
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	6	68	10	4	8	103	470	4	8	512	197
Future Volume (vph)	163	6	68	10	4	8	103	470	4	8	512	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-10%			-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		0.96		1.00	1.00		1.00	0.99	
Frt			0.850		0.949			0.999			0.958	
Flt Protected		0.954			0.978		0.950			0.950		
Satd. Flow (prot)	0	1759	1567	0	1755	0	1823	1916	0	1743	1744	0
Flt Permitted		0.954			0.978		0.119			0.407		
Satd. Flow (perm)	0	1724	1522	0	1751	0	228	1916	0	744	1744	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					9						23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		408			328			388			335	
Travel Time (s)		9.3			7.5			8.8			7.6	
Confl. Peds. (#/hr)	11		3	3		11	6		9	9		6
Confl. Bikes (#/hr)			3									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	183	7	76	11	4	9	116	528	4	9	575	221
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	76	0	24	0	116	532	0	9	796	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												
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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41	41	20	41		41	41		41	41	
Trailing Detector (ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Position(ft)	0	-7	-7	0	-7		-7	-7		-7	-7	
Detector 1 Size(ft)	20	6	6	20	6		6	6		6	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)		1	1		1		1	1		1	1	
Detector 2 Size(ft)		40	40		40		40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												

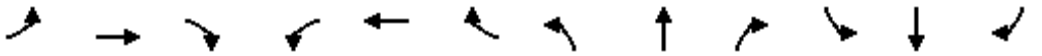
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0		3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0	8.0	10.0	10.0		8.0	15.0		8.0	15.0	
Total Split (s)	28.0	28.0	15.0	12.0	12.0		15.0	35.0		15.0	35.0	
Total Split (%)	31.1%	31.1%	16.7%	13.3%	13.3%		16.7%	38.9%		16.7%	38.9%	
Maximum Green (s)	23.0	23.0	10.0	7.0	7.0		10.0	30.0		10.0	30.0	
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				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	Max	
Walk Time (s)	8.0	8.0										
Flash Dont Walk (s)	15.0	15.0										
Pedestrian Calls (#/hr)	2	2										
v/c Ratio		0.66	0.21		0.20		0.45	0.43		0.02	0.82	
Control Delay		45.0	19.3		33.2		17.3	9.9		6.2	23.9	
Queue Delay		0.0	0.0		0.0		0.0	0.4		0.0	0.1	
Total Delay		45.0	19.3		33.2		17.3	10.4		6.2	24.0	
Queue Length 50th (ft)		103	33		8		16	86		1	290	
Queue Length 95th (ft)		151	40		32		m74	220		m2	#774	
Internal Link Dist (ft)		328			248			308			255	
Turn Bay Length (ft)			95				75			75		
Base Capacity (vph)		449	425		144		330	1247		599	967	
Starvation Cap Reductn		0	0		0		0	313		0	5	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.42	0.18		0.17		0.35	0.57		0.02	0.83	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red
Natural Cycle: 75
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NYS Route 9D & Beekman Street/W. Church Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	6	68	10	4	8	103	470	4	8	512	197
Future Volume (veh/h)	163	6	68	10	4	8	103	470	4	8	512	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.90	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	1847	1847	1847	2263	2263	2263	2106	2106	2106	1817	1817	1817
Adj Flow Rate, veh/h	183	7	76	11	4	9	116	528	4	9	575	221
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	10	283	23	8	19	312	1251	9	483	701	269
Arrive On Green	0.15	0.15	0.15	0.03	0.03	0.03	0.04	0.60	0.60	0.01	0.56	0.56
Sat Flow, veh/h	1697	65	1465	911	331	745	2006	2087	16	1731	1247	479
Grp Volume(v), veh/h	190	0	76	24	0	0	116	0	532	9	0	796
Grp Sat Flow(s),veh/h/ln	1762	0	1465	1987	0	0	2006	0	2103	1731	0	1727
Q Serve(g_s), s	9.3	0.0	4.0	1.1	0.0	0.0	2.2	0.0	12.2	0.2	0.0	33.7
Cycle Q Clear(g_c), s	9.3	0.0	4.0	1.1	0.0	0.0	2.2	0.0	12.2	0.2	0.0	33.7
Prop In Lane	0.96		1.00	0.46		0.37	1.00		0.01	1.00		0.28
Lane Grp Cap(c), veh/h	258	0	283	50	0	0	312	0	1261	483	0	971
V/C Ratio(X)	0.74	0.00	0.27	0.48	0.00	0.00	0.37	0.00	0.42	0.02	0.00	0.82
Avail Cap(c_a), veh/h	450	0	443	155	0	0	447	0	1261	664	0	971
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	0.87	0.00	0.87	0.79	0.00	0.79
Uniform Delay (d), s/veh	36.7	0.0	31.1	43.3	0.0	0.0	14.9	0.0	9.7	8.8	0.0	16.0
Incr Delay (d2), s/veh	1.5	0.0	0.2	2.7	0.0	0.0	0.2	0.0	0.9	0.0	0.0	6.2
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	4.0	0.0	1.4	0.6	0.0	0.0	0.9	0.0	5.4	0.1	0.0	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.0	31.3	46.0	0.0	0.0	15.1	0.0	10.6	8.8	0.0	22.2
LnGrp LOS	D	A	C	D	A	A	B	A	B	A	A	C
Approach Vol, veh/h		266			24			648			805	
Approach Delay, s/veh		36.3			46.0			11.4			22.1	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	59.0		18.2	9.0	55.6		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	30.0		23.0	10.0	30.0		7.0				
Max Q Clear Time (g_c+I1), s	2.2	14.2		11.3	4.2	35.7		3.1				
Green Ext Time (p_c), s	0.0	1.0		0.4	0.0	0.0		0.0				

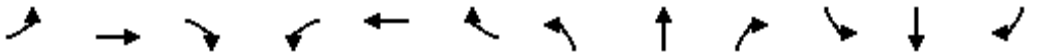
Intersection Summary												
HCM 6th Ctrl Delay			20.6									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	2	38	0	219	2	357	52	275	320	3
Future Volume (vph)	2	2	2	38	0	219	2	357	52	275	320	3
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		0.99			1.00	
Frt		0.955				0.850		0.981			0.999	
Flt Protected		0.984			0.950		0.950			0.950		
Satd. Flow (prot)	0	1749	0	0	1877	1663	1832	1822	0	1760	1851	0
Flt Permitted		0.920			0.752		0.551			0.381		
Satd. Flow (perm)	0	1635	0	0	1486	1611	1063	1822	0	706	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			1002			388	
Travel Time (s)		3.0			8.0			22.8			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)	3	3	3	43	0	246	2	406	59	299	348	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	43	246	2	465	0	299	351	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	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	41		20	41	41	41	41		41	41	
Trailing Detector (ft)	0	-7		0	-7	-7	1	-7		-7	-7	
Detector 1 Position(ft)	0	-7		0	-7	-7	7	-7		-7	-7	
Detector 1 Size(ft)	20	6		20	6	6	6	6		6	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)		1			1	1	1	1		1	1	
Detector 2 Size(ft)		40			40	40	40	40		40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0	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		
Detector Phase	4	4		8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	3.0	3.0	10.0		3.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	8.0	8.0	15.0		8.0	15.0	
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						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	Max	
Walk Time (s)	8.0	8.0		8.0	8.0			8.0				
Flash Dont Walk (s)	15.0	15.0		15.0	15.0			15.0				
Pedestrian Calls (#/hr)	15	15		15	15			21				
v/c Ratio		0.04			0.20	0.59	0.00	0.43		0.42	0.24	
Control Delay		23.2			32.3	30.8	7.0	15.0		9.5	6.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.3	
Total Delay		23.2			32.3	30.8	7.0	15.0		9.5	6.2	
Queue Length 50th (ft)		3			24	124	0	115		16	19	
Queue Length 95th (ft)		11			45	134	3	294		m111	m93	
Internal Link Dist (ft)		53			270			922			308	
Turn Bay Length (ft)						70	65			120		
Base Capacity (vph)		547			495	418	841	1093		704	1473	
Starvation Cap Reductn		0			0	0	0	0		0	558	
Spillback Cap Reductn		0			0	0	0	26		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.02			0.09	0.59	0.00	0.44		0.42	0.38	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Red	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: NYS Route 9D & Beacon City Hall/Main Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	2	38	0	219	2	357	52	275	320	3
Future Volume (veh/h)	2	2	2	38	0	219	2	357	52	275	320	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.96		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	3	3	3	43	0	246	2	406	59	299	348	3
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	115	111	87	353	0	474	720	972	141	632	1201	10
Arrive On Green	0.17	0.17	0.17	0.17	0.00	0.17	0.00	0.58	0.58	0.09	0.66	0.66
Sat Flow, veh/h	364	658	511	1612	0	1831	1922	1686	245	1745	1814	16
Grp Volume(v), veh/h	9	0	0	43	0	246	2	0	465	299	0	351
Grp Sat Flow(s),veh/h/ln	1533	0	0	1612	0	1831	1922	0	1931	1745	0	1829
Q Serve(g_s), s	0.0	0.0	0.0	1.6	0.0	10.4	0.0	0.0	12.1	5.8	0.0	7.2
Cycle Q Clear(g_c), s	0.4	0.0	0.0	2.0	0.0	10.4	0.0	0.0	12.1	5.8	0.0	7.2
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.13	1.00		0.01
Lane Grp Cap(c), veh/h	313	0	0	353	0	474	720	0	1113	632	0	1212
V/C Ratio(X)	0.03	0.00	0.00	0.12	0.00	0.52	0.00	0.00	0.42	0.47	0.00	0.29
Avail Cap(c_a), veh/h	552	0	0	616	0	774	930	0	1113	672	0	1212
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	0.55	0.00	0.55
Uniform Delay (d), s/veh	31.2	0.0	0.0	31.8	0.0	28.7	8.0	0.0	10.6	7.0	0.0	6.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	1.2	0.1	0.0	0.3
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	0.2	0.0	0.0	0.8	0.0	4.5	0.0	0.0	5.1	1.8	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	0.0	0.0	31.9	0.0	29.0	8.0	0.0	11.8	7.1	0.0	6.7
LnGrp LOS	C	A	A	C	A	C	A	A	B	A	A	A
Approach Vol, veh/h		9			289			467			650	
Approach Delay, s/veh		31.2			29.4			11.8			6.9	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.9	56.9		20.2	5.1	64.6		20.2				
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	7.8	14.1		2.4	2.0	9.2		12.4				
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0	0.2		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		13.3	
HCM 6th LOS		B	

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	2	2	0	208	264	0
Future Volume (vph)	2	2	0	208	264	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	14	12	12
Grade (%)	-10%			1%	-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1838	0	0	1977	1909	0
Flt Permitted	0.976					
Satd. Flow (perm)	1838	0	0	1977	1909	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	304			202	216	
Travel Time (s)	6.9			4.6	4.9	
Confl. Peds. (#/hr)	14	17	17			14
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	2	2	0	242	307	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	242	307	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.90	0.94	1.01	0.92	0.97	0.97
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	0.1

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	2	0	208	264	0
Future Vol, veh/h	2	2	0	208	264	0
Conflicting Peds, #/hr	14	17	17	0	0	14
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-10	-	-	1	-5	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	0	242	307	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	580	341	324	0	-	0
Stage 1	324	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Critical Hdwy	4.42	5.22	4.12	-	-	-
Critical Hdwy Stg 1	3.42	-	-	-	-	-
Critical Hdwy Stg 2	3.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	658	771	1236	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	638	747	1217	-	-	-
Mov Cap-2 Maneuver	638	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1217	-	688	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	0	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	38	8	8	201	256	29
Future Volume (vph)	38	8	8	201	256	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	12	12	16	11	12
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.977				0.986	
Flt Protected	0.960			0.998		
Satd. Flow (prot)	1922	0	0	2086	1775	0
Flt Permitted	0.960			0.998		
Satd. Flow (perm)	1922	0	0	2086	1775	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			216	408	
Travel Time (s)	4.5			4.9	9.3	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	44	9	9	234	298	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	0	0	243	332	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	1.00	1.01	0.86	1.04	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	1.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	38	8	8	201	256	29
Future Vol, veh/h	38	8	8	201	256	29
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	-	-	2	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	9	9	234	298	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	567	315	332	0	-	0
Stage 1	315	-	-	-	-	-
Stage 2	252	-	-	-	-	-
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	485	725	1227	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	481	725	1227	-	-	-
Mov Cap-2 Maneuver	481	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	790	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	12.9	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1227	-	511	-	-
HCM Lane V/C Ratio	0.008	-	0.105	-	-
HCM Control Delay (s)	8	0	12.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	79	0	18	108	0	9
Future Volume (vph)	79	0	18	108	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	13	9	12
Grade (%)	-5%			3%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.993		
Satd. Flow (prot)	1973	0	0	1883	1428	0
Flt Permitted				0.993		
Satd. Flow (perm)	1973	0	0	1883	1428	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	341			103	156	
Travel Time (s)	7.8			2.3	3.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	92	0	21	126	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	0	147	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	9	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.97	1.02	0.98	1.17	1.02
Turning Speed (mph)		60	60		60	60
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	79	0	18	108	0	9
Future Vol, veh/h	79	0	18	108	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	3	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	0	21	126	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	92	0	260	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	168	-
Critical Hdwy	-	-	4.12	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1503	-	698	958
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	838	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1503	-	688	958
Mov Cap-2 Maneuver	-	-	-	-	688	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	825	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	958	-	-	1503	-
HCM Lane V/C Ratio	0.011	-	-	0.014	-
HCM Control Delay (s)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

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Appendix E | Traffic Volumes and Reference Data

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Appendix E | Traffic Volume Data

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400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1._NYS_Route_9D_and_Verplanck_Avenue_-WKDAY_1107097_09-07-2023
Site Code :
Start Date : 9/7/2023
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	164	68	0	232	63	0	17	0	80	12	99	0	1	112	0	0	0	0	0	424
07:15 AM	0	132	70	0	202	68	0	10	0	78	13	110	0	1	124	0	0	0	0	0	404
07:30 AM	0	136	57	0	193	59	0	19	0	78	4	114	0	0	118	0	0	0	0	0	389
07:45 AM	0	121	79	0	200	58	0	12	1	71	16	137	0	0	153	0	0	0	0	0	424
Total	0	553	274	0	827	248	0	58	1	307	45	460	0	2	507	0	0	0	0	0	1641
08:00 AM	0	171	71	0	242	32	0	19	0	51	8	88	0	1	97	0	0	0	0	0	390
08:15 AM	0	136	44	0	180	33	0	7	3	43	9	132	0	0	141	0	0	0	0	0	364
08:30 AM	0	142	55	0	197	41	0	7	2	50	7	122	0	0	129	0	0	0	0	0	376
08:45 AM	0	125	41	0	166	37	0	12	1	50	11	128	0	0	139	0	0	0	0	0	355
Total	0	574	211	0	785	143	0	45	6	194	35	470	0	1	506	0	0	0	0	0	1485
Grand Total	0	1127	485	0	1612	391	0	103	7	501	80	930	0	3	1013	0	0	0	0	0	3126
Apprch %	0	69.9	30.1	0		78	0	20.6	1.4		7.9	91.8	0	0.3		0	0	0	0		
Total %	0	36.1	15.5	0	51.6	12.5	0	3.3	0.2	16	2.6	29.8	0	0.1	32.4	0	0	0	0	0	
Lights	0	1075	458	0	1533	371	0	93	0	464	73	876	0	0	949	0	0	0	0	0	2946
% Lights	0	95.4	94.4	0	95.1	94.9	0	90.3	0	92.6	91.2	94.2	0	0	93.7	0	0	0	0	0	94.2
Buses	0	17	15	0	32	11	0	7	0	18	5	20	0	0	25	0	0	0	0	0	75
% Buses	0	1.5	3.1	0	2	2.8	0	6.8	0	3.6	6.2	2.2	0	0	2.5	0	0	0	0	0	2.4
Trucks	0	35	12	0	47	9	0	3	0	12	2	34	0	0	36	0	0	0	0	0	95
% Trucks	0	3.1	2.5	0	2.9	2.3	0	2.9	0	2.4	2.5	3.7	0	0	3.6	0	0	0	0	0	3
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0	3
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	28.6	0.4	0	0	0	33.3	0.1	0	0	0	0	0	0.1
Pedestrians	0	0	0	0	0	0	0	0	5	5	0	0	0	2	2	0	0	0	0	0	7
% Pedestrians	0	0	0	0	0	0	0	0	71.4	1	0	0	0	66.7	0.2	0	0	0	0	0	0.2

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400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1._NYS_Route_9D_and_Verplanck_Avenue_-WKDAY_1107097_09-07-2023
Site Code :
Start Date : 9/7/2023

	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	**164**	68	0	**232**	63	0	17	0	**80**	12	99	0	**1**	112	0	0	0	0	0	**424**
07:15 AM	0	132	70	0	202	**68**	0	10	0	78	13	110	0	1	124	0	0	0	0	0	404
07:30 AM	0	136	57	0	193	59	0	**19**	0	78	4	114	0	0	118	0	0	0	0	0	389
07:45 AM	0	121	**79**	0	200	58	0	12	**1**	71	**16**	**137**	0	0	**153**	0	0	0	0	0	424
Total Volume	0	553	274	0	827	248	0	58	1	307	45	460	0	2	507	0	0	0	0	0	1641
% App. Total	0	66.9	33.1	0		80.8	0	18.9	0.3		8.9	90.7	0	0.4		0	0	0	0		
PHF	.000	.843	.867	.000	.891	.912	.000	.763	.250	.959	.703	.839	.000	.500	.828	.000	.000	.000	.000	.000	.968
Lights	0	527	260	0	787	240	0	51	0	291	40	437	0	0	477	0	0	0	0	0	1555
% Lights	0	95.3	94.9	0	95.2	96.8	0	87.9	0	94.8	88.9	95.0	0	0	94.1	0	0	0	0	0	94.8
Buses	0	6	9	0	15	6	0	5	0	11	3	7	0	0	10	0	0	0	0	0	36
% Buses	0	1.1	3.3	0	1.8	2.4	0	8.6	0	3.6	6.7	1.5	0	0	2.0	0	0	0	0	0	2.2
Trucks	0	20	5	0	25	2	0	2	0	4	2	16	0	0	18	0	0	0	0	0	47
% Trucks	0	3.6	1.8	0	3.0	0.8	0	3.4	0	1.3	4.4	3.5	0	0	3.6	0	0	0	0	0	2.9
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	50.0	0.2	0	0	0	0	0	0.1
Pedestrians	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	2
% Pedestrians	0	0	0	0	0	0	0	0	100	0.3	0	0	0	50.0	0.2	0	0	0	0	0	0.1

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1._NYS_Route_9D_and_Verplanck_Avenue_-WKDAY_1107097_09-07-2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	0	120	57	0	177	89	0	15	0	104	6	116	0	1	123	0	0	0	0	0	404
03:15 PM	0	117	47	0	164	82	0	15	0	97	12	154	0	0	166	0	0	0	0	0	427
03:30 PM	0	102	44	0	146	86	0	16	1	103	3	148	0	0	151	0	0	0	0	0	400
03:45 PM	0	156	38	0	194	67	0	8	0	75	5	150	0	0	155	0	0	0	0	0	424
Total	0	495	186	0	681	324	0	54	1	379	26	568	0	1	595	0	0	0	0	0	1655
04:00 PM	0	127	42	0	169	76	0	10	0	86	9	129	0	0	138	0	0	0	0	0	393
04:15 PM	0	153	55	0	208	74	0	10	0	84	7	165	0	0	172	0	0	0	0	0	464
04:30 PM	0	144	54	0	198	54	0	11	2	67	4	155	0	0	159	0	0	0	0	0	424
04:45 PM	0	143	66	0	209	80	0	19	0	99	1	148	0	1	150	0	0	0	0	0	458
Total	0	567	217	0	784	284	0	50	2	336	21	597	0	1	619	0	0	0	0	0	1739
05:00 PM	0	129	44	0	173	89	0	19	1	109	4	151	0	0	155	0	0	0	0	0	437
05:15 PM	0	99	44	0	143	54	0	12	3	69	4	69	0	0	73	0	0	0	0	0	285
05:30 PM	0	127	44	0	171	71	0	26	0	97	3	91	0	0	94	0	0	0	0	0	362
05:45 PM	0	100	49	0	149	77	0	17	0	94	4	59	0	0	63	0	0	0	0	0	306
Total	0	455	181	0	636	291	0	74	4	369	15	370	0	0	385	0	0	0	0	0	1390
06:00 PM	0	109	55	0	164	72	0	22	1	95	1	71	0	1	73	0	0	0	0	0	332
06:15 PM	0	107	31	0	138	60	0	25	0	85	3	136	0	3	142	0	0	0	0	0	365
Grand Total	0	1733	670	0	2403	1031	0	225	8	1264	66	1742	0	6	1814	0	0	0	0	0	5481
Apprch %	0	72.1	27.9	0		81.6	0	17.8	0.6		3.6	96	0	0.3		0	0	0	0		
Total %	0	31.6	12.2	0	43.8	18.8	0	4.1	0.1	23.1	1.2	31.8	0	0.1	33.1	0	0	0	0	0	
Lights	0	1690	657	0	2347	1006	0	215	0	1221	63	1687	0	0	1750	0	0	0	0	0	5318
% Lights	0	97.5	98.1	0	97.7	97.6	0	95.6	0	96.6	95.5	96.8	0	0	96.5	0	0	0	0	0	97
Buses	0	21	6	0	27	12	0	6	0	18	2	24	0	0	26	0	0	0	0	0	71
% Buses	0	1.2	0.9	0	1.1	1.2	0	2.7	0	1.4	3	1.4	0	0	1.4	0	0	0	0	0	1.3
Trucks	0	22	7	0	29	13	0	4	0	17	1	31	0	0	32	0	0	0	0	0	78
% Trucks	0	1.3	1	0	1.2	1.3	0	1.8	0	1.3	1.5	1.8	0	0	1.8	0	0	0	0	0	1.4
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	4
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	50	0.3	0	0	0	0	0	0	0	0	0	0	0.1
Pedestrians	0	0	0	0	0	0	0	0	4	4	0	0	0	6	6	0	0	0	0	0	10
% Pedestrians	0	0	0	0	0	0	0	0	50	0.3	0	0	0	100	0.3	0	0	0	0	0	0.2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1._NYS_Route_9D_and_Verplanck_Avenue_-WKDAY_1107097_09-07-2023
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	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	**153**	55	0	208	74	0	10	0	84	**7**	**165**	0	0	**172**	0	0	0	0	0	**464**
04:30 PM	0	144	54	0	198	54	0	11	**2**	67	4	155	0	0	159	0	0	0	0	0	424
04:45 PM	0	143	**66**	0	**209**	80	0	**19**	0	99	1	148	0	**1**	150	0	0	0	0	0	458
05:00 PM	0	129	44	0	173	**89**	0	19	1	**109**	4	151	0	0	155	0	0	0	0	0	437
Total Volume	0	569	219	0	788	297	0	59	3	359	16	619	0	1	636	0	0	0	0	0	1783
% App. Total	0	72.2	27.8	0		82.7	0	16.4	0.8		2.5	97.3	0	0.2		0	0	0	0		
PHF	.000	.930	.830	.000	.943	.834	.000	.776	.375	.823	.571	.938	.000	.250	.924	.000	.000	.000	.000	.000	.961
Lights	0	553	217	0	770	292	0	59	0	351	16	606	0	0	622	0	0	0	0	0	1743
% Lights	0	97.2	99.1	0	97.7	98.3	0	100	0	97.8	100	97.9	0	0	97.8	0	0	0	0	0	97.8
Buses	0	5	0	0	5	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	13
% Buses	0	0.9	0	0	0.6	0.3	0	0	0	0.3	0	1.1	0	0	1.1	0	0	0	0	0	0.7
Trucks	0	11	2	0	13	4	0	0	0	4	0	6	0	0	6	0	0	0	0	0	23
% Trucks	0	1.9	0.9	0	1.6	1.3	0	0	0	1.1	0	1.0	0	0	0.9	0	0	0	0	0	1.3
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	66.7	0.6	0	0	0	0	0	0	0	0	0	0	0.1
Pedestrians	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	2
% Pedestrians	0	0	0	0	0	0	0	0	33.3	0.3	0	0	0	100	0.2	0	0	0	0	0	0.1

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1.NYS_Route_9D_and_Verplanck_Avenue__-SAT_1107098_09-09-2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	0	160	43	0	203	53	0	8	1	62	10	127	0	0	137	0	0	0	0	0	402
11:15 AM	0	127	55	0	182	57	0	5	0	62	7	103	0	0	110	0	0	0	0	0	354
11:30 AM	0	125	52	0	177	65	0	3	0	68	8	128	0	1	137	0	0	0	0	0	382
11:45 AM	0	155	46	0	201	65	0	16	0	81	9	113	0	2	124	0	0	0	0	0	406
Total	0	567	196	0	763	240	0	32	1	273	34	471	0	3	508	0	0	0	0	0	1544
12:00 PM	0	158	48	0	206	62	0	9	0	71	9	140	0	0	149	0	0	0	0	0	426
12:15 PM	0	157	34	0	191	78	0	8	1	87	6	127	0	2	135	0	0	0	0	0	413
12:30 PM	0	136	44	0	180	65	0	12	0	77	7	125	0	0	132	0	0	0	0	0	389
12:45 PM	0	144	42	0	186	54	0	8	1	63	13	135	0	0	148	0	0	0	0	0	397
Total	0	595	168	0	763	259	0	37	2	298	35	527	0	2	564	0	0	0	0	0	1625
01:00 PM	0	137	47	0	184	60	0	9	1	70	4	119	0	1	124	0	0	0	0	0	378
01:15 PM	0	147	51	0	198	58	0	9	0	67	8	117	0	1	126	0	0	0	0	0	391
01:30 PM	0	153	52	0	205	66	0	11	0	77	7	157	0	5	169	0	0	0	0	0	451
01:45 PM	0	157	54	0	211	63	0	14	0	77	5	139	0	0	144	0	0	0	0	0	432
Total	0	594	204	0	798	247	0	43	1	291	24	532	0	7	563	0	0	0	0	0	1652
Grand Total	0	1756	568	0	2324	746	0	112	4	862	93	1530	0	12	1635	0	0	0	0	0	4821
Apprch %	0	75.6	24.4	0		86.5	0	13	0.5		5.7	93.6	0	0.7		0	0	0	0		
Total %	0	36.4	11.8	0	48.2	15.5	0	2.3	0.1	17.9	1.9	31.7	0	0.2	33.9	0	0	0	0	0	
Lights	0	1735	561	0	2296	733	0	110	0	843	92	1509	0	0	1601	0	0	0	0	0	4740
% Lights	0	98.8	98.8	0	98.8	98.3	0	98.2	0	97.8	98.9	98.6	0	0	97.9	0	0	0	0	0	98.3
Buses	0	7	1	0	8	5	0	0	0	5	0	5	0	0	5	0	0	0	0	0	18
% Buses	0	0.4	0.2	0	0.3	0.7	0	0	0	0.6	0	0.3	0	0	0.3	0	0	0	0	0	0.4
Trucks	0	14	6	0	20	8	0	2	0	10	1	16	0	0	17	0	0	0	0	0	47
% Trucks	0	0.8	1.1	0	0.9	1.1	0	1.8	0	1.2	1.1	1	0	0	1	0	0	0	0	0	1
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	4	4	0	0	0	12	12	0	0	0	0	0	16
% Pedestrians	0	0	0	0	0	0	0	0	100	0.5	0	0	0	100	0.7	0	0	0	0	0	0.3

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 1.NYS_Route_9D_and_Verplanck_Avenue__-SAT_1107098_09-09-2023
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	NORTH AVE From North					VERPLANCK AVE From East					NORTH AVE From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	137	47	0	184	60	0	9	**1**	70	4	119	0	1	124	0	0	0	0	0	378
01:15 PM	0	147	51	0	198	58	0	9	0	67	**8**	117	0	1	126	0	0	0	0	0	391
01:30 PM	0	153	52	0	205	**66**	0	11	0	**77**	7	**157**	0	**5**	**169**	0	0	0	0	0	**451**
01:45 PM	0	**157**	**54**	0	**211**	63	0	**14**	0	77	5	139	0	0	144	0	0	0	0	0	432
Total Volume	0	594	204	0	798	247	0	43	1	291	24	532	0	7	563	0	0	0	0	0	1652
% App. Total	0	74.4	25.6	0		84.9	0	14.8	0.3		4.3	94.5	0	1.2		0	0	0	0		
PHF	.000	.946	.944	.000	.945	.936	.000	.768	.250	.945	.750	.847	.000	.350	.833	.000	.000	.000	.000	.000	.916
Lights	0	590	203	0	793	246	0	43	0	289	24	524	0	0	548	0	0	0	0	0	1630
% Lights	0	99.3	99.5	0	99.4	99.6	0	100	0	99.3	100	98.5	0	0	97.3	0	0	0	0	0	98.7
Buses	0	2	1	0	3	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	5
% Buses	0	0.3	0.5	0	0.4	0.4	0	0	0	0.3	0	0.2	0	0	0.2	0	0	0	0	0	0.3
Trucks	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
% Trucks	0	0.3	0	0	0.3	0	0	0	0	0	0	1.3	0	0	1.2	0	0	0	0	0	0.5
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	1	1	0	0	0	7	7	0	0	0	0	0	8
% Pedestrians	0	0	0	0	0	0	0	0	100	0.3	0	0	0	100	1.2	0	0	0	0	0	0.5

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	17	168	0	0	185	2	1	0	0	3	0	97	2	0	99	1	3	6	0	10	297
07:15 AM	14	132	0	0	146	1	0	0	1	2	1	106	1	0	108	3	0	6	2	11	267
07:30 AM	8	138	0	0	146	1	1	0	1	3	0	97	1	0	98	0	1	5	1	7	254
07:45 AM	13	122	2	0	137	0	2	1	2	5	0	122	2	0	124	5	3	11	0	19	285
Total	52	560	2	0	614	4	4	1	4	13	1	422	6	0	429	9	7	28	3	47	1103
08:00 AM	15	173	0	0	188	1	0	1	1	3	0	92	0	0	92	2	2	3	1	8	291
08:15 AM	7	142	0	0	149	2	0	1	6	9	1	121	4	0	126	9	0	4	2	15	299
08:30 AM	8	151	0	0	159	2	0	4	3	9	1	121	5	0	127	11	1	7	2	21	316
08:45 AM	7	123	1	0	131	3	0	2	2	7	3	135	7	2	147	2	0	4	1	7	292
Total	37	589	1	0	627	8	0	8	12	28	5	469	16	2	492	24	3	18	6	51	1198
Grand Total	89	1149	3	0	1241	12	4	9	16	41	6	891	22	2	921	33	10	46	9	98	2301
Apprch %	7.2	92.6	0.2	0		29.3	9.8	22	39		0.7	96.7	2.4	0.2		33.7	10.2	46.9	9.2		
Total %	3.9	49.9	0.1	0	53.9	0.5	0.2	0.4	0.7	1.8	0.3	38.7	1	0.1	40	1.4	0.4	2	0.4	4.3	
Lights	82	1100	3	0	1185	11	4	8	0	23	6	840	22	0	868	32	10	46	0	88	2164
% Lights	92.1	95.7	100	0	95.5	91.7	100	88.9	0	56.1	100	94.3	100	0	94.2	97	100	100	0	89.8	94
Buses	0	20	0	0	20	1	0	1	0	2	0	19	0	0	19	0	0	0	0	0	41
% Buses	0	1.7	0	0	1.6	8.3	0	11.1	0	4.9	0	2.1	0	0	2.1	0	0	0	0	0	1.8
Trucks	7	29	0	0	36	0	0	0	0	0	0	32	0	0	32	1	0	0	0	1	69
% Trucks	7.9	2.5	0	0	2.9	0	0	0	0	0	0	3.6	0	0	3.5	3	0	0	0	1	3
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	2	2	6
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	25	9.8	0	0	0	0	0	0	0	0	22.2	2	0.3
Pedestrians	0	0	0	0	0	0	0	0	12	12	0	0	0	2	2	0	0	0	7	7	21
% Pedestrians	0	0	0	0	0	0	0	0	75	29.3	0	0	0	100	0.2	0	0	0	77.8	7.1	0.9

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

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	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	**15**	**173**	0	0	**188**	1	0	1	1	3	0	92	0	0	92	2	**2**	3	1	8	291
08:15 AM	7	142	0	0	149	2	0	1	**6**	**9**	1	121	4	0	126	9	0	4	**2**	15	299
08:30 AM	8	151	0	0	159	2	0	**4**	3	9	1	121	5	0	127	**11**	1	**7**	2	**21**	**316**
08:45 AM	7	123	**1**	0	131	**3**	0	2	2	7	**3**	**135**	**7**	**2**	**147**	2	0	4	1	7	292
Total Volume	37	589	1	0	627	8	0	8	12	28	5	469	16	2	492	24	3	18	6	51	1198
% App. Total	5.9	93.9	0.2	0		28.6	0	28.6	42.9		1	95.3	3.3	0.4		47.1	5.9	35.3	11.8		
PHF	.617	.851	.250	.000	.834	.667	.000	.500	.500	.778	.417	.869	.571	.250	.837	.545	.375	.643	.750	.607	.948
Lights	33	566	1	0	600	8	0	7	0	15	5	442	16	0	463	23	3	18	0	44	1122
% Lights	89.2	96.1	100	0	95.7	100	0	87.5	0	53.6	100	94.2	100	0	94.1	95.8	100	100	0	86.3	93.7
Buses	0	9	0	0	9	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	20
% Buses	0	1.5	0	0	1.4	0	0	12.5	0	3.6	0	2.1	0	0	2.0	0	0	0	0	0	1.7
Trucks	4	14	0	0	18	0	0	0	0	0	0	17	0	0	17	1	0	0	0	1	36
% Trucks	10.8	2.4	0	0	2.9	0	0	0	0	0	0	3.6	0	0	3.5	4.2	0	0	0	2.0	3.0
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	1	1	5
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	33.3	14.3	0	0	0	0	0	0	0	0	16.7	2.0	0.4
Pedestrians	0	0	0	0	0	0	0	0	8	8	0	0	0	2	2	0	0	0	5	5	15
% Pedestrians	0	0	0	0	0	0	0	0	66.7	28.6	0	0	0	100	0.4	0	0	0	83.3	9.8	1.3

Colliers Engineering & Design

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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	6	124	5	0	135	2	0	2	1	5	2	127	7	0	136	3	3	3	1	10	286
03:15 PM	3	107	2	0	112	1	0	0	0	1	2	180	5	0	187	6	0	3	0	9	309
03:30 PM	3	97	1	0	101	1	0	1	1	3	1	138	3	0	142	1	0	3	1	5	251
03:45 PM	5	153	1	0	159	2	1	1	0	4	0	145	4	0	149	4	1	6	0	11	323
Total	17	481	9	0	507	6	1	4	2	13	5	590	19	0	614	14	4	15	2	35	1169
04:00 PM	1	112	2	0	115	3	0	0	0	3	0	126	3	1	130	2	2	10	1	15	263
04:15 PM	4	139	2	0	145	3	1	3	0	7	1	170	2	0	173	4	2	7	3	16	341
04:30 PM	7	145	0	0	152	1	1	0	0	2	2	129	2	0	133	3	2	2	1	8	295
04:45 PM	5	150	1	0	156	0	1	2	0	3	1	162	4	0	167	2	1	5	0	8	334
Total	17	546	5	0	568	7	3	5	0	15	4	587	11	1	603	11	7	24	5	47	1233
05:00 PM	8	124	2	0	134	0	0	1	2	3	1	137	6	0	144	2	0	7	0	9	290
05:15 PM	9	97	2	0	108	1	0	1	0	2	2	85	2	3	92	5	2	5	1	13	215
05:30 PM	8	130	2	0	140	0	1	1	0	2	2	88	1	0	91	4	6	4	0	14	247
05:45 PM	6	99	5	0	110	2	0	0	2	4	1	43	1	2	47	2	1	3	0	6	167
Total	31	450	11	0	492	3	1	3	4	11	6	353	10	5	374	13	9	19	1	42	919
06:00 PM	5	114	0	0	119	2	0	1	3	6	1	86	2	1	90	3	3	1	0	7	222
06:15 PM	3	112	3	0	118	1	0	0	0	1	3	127	3	0	133	1	1	4	1	7	259
Grand Total	73	1703	28	0	1804	19	5	13	9	46	19	1743	45	7	1814	42	24	63	9	138	3802
Apprch %	4	94.4	1.6	0		41.3	10.9	28.3	19.6		1	96.1	2.5	0.4		30.4	17.4	45.7	6.5		
Total %	1.9	44.8	0.7	0	47.4	0.5	0.1	0.3	0.2	1.2	0.5	45.8	1.2	0.2	47.7	1.1	0.6	1.7	0.2	3.6	
Lights	73	1655	27	0	1755	17	5	12	0	34	19	1693	45	0	1757	42	24	61	0	127	3673
% Lights	100	97.2	96.4	0	97.3	89.5	100	92.3	0	73.9	100	97.1	100	0	96.9	100	100	96.8	0	92	96.6
Buses	0	24	0	0	24	2	0	0	0	2	0	21	0	0	21	0	0	0	0	0	47
% Buses	0	1.4	0	0	1.3	10.5	0	0	0	4.3	0	1.2	0	0	1.2	0	0	0	0	0	1.2
Trucks	0	24	1	0	25	0	0	1	0	1	0	29	0	0	29	0	0	2	0	2	57
% Trucks	0	1.4	3.6	0	1.4	0	0	7.7	0	2.2	0	1.7	0	0	1.6	0	0	3.2	0	1.4	1.5
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44.4	2.9	0.1
Pedestrians	0	0	0	0	0	0	0	0	9	9	0	0	0	7	7	0	0	0	5	5	21
% Pedestrians	0	0	0	0	0	0	0	0	100	19.6	0	0	0	100	0.4	0	0	0	55.6	3.6	0.6

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 2._NYS_Route_9D_and_Tompkins_Avenue_-WKDAY_1107099_09-07-2023
Site Code :
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	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	4	139	**2**	0	145	**3**	**1**	**3**	0	**7**	1	**170**	2	0	**173**	**4**	**2**	**7**	**3**	**16**	**341**
04:30 PM	7	145	0	0	152	1	1	0	0	2	**2**	129	2	0	133	3	2	2	1	8	295
04:45 PM	5	**150**	1	0	**156**	0	1	2	0	3	1	162	4	0	167	2	1	5	0	8	334
05:00 PM	**8**	124	2	0	134	0	0	1	**2**	3	1	137	**6**	0	144	2	0	7	0	9	290
Total Volume	24	558	5	0	587	4	3	6	2	15	5	598	14	0	617	11	5	21	4	41	1260
% App. Total	4.1	95.1	0.9	0		26.7	20	40	13.3		0.8	96.9	2.3	0		26.8	12.2	51.2	9.8		
PHF	.750	.930	.625	.000	.941	.333	.750	.500	.250	.536	.625	.879	.583	.000	.892	.688	.625	.750	.333	.641	.924
Lights	24	543	5	0	572	3	3	6	0	12	5	585	14	0	604	11	5	21	0	37	1225
% Lights	100	97.3	100	0	97.4	75.0	100	100	0	80.0	100	97.8	100	0	97.9	100	100	100	0	90.2	97.2
Buses	0	5	0	0	5	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	12
% Buses	0	0.9	0	0	0.9	25.0	0	0	0	6.7	0	1.0	0	0	1.0	0	0	0	0	0	1.0
Trucks	0	10	0	0	10	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	17
% Trucks	0	1.8	0	0	1.7	0	0	0	0	0	0	1.2	0	0	1.1	0	0	0	0	0	1.3
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75.0	7.3	0.2
Pedestrians	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
% Pedestrians	0	0	0	0	0	0	0	0	100	13.3	0	0	0	0	0	0	0	0	25.0	2.4	0.2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 2._NYS_Route_9D_and_Tompkins_Avenue_-SAT_1107100_09-09-2023
Site Code :
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	6	157	1	0	164	3	1	0	2	6	1	116	0	0	117	4	1	5	1	11	298
11:15 AM	6	122	0	0	128	4	0	2	1	7	0	105	1	0	106	2	0	3	0	5	246
11:30 AM	6	117	1	0	124	2	2	1	0	5	1	117	0	0	118	4	1	4	0	9	256
11:45 AM	7	163	1	0	171	2	0	0	1	3	0	117	4	0	121	2	0	6	1	9	304
Total	25	559	3	0	587	11	3	3	4	21	2	455	5	0	462	12	2	18	2	34	1104
12:00 PM	7	153	3	0	163	2	1	0	0	3	0	132	3	0	135	4	1	10	3	18	319
12:15 PM	2	146	2	0	150	3	1	2	1	7	3	112	2	0	117	3	0	4	0	7	281
12:30 PM	6	144	1	0	151	3	3	1	0	7	1	117	2	0	120	1	0	9	2	12	290
12:45 PM	7	139	3	0	149	4	1	1	5	11	0	127	1	0	128	2	0	6	0	8	296
Total	22	582	9	0	613	12	6	4	6	28	4	488	8	0	500	10	1	29	5	45	1186
01:00 PM	6	132	0	0	138	0	0	0	1	1	0	115	3	0	118	1	1	6	0	8	265
01:15 PM	4	148	1	0	153	0	0	0	1	1	0	120	2	1	123	1	0	3	0	4	281
01:30 PM	7	157	3	0	167	1	1	2	0	4	2	146	2	0	150	3	0	3	0	6	327
01:45 PM	11	154	2	0	167	1	0	2	0	3	0	127	1	2	130	3	1	6	5	15	315
Total	28	591	6	0	625	2	1	4	2	9	2	508	8	3	521	8	2	18	5	33	1188
Grand Total	75	1732	18	0	1825	25	10	11	12	58	8	1451	21	3	1483	30	5	65	12	112	3478
Apprch %	4.1	94.9	1	0		43.1	17.2	19	20.7		0.5	97.8	1.4	0.2		26.8	4.5	58	10.7		
Total %	2.2	49.8	0.5	0	52.5	0.7	0.3	0.3	0.3	1.7	0.2	41.7	0.6	0.1	42.6	0.9	0.1	1.9	0.3	3.2	
Lights	75	1705	18	0	1798	24	9	11	0	44	8	1431	21	0	1460	30	5	64	0	99	3401
% Lights	100	98.4	100	0	98.5	96	90	100	0	75.9	100	98.6	100	0	98.4	100	100	98.5	0	88.4	97.8
Buses	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	13
% Buses	0	0.4	0	0	0.4	0	0	0	0	0	0	0.3	0	0	0.3	0	0	1.5	0	0.9	0.4
Trucks	0	20	0	0	20	1	1	0	0	2	0	15	0	0	15	0	0	0	0	0	37
% Trucks	0	1.2	0	0	1.1	4	10	0	0	3.4	0	1	0	0	1	0	0	0	0	0	1.1
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.7	1.8	0.1
Pedestrians	0	0	0	0	0	0	0	0	12	12	0	0	0	3	3	0	0	0	10	10	25
% Pedestrians	0	0	0	0	0	0	0	0	100	20.7	0	0	0	100	0.2	0	0	0	83.3	8.9	0.7

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 2._NYS_Route_9D_and_Tompkins_Avenue_-SAT_1107100_09-09-2023
Site Code :
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	NORTH AVE From North					RALPH ST From East					NORTH AVE From South					TOMPKINS AVE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	**7**	**163**	1	0	**171**	2	0	0	**1**	3	0	117	**4**	0	121	2	0	6	1	9	304
12:00 PM	7	153	**3**	0	163	2	1	0	0	3	0	**132**	3	0	**135**	**4**	**1**	**10**	**3**	**18**	**319**
12:15 PM	2	146	2	0	150	**3**	1	**2**	1	**7**	**3**	112	2	0	117	3	0	4	0	7	281
12:30 PM	6	144	1	0	151	3	**3**	1	0	7	1	117	2	0	120	1	0	9	2	12	290
Total Volume	22	606	7	0	635	10	5	3	2	20	4	478	11	0	493	10	1	29	6	46	1194
% App. Total	3.5	95.4	1.1	0		50	25	15	10		0.8	97	2.2	0		21.7	2.2	63	13		
PHF	.786	.929	.583	.000	.928	.833	.417	.375	.500	.714	.333	.905	.688	.000	.913	.625	.250	.725	.500	.639	.936
Lights	22	593	7	0	622	10	5	3	0	18	4	473	11	0	488	10	1	28	0	39	1167
% Lights	100	97.9	100	0	98.0	100	100	100	0	90.0	100	99.0	100	0	99.0	100	100	96.6	0	84.8	97.7
Buses	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	6
% Buses	0	0.3	0	0	0.3	0	0	0	0	0	0	0.6	0	0	0.6	0	0	3.4	0	2.2	0.5
Trucks	0	11	0	0	11	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	13
% Trucks	0	1.8	0	0	1.7	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	1.1
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.7	2.2	0.1
Pedestrians	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	5	5	7
% Pedestrians	0	0	0	0	0	0	0	0	100	10.0	0	0	0	0	0	0	0	0	83.3	10.9	0.6

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-WKDAY_1107101_09-07-2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	102	58	2	2	164	1	1	0	1	3	0	73	6	0	79	1	2	24	0	27	273
07:15 AM	59	85	0	0	144	0	3	1	3	7	0	71	5	0	76	5	0	33	1	39	266
07:30 AM	55	74	1	0	130	3	3	0	1	7	0	77	6	0	83	2	0	18	1	21	241
07:45 AM	24	110	1	6	141	2	3	1	3	9	1	83	3	0	87	7	2	40	4	53	290
Total	240	327	4	8	579	6	10	2	8	26	1	304	20	0	325	15	4	115	6	140	1070
08:00 AM	63	99	2	1	165	1	3	1	1	6	0	70	8	0	78	6	1	19	0	26	275
08:15 AM	31	125	0	0	156	3	1	2	7	13	0	89	1	2	92	5	2	36	4	47	308
08:30 AM	41	125	0	0	166	0	4	5	3	12	1	108	3	0	112	11	1	18	2	32	322
08:45 AM	36	98	0	0	134	3	1	0	3	7	1	122	4	0	127	7	0	21	1	29	297
Total	171	447	2	1	621	7	9	8	14	38	2	389	16	2	409	29	4	94	7	134	1202
Grand Total	411	774	6	9	1200	13	19	10	22	64	3	693	36	2	734	44	8	209	13	274	2272
Apprch %	34.2	64.5	0.5	0.8		20.3	29.7	15.6	34.4		0.4	94.4	4.9	0.3		16.1	2.9	76.3	4.7		
Total %	18.1	34.1	0.3	0.4	52.8	0.6	0.8	0.4	1	2.8	0.1	30.5	1.6	0.1	32.3	1.9	0.4	9.2	0.6	12.1	
Lights	407	724	6	0	1137	13	19	10	0	42	3	650	33	0	686	40	7	201	0	248	2113
% Lights	99	93.5	100	0	94.8	100	100	100	0	65.6	100	93.8	91.7	0	93.5	90.9	87.5	96.2	0	90.5	93
Buses	3	21	0	0	24	0	0	0	0	0	0	17	3	0	20	3	1	3	0	7	51
% Buses	0.7	2.7	0	0	2	0	0	0	0	0	0	2.5	8.3	0	2.7	6.8	12.5	1.4	0	2.6	2.2
Trucks	1	29	0	0	30	0	0	0	0	0	0	26	0	0	26	1	0	5	0	6	62
% Trucks	0.2	3.7	0	0	2.5	0	0	0	0	0	0	3.8	0	0	3.5	2.3	0	2.4	0	2.2	2.7
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.1	0	0	0	0	0	0
Pedestrians	0	0	0	9	9	0	0	0	22	22	0	0	0	1	1	0	0	0	13	13	45
% Pedestrians	0	0	0	100	0.8	0	0	0	100	34.4	0	0	0	50	0.1	0	0	0	100	4.7	2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-WKDAY_1107101_09-07-2023
Site Code :
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	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	**63**	99	**2**	**1**	165	1	3	1	1	6	0	70	**8**	0	78	6	1	19	0	26	275
08:15 AM	31	**125**	0	0	156	**3**	1	2	**7**	**13**	0	89	1	**2**	92	5	**2**	**36**	**4**	**47**	308
08:30 AM	41	125	0	0	**166**	0	**4**	**5**	3	12	**1**	108	3	0	112	**11**	1	18	2	32	**322**
08:45 AM	36	98	0	0	134	3	1	0	3	7	1	**122**	4	0	**127**	7	0	21	1	29	297
Total Volume	171	447	2	1	621	7	9	8	14	38	2	389	16	2	409	29	4	94	7	134	1202
% App. Total	27.5	72	0.3	0.2		18.4	23.7	21.1	36.8		0.5	95.1	3.9	0.5		21.6	3	70.1	5.2		
PHF	.679	.894	.250	.250	.935	.583	.563	.400	.500	.731	.500	.797	.500	.250	.805	.659	.500	.653	.438	.713	.933
Lights	169	424	2	0	595	7	9	8	0	24	2	364	15	0	381	27	3	90	0	120	1120
% Lights	98.8	94.9	100	0	95.8	100	100	100	0	63.2	100	93.6	93.8	0	93.2	93.1	75.0	95.7	0	89.6	93.2
Buses	1	10	0	0	11	0	0	0	0	0	0	11	1	0	12	1	1	1	0	3	26
% Buses	0.6	2.2	0	0	1.8	0	0	0	0	0	0	2.8	6.3	0	2.9	3.4	25.0	1.1	0	2.2	2.2
Trucks	1	13	0	0	14	0	0	0	0	0	0	14	0	0	14	1	0	3	0	4	32
% Trucks	0.6	2.9	0	0	2.3	0	0	0	0	0	0	3.6	0	0	3.4	3.4	0	3.2	0	3.0	2.7
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	50.0	0.2	0	0	0	0	0	0.1
Pedestrians	0	0	0	1	1	0	0	0	14	14	0	0	0	1	1	0	0	0	7	7	23
% Pedestrians	0	0	0	100	0.2	0	0	0	100	36.8	0	0	0	50.0	0.2	0	0	0	100	5.2	1.9

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400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	28	106	3	3	140	2	0	0	4	6	1	107	9	0	117	11	1	24	0	36	299
03:15 PM	19	86	2	0	107	1	1	0	0	2	2	135	4	0	141	4	4	55	1	64	314
03:30 PM	25	76	3	0	104	1	1	0	1	3	0	119	5	0	124	6	1	22	1	30	261
03:45 PM	40	113	1	0	154	4	1	1	0	6	1	117	0	0	118	4	1	20	0	25	303
Total	112	381	9	3	505	8	3	1	5	17	4	478	18	0	500	25	7	121	2	155	1177
04:00 PM	24	92	2	5	123	1	2	0	1	4	1	110	6	0	117	5	2	23	2	32	276
04:15 PM	27	114	1	1	143	2	1	0	1	4	2	98	7	0	107	11	3	80	3	97	351
04:30 PM	35	121	0	0	156	0	1	0	0	1	0	98	7	0	105	3	1	28	1	33	295
04:45 PM	33	114	2	0	149	2	3	0	0	5	6	68	8	0	82	9	5	100	1	115	351
Total	119	441	5	6	571	5	7	0	2	14	9	374	28	0	411	28	11	231	7	277	1273
05:00 PM	38	94	1	1	134	2	2	1	1	6	4	111	9	0	124	1	3	31	1	36	300
05:15 PM	23	85	0	0	108	1	0	0	3	4	5	57	4	0	66	9	10	38	0	57	235
05:30 PM	26	101	5	0	132	2	1	1	1	5	10	54	4	0	68	13	3	33	2	51	256
05:45 PM	40	63	1	1	105	3	2	2	3	10	11	27	3	0	41	23	19	20	1	63	219
Total	127	343	7	2	479	8	5	4	8	25	30	249	20	0	299	46	35	122	4	207	1010
06:00 PM	31	87	1	1	120	1	8	2	3	14	8	56	6	0	70	9	6	25	1	41	245
06:15 PM	39	75	1	3	118	3	3	1	0	7	3	61	6	1	71	10	6	68	5	89	285
Grand Total	428	1327	23	15	1793	25	26	8	18	77	54	1218	78	1	1351	118	65	567	19	769	3990
Apprch %	23.9	74	1.3	0.8		32.5	33.8	10.4	23.4		4	90.2	5.8	0.1		15.3	8.5	73.7	2.5		
Total %	10.7	33.3	0.6	0.4	44.9	0.6	0.7	0.2	0.5	1.9	1.4	30.5	2	0	33.9	3	1.6	14.2	0.5	19.3	
Lights	417	1290	22	0	1729	25	26	8	0	59	51	1177	70	0	1298	115	64	559	0	738	3824
% Lights	97.4	97.2	95.7	0	96.4	100	100	100	0	76.6	94.4	96.6	89.7	0	96.1	97.5	98.5	98.6	0	96	95.8
Buses	8	16	0	0	24	0	0	0	0	0	2	16	7	0	25	2	0	4	0	6	55
% Buses	1.9	1.2	0	0	1.3	0	0	0	0	0	3.7	1.3	9	0	1.9	1.7	0	0.7	0	0.8	1.4
Trucks	3	21	1	0	25	0	0	0	0	0	1	25	1	0	27	1	1	4	0	6	58
% Trucks	0.7	1.6	4.3	0	1.4	0	0	0	0	0	1.9	2.1	1.3	0	2	0.8	1.5	0.7	0	0.8	1.5
Bicycles on Crosswalk	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	5	5	7
% Bicycles on Crosswalk	0	0	0	6.7	0.1	0	0	0	5.6	1.3	0	0	0	0	0	0	0	0	26.3	0.7	0.2
Pedestrians	0	0	0	14	14	0	0	0	17	17	0	0	0	1	1	0	0	0	14	14	46
% Pedestrians	0	0	0	93.3	0.8	0	0	0	94.4	22.1	0	0	0	100	0.1	0	0	0	73.7	1.8	1.2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-WKDAY_1107101_09-07-2023
Site Code :
Start Date : 9/7/2023
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	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	27	114	1	**1**	143	**2**	1	0	**1**	4	2	98	7	0	107	**11**	3	80	**3**	97	**351**
04:30 PM	35	**121**	0	0	**156**	0	1	0	0	1	0	98	7	0	105	3	1	28	1	33	295
04:45 PM	33	114	**2**	0	149	2	**3**	0	0	5	**6**	68	8	0	82	9	**5**	**100**	1	**115**	351
05:00 PM	**38**	94	1	1	134	2	2	**1**	1	**6**	4	**111**	**9**	0	**124**	1	3	31	1	36	300
Total Volume	133	443	4	2	582	6	7	1	2	16	12	375	31	0	418	24	12	239	6	281	1297
% App. Total	22.9	76.1	0.7	0.3		37.5	43.8	6.2	12.5		2.9	89.7	7.4	0		8.5	4.3	85.1	2.1		
PHF	.875	.915	.500	.500	.933	.750	.583	.250	.500	.667	.500	.845	.861	.000	.843	.545	.600	.598	.500	.611	.924
Lights	130	431	4	0	565	6	7	1	0	14	12	364	28	0	404	24	12	236	0	272	1255
% Lights	97.7	97.3	100	0	97.1	100	100	100	0	87.5	100	97.1	90.3	0	96.7	100	100	98.7	0	96.8	96.8
Buses	3	2	0	0	5	0	0	0	0	0	0	4	2	0	6	0	0	2	0	2	13
% Buses	2.3	0.5	0	0	0.9	0	0	0	0	0	0	1.1	6.5	0	1.4	0	0	0.8	0	0.7	1.0
Trucks	0	10	0	0	10	0	0	0	0	0	0	7	1	0	8	0	0	1	0	1	19
% Trucks	0	2.3	0	0	1.7	0	0	0	0	0	0	1.9	3.2	0	1.9	0	0	0.4	0	0.4	1.5
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.7	0.4	0.1
Pedestrians	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0	0	0	0	5	5	9
% Pedestrians	0	0	0	100	0.3	0	0	0	100	12.5	0	0	0	0	0	0	0	0	83.3	1.8	0.7

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400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-SAT_1107102_09-09-2023
Site Code :
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	61	97	2	0	160	2	6	1	0	9	2	88	8	0	98	4	1	29	2	36	303
11:15 AM	34	87	0	0	121	0	3	2	2	7	2	87	7	0	96	3	0	15	1	19	243
11:30 AM	30	102	1	1	134	0	1	3	0	4	0	94	8	0	102	15	0	32	0	47	287
11:45 AM	44	104	3	0	151	1	2	2	0	5	1	98	8	0	107	8	2	22	3	35	298
Total	169	390	6	1	566	3	12	8	2	25	5	367	31	0	403	30	3	98	6	137	1131
12:00 PM	47	101	1	1	150	2	0	0	1	3	0	89	14	0	103	9	1	41	1	52	308
12:15 PM	48	101	2	2	153	2	1	2	2	7	0	98	11	0	109	5	1	15	0	21	290
12:30 PM	44	94	4	0	142	3	2	0	0	5	0	72	9	0	81	12	3	49	2	66	294
12:45 PM	32	111	3	4	150	2	4	0	6	12	0	97	7	1	105	9	0	29	0	38	305
Total	171	407	10	7	595	9	7	2	9	27	0	356	41	1	398	35	5	134	3	177	1197
01:00 PM	35	96	0	1	132	4	0	1	1	6	1	88	8	1	98	8	0	32	1	41	277
01:15 PM	44	92	2	6	144	2	0	3	8	13	0	89	12	0	101	7	2	31	1	41	299
01:30 PM	45	117	4	0	166	1	0	4	0	5	1	100	8	2	111	13	0	46	4	63	345
01:45 PM	55	90	1	4	150	0	3	1	0	4	0	99	17	0	116	4	3	31	0	38	308
Total	179	395	7	11	592	7	3	9	9	28	2	376	45	3	426	32	5	140	6	183	1229
Grand Total	519	1192	23	19	1753	19	22	19	20	80	7	1099	117	4	1227	97	13	372	15	497	3557
Apprch %	29.6	68	1.3	1.1		23.8	27.5	23.8	25		0.6	89.6	9.5	0.3		19.5	2.6	74.8	3		
Total %	14.6	33.5	0.6	0.5	49.3	0.5	0.6	0.5	0.6	2.2	0.2	30.9	3.3	0.1	34.5	2.7	0.4	10.5	0.4	14	
Lights	513	1175	23	0	1711	19	22	19	0	60	7	1081	110	0	1198	97	13	370	0	480	3449
% Lights	98.8	98.6	100	0	97.6	100	100	100	0	75	100	98.4	94	0	97.6	100	100	99.5	0	96.6	97
Buses	2	5	0	0	7	0	0	0	0	0	0	4	7	0	11	0	0	2	0	2	20
% Buses	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0.4	6	0	0.9	0	0	0.5	0	0.4	0.6
Trucks	4	12	0	0	16	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	30
% Trucks	0.8	1	0	0	0.9	0	0	0	0	0	0	1.3	0	0	1.1	0	0	0	0	0	0.8
Bicycles on Crosswalk	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	4
% Bicycles on Crosswalk	0	0	0	5.3	0.1	0	0	0	0	0	0	0	0	25	0.1	0	0	0	13.3	0.4	0.1
Pedestrians	0	0	0	18	18	0	0	0	20	20	0	0	0	3	3	0	0	0	13	13	54
% Pedestrians	0	0	0	94.7	1	0	0	0	100	25	0	0	0	75	0.2	0	0	0	86.7	2.6	1.5

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 3._NYS_Route_9D_and_Beekman_Street_-SAT_1107102_09-09-2023
Site Code :
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	NORTH AVE From North					W CHURCH ST From East					NORTH AVE From South					BEEKMAN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	35	96	0	1	132	**4**	0	1	1	6	**1**	88	8	1	98	8	0	32	1	41	277
01:15 PM	44	92	2	**6**	144	2	0	3	**8**	**13**	0	89	12	0	101	7	2	31	1	41	299
01:30 PM	45	**117**	**4**	0	**166**	1	0	**4**	0	5	1	**100**	8	**2**	111	**13**	0	**46**	**4**	**63**	**345**
01:45 PM	**55**	90	1	4	150	0	**3**	1	0	4	0	99	**17**	0	**116**	4	**3**	31	0	38	308
Total Volume	179	395	7	11	592	7	3	9	9	28	2	376	45	3	426	32	5	140	6	183	1229
% App. Total	30.2	66.7	1.2	1.9		25	10.7	32.1	32.1		0.5	88.3	10.6	0.7		17.5	2.7	76.5	3.3		
PHF	.814	.844	.438	.458	.892	.438	.250	.563	.281	.538	.500	.940	.662	.375	.918	.615	.417	.761	.375	.726	.891
Lights	179	391	7	0	577	7	3	9	0	19	2	368	44	0	414	32	5	140	0	177	1187
% Lights	100	99.0	100	0	97.5	100	100	100	0	67.9	100	97.9	97.8	0	97.2	100	100	100	0	96.7	96.6
Buses	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	4
% Buses	0	0.5	0	0	0.3	0	0	0	0	0	0	0.3	2.2	0	0.5	0	0	0	0	0	0.3
Trucks	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
% Trucks	0	0.5	0	0	0.3	0	0	0	0	0	0	1.9	0	0	1.6	0	0	0	0	0	0.7
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	33.3	0.2	0	0	0	16.7	0.5	0.2
Pedestrians	0	0	0	11	11	0	0	0	9	9	0	0	0	2	2	0	0	0	5	5	27
% Pedestrians	0	0	0	100	1.9	0	0	0	100	32.1	0	0	0	66.7	0.5	0	0	0	83.3	2.7	2.2

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-WKDAY_1107104_09-07-2023
Site Code :
Start Date : 9/7/2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	105	0	0	105	0	0	0	0	0	0	27	0	1	28	0	0	0	1	1	134
07:15 AM	0	72	0	0	72	0	0	0	0	0	0	39	0	0	39	0	0	0	3	3	114
07:30 AM	0	59	0	0	59	0	0	0	0	0	0	23	0	1	24	0	0	0	2	2	85
07:45 AM	0	30	0	1	31	0	0	0	0	0	0	46	1	1	48	1	0	1	7	9	88
Total	0	266	0	1	267	0	0	0	0	0	0	135	1	3	139	1	0	1	13	15	421
08:00 AM	0	71	0	0	71	0	0	0	0	0	0	26	0	1	27	1	0	1	2	4	102
08:15 AM	0	36	0	0	36	0	0	0	0	0	0	39	0	0	39	0	0	0	1	1	76
08:30 AM	1	47	0	6	54	0	0	0	0	0	0	30	0	0	30	1	0	0	6	7	91
08:45 AM	0	38	0	0	38	0	0	0	0	0	0	27	0	2	29	0	0	1	1	2	69
Total	1	192	0	6	199	0	0	0	0	0	0	122	0	3	125	2	0	2	10	14	338
Grand Total	1	458	0	7	466	0	0	0	0	0	0	257	1	6	264	3	0	3	23	29	759
Apprch %	0.2	98.3	0	1.5		0	0	0	0		0	97.3	0.4	2.3		10.3	0	10.3	79.3		
Total %	0.1	60.3	0	0.9	61.4	0	0	0	0	0	0	33.9	0.1	0.8	34.8	0.4	0	0.4	3	3.8	
Lights	1	450	0	0	451	0	0	0	0	0	0	246	1	0	247	3	0	3	0	6	704
% Lights	100	98.3	0	0	96.8	0	0	0	0	0	0	95.7	100	0	93.6	100	0	100	0	20.7	92.8
Buses	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
% Buses	0	1.5	0	0	1.5	0	0	0	0	0	0	2.7	0	0	2.7	0	0	0	0	0	1.8
Trucks	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
% Trucks	0	0.2	0	0	0.2	0	0	0	0	0	0	1.6	0	0	1.5	0	0	0	0	0	0.7
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.3	3.4	0.1
Pedestrians	0	0	0	7	7	0	0	0	0	0	0	0	0	6	6	0	0	0	22	22	35
% Pedestrians	0	0	0	100	1.5	0	0	0	0	0	0	0	0	100	2.3	0	0	0	95.7	75.9	4.6

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-WKDAY_1107104_09-07-2023
Site Code :
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	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	**105**	0	0	**105**	0	0	0	0	0	0	27	0	**1**	28	0	0	0	1	1	**134**
07:15 AM	0	72	0	0	72	0	0	0	0	0	0	39	0	0	39	0	0	0	3	3	114
07:30 AM	0	59	0	0	59	0	0	0	0	0	0	23	0	1	24	0	0	0	2	2	85
07:45 AM	0	30	0	**1**	31	0	0	0	0	0	0	**46**	**1**	1	**48**	**1**	0	**1**	**7**	**9**	88
Total Volume	0	266	0	1	267	0	0	0	0	0	0	135	1	3	139	1	0	1	13	15	421
% App. Total	0	99.6	0	0.4		0	0	0	0		0	97.1	0.7	2.2		6.7	0	6.7	86.7		
PHF	.000	.633	.000	.250	.636	.000	.000	.000	.000	.000	.000	.734	.250	.750	.724	.250	.000	.250	.464	.417	.785
Lights	0	261	0	0	261	0	0	0	0	0	0	130	1	0	131	1	0	1	0	2	394
% Lights	0	98.1	0	0	97.8	0	0	0	0	0	0	96.3	100	0	94.2	100	0	100	0	13.3	93.6
Buses	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9
% Buses	0	1.9	0	0	1.9	0	0	0	0	0	0	3.0	0	0	2.9	0	0	0	0	0	2.1
Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0.7	0	0	0.7	0	0	0	0	0	0.2
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.7	6.7	0.2
Pedestrians	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3	0	0	0	12	12	16
% Pedestrians	0	0	0	100	0.4	0	0	0	0	0	0	0	0	100	2.2	0	0	0	92.3	80.0	3.8

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File Name : 4._Beekman_Street_and_High_Street_-WKDAY_1107104_09-07-2023
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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	0	33	0	0	33	0	0	0	0	0	0	34	0	0	34	0	0	2	1	3	70
03:15 PM	0	20	0	0	20	0	0	0	0	0	0	62	0	0	62	0	0	1	4	5	87
03:30 PM	1	29	0	2	32	0	0	0	0	0	0	30	1	0	31	1	0	0	3	4	67
03:45 PM	1	33	0	0	34	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	57
Total	2	115	0	2	119	0	0	0	0	0	0	149	1	0	150	1	0	3	8	12	281
04:00 PM	1	33	0	1	35	0	0	0	0	0	0	26	0	0	26	1	0	0	6	7	68
04:15 PM	1	37	0	2	40	0	0	0	0	0	0	89	0	1	90	3	0	0	2	5	135
04:30 PM	0	45	0	2	47	0	0	0	0	0	0	27	0	0	27	1	0	0	2	3	77
04:45 PM	1	41	0	2	44	0	0	0	0	0	0	114	0	0	114	1	0	2	0	3	161
Total	3	156	0	7	166	0	0	0	0	0	0	256	0	1	257	6	0	2	10	18	441
05:00 PM	0	48	0	1	49	0	0	0	0	0	0	30	0	0	30	1	0	0	3	4	83
05:15 PM	0	28	0	0	28	0	0	0	0	0	0	82	1	0	83	2	0	1	0	3	114
05:30 PM	1	30	0	0	31	0	0	0	0	0	0	44	1	0	45	1	0	0	1	2	78
05:45 PM	0	45	0	0	45	0	0	0	0	0	0	57	3	2	62	2	0	0	0	2	109
Total	1	151	0	1	153	0	0	0	0	0	0	213	5	2	220	6	0	1	4	11	384
06:00 PM	1	46	0	0	47	0	0	0	0	0	0	21	1	0	22	1	0	0	2	3	72
06:15 PM	1	44	0	0	45	0	0	0	0	0	0	83	0	0	83	1	0	0	5	6	134
Grand Total	8	512	0	10	530	0	0	0	0	0	0	722	7	3	732	15	0	6	29	50	1312
Apprch %	1.5	96.6	0	1.9		0	0	0	0		0	98.6	1	0.4		30	0	12	58		
Total %	0.6	39	0	0.8	40.4	0	0	0	0	0	0	55	0.5	0.2	55.8	1.1	0	0.5	2.2	3.8	
Lights	8	496	0	0	504	0	0	0	0	0	0	710	7	0	717	15	0	6	0	21	1242
% Lights	100	96.9	0	0	95.1	0	0	0	0	0	0	98.3	100	0	98	100	0	100	0	42	94.7
Buses	0	14	0	0	14	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	20
% Buses	0	2.7	0	0	2.6	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	1.5
Trucks	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
% Trucks	0	0.4	0	0	0.4	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0.6
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17.2	10	0.4
Pedestrians	0	0	0	10	10	0	0	0	0	0	0	0	0	3	3	0	0	0	24	24	37
% Pedestrians	0	0	0	100	1.9	0	0	0	0	0	0	0	0	100	0.4	0	0	0	82.8	48	2.8

Colliers Engineering & Design

400 Columbus Avenue - Suite 180E
Valhalla, New York, 10595
Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-WKDAY_1107104_09-07-2023
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	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	**1**	37	0	**2**	40	0	0	0	0	0	0	89	0	**1**	90	**3**	0	0	2	**5**	135
04:30 PM	0	45	0	2	47	0	0	0	0	0	0	27	0	0	27	1	0	0	2	3	77
04:45 PM	1	41	0	2	44	0	0	0	0	0	0	**114**	0	0	**114**	1	0	**2**	0	3	**161**
05:00 PM	0	**48**	0	1	**49**	0	0	0	0	0	0	30	0	0	30	1	0	0	**3**	4	83
Total Volume	2	171	0	7	180	0	0	0	0	0	0	260	0	1	261	6	0	2	7	15	456
% App. Total	1.1	95	0	3.9		0	0	0	0		0	99.6	0	0.4		40	0	13.3	46.7		
PHF	.500	.891	.000	.875	.918	.000	.000	.000	.000	.000	.000	.570	.000	.250	.572	.500	.000	.250	.583	.750	.708
Lights	2	165	0	0	167	0	0	0	0	0	0	259	0	0	259	6	0	2	0	8	434
% Lights	100	96.5	0	0	92.8	0	0	0	0	0	0	99.6	0	0	99.2	100	0	100	0	53.3	95.2
Buses	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
% Buses	0	2.9	0	0	2.8	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	1.3
Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Trucks	0	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.3	6.7	0.2
Pedestrians	0	0	0	7	7	0	0	0	0	0	0	0	0	1	1	0	0	0	6	6	14
% Pedestrians	0	0	0	100	3.9	0	0	0	0	0	0	0	0	100	0.4	0	0	0	85.7	40.0	3.1

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Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	1	78	0	1	80	0	0	0	0	0	0	34	0	0	34	1	0	1	1	3	117
11:15 AM	0	44	0	0	44	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	62
11:30 AM	0	38	0	5	43	0	0	0	0	0	0	48	0	2	50	0	0	0	9	9	102
11:45 AM	0	52	0	0	52	0	0	0	0	0	0	31	0	0	31	0	0	0	2	2	85
Total	1	212	0	6	219	0	0	0	0	0	0	131	0	2	133	1	0	1	12	14	366
12:00 PM	0	61	0	0	61	0	0	0	0	0	0	47	0	0	47	0	0	1	0	1	109
12:15 PM	1	61	0	0	62	0	0	0	0	0	0	24	0	0	24	0	0	0	2	2	88
12:30 PM	0	57	0	0	57	0	0	0	0	0	0	61	0	0	61	1	0	0	1	2	120
12:45 PM	1	42	0	4	47	0	0	0	0	0	0	39	0	0	39	0	0	1	10	11	97
Total	2	221	0	4	227	0	0	0	0	0	0	171	0	0	171	1	0	2	13	16	414
01:00 PM	0	43	0	0	43	0	0	0	0	0	0	37	0	0	37	1	0	1	0	2	82
01:15 PM	0	55	0	0	55	0	0	0	0	0	0	44	0	1	45	0	0	0	4	4	104
01:30 PM	0	52	0	1	53	0	0	0	0	0	0	55	0	2	57	0	0	0	5	5	115
01:45 PM	0	78	0	0	78	0	0	0	0	0	0	40	0	1	41	0	0	0	4	4	123
Total	0	228	0	1	229	0	0	0	0	0	0	176	0	4	180	1	0	1	13	15	424
Grand Total	3	661	0	11	675	0	0	0	0	0	0	478	0	6	484	3	0	4	38	45	1204
Apprch %	0.4	97.9	0	1.6		0	0	0	0		0	98.8	0	1.2		6.7	0	8.9	84.4		
Total %	0.2	54.9	0	0.9	56.1	0	0	0	0	0	0	39.7	0	0.5	40.2	0.2	0	0.3	3.2	3.7	
Lights	2	648	0	0	650	0	0	0	0	0	0	476	0	0	476	3	0	4	0	7	1133
% Lights	66.7	98	0	0	96.3	0	0	0	0	0	0	99.6	0	0	98.3	100	0	100	0	15.6	94.1
Buses	0	9	0	0	9	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	11
% Buses	0	1.4	0	0	1.3	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0.9
Trucks	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
% Trucks	33.3	0.6	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.6	2.2	0.1
Pedestrians	0	0	0	11	11	0	0	0	0	0	0	0	0	6	6	0	0	0	37	37	54
% Pedestrians	0	0	0	100	1.6	0	0	0	0	0	0	0	0	100	1.2	0	0	0	97.4	82.2	4.5

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Accelerating Success

File Name : 4._Beekman_Street_and_High_Street_-SAT_1107105_09-09-2023
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	BEEKMAN ST From North					From East					BEEKMAN ST From South					HIGH ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	43	0	0	43	0	0	0	0	0	0	37	0	0	37	**1**	0	**1**	0	2	82
01:15 PM	0	55	0	0	55	0	0	0	0	0	0	44	0	1	45	0	0	0	4	4	104
01:30 PM	0	52	0	**1**	53	0	0	0	0	0	0	**55**	0	**2**	**57**	0	0	0	**5**	**5**	115
01:45 PM	0	**78**	0	0	**78**	0	0	0	0	0	0	40	0	1	41	0	0	0	4	4	**123**
Total Volume	0	228	0	1	229	0	0	0	0	0	0	176	0	4	180	1	0	1	13	15	424
% App. Total	0	99.6	0	0.4		0	0	0	0		0	97.8	0	2.2		6.7	0	6.7	86.7		
PHF	.000	.731	.000	.250	.734	.000	.000	.000	.000	.000	.000	.800	.000	.500	.789	.250	.000	.250	.650	.750	.862
Lights	0	227	0	0	227	0	0	0	0	0	0	176	0	0	176	1	0	1	0	2	405
% Lights	0	99.6	0	0	99.1	0	0	0	0	0	0	100	0	0	97.8	100	0	100	0	13.3	95.5
Buses	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Buses	0	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	1	1	0	0	0	0	0	0	0	0	4	4	0	0	0	13	13	18
% Pedestrians	0	0	0	100	0.4	0	0	0	0	0	0	0	0	100	2.2	0	0	0	100	86.7	4.2

Colliers Engineering & Design

NYSDOT VOLUME DATA SUMMARY

ROADWAY: BEEKMAN STREET
SEGMENT: FROM NYS ROUTE 9D TO RED FLYNN DRIVE
LOCATION: 275' E OF RIVER ST
START DATE OF COUNT: Tuesday, April 24, 2018
NYSDOT COUNT STATION: 821009
FUNCTIONAL CLASS: 17 - URBAN MAJOR COLLECTOR
FACTOR GROUP: 30
SEASONAL FACTOR: 1.062

TIME PERIOD		DIRECTIONAL VOLUMES		TOTAL VOLUME
START	FINISH	EASTBOUND	WESTBOUND	
12:00 AM	1:00 AM	53	6	59
1:00 AM	2:00 AM	22	4	26
2:00 AM	3:00 AM	12	1	13
3:00 AM	4:00 AM	7	5	12
4:00 AM	5:00 AM	24	101	125
5:00 AM	6:00 AM	41	120	161
6:00 AM	7:00 AM	90	196	286
7:00 AM	8:00 AM	152	132	284
8:00 AM	9:00 AM	113	88	201
9:00 AM	10:00 AM	79	59	138
10:00 AM	11:00 AM	84	68	152
11:00 AM	12:00 PM	79	54	133
12:00 PM	1:00 PM	81	58	139
1:00 PM	2:00 PM	85	70	155
2:00 PM	3:00 PM	94	63	157
3:00 PM	4:00 PM	128	67	195
4:00 PM	5:00 PM	239	77	316
5:00 PM	6:00 PM	252	77	329
6:00 PM	7:00 PM	356	93	449
7:00 PM	8:00 PM	273	68	341
8:00 PM	9:00 PM	181	56	237
9:00 PM	10:00 PM	103	37	140
10:00 PM	11:00 PM	82	22	104
11:00 PM	12:00 AM	62	14	76
AVERAGE WEEKDAY DAILY TRAFFIC		**2692**	**1536**	**4228**
	AADT	**2535**	**1446**	**3981**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT CLASSIFICATION DATA SUMMARY

ROADWAY: BEEKMAN STREET
SEGMENT: FROM NYS ROUTE 9D TO RED FLYNN DRIVE
LOCATION: 275' E OF RIVER ST
START DATE OF COUNT: Tuesday, April 24, 2018
NYSDOT COUNT STATION: 821009
FUNCTIONAL CLASS: 17 - URBAN MAJOR COLLECTOR
FACTOR GROUP: 30

VEHICLE CLASS	DIRECTIONAL VOLUMES		TOTAL VEHICLES	TOTAL AXLES
	EASTBOUND	WESTBOUND		
F1	0	5	5	10
F2	2369	1352	3721	7442
F3	255	142	397	794
F4	20	6	26	65
F5	27	13	40	80
F6	7	5	12	36
F7	0	3	3	12
F8	1	0	1	4
F9	4	0	4	20
F10	0	3	3	18
F11	0	0	0	0
F12	0	0	0	0
F13	0	0	0	0
AVERAGE WEEKDAY TOTAL	**2683**	**1529**	**4212**	**8481**

	EASTBOUND	WESTBOUND	TOTAL
% TRUCKS & BUSES (F3 - F13)	12%	11%	12%
% HEAVY VEHICLES (F4 - F13)	2%	2%	2%
% F3 - F7	2%	2%	2%
% F8 - F13	0%	0%	0%
% F1	0%	0%	0%
% F2	88%	88%	88%
% F3	10%	9%	9%
% F4	1%	0%	1%
% F5 - F7	1%	1%	1%

VEHICLE CLASSIFICATION CODES:

- **F1** MOTORCYCLES
- **F2** AUTOS (INCLUDING THOSE HAULING TRAILERS)
- **F3** 2 AXLE, 4-TIRE PICKUPS, VANS, MOTORHOMES (INCLUDING THOSE HAULING TRAILERS)
- **F4** BUSES
- **F5** 2 AXLE, 6-TIRE SINGLE UNIT TRUCKS
- **F6** 3 AXLE SINGLE UNIT TRUCKS
- **F7** 4 OR MORE AXLE SINGLE UNIT TRUCKS
- **F8** 4 OR LESS AXLE VEHICLES, ONE UNIT IS A TRUCK
- **F9** 5 AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F10** 6 OR MORE AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F11** 5 OR LESS AXLE MULTI-UNIT TRUCKS
- **F12** 6 AXLE MULTI UNIT TRUCKS
- **F13** 7 OR MORE AXLE MULTI-UNIT TRUCKS

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT SPEED DATA SUMMARY

ROADWAY: BEEKMAN STREET
SEGMENT: FROM NYS ROUTE 9D TO RED FLYNN DRIVE
LOCATION: 275' E OF RIVER ST
START DATE OF COUNT: Tuesday, April 24, 2018
NYSDOT COUNT STATION: 821009
FUNCTIONAL CLASS: 17 - URBAN MAJOR COLLECTOR
POSTED SPEED LIMIT: 30
FACTOR GROUP: 30

SPEEDS (MPH)	DIRECTIONAL VOLUMES		TOTAL VOLUME
	EASTBOUND	WESTBOUND	
0 - 20.0	97	14	111
20.1 - 25.0	323	40	363
25.1 - 30.0	1129	262	1391
30.1 - 35.0	896	690	1586
35.1 - 40.0	206	423	629
40.1 - 45.0	33	95	128
45.1 - 50.0	1	13	14
50.1 - 55.0	0	0	0
55.1 - 60.0	0	0	0
60.1 - 65.0	0	0	0
65.1 - 70.0	0	0	0
70.1 - 75.0	0	0	0
75.1 - 80.0	0	0	0
80.1+	0	0	0
UNCLASSIFIED	0	0	0
AVERAGE SPEED (MPH)	**28**	**32**	**29**
50TH PERCENTILE SPEED (MPH)	**29**	**33**	**31**
85TH PERCENTILE SPEED (MPH)	**34**	**39**	**36**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

Colliers Engineering & Design

NYSDOT VOLUME DATA SUMMARY

ROADWAY: NYS ROUTE 9D
SEGMENT: FROM MAIN STREET TO RTS I-84 AND 52 UNDER
LOCATION: 55' S OF VAN NESS RD
START DATE OF COUNT: Monday, May 6, 2019
NYSDOT COUNT STATION: 820021
FUNCTIONAL CLASS: 16 - URBAN MINOR ARTERIAL
FACTOR GROUP: 30
SEASONAL FACTOR: 1.089

TIME PERIOD		DIRECTIONAL VOLUMES		TOTAL VOLUME
START	FINISH	NORTHBOUND	SOUTHBOUND	
12:00 AM	1:00 AM	100	78	178
1:00 AM	2:00 AM	46	42	88
2:00 AM	3:00 AM	33	30	63
3:00 AM	4:00 AM	28	38	66
4:00 AM	5:00 AM	87	254	341
5:00 AM	6:00 AM	221	426	647
6:00 AM	7:00 AM	482	839	1321
7:00 AM	8:00 AM	798	930	1728
8:00 AM	9:00 AM	816	781	1597
9:00 AM	10:00 AM	599	599	1198
10:00 AM	11:00 AM	562	546	1108
11:00 AM	12:00 PM	536	535	1071
12:00 PM	1:00 PM	625	605	1230
1:00 PM	2:00 PM	643	644	1287
2:00 PM	3:00 PM	741	686	1427
3:00 PM	4:00 PM	1018	746	1764
4:00 PM	5:00 PM	1021	852	1873
5:00 PM	6:00 PM	996	896	1892
6:00 PM	7:00 PM	995	801	1796
7:00 PM	8:00 PM	745	600	1345
8:00 PM	9:00 PM	588	465	1053
9:00 PM	10:00 PM	383	380	763
10:00 PM	11:00 PM	315	235	550
11:00 PM	12:00 AM	180	150	330
AVERAGE WEEKDAY DAILY TRAFFIC		**12558**	**12158**	**24716**
	AADT	**11532**	**11164**	**22696**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT CLASSIFICATION DATA SUMMARY

ROADWAY: NYS ROUTE 9D
SEGMENT: FROM MAIN STREET TO RTS I-84 AND 52 UNDER
LOCATION: 55' S OF VAN NESS RD
START DATE OF COUNT: Monday, May 6, 2019
NYSDOT COUNT STATION: 820021
FUNCTIONAL CLASS: 16 - URBAN MINOR ARTERIAL
FACTOR GROUP: 30

VEHICLE CLASS	DIRECTIONAL VOLUMES		TOTAL VEHICLES	TOTAL AXLES
	NORTHBOUND	SOUTHBOUND		
F1	54	48	102	204
F2	10789	10027	20816	41632
F3	1279	1569	2848	5696
F4	94	93	187	468
F5	223	260	483	966
F6	42	37	79	237
F7	8	9	17	68
F8	17	17	34	119
F9	21	19	40	200
F10	3	11	14	84
F11	0	0	0	0
F12	0	0	0	0
F13	0	2	2	18
AVERAGE WEEKDAY TOTAL	**12530**	**12092**	**24622**	**49691**

	NORTHBOUND	SOUTHBOUND	TOTAL
% TRUCKS & BUSES (F3 - F13)	13%	17%	15%
% HEAVY VEHICLES (F4 - F13)	3%	4%	3%
% F3 - F7	3%	3%	3%
% F8 - F13	0%	0%	0%
% F1	0%	0%	0%
% F2	86%	83%	85%
% F3	10%	13%	12%
% F4	1%	1%	1%
% F5 - F7	2%	3%	2%

VEHICLE CLASSIFICATION CODES:

- **F1** MOTORCYCLES
- **F2** AUTOS (INCLUDING THOSE HAULING TRAILERS)
- **F3** 2 AXLE, 4-TIRE PICKUPS, VANS, MOTORHOMES (INCLUDING THOSE HAULING TRAILERS)
- **F4** BUSES
- **F5** 2 AXLE, 6-TIRE SINGLE UNIT TRUCKS
- **F6** 3 AXLE SINGLE UNIT TRUCKS
- **F7** 4 OR MORE AXLE SINGLE UNIT TRUCKS
- **F8** 4 OR LESS AXLE VEHICLES, ONE UNIT IS A TRUCK
- **F9** 5 AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F10** 6 OR MORE AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F11** 5 OR LESS AXLE MULTI-UNIT TRUCKS
- **F12** 6 AXLE MULTI UNIT TRUCKS
- **F13** 7 OR MORE AXLE MULTI-UNIT TRUCKS

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT SPEED DATA SUMMARY

ROADWAY: NYS ROUTE 9D
SEGMENT: FROM MAIN STREET TO RTS I-84 AND 52 UNDER
LOCATION: 55' S OF VAN NESS RD
START DATE OF COUNT: Monday, May 6, 2019
NYSDOT COUNT STATION: 820021
FUNCTIONAL CLASS: 16 - URBAN MINOR ARTERIAL
POSTED SPEED LIMIT: 30
FACTOR GROUP: 30

SPEEDS (MPH)	DIRECTIONAL VOLUMES		TOTAL VOLUME
	NORTHBOUND	SOUTHBOUND	
0 - 20.0	985	230	1215
20.1 - 25.0	551	455	1006
25.1 - 30.0	1100	1690	2790
30.1 - 35.0	3426	4619	8045
35.1 - 40.0	4343	3865	8208
40.1 - 45.0	1716	1102	2818
45.1 - 50.0	344	166	510
50.1 - 55.0	73	16	89
55.1 - 60.0	14	2	16
60.1 - 65.0	1	0	1
65.1 - 70.0	1	0	1
70.1 - 75.0	1	0	1
75.1 - 80.0	0	0	0
80.1+	0	0	0
UNCLASSIFIED	0	0	0
AVERAGE SPEED (MPH)	**31**	**32**	**32**
50TH PERCENTILE SPEED (MPH)	**35**	**34**	**35**
85TH PERCENTILE SPEED (MPH)	**41**	**39**	**40**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

Colliers Engineering & Design

NYSDOT VOLUME DATA SUMMARY

ROADWAY: VERPLANCK AVENUE
SEGMENT: FROM FISHKILL AVENUE TO NYS ROUTE 9D ARTERIAL
LOCATION: 120' E OF N WALNUT ST
START DATE OF COUNT: Tuesday, May 14, 2019
NYSDOT COUNT STATION: 822024
FUNCTIONAL CLASS: 17 - URBAN MAJOR COLLECTOR
FACTOR GROUP: 30
SEASONAL FACTOR: 1.089

TIME PERIOD		DIRECTIONAL VOLUMES		TOTAL VOLUME
START	FINISH	EASTBOUND	WESTBOUND	
12:00 AM	1:00 AM	24	26	50
1:00 AM	2:00 AM	14	16	30
2:00 AM	3:00 AM	10	8	18
3:00 AM	4:00 AM	7	12	19
4:00 AM	5:00 AM	22	25	47
5:00 AM	6:00 AM	51	94	145
6:00 AM	7:00 AM	150	191	341
7:00 AM	8:00 AM	301	344	645
8:00 AM	9:00 AM	340	270	610
9:00 AM	10:00 AM	230	226	456
10:00 AM	11:00 AM	220	199	419
11:00 AM	12:00 PM	248	201	449
12:00 PM	1:00 PM	240	190	430
1:00 PM	2:00 PM	279	226	505
2:00 PM	3:00 PM	397	253	650
3:00 PM	4:00 PM	430	250	680
4:00 PM	5:00 PM	368	295	663
5:00 PM	6:00 PM	429	294	723
6:00 PM	7:00 PM	336	300	636
7:00 PM	8:00 PM	260	212	472
8:00 PM	9:00 PM	236	151	387
9:00 PM	10:00 PM	144	110	254
10:00 PM	11:00 PM	109	90	199
11:00 PM	12:00 AM	55	48	103
AVERAGE WEEKDAY DAILY TRAFFIC		**4900**	**4031**	**8931**
	AADT	**4500**	**3702**	**8202**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT CLASSIFICATION DATA SUMMARY

ROADWAY: VERPLANCK AVENUE
SEGMENT: FROM FISHKILL AVENUE TO NYS ROUTE 9D ARTERIAL
LOCATION: 120' E OF N WALNUT ST
START DATE OF COUNT: Tuesday, May 14, 2019
NYSDOT COUNT STATION: 822024
FUNCTIONAL CLASS: 17 - URBAN MAJOR COLLECTOR
FACTOR GROUP: 30

VEHICLE CLASS	DIRECTIONAL VOLUMES		TOTAL VEHICLES	TOTAL AXLES
	EASTBOUND	WESTBOUND		
F1	90	91	181	362
F2	3991	3308	7299	14598
F3	554	441	995	1990
F4	46	27	73	183
F5	89	75	164	328
F6	5	3	8	24
F7	34	21	55	220
F8	74	66	140	490
F9	8	3	11	55
F10	1	0	1	6
F11	0	0	0	0
F12	0	0	0	0
F13	4	2	6	53
AVERAGE WEEKDAY TOTAL	**4896**	**4037**	**8933**	**18308**

	EASTBOUND	WESTBOUND	TOTAL
% TRUCKS & BUSES (F3 - F13)	17%	16%	16%
% HEAVY VEHICLES (F4 - F13)	5%	5%	5%
% F3 - F7	4%	3%	3%
% F8 - F13	2%	2%	2%
% F1	2%	2%	2%
% F2	82%	82%	82%
% F3	11%	11%	11%
% F4	1%	1%	1%
% F5 - F7	3%	2%	3%

VEHICLE CLASSIFICATION CODES:

- **F1** MOTORCYCLES
- **F2** AUTOS (INCLUDING THOSE HAULING TRAILERS)
- **F3** 2 AXLE, 4-TIRE PICKUPS, VANS, MOTORHOMES (INCLUDING THOSE HAULING TRAILERS)
- **F4** BUSES
- **F5** 2 AXLE, 6-TIRE SINGLE UNIT TRUCKS
- **F6** 3 AXLE SINGLE UNIT TRUCKS
- **F7** 4 OR MORE AXLE SINGLE UNIT TRUCKS
- **F8** 4 OR LESS AXLE VEHICLES, ONE UNIT IS A TRUCK
- **F9** 5 AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F10** 6 OR MORE AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F11** 5 OR LESS AXLE MULTI-UNIT TRUCKS
- **F12** 6 AXLE MULTI UNIT TRUCKS
- **F13** 7 OR MORE AXLE MULTI-UNIT TRUCKS

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT SPEED DATA SUMMARY

ROADWAY: VERPLANCK AVENUE
SEGMENT: FROM FISHKILL AVENUE TO NYS ROUTE 9D ARTERIAL
LOCATION: 120' E OF N WALNUT ST
START DATE OF COUNT: Tuesday, May 14, 2019
NYSDOT COUNT STATION: 822024
FUNCTIONAL CLASS: 17 - URBAN MAJOR COLLECTOR
POSTED SPEED LIMIT: 30
FACTOR GROUP: 30

SPEEDS (MPH)	DIRECTIONAL VOLUMES		TOTAL VOLUME
	EASTBOUND	WESTBOUND	
0 - 20.0	413	193	606
20.1 - 25.0	1299	854	2153
25.1 - 30.0	2177	1981	4158
30.1 - 35.0	872	865	1737
35.1 - 40.0	113	121	234
40.1 - 45.0	10	13	23
45.1 - 50.0	1	4	5
50.1 - 55.0	1	0	1
55.1 - 60.0	1	0	1
60.1 - 65.0	0	0	0
65.1 - 70.0	0	0	0
70.1 - 75.0	1	0	1
75.1 - 80.0	0	0	0
80.1+	0	0	0
UNCLASSIFIED	3	3	6
AVERAGE SPEED (MPH)	**25**	**26**	**25**
50TH PERCENTILE SPEED (MPH)	**27**	**28**	**27**
85TH PERCENTILE SPEED (MPH)	**32**	**32**	**32**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

Appendix E | NYSDOT Traffic Signal Timing Plans

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Appendix E | American Community Survey Data

COMMUTING CHARACTERISTICS BY SEX

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

	ZCTA5 12508					
	Total		Male		Female	
Label	Estimate	Margin of Error	Estimate	Margin of Er	Estimate	Margin of Error
Workers 16 years and over	9,162	±595	4,636	±403	4,526	±372
MEANS OF TRANSPORTATION TO WORK						
Car, truck, or van	75.5%	±3.4	78.5%	±4.4	72.5%	±5.1
Public transportation (excluding taxicab)	10.1%	±2.2	8.8%	±3.1	11.4%	±3.5
Walked	3.3%	±1.5	2.7%	±1.6	4.0%	±2.1
Bicycle	0.4%	±0.6	0.8%	±1.2	0.0%	±0.8
Taxicab, motorcycle, or other means	0.4%	±0.5	0.4%	±0.6	0.5%	±0.9
Worked from home	10.3%	±2.3	9.0%	±2.9	11.6%	±3.1
PLACE OF WORK						
Workers 16 years and over who did not work from home	8,222	±566	4,221	±392	4,001	±345
VEHICLES AVAILABLE						
Workers 16 years and over in households	9,129	±591	4,612	±395	4,517	±372
No vehicle available	4.9%	±2.2	5.3%	±3.1	4.4%	±2.5
1 vehicle available	25.6%	±3.9	24.1%	±5.4	27.2%	±4.4
2 vehicles available	40.3%	±5.6	42.6%	±6.5	38.0%	±6.3
3 or more vehicles available	29.2%	±5.0	28.0%	±5.2	30.4%	±5.8
PERCENT ALLOCATED						

Table Notes

COMMUTING CHARACTERISTICS BY SEX

Survey/Program: American Community Survey
Year: 2021
Estimates: 5-Year
Table ID: S0801

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

When information is missing or inconsistent, the Census Bureau logically assigns an acceptable value using the response to a related question or questions. If a logical assignment is not possible, data are filled using a statistical process called allocation, which uses a similar individual or household to provide a donor value. The "Allocated" section is the number of respondents who received an allocated value for a particular subject.

Several means of transportation to work categories were updated in 2019. For more information, see: Change to Means of Transportation.

The 2017-2021 American Community Survey (ACS) data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

-

The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.

N

The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.

(X)

The estimate or margin of error is not applicable or not available.

median-

The median falls in the lowest interval of an open-ended distribution (for example "2,500-")

median+

The median falls in the highest interval of an open-ended distribution (for example "250,000+").

**

The margin of error could not be computed because there were an insufficient number of sample observations.

***

The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.

*****

A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling erro and the margin of error may be treated as zero.

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Traffic & Parking Study

Appendix F | Parking Data

§ 223-41.21. Regulations.

A. Uses by right. Uses listed below in this Subsection A are permitted by right subject to site plan review, except as otherwise noted in this § 223-41.21. Site plan review shall not be required for a change of use in an existing building where the new use is allowed by right, the building will not be expanded, and the minimum number of off-street parking spaces required for the new use in § 223-41.21F(2) is not more than 25% greater than the requirement for the existing use in § 223-26F herein. The following uses are allowed by right subject to a requirement that for any new construction of a principal building, an apartment use or attached, semidetached, or multifamily dwelling unit shall only be located on the upper stories or at least 50 feet behind the facade in the rear portion of the ground floor, if the building faces the north side of Beekman Street between Route 9D and West Main Street, faces the north side of West Main Street, or if the parcel is within 400 feet of the Route 9D-Beekman Street intersection, as identified on the Zoning Map: **[Amended 8-19-2013 by L.L. No. 14-2013; 7-21-2014 by L.L. No. 11-2014; 6-15-2020 by L.L. No. 7-2020; 2-16-2021 by L.L. No. 02-2021]**

(1) Multifamily dwelling.

(2) Attached or semidetached dwelling units.

(3) Apartment building.

(4) Inn.

(5) Bed-and-breakfast establishment.

(6) Artist studio, art gallery or exhibit space.

(7) Hotel.

(8) Park, plaza, green, preserve or community garden.

(9) Retail, personal services business, bank, or restaurant, coffee house, bar, brew pub or other establishment that serves food, with or without alcoholic beverages, provided that:

(a) The floor area of each such establishment is not greater than 5,000 square feet;

(b) The parcel is within 400 feet of the Route 9D-Beekman Street intersection, located along the north side of Beekman Street between Route 9D and West Main Street, or located along the north side of West Main Street, as identified on the Zoning Map.

(10) Office, trade school, training program, microbrewery or microdistillery, provided that:

(a) The total floor area of each such establishment is no greater than 25,000 square feet;

(b) The parcel is within 400 feet of the Route 9D-Beekman Street intersection, located along the north side of Beekman Street between Route 9D and West Main Street, or located along the north side of West Main Street, as identified on the Zoning Map.

(11) Government facility, including buildings, structures and uses owned or operated by the City of Beacon or any department or agency thereof.

(12) Day-care center.

(13) Museum, theater, concert, or conference space.

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(14) College, university, private school, or nursery school.

(15) Workshop.

(16) Artist live/work space, provided that, if the use faces the north side of Beekman Street between Route 9D and West Main Street, faces the north side of West Main Street, or if the parcel is within 400 feet of the Route 9D-Beekman Street intersection, the residential space shall only be located on the upper stories or at least 50 feet behind the facade in the rear portion of the ground floor, unless the first 50 feet behind the facade is used for the retail sale of the artist's wares.

(17) Spa, fitness center, or exercise studio.

(18) Wireless telecommunication services facilities, subject to § 223-26.4.

B. Uses by special permit. **[Amended 7-21-2014 by L.L. No. 11-2014; 4-3-2017 by L.L. No. 5-2017; 1-16-2018 by L.L. No. 1-2018; 10-15-2018 by L.L. No. 17-2018; 6-15-2020 by L.L. No. 7-2020]**

(1) The following uses are allowed in existing buildings as permitted uses. For newly constructed buildings, the following uses are allowed by special permit from the Planning Board, upon a finding that the proposed use is consistent with the City of Beacon Comprehensive Plan, will enhance the architectural character of the street, and will contribute to creating a more urban, pedestrian-friendly quality in the L District, and that the conditions and standards in § 223-18B(1)(a) through (f) have been met: **[Amended 2-16-2021 by L.L. No. 02-2021]**

(a) Manufacturing use or food preparation business that may also sell goods made on the site for consumption off the premises, provided that:

[1] The total manufacturing or food preparation business floor area of the building is no greater than 25,000 square feet;

[2] The parcel is within 400 feet of the Route 9D-Beekman Street intersection, located along the north side of Beekman Street between Route 9D and West Main Street, or located along the north side of West Main Street, as identified on the Zoning Map; and

[3] The Planning Board finds that there are no substantial detrimental effects on parking, traffic or on the character of surrounding neighborhoods or the community.

(b) Historic District and Landmark Overlay use, subject to § 23-24.7.

(2) In considering the appropriateness of the proposed use, the Planning Board shall consider impacts on shadows, traffic, and parking and may impose traffic and parking mitigation measures, including but not limited to provision of pedestrian walkways and stairways on-site.

B.1. Accessory uses. The following are permitted accessory uses in the L District: **[Added 7-21-2014 by L.L. No. 11-2014]**

(1) Any accessory building or use customarily incident to a permitted use, except outside storage.

(2) Signs, in accordance with the provisions of § 223-15, as applicable.

(3) Off-street parking areas, in accordance with § 223-41.21F.

(4) Exterior lighting, in accordance with the provisions of § 223-41.21K(12) and § 223-14B. **[Amended 6-15-2020 by L.L. No. 7-2020]**

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(5) Parking structure. **[Added 6-15-2020 by L.L. No. 7-2020[1]]**

(6) Roof garden or solar collector, site plan review not required.

(7) Greenhouse.

(8) Short-term rentals in any dwelling unit, or room(s) therein, located in a one-family home, two-family home, accessory apartment, or multifamily dwelling, as provided in § 223-26.5. **[Added 6-15-2020 by L.L. No. 6-2020[2]]**

C. Prohibited uses. Uses not listed in Subsection A or B above and the following specific uses are prohibited in the L District:

(1) Gasoline filling station.

(2) Drive-through facilities, stand-alone or used in connection with any other use.

D. Dimensional regulations. All new construction or enlargement of existing structures in the L District shall be subject to the following minimum and maximum dimensional regulations:

(1) Front setback: minimum zero, maximum 20 feet, except that a larger maximum may be allowed if a) surrounding buildings have a larger setback, in which case the setback line may be placed in a location that harmonizes with the prevailing setbacks, provided that there is no parking in the front yard other than on a driveway accessing a rear garage; and b) the area in front of a building has no parking spaces and is landscaped and used in a manner that enhances the street life by such means as pocket parks, gardens, fountains, outdoor tables, public art, and outdoor display of items for sale on the premises. At least 30% of any such outdoor space shall be landscaped with plant materials in a configuration approved by the Planning Board.

(2) Corner buildings: Corner buildings shall be treated as having frontage on both streets and front setbacks shall apply to both, as appropriate to the street.

(3) Side setbacks: minimum of zero, maximum of 30 feet. The minimum side setback may be increased by the Planning Board to allow light and air to continue to penetrate an existing building that has side windows.

(4) Rear setbacks: minimum 25 feet, except that if the rear yard is voluntarily dedicated to the City of Beacon as all or part of a public parking lot or parking structure, the minimum setback shall be 10 feet with landscaping to screen adjacent uses.

(5) Building height: minimum two stories, average maximum four stories and 48 feet, as determined from the average street front level. Stories built below the grade of the street front shall not be counted toward building height. The second story of a two-story building shall be built in a manner that allows actual occupancy for one or more permitted uses and does not create the mere appearance of a second story. For any building over three stories, a stepback of at least 15 feet behind the facade shall be required above the third story. Chimneys, vent pipes, mechanical systems, elevator shafts, antennas, wireless communications facilities, roof gardens and fences, greenhouses, solar collectors, wind energy systems, and other rooftop accessory

---

1. **Editor's Note: This local law also repealed former Subsection B(5), which listed home occupation as a permitted accessory use.**

2. **Editor's Note: This local law provided the following: "This local law shall take effect on October 1, 2020. Any short-term rental, as defined herein, in existence prior to October 1, 2020 shall have until November 15, 2020, to file an application to obtain a short-term rental permit. Any short-term rental existing prior to October 1, 2020 that (a) does not meet the definition of short-term rental or (b) is a short-term rental, as defined, and does not file an application by November 15, 2020 shall be deemed to be in violation of this local law and subject to enforcement."**

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structures may project up to 15 feet above the maximum height. With the exception of roof gardens and solar collectors, such projections may occupy no more than 20% of the roof area and must be set back at least 15 feet from the front edge of the roof. **[Amended 4-3-2017 by L.L. No. 5-2017]**

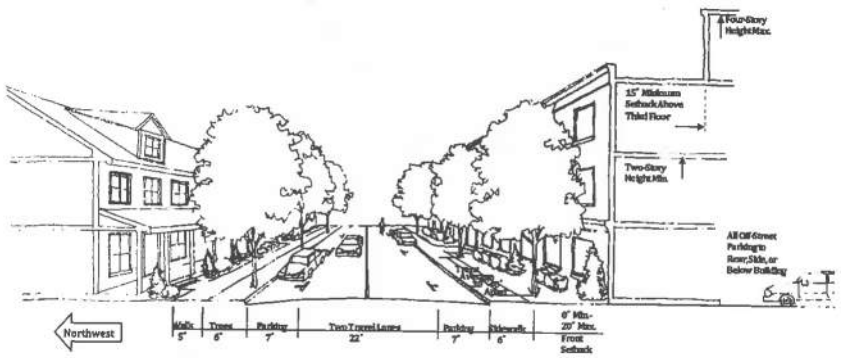
(6) Lot area and lot width: There are no minimum lot area or lot width requirements.

(7) Lot depth: Minimum lot depth is 75 feet, except that on any lot in which the area behind a building is voluntarily dedicated to the City as public parking, there shall be no minimum depth requirement.

(8) Floor area ratio: There is no maximum floor area ratio.

(9) Landscaped area: A minimum of 15% of the lot shall be landscaped with trees, shrubs, or grass, in locations approved by the Planning Board that enhance the streetscape or provide a landscaped interior courtyard and are found to be consistent with the intent of the L District. This requirement shall be reduced to 5% if the landscaped area is accessible to the public. These requirements may be waived for preexisting lots of 5,000 square feet or less.

Figure 21-0: Illustrative View of Proposed Linkage Zoning Requirements



(10) Linkage Zone standards.

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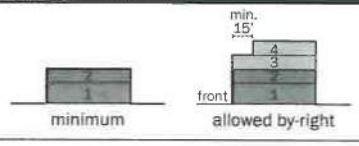
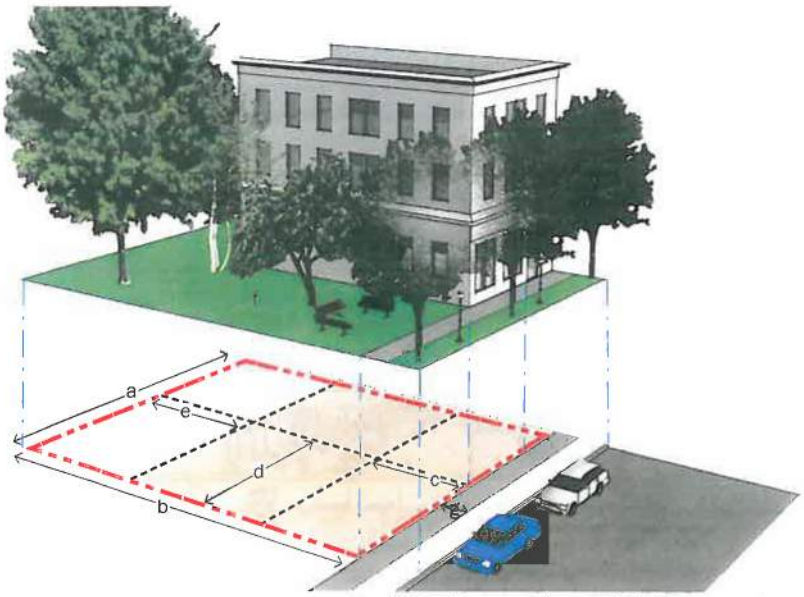
Figure 21-1: Linkage Zone Standards

LOT STANDARDS			
		Min.	Max.
	Lot Area	–	–
(a)	Lot Width	–	–
(b)	Lot Depth	75'	–
	F.A.R.	–	–
(c)	Front Setback	0'	20'
(d)	Side Setback	0'	30'
(e)	Rear Setback	25'	–
(f)	Landscaped Area	15%	–
	Frontage Occupancy	–	–
(g)	Pedestrian Clearway	5'	–

BUILDING HEIGHTS



FRONTAGE TYPES	
	Allowed
Storefront	within 400' of Rt. 9-D/Beekman St. intersection
Forecourt	yes
Stoop	yes
Porch	yes
Lightwell	yes



See text for exceptions and clarifications to Figure 21-1

E. Frontage types.

(1) The following building frontage types are permitted:

(a) Storefront, only at locations within 400 feet of the Route 9D-Beekman Street intersection.

(b) Forecourt.

(c) Stoop.

(d) Porch.

(e) Lightwell.

(2) Storefront: a frontage type where the building facade is placed at or close to the right-of-way line, with the entrance at sidewalk grade. This building frontage type is conventional for retail use. It is characterized by a high percentage of glazing on the first floor, a prominent entrance, and often an awning. Recessed doors on storefronts are acceptable.

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Figure 21-2: Illustrative View of Storefront Frontage Type

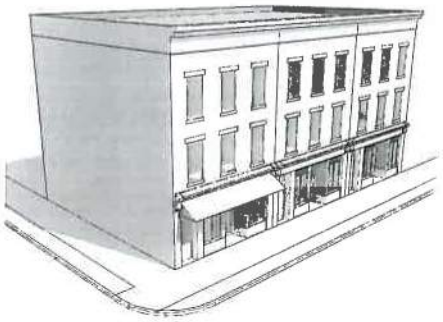


Figure 21-3: Section View of Storefront Frontage Type

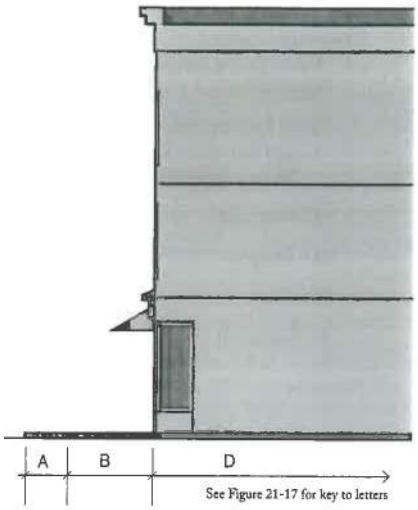
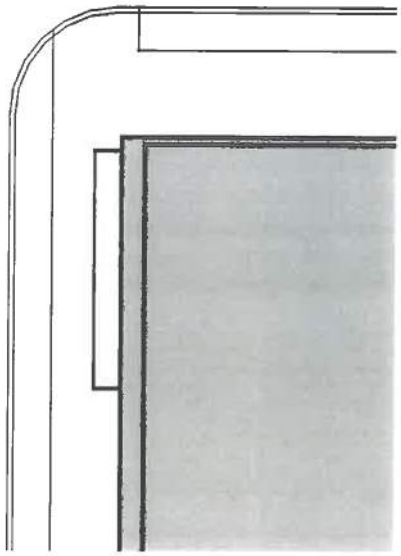


Figure 21-4: Plan View of Storefront Frontage Type



(3) Forecourt. A forecourt is a semi-public exterior space whose back and sides are surrounded by a building and whose front opens to a thoroughfare—forming a court. The court is suitable for gardens, gathering space, and outdoor dining.

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Figure 21-5: Illustrative View of Forecourt Frontage Type

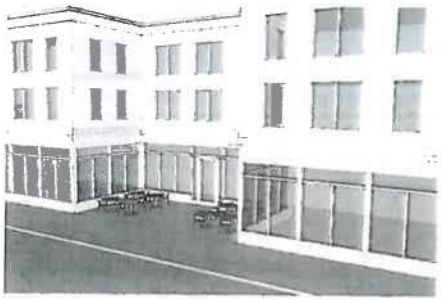
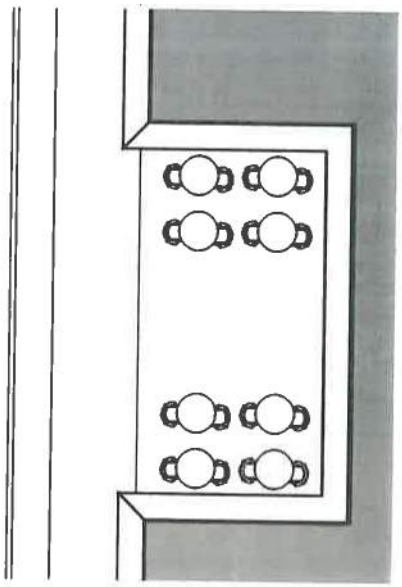


Figure 21-6: Section View of Forecourt Frontage Type

Figure 21-7: Plan View of Forecourt Frontage Type



(4) Stoop. In this frontage type, the building facade is aligned close to the frontage line. The first story is usually elevated sufficiently to provide some privacy for occupants. A stoop (composed of an elevated pad and stairs) lands at the edge of the sidewalk or a short front walkway. A small porch or roof may cover the stoop. This frontage type is suitable for ground-floor residential uses with short setbacks.

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Figure 21-8: Illustrative View of Stoop Frontage Type

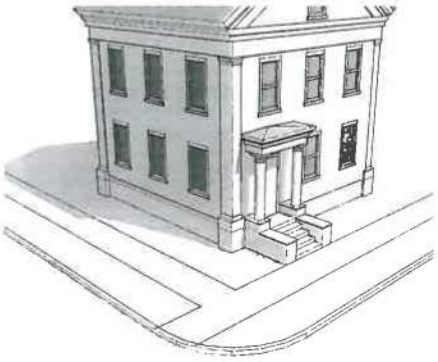


Figure 21-9: Section View of Stoop Frontage Type

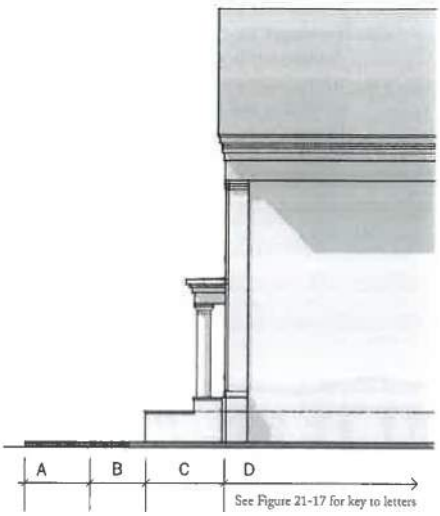
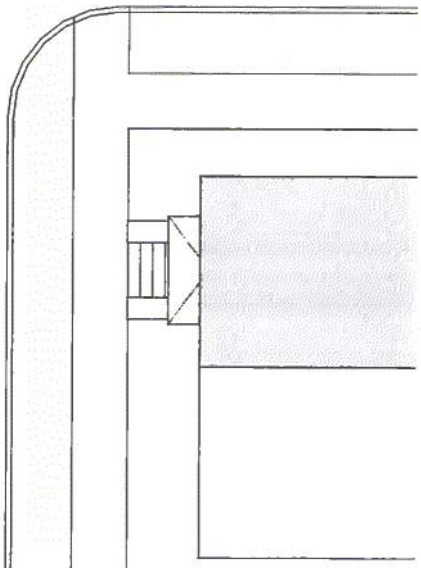


Figure 21-10: Plan View of Stoop Frontage Type



(5) Porch. A frontage type where the building facade is set back from the frontage line. The porch (a covered, but not enclosed, space) sits between the facade and the frontage line. The porch provides a transition from the public realm to the private realm. Porches are typically elevated above the surrounding grade. A porch should have a clear space that is a minimum of six feet deep and 10 feet wide.

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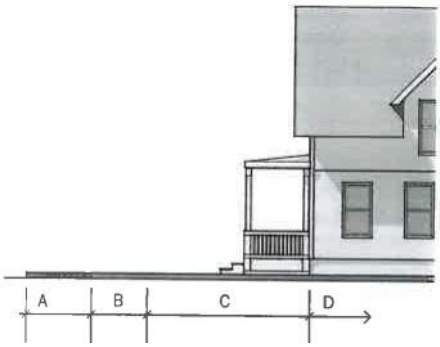
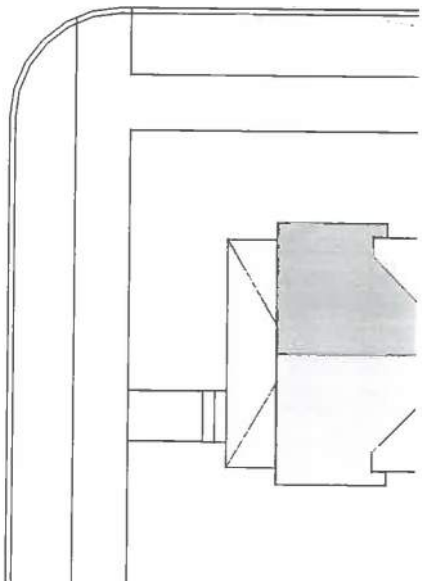
Figure 21-11: Illustrative View of Porch Frontage Type

Figure 21-12: Section View of Porch Frontage Type



See Figure 21-17 for key to letters

Figure 21-13: Plan View of Porch Frontage Type



(6) Lightwell: a frontage type where the facade is set back from the frontage line. The ground floor of the building is elevated to allow light to enter the basement, which is typically occupied. Stairs lead up to the ground floor and down to a below-grade entrance and/or sunken court. The stairs typically land at the frontage line.

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Figure 21-14: Illustrative View of Lightwell Frontage Type

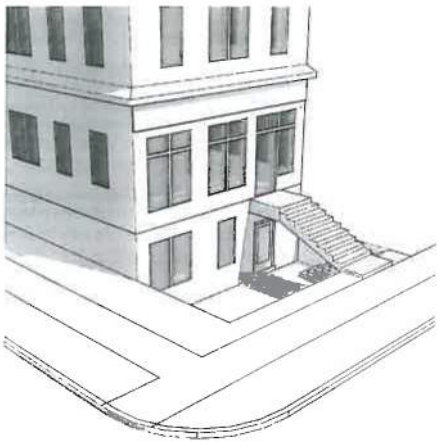
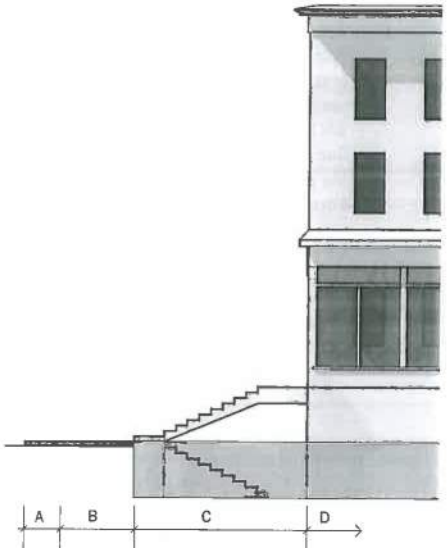
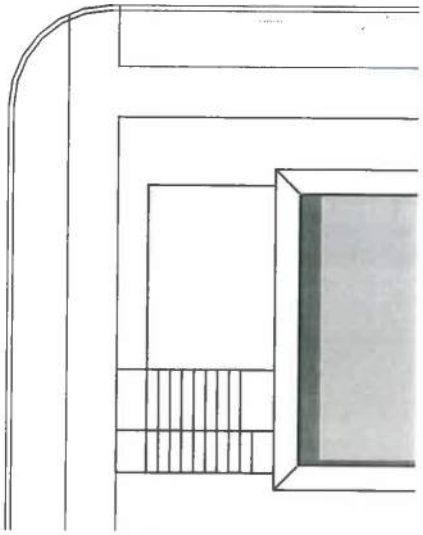


Figure 21-15: Section View of Lightwell Frontage Type



See Figure 21-17 for key to letters

Figure 21-16: Plan View of Lightwell Frontage Type



F. Parking location and quantity.

(1) All off-street parking shall be located behind, underneath, or to the side of a building. If on the side, it shall be located at least 40 feet from any property line that fronts on a street and be screened by a low brick or stone wall, hedge, ornamental fence, and/or other landscaping that maintains the continuity of the street and that screens parked cars from view from the street.

(2) The minimum quantity of required on-site parking spaces shall be as follows:

(a) Residential: one space per unit.

(b) Office and general commercial: 2.5 spaces per 1,000 square feet of floor area.

:10

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(c) Retail commercial and personal services: three spaces per 1,000 square feet of floor area.

(d) Other uses: as listed in § 223-26 of this chapter. **[Amended 4-3-2017 by L.L. No. 5-2017]**

(3) The quantity of required on-site parking in Subsection F(2) above may be modified by the Planning Board, in its discretion, based upon information submitted by the applicant or otherwise made available to the Planning Board in the public record, demonstrating one or more of the following:

(a) That the projected operational characteristics of the proposed use and/or its proximity within walking distance of the train station and other services justify a reduction in the required amount of parking.

(b) That adequate shared parking, contractually obligated for the duration of the proposed use, is available within 500 feet of the site and in the L District.

(c) That the applicant has provided sufficient bicycle parking to reduce anticipated vehicular travel demand, as supported by a professional parking study. **[Amended 4-3-2017 by L.L. No. 5-2017]**

(d) That there is sufficient public parking available within 800 feet of the site and in the L District to meet foreseeable parking needs of the proposed use and surrounding uses for the duration of the proposed use.

(e) That the applicant will voluntarily dedicate land for public parking on site or will acquire land by purchase or long-term lease (for the duration of the proposed use) within 800 feet of the site and in the L District and voluntarily dedicate such land to the City for public parking.

(f) That a professional parking study of the proposed use and the surrounding area demonstrates that a different amount of parking would be appropriate for the use in its particular location and/or that existing and/or proposed off-site parking is sufficient.

(4) For small preexisting lots where the provision of on-site parking is infeasible, the Planning Board may waive up to 50% of the parking requirements, provided that the total floor area of the building is no greater than 3,000 square feet. The Planning Board may grant additional parking waivers, at its discretion, subject to an in-lieu payment of $10,000 per parking space. **[Amended 4-3-2017 by L.L. No. 5-2017]**

(5) Section 223-26B of this chapter shall not apply in the L District.

G. Streetscape improvements.

(1) On West Main Street, Beekman Street, and Wolcott Avenue, within the building transition zone, the Planning Board may require the lot owner to provide planters, trees, shrubs, or other landscaping to enhance the appearance of the streetscape. Ornamental fencing four feet or less in height may be provided to separate privately owned space from public space. Chain link, vinyl, and solid fencing shall be prohibited. For commercial uses, display areas, and outdoor dining and seating areas may be provided.

(2) A pedestrian clearway, at least five feet wide, with unobstructed space for pedestrian activity, shall be provided along the sidewalk, unless site conditions require a narrower clearway. A pedestrian clearway of eight feet shall be provided along storefront frontages.

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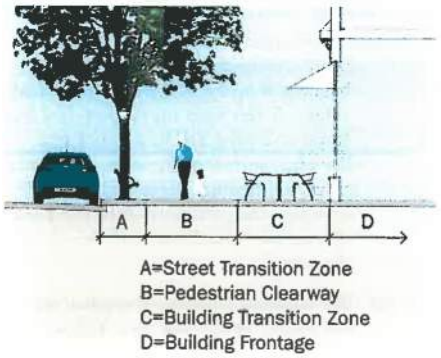
(3) Within the street transition zone, if space permits, lot owners may plant trees and place benches, tables, and outdoor seating areas with the approval of the Department of Public Works. The Planning Board may require the planting of street trees on average 30 feet to 40 feet apart as a condition of site plan approval. To the extent practical, an applicant shall, in cooperation with the City of Beacon Department of Public Works, implement the recommendations in the Linkage Plan street sections for Beekman Street and Wolcott Avenue.

(4) The Planning Board may require that an applicant constructing a building greater than 10,000 square feet in floor area pay for the provision of related street improvements to improve pedestrian and/or bicycle safety.

Figure 21-17: Parts of the Streetscape



H. (Reserved).[3]

I. Site plan and special permit amendments. For any proposed change to an approved site plan, the applicant shall meet with the Building Inspector who shall make a determination as to whether or not the proposed change is significant. If the Building Inspector determines that the change is significant (e.g., a change of use and/or a change in dimensions of more than 10% shall be presumed to be significant), the application shall be referred to the Planning Board for an amendment to the site plan or special permit, as appropriate. If the Building Inspector determines that the change is not significant and otherwise complies with applicable requirements, the Building Inspector is authorized to issue a building permit without further review.

J. Compliance with below market rate housing requirements. All applications involving residential development shall comply with Article IVB of this chapter (Affordable-Workforce Housing).

K. Design standards.

(1) Because of the design standards in this section, the architectural review provisions of Chapter 86 shall not apply within the L District. In addition to the preceding sections of this article, all new buildings or substantial alterations of existing buildings shall comply with the following design requirements. These design standards are intended to promote the following purposes:

(a) Preserve and enhance the unique character of the City of Beacon;

(b) Promote pedestrian access and activity, as well as a general sense of area security;

3. **Editor's Note: Former Subsection H, Site plan review/special permit procedures and criteria, as amended, was repealed 6-15-2020 by L.L. No. 7-2020.**

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(c) Restore and maintain the role of streets as civic and social spaces, framed by active uses;

(d) Encourage economic development and a convenient mix of uses and services; and

(e) Support a sense of design context that appropriately relates historic buildings, general facade and window patterns, and traditional streetscapes in the area to new redevelopment efforts, while still allowing contemporary architectural flexibility.

(2) Standards using the verb "shall" are required; "should" is used when the standard is to be applied unless the Planning Board finds a strong justification for an alternative solution in an unusual and specific circumstance; and "may" means that the "standard" is an optional guideline that is encouraged but not required.

(3) Buildings should have a top-floor cornice feature and first-floor architectural articulation, such as a storefront with a secondary cornice or an architecturally emphasized entrance doorway, to accent the central body of the building.

(4) Architectural features and windows should be continued on all sides of the building that are clearly visible from a street or public parking area, avoiding any blank walls, except in cases of existing walls or potential common property walls. Larger buildings shall incorporate significant breaks in the facades and rooflines at intervals of no more than 35 feet.

(5) Building elements that provide additional architectural interest, such as bay windows, and cornices, but not including balconies or porches, may encroach up to two feet beyond the front line if the bottom of the encroaching building elements is at least 12 feet above grade. **[Amended 12-9-2019 by L.L. No. 12-2019]**

(6) Metal, glass or canvas-type awnings and canopies or projecting signs are encouraged and may encroach up to six feet into the front setback and over the sidewalk above seven feet. Vinyl awnings are discouraged unless the applicant can demonstrate to the Planning Board's satisfaction that the finish and design of such awning are of high quality, aesthetically pleasing and meet the intended standards of the district, as determined by said Board. **[Amended 7-21-2014 by L.L. No. 11-2014]**

(7) Buildings shall have a front entrance door facing the primary street and connected to the sidewalk. Front entrance doors for commercial buildings and retail storefronts shall be active and provide main access during business hours.

(8) Primary individual window proportions shall be greater in height than in width. Mirrored, reflective, or tinted glass, all-glass walls, and exterior roll-down security gates shall not be permitted. Any shutters shall match the size of the window opening, appear functional, and be attached to the window frame.

(9) Commercial buildings shall have at least 70% glass on the first-floor facades, located between two feet and 10 feet above the sidewalk. Residential buildings shall have at least 30% glass on the first-floor facades.

(10) Finish building materials should be wood, brick, traditional cement-based stucco, stone or fiber-cement siding or other material deemed acceptable by the Planning Board. Vinyl, aluminum or sheet metal siding or sheet trim, exposed concrete blocks or concrete walls, plywood or other similar prefabricated panels, unpainted or unstained lumber, synthetic stone or brick, or synthetic stucco, exterior insulation and finishing system (EIFS), or direct-applied finish system (DAFS), and chain link fencing shall not be permitted. **[Amended 7-21-2014 by L.L. No.**

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11-2014]

(11) Materials and colors should complement historic buildings on the block.

(12) Lighting fixtures shall be a maximum of 15 feet in height, except pole lights in rear parking lots shall be a maximum of 20 feet high. All exterior lighting shall comply with the standards in §223-14B. **[Amended 6-15-2020 by L.L. No. 7-2020]**

(13) Mechanical equipment and refuse containers shall be concealed from public view by approved architectural elements and shall be located to the rear of the site. Window or projecting air conditioners shall not be permitted on the front facade.

(14) The Planning Board may waive setback requirements for landmark civic buildings, including government buildings, schools, libraries, or places of worship, and for pedestrian-oriented places, such as public greens or plazas and outdoor eating areas.

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Figure 21-18: Design Standards Examples A [Amended 6-15-2020 by L.L. No. 7-2020]

Figure 21-19: Design Standards Examples B

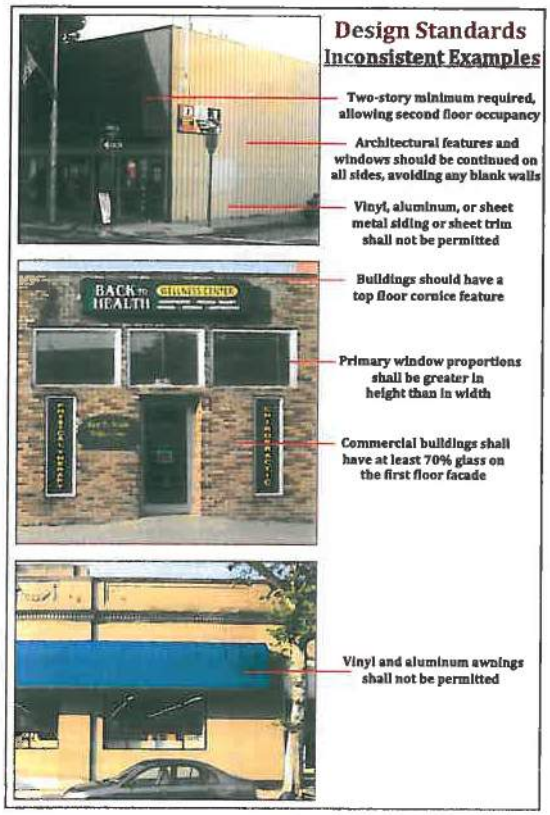

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Figure 21-20: Design Standards Examples C

L. Linkage plan. This sketch plan provides one possible set of design solutions, which was included in the 2007 Comprehensive Plan Appendix as an illustration of planning principles for the Linkage District.

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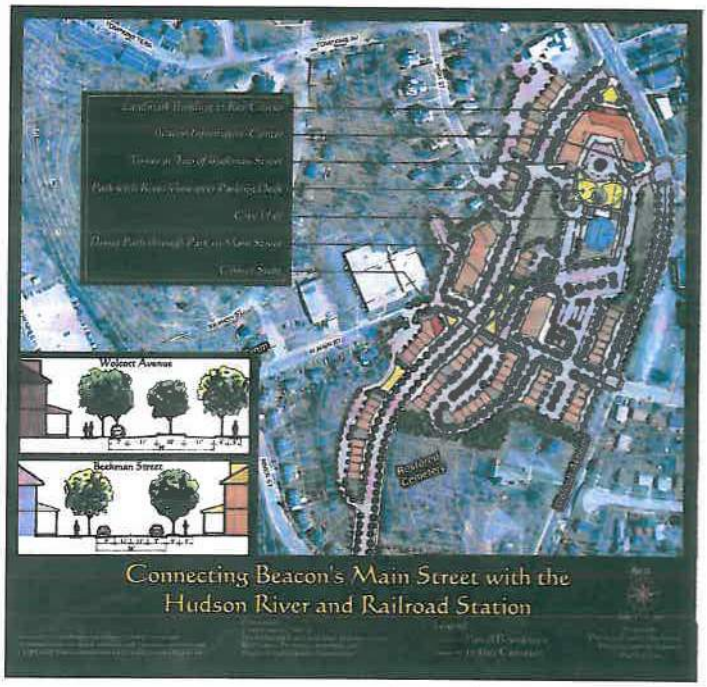
Figure 21-21: Connecting Beacon's Main Street with the Hudson River and Railroad Station



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Land Use: 220 Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with one or two levels (floors) of residence. Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), and affordable housing (Land Use 223) are related land uses.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand (1) on a weekday (10 study sites) and a Saturday (11 study sites) in a general urban/suburban setting and (2) on a weekday (three study sites) and a Saturday (three study sites) in a dense multi-use urban setting.

	Percent of Peak Parking Demand			
	General Urban/Suburban		Dense Multi-Use Urban	
Hour Beginning	Weekday	Saturday	Weekday	Saturday
12:00–4:00 a.m.	100	93	86	100
5:00 a.m.	97	100	100	94
6:00 a.m.	90	98	94	91
7:00 a.m.	77	96	81	85
8:00 a.m.	56	92	58	79
9:00 a.m.	45	80	56	76
10:00 a.m.	40	78	53	71
11:00 a.m.	37	71	58	74
12:00 p.m.	36	68	56	68
1:00 p.m.	36	66	53	68
2:00 p.m.	37	65	47	68
3:00 p.m.	43	68	56	56
4:00 p.m.	45	70	53	59
5:00 p.m.	55	73	61	53
6:00 p.m.	66	77	81	50
7:00 p.m.	73	81	67	56
8:00 p.m.	77	82	61	65
9:00 p.m.	86	86	64	74
10:00 p.m.	92	87	75	85
11:00 p.m.	97	92	86	91

Additional Data

In prior editions of *Parking Generation*, the low-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of parking demand data found no clear differences in parking demand between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

The average parking supply ratios for the study sites with parking supply information are shown in the table below.

		Parking Supply Ratio	
Setting	**Proximity to Rail Transit**	**Per Dwelling Unit**	**Per Bedroom**
Dense Multi-Use Urban	Within ½ mile of rail transit	0.6 (12 sites)	0.4 (10 sites)
	Not within ½ mile of rail transit	0.9 (18 sites)	0.6 (18 sites)
General Urban/ Suburban	Within ½ mile of rail transit	1.5 (10 sites)	0.9 (10 sites)
	Not within ½ mile of rail transit	1.7 (52 sites)	1.0 (52 sites)

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, District of Columbia, Maryland, Massachusetts, Oregon, Pennsylvania, Texas, Washington, and Wisconsin.

It is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e. number of units by number of bedrooms at the site complex). Future parking studies should also indicate the number of levels contained in the residential building.

Source Numbers

72, 124, 152, 154, 209, 215, 216, 218, 219, 255, 257, 314, 414, 419, 432, 437, 505, 512, 533, 535, 536, 537, 544, 545, 577, 578, 579, 580, 584, 585, 587

Land Use: 820 Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand **during the month of December** on a weekday (seven study sites), a Friday (eight study sites), and a Saturday (19 study sites).

	Percent of Peak Parking Demand during December		
Hour Beginning	Weekday	Friday	Saturday
12:00–4:00 a.m.	–	–	–
5:00 a.m.	–	–	–
6:00 a.m.	–	–	–
7:00 a.m.	–	–	–
8:00 a.m.	–	–	–
9:00 a.m.	–	–	–
10:00 a.m.	–	74	–
11:00 a.m.	–	87	85
12:00 p.m.	77	97	97
1:00 p.m.	100	100	98
2:00 p.m.	98	92	100
3:00 p.m.	90	85	97
4:00 p.m.	76	84	88
5:00 p.m.	82	78	77
6:00 p.m.	89	75	64
7:00 p.m.	90	63	–
8:00 p.m.	84	–	–
9:00 p.m.	–	–	–
10:00 p.m.	–	–	–
11:00 p.m.	–	–	–

The following table presents a time-of-day distribution of parking demand **during a non-December month** on a weekday (18 study sites), a Friday (seven study sites), and a Saturday (13 study sites).

	Percent of Non–December Peak Parking Demand		
Hour Beginning	Weekday	Friday	Saturday
12:00–4:00 a.m.	–	–	–
5:00 a.m.	–	–	–
6:00 a.m.	–	–	–
7:00 a.m.	–	–	–
8:00 a.m.	15	32	27
9:00 a.m.	32	50	46
10:00 a.m.	54	67	67
11:00 a.m.	71	80	85
12:00 p.m.	99	100	95
1:00 p.m.	100	98	100
2:00 p.m.	90	90	98
3:00 p.m.	83	78	92
4:00 p.m.	81	81	86
5:00 p.m.	84	86	79
6:00 p.m.	86	84	71
7:00 p.m.	80	79	69
8:00 p.m.	63	70	60
9:00 p.m.	42	–	51
10:00 p.m.	15	–	38
11:00 p.m.	–	–	–

Additional Data

The parking demand database includes data from strip, neighborhood, community, town center, and regional shopping centers. Some of the centers contain non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities.

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The parking demand data plots and analysis are based on the total gross leasable area (GLA) of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area (GFA) of the center.

The average parking supply ratios for the study sites with parking supply information are the following:

- 5.1 spaces per 1,000 square feet GFA (137 sites) in a general urban/suburban setting
- 4.7 spaces per 1,000 square feet GFA (five sites) in a dense multi-use urban setting

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alabama, Alberta (CAN), Arizona, California, Colorado, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, North Carolina, New Jersey, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, and Washington.

Future data submissions should attempt to provide information on the composition of each study site (types and number of stores, restaurants, or other tenants within the shopping center).

Source Numbers

3, 18, 21, 32, 39, 47, 87, 88, 89, 103, 142, 145, 152, 153, 154, 174, 175, 176, 179, 202, 203, 204, 205, 209, 215, 219, 224, 241, 265, 274, 313, 314, 315, 431, 432, 433, 436, 438, 441, 511, 525, 527, 531, 533, 542, 556, 558, 565

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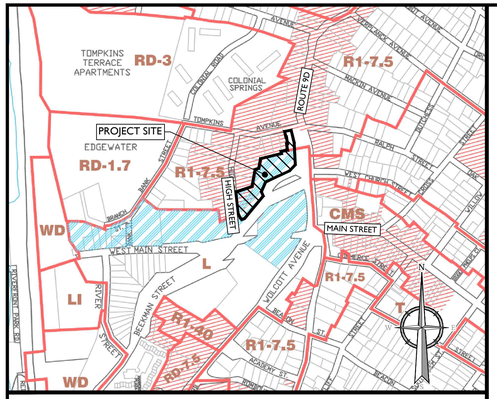


VICINITY MAP
SCALE: 1" = 500'
SOURCE: CITY OF BEACON ZONING MAP

ZONING DISTRICT:

L- (LINKAGE DISTRICT)
USE PERMITTED BY RIGHT: RETAIL
USE PERMITTED BY RIGHT: OFFICE
USE PERMITTED BY RIGHT: MULTIFAMILY DWELLING
-IF THE BUILDING FACES THE NORTH SIDE OF BEEKMAN STREET BETWEEN ROUTE 9D AND WEST MAIN STREET
-SUBJECT TO A REQUIREMENT THAT ANY DWELLING UNIT SHALL ONLY BE LOCATED ON THE UPPER STORIES OR AT LEAST 50 FEET BEHIND THE FACADE IN THE REAR PORTION OF THE GROUND FLOOR

HDLO: (HISTORIC DISTRICT AND LANDMARK OVERLAY ZONE)

TABLE OF BULK REQUIREMENTS

L - LINKAGE DISTRICT

MINIMUM	REQUIRED	PROVIDED	REMARKS
LANDSCAPED AREA	15%	23.0%	OK
LOT AREA	N/A	N/A	OK
LOT AREA PER UNIT	N/A	N/A	OK
LOT WIDTH	N/A	N/A	OK
LOT DEPTH	75 FT.	106 FT.	OK
FRONT YARD SETBACK	0 FT.	1 FT.	OK
SIDE YARD SETBACK	0 FT.	1 FT.	OK
REAR YARD SETBACK	25 FT.	48 FT.	OK
DISTANCE BETWEEN BUILDINGS SAME LOT	N/A	N/A	OK
MAXIMUM			
BUILDING HEIGHT	4 STORIES AND 48 FT.	4 STORIES AND <48 FT.	OK
BUILDING COVERAGE	N/A	N/A	OK
UNITS PER BUILDING	N/A	N/A	OK
FRONT YARD SETBACK	20 FT.	17.9 FT.	OK
SIDE YARD SETBACK	30 FT.	N/A	OK

ZONING DISTRICT:

R1-7.5: (ONE FAMILY RESIDENTIAL DISTRICT (7,500 SF/DWELLING))
NO USE PROPOSED IN R1-7.5 DISTRICT

TABLE OF BULK REQUIREMENTS

R1-7.5 - ONE FAMILY RESIDENTIAL DISTRICT

MINIMUM	REQUIRED	PROVIDED	REMARKS
LANDSCAPED AREA	15%	NO STRUCTURE PROPOSED IN R1-7.5 DISTRICT	OK
LOT AREA	7,500 SF		OK
LOT AREA PER UNIT	7,500 SF		OK
LOT WIDTH	75 FT.		OK
LOT DEPTH	100 FT.		OK
FRONT YARD SETBACK	15 FT.		OK
SIDE YARD SETBACK	10 FT.		OK
REAR YARD SETBACK	25 FT.		OK
DISTANCE BETWEEN BUILDINGS SAME LOT	N/A		OK
WELL-DESIGNED AND LANDSCAPED RECREATION OR USABLE OPEN SPACE AREA IN REAR YARD	100 SF PER DWELLING UNIT		OK
MAXIMUM			
BUILDING HEIGHT	2.5 STORIES AND 35 FT.		OK
BUILDING COVERAGE	30%		OK
UNITS PER BUILDING	N/A		OK
FRONT YARD SETBACK	35 FT.		OK
SIDE YARD SETBACK	N/A		OK

PARKING REQUIREMENTS:

REQUIRED

RESIDENTIAL:
1 SPACE PER UNIT
65 DWELLING UNITS = 65 SPACES

RETAIL:
3 SPACES PER 1,000 SF OF GFA
7,044 SF OF RETAIL SPACE = 22 SPACES

OFFICE:
2.5 SPACES PER 1,000 SF OF GFA
7,044 SF OF OFFICE SPACE = 18 SPACES

TOTAL PARKING REQUIRED = 105 SPACES

PROVIDED

TOTAL PARKING PROVIDED = 89 SPACES
(BASED ON SHARED PARKING ANALYSIS PROVIDED IN THE T.I.S., PREPARED BY COLLIERS ENGINEERING & DESIGN, WHICH ACCOUNTED FOR ALL RETAIL USES IN THE COMMERCIAL SPACE)

LOADING REQUIREMENTS:

REQUIRED

RETAIL:
1 SPACE FOR THE FIRST 7,500 SF OF GFA AND 1 SPACE FOR EACH ADDITIONAL 10,000 SF OF GFA OR MAJOR PORTION THEREOF, EXCEPT THAT NO BERTHS SHALL BE REQUIRED FOR BUILDINGS OF LESS THAN 5,000 SQUARE FEET OF GFA

EAST BLDG: 4,335 SF OF RETAIL SPACE = 1 LOADING SPACE
WEST BLDG: 2,709 SF OF RETAIL SPACE = 1 LOADING SPACE

OFFICE:
1 SPACE FOR THE FIRST 20,000 SF OF GFA AND 1 SPACE FOR EACH ADDITIONAL 40,000 SF OF GFA, OR MAJOR PORTION THEREOF, EXCEPT THAT NO BERTHS ARE REQUIRED FOR BUILDINGS OF LESS THAN 10,000 SQUARE FEET OF GFA

EAST BLDG: 4,335 SF OF OFFICE SPACE = 0 LOADING SPACE
WEST BLDG: 2,709 SF OF OFFICE SPACE = 0 LOADING SPACE

TOTAL LOADING SPACES REQUIRED:
EAST BLDG: = 1 LOADING SPACE
WEST BLDG:= 1 LOADING SPACE

PROVIDED

TOTAL LOADING SPACES PROVIDED:
EAST BLDG: = 1 LOADING SPACE
WEST BLDG: = 1 LOADING SPACE

OWNER/APPLICANT:

BEEKMAN ARTS CENTER LLC (TAX ID: 5955-19-706012)
268 MAIN STREET
BEACON, NY 12508

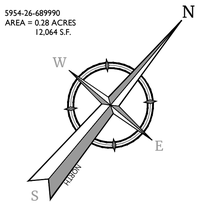
BAYRIDGE STUDIOS LLC (TAX ID: 5954-26-781983 & 5954-26-689990)
268 MAIN STREET
BEACON, NY 12508

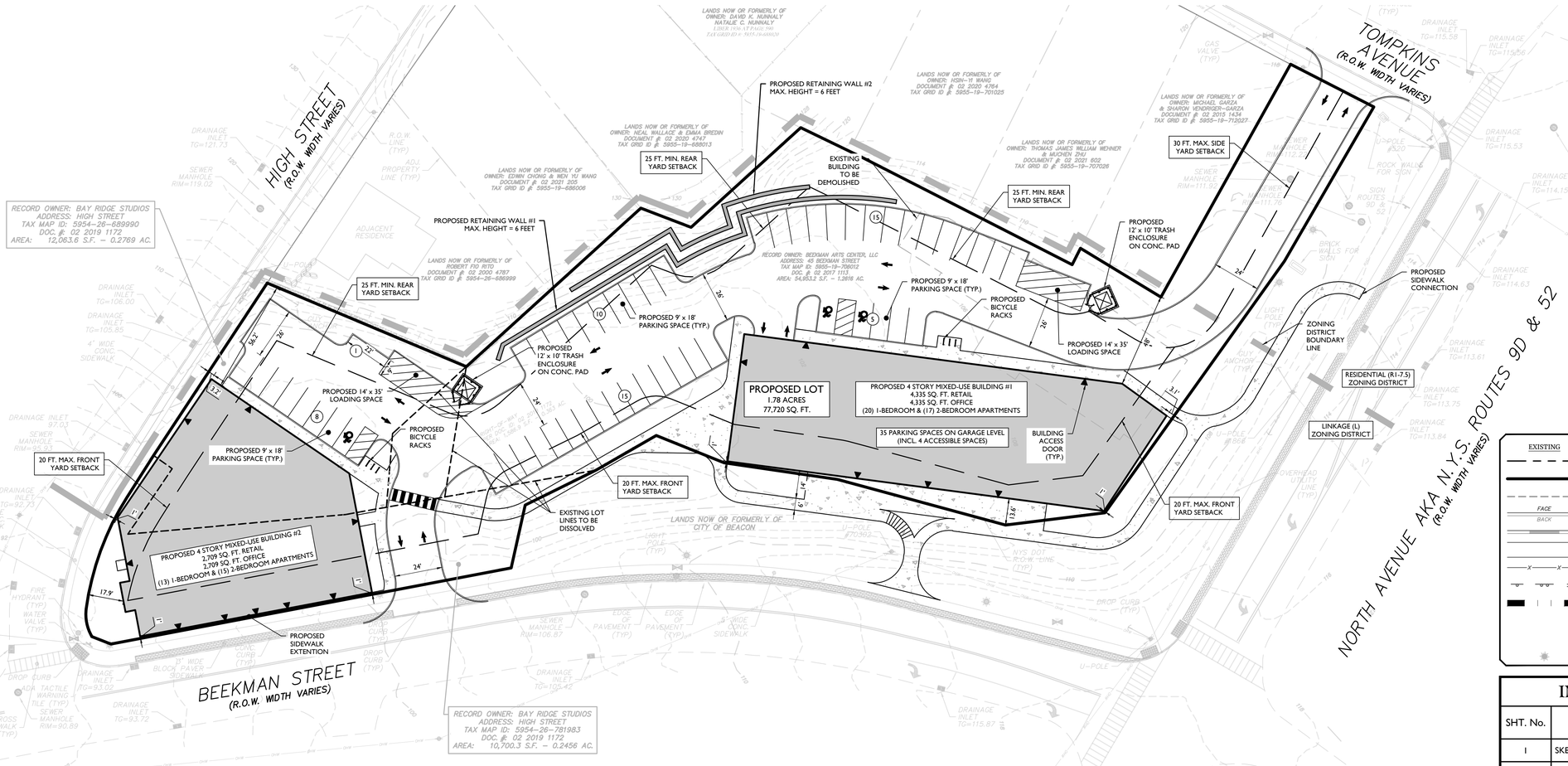
TAX LOTS:

5955-19-706012
AREA = 1.26 ACRES
54,953 S.F.

5954-26-781983
AREA = 0.25 ACRES
10,700 S.F.

5954-26-689990
AREA = 0.28 ACRES
12,064 S.F.





LEGEND

EXISTING		PROPOSED
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
-X-X-	FENCES	-X-X-
	ROADWAY SIGNS	
	ZONING BOUNDARY LINE	
	STALL COUNT	(10)
	ADA ACCESSIBLE STALL	
	LIGHT POLE	

INDEX OF SHEETS

SHT. No.	DESCRIPTION
1	SKETCH SITE PLAN
2	EXISTING CONDITIONS & DEMOLITION PLAN
3-4	BUILDING PLANS
5	BUILDING ELEVATIONS

30 0 30 60
SCALE : 1" = 30'
SELECT LINEAR UNIT OF MEASURE

SURVEY REFERENCE:

1. EXISTING SITE INFORMATION TAKEN FROM MAP ENTITLED "TOPOGRAPHIC SURVEY OF BEEKMAN ARTS CENTER, LLC & BAYRIDGE STUDIOS, LLC" PREPARED BY AUTOMATED CONSTRUCTION ENHANCED SOLUTIONS, INC., DATED 10/05/2023.

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

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Engineering & Design
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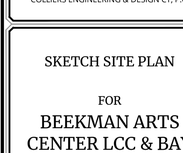
REV	DATE	DRAWN BY	DESCRIPTION



Justin Eric Dates
NEW YORK REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: 001964-01
COLLIERS ENGINEERING & DESIGN CT, P.C.

SKETCH SITE PLAN

FOR

BEEKMAN ARTS CENTER LCC & BAY RIDGE STUDIOS LLC

TAX LOTS:
5955-19-706012
5954-26-689990
5954-26-781983

CITY OF BEACON
DUTCHESS COUNTY
NEW YORK STATE

Colliers
Engineering & Design
NEWBURGH
555 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.564.4495
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	11/28/2023	KAS	JED

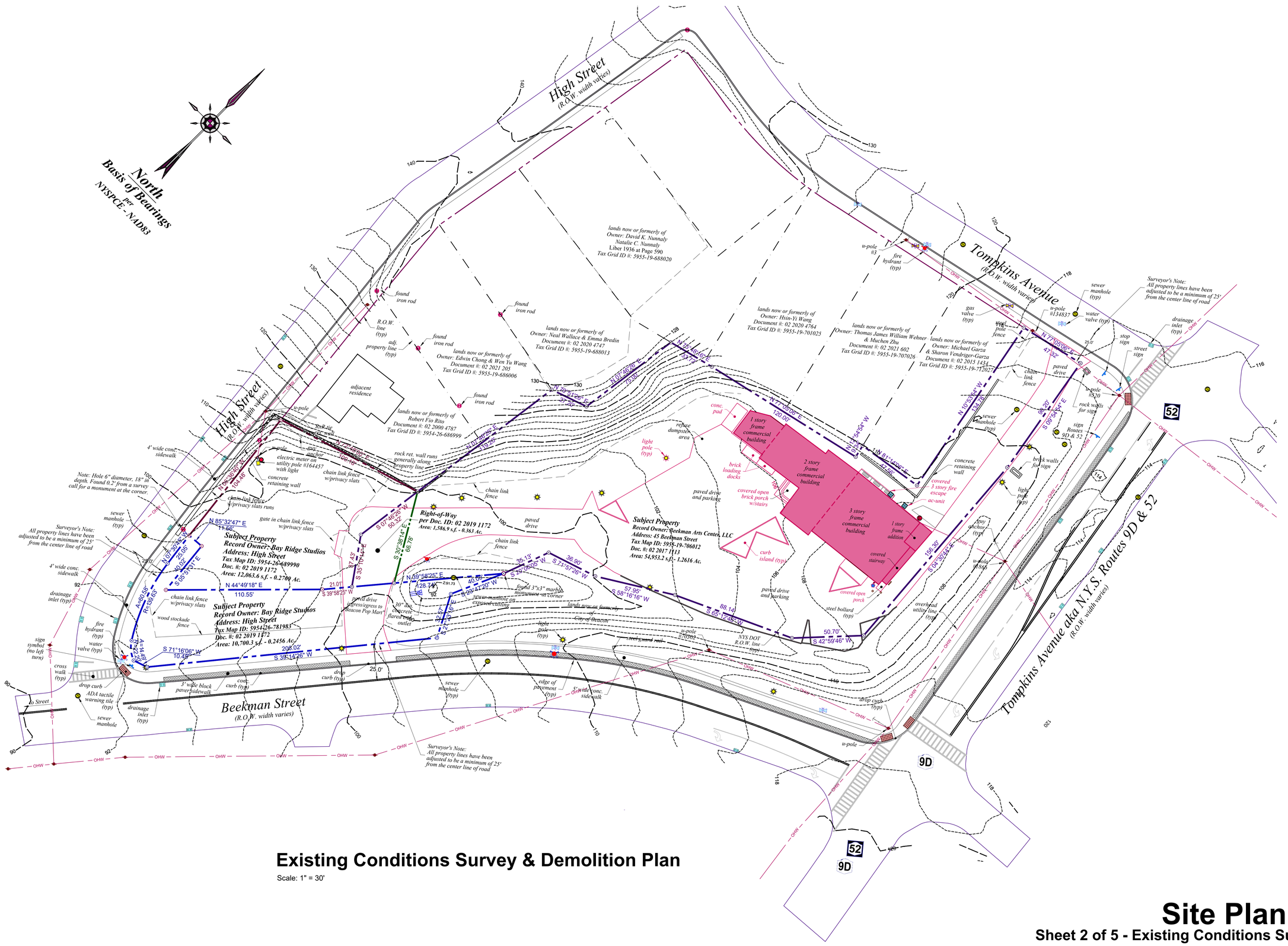
PROJECT NUMBER: 23010468A
DRAWING NAME: C-LAYT

SHEET TITLE: SKETCH SITE PLAN

SHEET NUMBER: 01 of 05

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

2023\23010468A\Engineering\Site Plans\C-LAYT.dwg|C-01 SKETCH SITE PLAN| By: KYLE SHALLOW



Existing Conditions Survey & Demolition Plan

Scale: 1" = 30'

Site Plan Application

Sheet 2 of 5 - Existing Conditions Survey & Demolition Plan

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

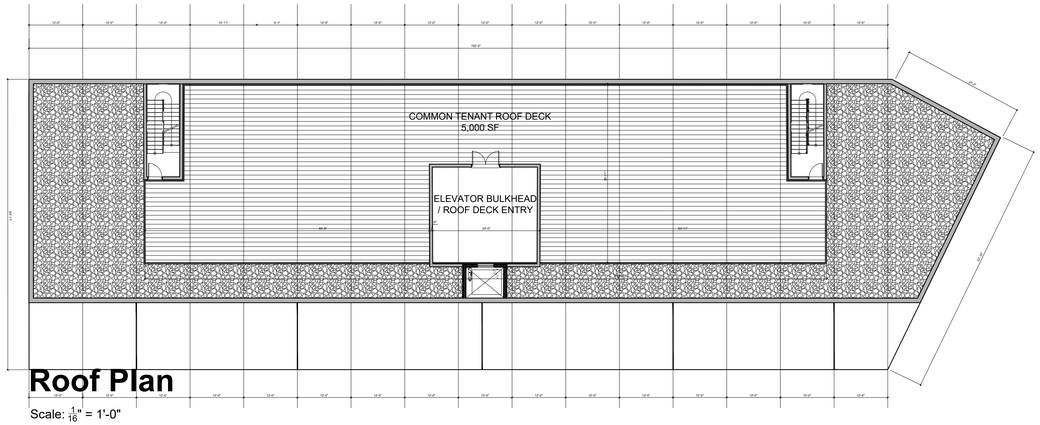
Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

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

Site / Civil Engineer:
Colliers Engineering & Design
555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

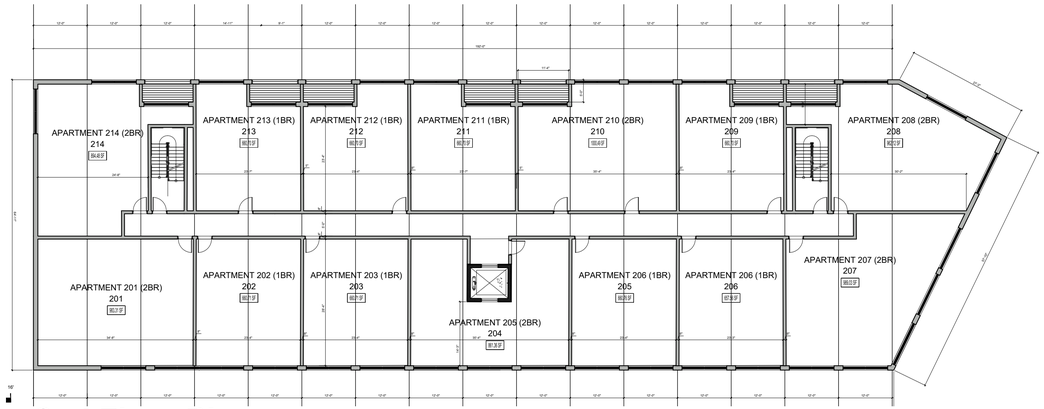
Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1" = 30'
November 28, 2023



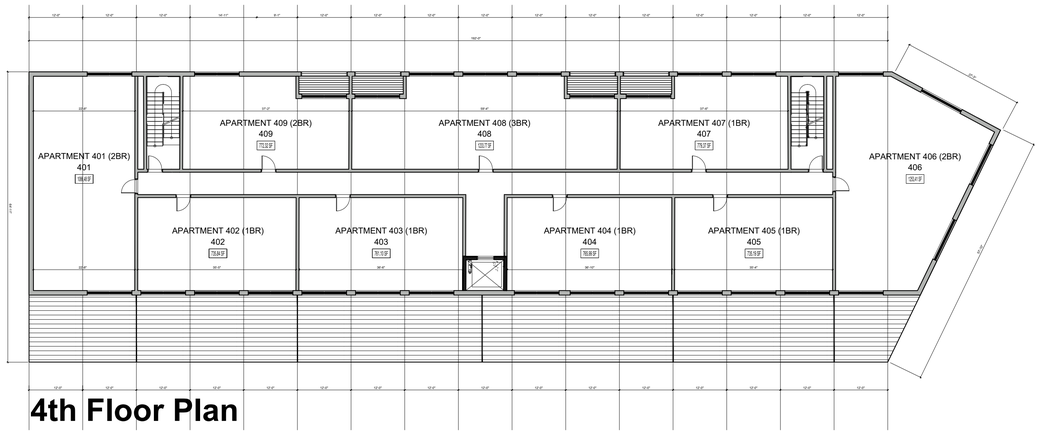
Roof Plan

Scale: $\frac{1}{16}$" = 1'-0"



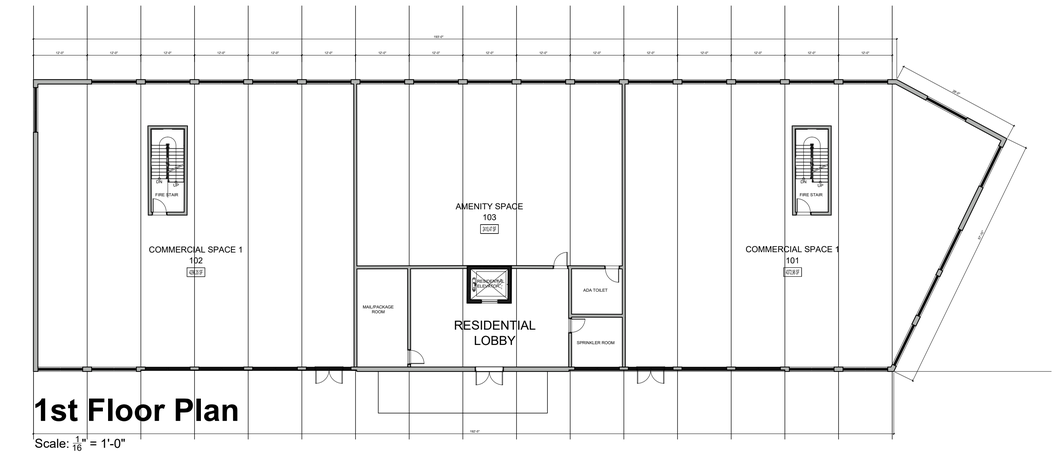
2nd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



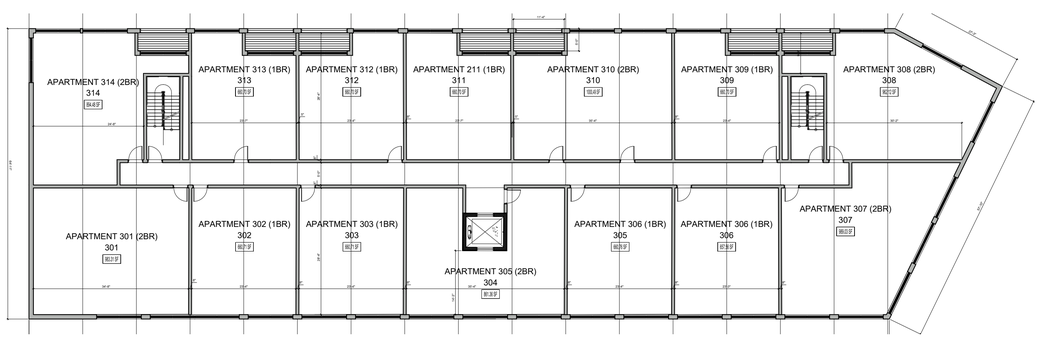
4th Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



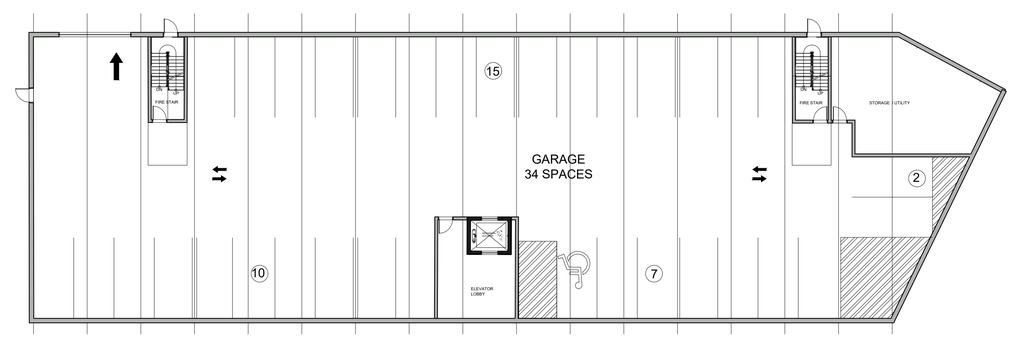
1st Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



3rd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



Garage Plan

Scale: $\frac{1}{16}$" = 1'-0"

Site Plan Application

Sheet 3 of 5 - Building Plans - Beekman Street

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

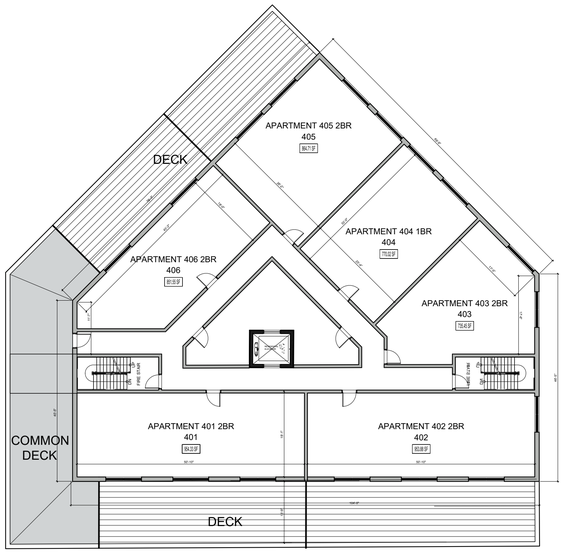
Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

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

Site / Civil Engineer:
Colliers Engineering & Design
555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

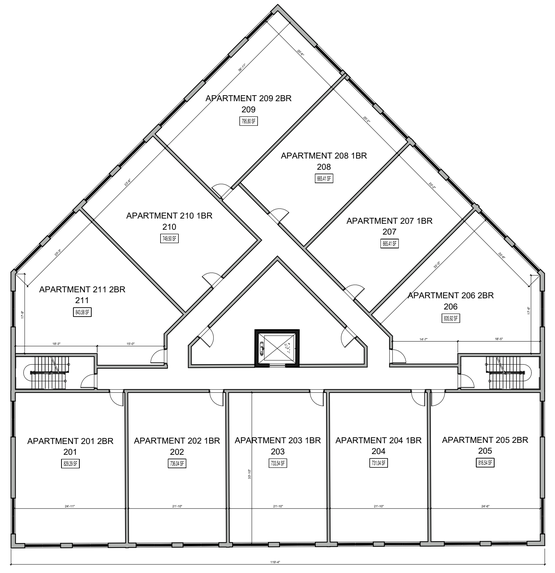
Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1" = 30'
November 28, 2023



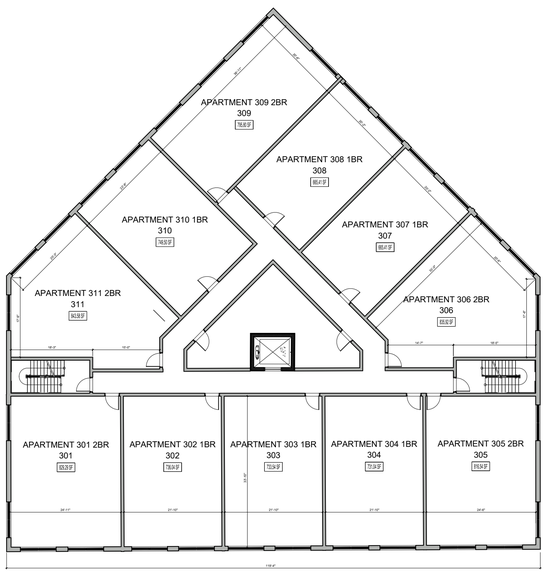
4th Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



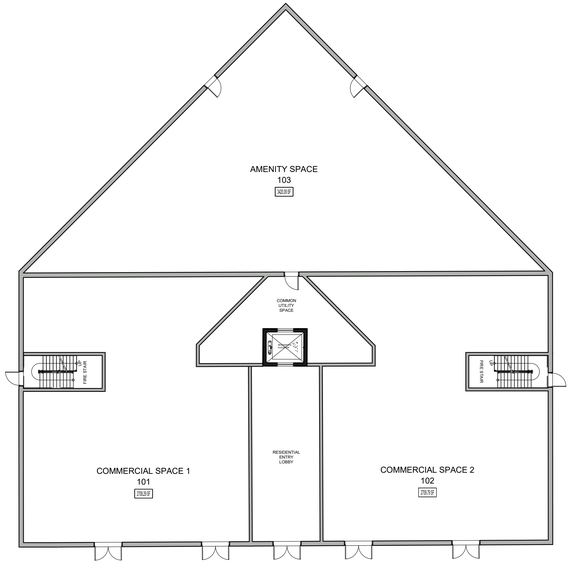
2nd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



3rd Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"



1st Floor Plan

Scale: $\frac{1}{16}$" = 1'-0"

Site Plan Application

Sheet 4 of 5 - Building Plans - High Street

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

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

Site / Civil Engineer:
Colliers Engineering & Design
555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1" = 30'
November 28, 2023

View: Beekman Street Building

Not to Scale

View: High Street Building

Not to Scale

View: High Street Building

Not to Scale

Site Plan Application

Sheet 5 of 5 - Building Elevations

Owner / Applicant:
Beekman Arts Center LLC
(Tax ID: 5955-19-706012)
268 Main Street
Beacon, NY 12508

Owner / Applicant:
Bayridge Studios LLC
(Tax ID: 5954-26-781983 & 5954-26-689990)
268 Main Street
Beacon, NY 12508

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

Site / Civil Engineer:
Colliers Engineering & Design
555 Hudson Valley Avenue - Suite 101
New Windsor, NY 12553

Surveyor:
Automated Construction Enhanced Solutions, Inc.
1229 Route 300 - Suite 4
Newburgh, NY 12550

45 Beekman Street
Beacon, New York
Scale: 1" = 30'
November 28, 2023

John Clarke Planning and Design jclarkeplandesign@gmail.com
845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: December 8, 2023
Re: **45 Beekman Street Site Plan**

I have reviewed the November 28, 2023 cover letter from Cuddy+Feder, November 28, 2023 Full EAF Part 1, undated Site Plan and Subdivision Applications, November 28, 2023 Coastal Assessment Form, November 28, 2023 Traffic & Parking Study by Colliers Engineering, and a 5-sheet Sketch Site Plan set by Colliers Engineering and Aryeh Siegel, all dated November 28, 2023.

Proposal
The applicant is proposing to construct two 4-story mixed-use buildings, having a total of 14,088 first-floor commercial square feet and 65 dwelling units on the upper floors. The 1.78-acre site includes three parcels to be merged into a single lot. The proposed buildings and parking are in the Linkage (L) district with only the northern driveway onto Tompkins Avenue in the R1-7.5 Residential district. The parcel is also within the Local Waterfront Revitalization Program (LWRP) area.

Comments and Recommendations
1. To assist the Board is assessing any potential impacts on adjacent properties, the first sheet should include an aerial that shows the location of buildings on the surrounding parcels.

2. The Sheet 1 Parking Requirements should be consistent with the assumptions and total parking required in the Traffic & Parking Study.

3. Sheet 2 should include the location, size, and species of all trees on the site over 6 inches in diameter and identify any trees that are to be removed.

4. The applicant is proposing 89 off-street parking spaces, while 109 spaces are required under the zoning evaluation in the Traffic & Parking Study. The Study also makes the case for a 20-space reduction under the provisions in Section 223-41.21F(3), including proximity to the Train Station and a shared parking analysis for the mixed-use proposal. The Planning Board's transportation consultant should review the Study and provide comments and recommendations.

5. The Board should discuss if portions of the parking lots comply with the setbacks and screening provisions in Section 223-41.21F(1).

6. The cover sheet is labeled as a Sketch Site Plan and the set is incomplete. Future submittals will need a Landscaping Plan with a detailed plant schedule, a Lighting Plan with fixture specifications that demonstrate compliance with Section 223-14B, engineering sheets, construction details, and building elevations with major dimensions, materials, and colors noted.

7. The Sheet 3 Garage Plan shows one ADA space, while the Sheet 1 note implies that 4 ADA spaces are in the garage. Also, a few of the garage spaces are too narrow and cars in the two spaces at the far end of the garage seem to have no way of easily backing out of the spaces.

8. The LWRP consistency justification is acceptable and the proposal appears to present no conflicts the City's waterfront area policies.

9. Once the plans are developed further, the building design should be referred to the Architectural Review Subcommittee. Future graphics should show rooftop projections.

If you have any questions or need additional information, please feel free to contact me.

John Clarke, Beacon Planning Consultant

c: Bruce Flower, Building Inspector
Jennifer L. Gray, Esq., City Attorney
John Russo, P.E., City Engineer
Taylor M. Palmer, Esq., Project Attorney
Aryeh Siegel, Project Architect

LANC & TULLY
Engineering and Surveying, P.C.

December 8, 2023

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 45 Beekman Street
Mixed-Use Building
Tax Nos. 5955-19-706012, 5954-26-689990 & 781983
City of Beacon

Dear Mr. Gunn:

My office has received the following regarding a mixed-use building to be located at 152-158 Fishkill Avenue:

- Correspondence dated November 28, 2023, from Cuddy & Feder.
- Application for site plan approval, dated November 2023.
- Application for subdivision approval, dated November 2023.
- Full Environmental Assessment Form dated November 28, 2023.
- Costal Assessment Form dated November 28, 2023.
- Traffic & Parking Study titled "45 Beekman Street & High Street", dated November 28, 2023, as prepared by Colliers Engineering & Design.
- Plan set titled 45 Beekman Street, dated November 28, 2023, and consisting of the following drawings:
  - Sheet 1 of 5 – Sketch Site Plan prepared by Colliers
  - Sheet 2 of 5 – Existing Conditions Survey & Demolition Plan
  - Sheets 3 & 4 of 5 – Building Plans
  - Sheet 5 of 5 – Building Elevations

The proposed project entails the demolition of the existing structure located at the intersection of North Avenue & Beekman Street, and the merging of the three (3) parcels into a single parcel; and the construction of two (2) mixed-use buildings. Both buildings are proposed to have commercial space, tenant amenity space on the 1st floor and dwelling units on the 2nd through 4th floors, with a total of 65 dwelling units consisting of 33 one-bedroom units and 32 two-bedroom units. The project site, with the lots merged, has an area of 1.78± acres and is located in the L (Linkage) Zone, with a small portion of the lot along North Avenue being located in the R1-7.5 Zone and the vacant parcel along High Street being located in the Historic District and Landmark Overly (HDLO) district. The proposed uses, commercial and residential, are permitted uses within the L Zone.

Based on our review of the above documents and plans, and noting that only a sketch plan has been submitted at this time, we would like to offer the following comments:

SEQRA Comments:

1. The calculations for the proposed water and sewer usage shall be provided.

2. The applicant shall seek a letter from the Beacon Water & Sewer Superintendent to verify that there is sufficient water and sewer to service the project.

General Comments:

1. A lot-line merger plan shall be prepared for the project.

2. Based upon the submitted EAF, the applicant has noted that they will require approvals from the NYSDOT and Dutchess County Department of Health.

3. The applicant's consultant shall conduct an Inflow & Infiltration (I&I) Study of the existing site and building, and provide a certified written report to the City of Beacon of the findings. Possible cross-connections to the City's sanitary sewer collection system include roof-leaders, sump pumps, existing site drains, etc. shall be identified. If any cross-connections are found, the report shall include these findings along with the volume of I&I being introduced into the sanitary sewer collection system, and the proposed remediation for the cross-connection(s) found.

4. A stormwater pollution prevention plan (SWPPP) shall be prepared for the project.

5. As the project progresses, the plan set shall be updated to include utility plans, landscaping plans, lighting plans, grading plans, signage & striping plans, erosion & sediment control plans, and construction details pertinent to the construction of the project.

6. The current plans shall be updated to reflect the water, sewer, storm drainage, and other utility pipe runs that are currently crossing and/or servicing the site, as well as those utility pipe runs located along and in the adjoining roads to the site. This information should include the size of the pipes, pipe material, pipe inverts in structures, etc.

7. A copy of the survey prepared for the parcels that make up the project site shall be submitted. The survey shall be signed and sealed.

8. Sheet 2 of 5 includes a note in several locations stating "All property lines have been adjusted to be a minimum of 25' from the center line of the road". The plan should show the property lines as to where they currently exist without adjustment, and an offer of dedication to the City of Beacon be prepared for those areas as to where the property line is to be adjusted so that it is 25-feet from the centerline of the road.

9. Sheet 2 of 5 has Route 9D labeled as Tompkins Avenue. This should be revised to North Avenue.

10. Sheet 2 of 5 should be updated to reflect all utilities located within the neighboring roads, as well as running through the site, as per Comment No. 6 above.

11. The "Existing Conditions" plan shall be updated to include a note as to where the boundary survey information and topography were obtained.

12. As the retaining walls exceed 4-feet in height, the retaining walls shall be designed by a licensed engineer in the State of New York. Design drawings of the wall(s), along with the calculations for the wall design, shall be submitted for review. The applicant should also provide details of the wall on the plans for review by the Planning Board.

13. The plans shall take into account snow storage areas for the proposed project.

14. Additional elevation views should be provided with views from Route 9D and Tompkins Avenue. The current elevation views that have been provided should be labeled as to the what side of the building is being viewed (north, east, etc.).

This completes our review at this time. Further comments may be provided based on future submissions when more detailed plans are prepared for the project. **A written response letter addressing each of the above comments should be provided with the next submission.** If you have any questions, or require any additional information, please do not hesitate to contact our office.

Very truly,

LANC & TULLY, P.C.

John Russo, P.E.

cc: John Clarke, Planner
Jennifer Gray, Esq.
Bruce Flower, Building Inspector

City of Beacon Planning Board Agenda
12/12/2023

Title:

Review application for Site Plan Approval, place of worship, 409 Fishkill Avenue, Fishkill Avenue, and Mead Avenue, submitted by Soka Gakkai International – USA.

ATTACHMENTS

409 Fishkill PB 12.12.23 City of Beacon_SGI USA Cover Letter_2023-1128.pdf

409 Fishkill PB 12.12.23 Site Plan Application_SGI-USA-409 Fishkill Ave.pdf

409 Fishikill PB 12.12.23 Short EAF_409 Fishkill Avenue.pdf

409 Fishikill PB 12.12.23 Traffic Impact Study.pdf

409 Fishkill PB 12.12.23 I&I Report SGI USA - 409 Fishkill Ave 2023-1128.pdf

409 Fishkill PB 12.12.23 Architectural Plans_SGI-Beacon 2023-1128.pdf

409 Fishkill PB 12.12.23 ROBERT SCARPA ARCH_SGI BEACON_01_ 11-27-23.pdf

409 FIshkill PB 12.12.23 SITE PLAN_SGI-USA-409 Fishkill Ave.pdf

Lanc Tully review 409 Fishkill Ave 12-07-23.pdf

John Clarke review PB 409 Fishkill Av 12.8.23.pdf

Civil & Environmental Engineering Consultants
174 Main Street, Beacon, New York 12508 (Main Office and Mailing Address)
13 Chambers Street, Newburgh, NY 12550 (Satellite Office)
Phone: 845-440-6926
www.HudsonLandDesign.com

November 28, 2023

Hon. John Gunn, Chairman and Members of the City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

Re: SGI-USA Site Plan
409 Fishkill Avenue
Tax Parcels: 6055-80-403061 (±0.23 acre)
6055-80-399053 (±0.16 acre)
6055-80-406047 (±0.23 acre)
6055-80-411056 (±0.22 acre)
6055-80-416064 (±0.22 acre)
6055-80-418071 (±0.11 acre); 1.17 acres total
City of Beacon, NY

Dear Chairman Gunn and Members of the Planning Board:

On behalf of the Applicant for the above referenced project, Hudson Land Design (HLD) is pleased to submit five (5) copies of the following documents in support of the Project:

- Application for Site Plan Approval – executed by the Applicant, SGI-USA
- Application Processing Restriction Law – executed by the Owner, DKH Realty, LLC
- Entity Disclosure Form – executed by both Owner and Applicant
- Application fee and initial escrow check for $3,363.50 (SGI-USA Check #154528)
  - Application Fee of $1,863.50 ($500 plus $250/1,000 SF X 5,454 SF)
  - Initial Escrow of $1,500 for Site Plan with Existing Building
- Short Environmental Assessment Form (EAF)
- I&I Report
- Traffic Impact Study
- Civil Site Plan Set (Sheets 1 through 9 of 9)
- Architectural Plan Set (5 Sheets)

- Architectural Rendering

These items are being submitted to the City of Beacon Planning Board for initial review. The proposed Project is located at 409 Fishkill Avenue (with frontage along Conklin Street to the west, and Mead Avenue to the north), and consists of 6 parcels totaling 1.18 acres. The parcels lie within the City of Beacon's R1-5 One Family, and GB General Business Zoning District, and within established water and sewer districts. The property currently contains a commercial building used as a car dealership, and the applicant (SGI-USA) is proposing to change the use of the building to a place of worship as defined in City Code, which is principally permitted within both zoning districts. The owner, DKH Realty, LLC, will be leasing the property to SGI-USA for the Project.

The existing waster and sanitary sewer service lines will be used; therefore, no new service lines will be installed. The proposal includes a reduction in impervious coverage of the site as a result of pavement removal as the site requires 50 parking spaces to serve its needs. The impervious coverage is being reduced from 86% to 69%.

We believe that this application should be deemed a Type II action under SEQRA Part 617.5(c)(18), which states: reuse of a residential or commercial structure, or of a structure containing mixed residential and commercial uses, where the residential or commercial use is a permitted use under the applicable zoning law or ordinance, including permitted by special use permit, and the action does not meet or exceeds any of the thresholds in section 617.4. Despite that assertion, a short EAF has been provided for your consideration if it is deemed that this action is Unlisted.

We look forward to discussing this project at your December 2023 Planning Board meeting, and will seek to either establish lead agency and set a SEQR public hearing (if SEQR is determined to be Unlisted) or set a site plan public hearing. Should you have any questions, please feel free to contact me at my direct line 845-766-8955.

Sincerely,

Daniel G. Koehler, P.E.
Principal

cc: SGI-USA (via email)
Robert Scarpa, R.A., NCARB, LEED AP BD+C (via email)
Michael A. Bodendorf, P.E. (HLD file)

APPLICATION FOR SITE PLAN APPROVAL

Submit to Planning Board Secretary, One Municipal Plaza, Suite One, Beacon, New York 12508

IDENTIFICATION OF APPLICANT

Name: Soka Gakkai International - USA

Address: 606 Wilshire Boulevard Santa Monica CA 90401
c/o Clifford Sawyer

Signature: Cliff Sawyer

Date: 11/16/23

Phone: (310) 260-8954

(For Official Use Only)

	Date	Initials
Application & Fee Rec'd		
Initial Review		
Public Hearing		
Conditional Approval		
Final Approval		

IDENTIFICATION OF REPRESENTATIVE / DESIGN PRFESSIONAL

Name: Daniel Koehler P.E.

Address: 174 Main Street Beacon NY 12508

Phone: 845-440-6926

Fax:

Email address: DKoehler@HudsonLandDesign.com

IDENTIFICATION OF SUBJECT PROPERTY:

Property Address: 409 Fishkill Ave Beacon NY 12508

Tax Map Designation: Section 6055 Block 80 Lot(s) 403061, 399053, 406047, 411056, 416064 & 418071

Land Area: +/- 1.18 Acres

Zoning District(s) GB (GENERAL BUSINESS)

DESCRIPTION OF PROPOSED DEVELOPMENT:

Proposed Use: Place of worship

Gross Non-Residential Floor Space: Existing 5,454 SQFT Proposed No additional

TOTAL: 5,454 SQFT

Dwelling Units (by type): Existing None Proposed

TOTAL:

ITEMS TO ACCOMPANY THIS APPLICATION

a. One electronic and five (5) **folded** paper copies of a site location sketch showing the location of the subject property and the proposed development with respect to neighboring properties and developments.

b. One electronic and five (5) **folded** paper copies of the proposed site development plan, consisting of sheets, showing the required information as set forth on the back of this form and other such information as deemed necessary by the City Council or the Planning Board to determine and provide for the property enforcement of

the Zoning Ordinance.

c. One electronic and five (5) **folded** paper copies of additional sketches, renderings or other information.

d. An application fee, payable to the City of Beacon, computed per the attached fee schedule.

e. An initial escrow amount, payable to the City of Beacon, as set forth in the attached fee schedule.

INFORMATION TO BE SHOWN ON SITE LOCATION SKETCH

a. Property lines, zoning district boundaries and special district boundaries affecting all adjoining streets and properties, including properties located on the opposite sides of adjoining streets.
b. Any reservations, easements or other areas of public or special use which affect the subject property.
c. Section, block and lot numbers written on the subject property and all adjoining properties, including the names of the record owners of such adjoining properties.

INFORMATION TO BE SHOWN ON THE SITE DEVELOPMENT PLAN

a. Title of development, date and revision dates if any, north point, scale, name and address of record owner of property, and of the licensed engineer, architect, landscape architect, or surveyor preparing the site plan.
b. Existing and proposed contours at a maximum vertical interval of two (2) feet.
c. Location and identification of natural features including rock outcrops, wooded areas, single trees with a caliper of six (6) or more inches measured four (4) feet above existing grade, water bodies, water courses, wetlands, soil types, etc.
d. Location and dimensions of all existing and proposed buildings, retaining walls, fences, septic fields, etc.
e. Finished floor level elevations and heights of all existing and proposed buildings.
f. Location, design, elevations, and pavement and curbing specifications, including pavement markings, of all existing and proposed sidewalks, and parking and truck loading areas, including access and egress drives thereto.
g. Existing pavement and elevations of abutting streets, and proposed modifications.
h. Location, type and design of all existing and proposed storm drainage facilities, including computation of present and estimated future runoff of the entire tributary watershed, at a maximum density permitted under existing zoning, based on a 100 year storm.
i. Location and design of all existing and proposed water supply and sewage disposal facilities.
j. Location of all existing and proposed power and telephone lines and equipment, including that located within the adjoining street right-of-way. All such lines and equipment must be installed underground.
k. Estimate of earth work, including type and quantities of material to be imported to or removed from the site.
l. Detailed landscape plan, including the type, size, and location of materials to be used.
m. Location, size, type, power, direction, shielding, and hours of operation of all existing and proposed lighting facilities.
n. Location, size, type, and design of all existing and proposed business and directional signs.
o. Written dimensions shall be used wherever possible.
p. Signature and seal of licensed professional preparing the plan shall appear on each sheet.
q. Statement of approval, in blank, as follows:

Approved by Resolution of the Beacon Planning Board
on the_____day of_____, 20_____
subject to all conditions as stated therein

_____ _____
Chairman, City Planning Board **Date**

APPLICATION FEES

Site Plan	**Residential $500 + $250 per dwelling unit** **Commercial $500 + $250 per 1,000 s.f.**
Special Use Permit	**Residential $500 + $250 per dwelling unit** **Commercial $500 + $250 per 1,000 s.f.**
Subdivision	**$ 750 for 2-4 lots + $100 per lot** **$1,000 for 5 or more lots + $300 per lot**
Zoning Board of Appeals	**Use Variance $500 Area Variance $250** **Interpretation $250**

ESCROW FEES

ALL SUBDIVISIONS, AND RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

No. of Lots or Dwelling Units	Initial Deposit	Depleted to	Replenishment
1-5 (including lot-line realignment)	$ 2,500	$ 1,000	Current bills + $1,000
6-15	$ 7,500	$ 2,500	Current bills + $1,000
Over 15	$ 15,000	$ 5,000	Current bills + $5,000

NON-RESIDENTIAL SITE PLAN AND SUP APPLICATIONS

	Initial Deposit	Depleted to	Replenishment
Existing Buildings/Change of Use with no site development	$ 1,500	$ 1,000	Current bills + $500
Up to 3,000 s.f. gross floor area	$ 2,500	$ 1,000	Current bills + $1,000
3,000 to 10,000 s.f. gross floor area	$ 2,500 + $0.50 per sq.ft. over 3,000	$ 2,500	Current bills + $2,500
Over 10,000 s.f. gross floor area	$ 7,500 + $0.50 per sq.ft. over 10,000	$ 2,500	Current bills + $2,500

ZONING

** if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Use Variance*	$ 1,000	$500	Current bills + $500
Area Variance*	$ 1,000	$500	Current bills + $500
Interpretation*	$ 1,000	$500	Current bills + $500

ARCHITECTURAL REVIEW OR CERTIFICATE OF APPROPRIATENESS ***(if not currently before PB)***

** if required by Chairman*	Initial Deposit	Depleted to	Replenishment
Single Family House*	$500	$250	Current bills + $250
All others*	$500	$250	Current bills + $250

CITY OF BEACON
SITE PLAN SPECIFICATION FORM

Name of Application: 409 Fishkill Ave

PLEASE INDICATE WHETHER THE SITE PLAN DRAWINGS SHOW THE SUBJECT INFORMATION BY PLACING A CHECK MARK IN THE APPROPRIATE BOXES BELOW.		
	YES	**NO**
The site plan shall be clearly marked "Site Plan", it shall be prepared by a legally certified individual of firm, such as a Registered Architect or Professional Engineer, and it shall contain the following information:		
LEGAL DATA		
Name and address of the owner of record.	✓	
Name and address of the applicant (if other than the owner).	✓	
Name and address of person, firm or organization preparing the plan.	✓	
Date, north arrow, and written and graphic scale.	✓	
NATURAL FEATURES		
Existing contours with intervals of two (2) feet, referred to a datum satisfactory to the Planning Board.	✓	
Approximate boundaries of any areas subject to flooding or stormwater overflows.	n/a	
Location of existing watercourses, wetlands, wooded areas, rock outcrops, isolated trees with a diameter of eight (8) inches or more measured three (3) feet above the base of the trunk, and any other significant existing natural features.	✓	
EXISTING STRUCTURES, UTILITIES, ETC.		
Outlines of all structures and the location of all uses not requiring structures. Paved areas, sidewalks, and vehicular access between the site and public streets.	✓	
Locations, dimensions, grades, and flow direction of any existing sewers, culverts, water lines, as well as other underground and above ground utilities within and adjacent to the property.	✓	
Other existing development, including fences, retaining walls, landscaping, and screening.	✓	
Sufficient description or information to define precisely the boundaries of the property.	✓	
The owners of all adjoining lands as shown on the latest tax records.	✓	
The locations, names, and existing widths of adjacent streets and curb lines.	✓	
Location, width, and purpose of all existing and proposed easements, setbacks, reservations, and areas dedicated to private or public use within or adjacent to the properties.	✓	

PROPOSED DEVELOPMENT	YES	NO
The location, use and design of proposed buildings or structural improvements.	✓	
The location and design of all uses not requiring structures, such as outdoor storage (if permitted), and off-street parking and unloading areas.	✓	
Any proposed division of buildings into units of separate occupancy.	n/a	
The location, direction, power, and time of use for any proposed outdoor lighting.	✓	
The location and plans for any outdoor signs.	✓	
The location, arrangement, size(s) and materials of proposed means of ingress and egress, including sidewalks, driveways, or other paved areas.	✓	
Proposed screening and other landscaping including a planting plan and schedule prepared by a qualified individual or firm.	✓	
The location, sizes and connection of all proposed water lines, valves, and hydrants and all storm drainage and sewer lines, culverts, drains, etc.	✓	
Proposed easements, deed restrictions, or covenants and a notation of any areas to be dedicated to the City.	n/a	
Any contemplated public improvements on or adjoining the property.	✓	
Any proposed new grades, indicating clearly how such grades will meet existing grades of adjacent properties or the street.	✓	
Elevations of all proposed principal or accessory structures.	✓	
Any proposed fences or retaining walls.	n/a	
MISCELLANEOUS		
A location map showing the applicant's entire property and adjacent properties and streets, at a convenient scale.	✓	
Erosion and sedimentation control measures.	✓	
A schedule indicating how the proposal complies with all pertinent zoning standards, including parking and loading requirements.	✓	
An indication of proposed hours of operation.	✓	
If the site plan only indicates a first stage, a supplementary plan shall indicate ultimate development.	n/a	

For all items marked "NO" above, please explain below why the required information has not been provided:

Applicant/Sponsor Name:_____

Signature:_____

Date: _____

FOR OFFICE USE ONLY
Application #

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

ENTITY DISCLOSURE FORM

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

Disclosure of the names and addresses of all persons or entities owning any interest or controlling position of any Limited Liability Company, Partnership, Limited Partnership, Joint Venture, Corporation or other business entity (hereinafter referred to as the "Entity") filing a land-use application with the City is required pursuant to Section 223-61.4 of the City Code of the City of Beacon. If any Member of the Entity is not a natural person, then the names and addresses as well as all other information sought herein must be supplied about the non-natural person member of that Entity, including names, addresses and Formation filing documents. Applicants shall submit supplemental sheets for any additional information that does not fit within the below sections, identifying the Section being supplemented.

SECTION A.

IF AFFIANT IS A PARTNERSHIP, JOINT VENTURE OR OTHER BUSINESS ENTITY, EXCEPT A CORPORATION:

Name of Entity	Address of Entity
Place where such business entity was created	Official Registrar's or Clerk's office where the documents and papers creating entity were filed
Date such business entity or partnership was created	Telephone Contact Information

IF AFFIANT IS A CORPORATION:

Name of Entity Soka Gakkai International – USA (entity is a religious corporation)	Telephone Contact Information (310) 260-8900
Principal Place of Business of Entity 606 Wilshire Blvd. Santa Monica, CA 90401	Place and Date of incorporation State of California, County of Los Angeles November 22, 1991
Method of Incorporation Articles of Incorporation	Official place where the documents and papers of incorporation were filed California Secretary of State's Office

SECTION B. List all persons, officers, limited or general partners, directors, members, shareholders, managers, and any others with any interest, mortgage, encumbrance or other interest (recorded or unrecorded) in or with the above referenced

Entity. List all persons to whom corporate stock has been pledged, mortgaged or encumbered and with whom any agreement has been made to pledge, mortgage or encumber said stock. Use a supplemental sheet to list additional persons.

Name	Resident Address	Resident Telephone Number	Nature and Extent of Interest

SECTION C. 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.

SECTION D. Is any owner, of record or otherwise, an officer, director, stockholder, agent or employee of any person listed in Section B-C?

☐ **YES** ☐ **NO**

Name	Employer	Position

SECTION E. Is any party identified in Sections A- C 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 F. Was any person referred to in Sections A-D known by any other name within five (5) years preceding the date of the application?

☐ **YES** ☒ **NO**

Current Name	Other Names

SECTION G. List the names and addresses of each person, business entity, partnership and corporation in the chain of title of the subject premises for the five (5) years next preceding the date of the application.

Name	Address

SECTION H. If the applicant is not a record owner of the subject property, describe the applicant's interest in the subject property and the relationship the applicant has to the record owner(s) of the subject property.

Applicant has leased subject property. Applicant is a Tenant of the record Owner of the subject property.

SECTION I. 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. Any sensitive or confidential information may be redacted from the contract prior to production.

SECTION J.

1. Where the record owner or contract vendee is a corporation, the following additional information shall be submitted:

Name of the Corporation	Telephone Contact Information
Principal Business Address	Place and Date of Incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	**Residence or business address**	**Telephone number**

3. Have any shares of the stock of the corporation or of any stockholder been pledged, mortgaged or encumbered?

☐ **YES** ☐ **NO**

If so, please list the name and address of each person having, holding, owning or claiming any such interest.

Name	**Address**

SECTION K. 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**

I, Cliff Sawyer being first duly sworn, according to law, deposes and says that I am (Title) V.P., an active and qualified member of the SGI-USA, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

(Print) Cliff Sawyer

(Signature) Cliff Sawyer

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: DKH Realty, LLC

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:

Applicant Address: PO Box 859, Goshen NY 10924

Project Address: 409 Fishkill Avenue, Beacon NY 12508

Project Tax Grid # 6055-80-403061, 399053, 406047, 411056, 416064 & 418071

Type of Application Site Plan

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, Dwight Henley, 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 N/A
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 N/A
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon N/A
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current ✓

Signature of Owner

MEMBER

Title if owner is corporation

Office Use Only:	NO	YES	Initial
Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)	X		MP
ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)		X	KLM
ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)		X	KLM

APPLICATION PROCESSING RESTRICTION LAW

Affidavit of Property Owner

Property Owner: DKH Realty, LLC

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:

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Project Address: 409 Fishkill Avenue, Beacon NY 12508

Project Tax Grid # 6055-80-403061, 399053, 406047, 411056, 416064 & 418071

Type of Application Site Plan

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, Dwight Hendley, 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 N/A
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 N/A
5. Special Assessments are outstanding on a parcel or parcels owned by me in the City of Beacon N/A
6. ALL Special Assessments due to the City of Beacon on any parcel owned by me are current ✓

Signature of Owner

MEMBER

Title if owner is corporation

Office Use Only:	NO	YES	Initial
Applicant has violations pending for ANY parcel owned within the City of Beacon (Building Dept.)	___	___	___
ALL taxes are current for properties in the City of Beacon are current (Tax Dept.)	___	___	___
ALL Special Assessments, i.e. water, sewer, fines, etc. are current (Water Billing)	___	___	___

Entity. List all persons to whom corporate stock has been pledged, mortgaged or encumbered and with whom any agreement has been made to pledge, mortgage or encumber said stock. Use a supplemental sheet to list additional persons.

Name	Resident Address	Resident Telephone Number	Nature and Extent of Interest

SECTION C. 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.
Dwight Hurley	409 Fishkill Ave Beacon NY 12508	914-474-3305	06-26-2000	City of Beacon NYS Library

SECTION D. Is any owner, of record or otherwise, an officer, director, stockholder, agent or employee of any person listed in Section B-C?

☐ YES ☑ NO

Name	Employer	Position

SECTION E. Is any party identified in Sections A- C 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 F. Was any person referred to in Sections A-D known by any other name within five (5) years preceding the date of the application?

☐ **YES** ☑ **NO**

Current Name	Other Names

SECTION G. List the names and addresses of each person, business entity, partnership and corporation in the chain of title of the subject premises for the five (5) years next preceding the date of the application.

Name	Address

SECTION H. If the applicant is not a record owner of the subject property, describe the applicant's interest in the subject property and the relationship the applicant has to the record owner(s) of the subject property.

SECTION I. 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. Any sensitive or confidential information may be redacted from the contract prior to production.

SECTION J.

1. Where the record owner or contract vendee is a corporation, the following additional information shall be submitted:

Name of the Corporation	Telephone Contact Information
Principal Business Address	Place and Date of Incorporation
Method of Incorporation	Official place where the documents and papers of incorporation were filed

2. Please provide the following information for every incorporator, officer, director and shareholder of the corporation.

Name	**Residence or business address**	**Telephone number**

3. Have any shares of the stock of the corporation or of any stockholder been pledged, mortgaged or encumbered?

☐ **YES** ☑ **NO**

If so, please list the name and address of each person having, holding, owning or claiming any such interest.

Name	**Address**

SECTION K. 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**

I, _____ being first duly sworn, according to law, deposes and says that I am (Title) _____, an active and qualified member of the _____, a business duly authorized by law to do business in the State of New York, and that the statements made herein are true, accurate, and complete.

(Print) DWIGHT HEATH

(Signature) _____

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:
409 Fishkill Ave Site Plan

Project Location (describe, and attach a location map):
409 Fishkill Avenue, Beacon NY 12508

Brief Description of Proposed Action:
The Project proposes an adaptive reuse of the existing automobile dealership located on the subject property, with no increase to the building size. The Applicant, SGI-USA will utilize the building for religious assembly and gatherings of up to 200 persons. Site improvements to the parking areas are also proposed as part of the Project that will provide a total of 50 parking spaces on the site including two (2) ADA accessible parking spaces. Additional improvements include architectural alterations to the building facade, new sidewalk around the existing building, reduction in paved areas, elimination of existing site entry points on Conklin Street and Fishkill Avenue, new lighting, and additional landscaping. The facility will operate Monday through Wednesday between 6:00 PM – 9:30 PM and on Saturdays & Sundays between 7:00 AM – 6:00 PM.

Name of Applicant or Sponsor:	Telephone: 310-309-3218
SGI - USA c/o Allen Okazaki-Freeney	E-Mail: aokazaki@sgi-usa.org

Address:
606 Wilshire Boulevard

City/PO:	State:	Zip Code:
Santa Monica	CA	90401

	NO	YES
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.	☑	☐
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: NYSDOT - Highway Work Permit	☐	☑

3. a. Total acreage of the site of the proposed action? 1.183 acres
   b. Total acreage to be physically disturbed? +/-0.9 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 1.183 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

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
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?		
If Yes, identify: _____	☑	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
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?	☐	☑

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies: _____ _____	☐	☑

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water: _____ _____	☐	☑

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment: _____ _____	☐	☑

	NO	YES
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?	☑	☐
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?	☐	☑

	NO	YES
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?	☐	☑
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

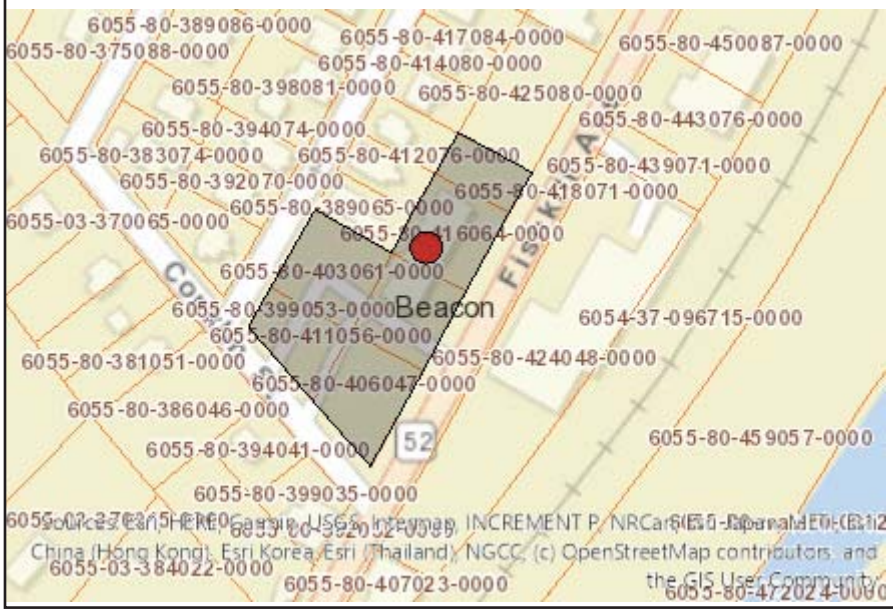
	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered? Indiana Bat	☐	☑
16. Is the project site located in the 100-year flood plan?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☑	☐
If 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: Intend to utilize existing culvert pipe discharges to the stormwater conveyance system along Fishkill Avenue.		
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:	☑	☐
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:	☑	☐
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:	☑	☐

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: Eric S. Rogge, P.E. Date: 11/28/2023

Signature: _____ Title: Consultanting Engineer for Applicant

PRINT FORM



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]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 15 [Threatened or Endangered Animal - Name]	Indiana Bat
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No

400 Columbus Avenue, Suite 180E
Valhalla, New York 10595
Main: 877 627 3772
colliersengineering.com

Colliers
Engineering
& Design

October 30, 2023

Clifford Sawyer
SGI-USA
606 Wilshire Boulevard
Santa Monica, CA 90401

409 Fishkill Avenue – Traffic Evaluation
City of Beacon, Dutchess County, NY
Colliers Engineering & Design Project No. 23011783A

Dear Mr. Sawyer,

Colliers Engineering & Design has conducted a traffic evaluation of the proposed SGI-USA development ("the Project") to be located at 409 Fishkill Avenue in the City of Beacon, Dutchess County, New York. The Project proposes an adaptive reuse of the existing Healey Ford dealership located on the subject property. As shown in Figure No. 1 below, the site is located at the northeast corner of Fishkill Avenue and Conklin Street bounded by Conklin Street to the south, Fishkill Avenue to the east and Mead Avenue to the west. The Project site is currently provided access via two (2) existing access driveways to Fishkill Avenue and another existing driveway connection to Conklin Street. The existing dealership building is approximately 5,454 sq. ft.

The Project proposes to adaptively reuse the existing building with no changes to its overall size. SGI-USA will utilize the building for religious assembly and gatherings of up to 200 persons. Site improvements to the parking areas are also proposed as part of the Project that will provide a total of 50 parking spaces on the Site including two (2) ADA accessible parking spaces. The following provides further details of the proposed use and the associated traffic evaluation.

Colliers Engineering & Design

Figure No. 1 – Site Location Map

Source: Dutchess Count, NY Parcel Access

Project Description

SGI-USA (Soka Gakkai International), a Buddhist religious organization, proposes to adaptively reuse the existing dealership building to convert it to a religious gathering space. The facility will operate Monday through Wednesday between 6:00 PM – 9:30 PM and on Saturdays & Sundays between 7:00 AM – 6:00 PM.

The weeknight (Monday through Wednesday) operations will consist of gatherings of between 30-50 attendees occurring between 7:00 PM – 8:30 PM. Saturday operations will consist of two (2) gatherings with a total of 50 – 100 attendees over the course of the day. The gatherings will be held between 11:00 AM – 12:30 PM and between 1:00 PM – 3:00 PM. Sunday operations will consist of three (3) gatherings also with a total of 50 -100 attendees over the course of the day. The Sunday gathering times will be 8:00 AM – 9:30 AM, 10:00 AM – 12:00 PM and 1:00 PM – 3:00 PM. In addition, a larger monthly gathering will be held once a month on a Sunday morning that will have 150 –200 attendees.

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Existing Traffic Conditions

The Project site is located along and will have access to Fishkill Avenue. Fishkill Avenue is classified as an urban minor arterial roadway under the jurisdiction of the City of Beacon. It traverses in a generally northeast/southwest direction throughout the City of Beacon. In the immediate vicinity of the site, Fishkill Avenue is a two-lane roadway with paved shoulders and curbing. There is a sidewalk present along the west side of the roadway. The posted speed limit in this area is 30 MPH and there is no on-street parking permitted along the roadway.

It should also be noted that this section of Fishkill Avenue was previously proposed for roadway, curbing, sidewalk, signing and striping improvements as part of the Rehabilitation of Teller Avenue and Fishkill Avenue that is currently under development. It is our understanding that the scope of that project has been reduced and this section of Fishkill Avenue is no longer included as part of the planned improvements.

In order to assess the existing traffic conditions along Fishkill Avenue in the vicinity of the Project, traffic volume data previously collected by representatives of Colliers Engineering & Design for the intersection of Fishkill Avenue at Conklin Street on Thursday October 6, 2022 for the AM and PM Peak Hours, and October 8, 2022 for the Saturday Peak Hour was referenced. Traffic volume data available from the New York State Department of Transportation (NYSDOT) and Dutchess County for the Fishkill Avenue corridor was also obtained and referenced. Based on this information, which is contained in Appendix A for reference, a summary of the traffic volumes passing the Project site during each of the identified peak hours as well as on a daily basis, is provided int Table No. 1 below.

Table No. 1 – NYS Route 52 Existing Traffic Volumes

Peak Hour	Route 52 Northbound	Route 52 Southbound	Route 52 Total Volumes
Weekday AM Peak Hour (8:00 AM – 9:00 AM)[1]	447	393	840
Weekday PM Peak Hour (4:15 PM – 5:15 PM)[1]	550	661	1,211
Saturday Peak Hour (1:00 PM – 2:00 PM)[1]	405	534	939
Average Daily Traffic Volume[2]	4,539	4,224	8,763

Notes:

1. Weekday AM, Weekday PM and Saturday Peak Hour traffic volumes based on turning movement counts conducted at the Fishkill Avenue/Conklin Street intersection on Thursday October 6, 2022, and Saturday October 8, 2022.
2. Average Daily Traffic Volumes for NYSDOT Route 52 based on Dutchess County traffic volume data for Fishkill Avenue collected Sunday April 30, 2023, through Thursday May 4, 2023.

It should be noted that while existing traffic volume data for NYS Route 52 on a Sunday is not currently available, it is assumed that Sunday Traffic Volumes are comparable to Saturday traffic volumes along the roadway.

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Project Traffic Generation

Estimates of the amount of traffic to be generated by the Project during various time periods were developed based on information published by the Institute of Transportation Engineers (ITE) as contained in the report entitled "Trip Generation", 11th Edition, 2021. The estimates of traffic generated by the Project we calculated based on ITE Land Use Category – 560 – Church, which is the most similar ITE Land Use to the proposed Project use of the facility. Table No. 2 below provides a summary of the estimated traffic generation rates and volumes for each of the peak hours based on the ITE data.

Table No. 2 – Hourly Trip Generation Rates (HTGR) and Site Generated Traffic Volumes

Peak Hour	Entry		Exit		Total Volume
	HTGR[1]	Volume	HTGR[1]	Volume	
Weekday AM Peak Hour	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
Weekday PM Peak Hour	0.095	19	0.065	13	32
Saturday Peak Hour	0.235	47	0.235	47	94
Sunday Peak Hour	0.205	41	0.215	43	84

Notes:

1. The Hourly Trip Generation Rates (HTGR) are based on data published by the Institute of Transportation Engineers (ITE) as contained in the Trip Generation Handbook, 11th Edition, 2021. ITE Lane Use Category 560 – Church for Weekday PM Peak Hour of Generator, Saturday Peak Hour of Generator and Sunday Peak Hour of Generator.
2. Average Daily Traffic Volumes for NYSDOT Route 52 based on Dutchess County traffic volume data for Fishkill Avenue collected Sunday April 30, 2023, through Thursday May 4, 2023.

It should be noted that the Project is not anticipated to generate any significant traffic during the Weekday AM Peak Hour since weekday operations of the facility typically occur between 6:00 PM – 9:30 PM.

During each of the peak hours the total estimated traffic generation of Project will be less than the NYSDOT and ITE threshold volume of 100 site generated peak hour trips on any one intersection approach. NYSDOT and ITE provide this threshold volume for guidance on the need for detailed analysis of intersection locations where the increase in vehicle traffic by a Project has the potential to impact traffic operations at off-site intersections. Since the estimated traffic generation for the Project is less than the 100-trip threshold it is concluded that further analysis of the Project traffic generation is not required, and the Project generated traffic can be accommodated on the existing roadway network without significant impact to existing operating conditions.

Colliers Engineering & Design

Site Access

As previously indicated the Project site is currently provided access via two (2) existing access driveways to Fishkill Avenue and another existing driveway connection to Conklin Street. The Project proposes onsite modifications that will result in the elimination of the existing Conklin Street driveway. The two (2) existing driveways to Fishkill Avenue will be maintained with landscaping and other upgrades to better define the driveway locations. The southerly driveway will be a 24-ft wide two-way driveway serving the main parking area to be provided on the site while the northerly driveway will be a 24-ft wide two-way driveway serving a smaller parking area of four (4) parking spaces including (2) ADA accessible spaces. A drive aisle provided in front of the building will also connect the north and south driveways.

Sight distances were reviewed for each of the site access driveway locations. Based on recent Dutchess County data collected in May 2023, the 85th percentile speed along Fishkill Avenue in this area is approximately 37 MPH where the posted speed limit is 30 MPH. The sight distance analysis for the driveways has been conducted assuming a 40 MPH design speed which results in a somewhat conservative analysis of sight distance conditions in this area. The sight distance analysis, which is summarized in Table No. 3 below for both of the driveway locations, indicates that all required stopping sight distances and recommended intersection sight distances will be exceeded for both of the driveway locations.

Table No. 3 – Sight Distance Summary

Sight Line		Available Sight Distance (Feet)	AASHTO Sight Distances	
			Stopping Sight Distance (Feet)	Intersection Sight Distance (Feet)
South Driveway				
Left Turn from Site Access	Looking Left (North)	525	305	445
	Looking Right (South)	1,000	305	445
Left Turn from Major Road	Left Turn Entry (Ahead)	1,000	305	325
	Left Turn Entry (Rear End)	560	305	---
North Driveway				
Left Turn from Site Access	Looking Left (North)	650	305	445
	Looking Right (South)	850	305	445
Left Turn from Major Road	Left Turn Entry (Ahead)	850	305	325
	Left Turn Entry (Rear End)	700	305	---

Notes:

1. AASHTO Sight Distances based on 40 MPH design speed.

It is noted that landscaping improvements are proposed along the site frontage, which include the installation of new street trees. These trees have been positioned such that they will not impact the sight lines for vehicles exiting each of the driveway locations. Sight distance triangles are provided on the Site plans to designate the area of maintenance of vegetation to ensure sight distance is continually provided for each of the driveway locations.

Parking

As indicated previously, the Project proposes site improvements that will result in a total of off-street 50 parking spaces being provided on the Site including two (2) ADA accessible parking spaces. The parking needs of the Project were assessed based on the City of Beacon code requirements. The Project site falls within the City of Beacon GB – General Business zoning district. The off-street parking requirements for the GB district are specific in Section 223-26.F of the City of Beacon Code, which indicates that the minimum off-street parking requirement for a place of worship, theater, auditorium, athletic field or other place of assembly is 1 space for each 4 seats or pew spaces or, in places without seats, 1 space for each 100 square feet of floor space used for public assembly. The Project proposes a total of 200 seats within the proposed building which results in a total parking requirement of 50 parking spaces. Therefore, the Project will satisfy the minimum parking requirement based on the City Code.

Conclusion

Based on the above analysis, it is anticipated that the additional traffic generated by the Project will not have a significant impact on traffic operating conditions in the vicinity of the Site. Furthermore, as summarized above, the Project will provide sufficient off-street parking to satisfy the City of Beacon minimum off-street parking requirements. Sight distance triangles identified on the site plans designate the area of maintenance of proposed vegetation along the site frontage to ensure sight distance is continually provided for each of the driveway locations.

Sincerely,

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.

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

R:\Projects\2023\23011783A\Reports\Traffic\Word\231030RGD_Traffic Evaluation_Final.docx

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Appendix

Appendix A | Traffic Volume Data

Colliers Engineering

400 Columbus Avenue Suite 180 E
Valhalla, NY, 10595

Customer Loyalty through Client Satisfaction

File Name : 1-_FISHKILL_AVE_&_CONKLIN_ST-THU_998939_10-06-2022
Site Code :
Start Date : 10/6/2022
Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

	FISHKILL AVE From North					From East					FISHKILL AVE From South					CONKLIN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:00 AM	0	25	0	0	25	0	0	0	0	0	0	30	0	0	30	1	0	1	0	2	57
06:15 AM	0	23	0	0	23	0	0	0	0	0	0	27	1	0	28	0	0	0	1	1	52
06:30 AM	0	40	0	0	40	0	0	0	0	0	0	49	0	0	49	2	0	1	1	4	93
06:45 AM	0	67	0	0	67	0	0	0	0	0	0	67	0	0	67	1	0	2	0	3	137
Total	0	155	0	0	155	0	0	0	0	0	0	173	1	0	174	4	0	4	2	10	339
07:00 AM	0	90	0	0	90	0	0	0	0	0	0	44	0	0	44	0	0	3	3	6	140
07:15 AM	0	100	0	0	100	0	0	0	0	0	0	98	0	0	98	2	0	1	1	4	202
07:30 AM	1	75	0	0	76	0	0	0	0	0	0	71	0	0	71	2	0	0	4	6	153
07:45 AM	0	125	0	0	125	0	0	0	0	0	0	80	0	0	80	3	0	2	0	5	210
Total	1	390	0	0	391	0	0	0	0	0	0	293	0	0	293	7	0	6	8	21	705
08:00 AM	2	102	0	0	104	0	0	0	0	0	0	121	2	0	123	2	0	1	2	5	232
08:15 AM	1	98	0	0	99	0	0	0	0	0	0	102	3	0	105	5	0	1	1	7	211
08:30 AM	1	97	0	0	98	0	0	0	0	0	0	98	1	0	99	3	0	0	1	4	201
08:45 AM	1	91	0	0	92	0	0	0	0	0	0	124	2	0	126	4	0	0	7	11	229
Total	5	388	0	0	393	0	0	0	0	0	0	445	8	0	453	14	0	2	11	27	873
Grand Total	6	933	0	0	939	0	0	0	0	0	0	911	9	0	920	25	0	12	21	58	1917
Apprch %	0.6	99.4	0	0		0	0	0	0		0	99	1	0		43.1	0	20.7	36.2		
Total %	0.3	48.7	0	0	49	0	0	0	0	0	0	47.5	0.5	0	48	1.3	0	0.6	1.1	3	
Lights	5	904	0	0	909	0	0	0	0	0	0	879	9	0	888	24	0	12	0	36	1833
% Lights	83.3	96.9	0	0	96.8	0	0	0	0	0	0	96.5	100	0	96.5	96	0	100	0	62.1	95.6
Buses	1	15	0	0	16	0	0	0	0	0	0	17	0	0	17	1	0	0	0	1	34
% Buses	16.7	1.6	0	0	1.7	0	0	0	0	0	0	1.9	0	0	1.8	4	0	0	0	1.7	1.8
Trucks	0	14	0	0	14	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	29
% Trucks	0	1.5	0	0	1.5	0	0	0	0	0	0	1.6	0	0	1.6	0	0	0	0	0	1.5
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21	21
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	36.2	1.1

Colliers Engineering

400 Columbus Avenue Suite 180 E
Valhalla, NY, 10595

Customer Loyalty through Client Satisfaction

File Name : 1-_FISHKILL_AVE_&_CONKLIN_ST-THU_998939_10-06-2022
Site Code :
Start Date : 10/6/2022
Page No : 2

	FISHKILL AVE From North					From East					FISHKILL AVE From South					CONKLIN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	**2**	**102**	0	0	**104**	0	0	0	0	0	0	121	2	0	123	2	0	**1**	2	5	**232**
08:15 AM	1	98	0	0	99	0	0	0	0	0	0	102	**3**	0	105	**5**	0	1	1	7	211
08:30 AM	1	97	0	0	98	0	0	0	0	0	0	98	1	0	99	3	0	0	1	4	201
08:45 AM	1	91	0	0	92	0	0	0	0	0	0	**124**	2	0	**126**	4	0	0	**7**	**11**	229
Total Volume	5	388	0	0	393	0	0	0	0	0	0	445	8	0	453	14	0	2	11	27	873
% App. Total	1.3	98.7	0	0		0	0	0	0		0	98.2	1.8	0		51.9	0	7.4	40.7		
PHF	.625	.951	.000	.000	.945	.000	.000	.000	.000	.000	.000	.897	.667	.000	.899	.700	.000	.500	.393	.614	.941
Lights	4	377	0	0	381	0	0	0	0	0	0	427	8	0	435	13	0	2	0	15	831
% Lights	80.0	97.2	0	0	96.9	0	0	0	0	0	0	96.0	100	0	96.0	92.9	0	100	0	55.6	95.2
Buses	1	6	0	0	7	0	0	0	0	0	0	8	0	0	8	1	0	0	0	1	16
% Buses	20.0	1.5	0	0	1.8	0	0	0	0	0	0	1.8	0	0	1.8	7.1	0	0	0	3.7	1.8
Trucks	0	5	0	0	5	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	15
% Trucks	0	1.3	0	0	1.3	0	0	0	0	0	0	2.2	0	0	2.2	0	0	0	0	0	1.7
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	11
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	40.7	1.3

Colliers Engineering

400 Columbus Avenue Suite 180 E
Valhalla, NY, 10595

Customer Loyalty through Client Satisfaction

File Name : 1-_FISHKILL_AVE_&_CONKLIN_ST-THU_998939_10-06-2022
Site Code :
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Groups Printed- Lights - Buses - Trucks - Pedestrians

	FISHKILL AVE From North					From East					FISHKILL AVE From South					CONKLIN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
03:00 PM	2	111	0	0	113	0	0	0	0	0	0	114	2	0	116	4	0	1	4	9	238
03:15 PM	5	115	0	0	120	0	0	0	0	0	0	125	1	0	126	2	0	2	1	5	251
03:30 PM	2	119	0	0	121	0	0	0	0	0	0	117	4	0	121	5	0	0	3	8	250
03:45 PM	1	118	0	0	119	0	0	0	0	0	0	102	2	0	104	2	0	0	2	4	227
Total	10	463	0	0	473	0	0	0	0	0	0	458	9	0	467	13	0	3	10	26	966
04:00 PM	0	111	0	0	111	0	0	0	0	0	0	160	2	0	162	3	0	1	3	7	280
04:15 PM	1	167	0	0	168	0	0	0	0	0	0	123	1	0	124	3	0	1	3	7	299
04:30 PM	3	179	0	0	182	0	0	0	0	0	0	152	3	0	155	3	0	1	1	5	342
04:45 PM	1	152	0	0	153	0	0	0	0	0	0	121	1	0	122	5	0	0	1	6	281
Total	5	609	0	0	614	0	0	0	0	0	0	556	7	0	563	14	0	3	8	25	1202
05:00 PM	1	157	0	0	158	0	0	0	0	0	0	151	2	0	153	5	0	1	2	8	319
05:15 PM	0	135	0	0	135	0	0	0	0	0	0	126	0	0	126	0	0	0	1	1	262
05:30 PM	3	173	0	0	176	0	0	0	0	0	0	136	0	0	136	1	0	0	3	4	316
05:45 PM	0	140	0	0	140	0	0	0	0	0	0	114	2	0	116	1	0	0	6	7	263
Total	4	605	0	0	609	0	0	0	0	0	0	527	4	0	531	7	0	1	12	20	1160
Grand Total	19	1677	0	0	1696	0	0	0	0	0	0	1541	20	0	1561	34	0	7	30	71	3328
Apprch %	1.1	98.9	0	0		0	0	0	0		0	98.7	1.3	0		47.9	0	9.9	42.3		
Total %	0.6	50.4	0	0	51	0	0	0	0	0	0	46.3	0.6	0	46.9	1	0	0.2	0.9	2.1	
Lights	19	1656	0	0	1675	0	0	0	0	0	0	1504	20	0	1524	32	0	7	0	39	3238
% Lights	100	98.7	0	0	98.8	0	0	0	0	0	0	97.6	100	0	97.6	94.1	0	100	0	54.9	97.3
Buses	0	6	0	0	6	0	0	0	0	0	0	17	0	0	17	1	0	0	0	1	24
% Buses	0	0.4	0	0	0.4	0	0	0	0	0	0	1.1	0	0	1.1	2.9	0	0	0	1.4	0.7
Trucks	0	15	0	0	15	0	0	0	0	0	0	20	0	0	20	1	0	0	0	1	36
% Trucks	0	0.9	0	0	0.9	0	0	0	0	0	0	1.3	0	0	1.3	2.9	0	0	0	1.4	1.1
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	30	30
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	42.3	0.9

Colliers Engineering

400 Columbus Avenue Suite 180 E
Valhalla, NY, 10595

Customer Loyalty through Client Satisfaction

File Name : 1-_FISHKILL_AVE_&_CONKLIN_ST-THU_998939_10-06-2022
Site Code :
Start Date : 10/6/2022
Page No : 2

	FISHKILL AVE From North					From East					FISHKILL AVE From South					CONKLIN ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	1	167	0	0	168	0	0	0	0	0	0	123	1	0	124	3	0	**1**	**3**	7	299
04:30 PM	**3**	**179**	0	0	**182**	0	0	0	0	0	0	**152**	**3**	0	**155**	3	0	1	1	5	**342**
04:45 PM	1	152	0	0	153	0	0	0	0	0	0	121	1	0	122	**5**	0	0	1	6	281
05:00 PM	1	157	0	0	158	0	0	0	0	0	0	151	2	0	153	5	0	1	2	**8**	319
Total Volume	6	655	0	0	661	0	0	0	0	0	0	547	7	0	554	16	0	3	7	26	1241
% App. Total	0.9	99.1	0	0		0	0	0	0		0	98.7	1.3	0		61.5	0	11.5	26.9		
PHF	.500	.915	.000	.000	.908	.000	.000	.000	.000	.000	.000	.900	.583	.000	.894	.800	.000	.750	.583	.813	.907
Lights	6	649	0	0	655	0	0	0	0	0	0	536	7	0	543	15	0	3	0	18	1216
% Lights	100	99.1	0	0	99.1	0	0	0	0	0	0	98.0	100	0	98.0	93.8	0	100	0	69.2	98.0
Buses	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
% Buses	0	0.2	0	0	0.2	0	0	0	0	0	0	0.9	0	0	0.9	0	0	0	0	0	0.5
Trucks	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	12
% Trucks	0	0.8	0	0	0.8	0	0	0	0	0	0	1.1	0	0	1.1	6.3	0	0	0	3.8	1.0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	7
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	26.9	0.6

Colliers Engineering

400 Columbus Avenue Suite 180 E
Valhalla, NY, 10595

Customer Loyalty through Client Satisfaction

File Name : 1-_FISHKILL_AVE_&_CONKLIN_ST-SAT_998946_10-08-2022
Site Code :
Start Date : 10/8/2022
Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

	FISHKILL AVE From North					From East					FISHKILL AVE From South					Eastbound Approach From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	1	94	0	0	95	0	0	0	0	0	0	104	3	0	107	2	0	2	0	4	206
11:15 AM	0	113	0	0	113	0	0	0	0	0	0	107	2	0	109	0	0	4	3	7	229
11:30 AM	1	95	0	2	98	0	0	0	0	0	0	99	0	0	99	4	0	2	1	7	204
11:45 AM	1	107	0	0	108	0	0	0	0	0	0	99	2	0	101	2	0	2	4	8	217
Total	3	409	0	2	414	0	0	0	0	0	0	409	7	0	416	8	0	10	8	26	856
12:00 PM	1	135	0	0	136	0	0	0	0	0	0	104	2	1	107	3	0	2	4	9	252
12:15 PM	0	127	0	0	127	0	0	0	0	0	0	101	2	0	103	3	0	2	2	7	237
12:30 PM	1	126	0	0	127	0	0	0	0	0	0	107	1	0	108	0	0	4	0	4	239
12:45 PM	0	116	0	0	116	0	0	0	0	0	0	94	1	0	95	2	0	0	0	2	213
Total	2	504	0	0	506	0	0	0	0	0	0	406	6	1	413	8	0	8	6	22	941
01:00 PM	1	137	0	0	138	0	0	0	0	0	0	115	0	0	115	1	0	0	4	5	258
01:15 PM	1	127	0	0	128	0	0	0	0	0	0	89	2	0	91	1	0	1	1	3	222
01:30 PM	0	141	0	1	142	0	0	0	0	0	0	82	1	0	83	0	0	1	4	5	230
01:45 PM	1	126	0	0	127	0	0	0	0	0	0	115	0	0	115	4	0	2	3	9	251
Total	3	531	0	1	535	0	0	0	0	0	0	401	3	0	404	6	0	4	12	22	961
Grand Total	8	1444	0	3	1455	0	0	0	0	0	0	1216	16	1	1233	22	0	22	26	70	2758
Apprch %	0.5	99.2	0	0.2		0	0	0	0		0	98.6	1.3	0.1		31.4	0	31.4	37.1		
Total %	0.3	52.4	0	0.1	52.8	0	0	0	0	0	0	44.1	0.6	0	44.7	0.8	0	0.8	0.9	2.5	
Lights	8	1439	0	0	1447	0	0	0	0	0	0	1204	15	0	1219	21	0	20	0	41	2707
% Lights	100	99.7	0	0	99.5	0	0	0	0	0	0	99	93.8	0	98.9	95.5	0	90.9	0	58.6	98.2
Buses	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0.1
Trucks	0	5	0	0	5	0	0	0	0	0	0	9	1	0	10	1	0	2	0	3	18
% Trucks	0	0.3	0	0	0.3	0	0	0	0	0	0	0.7	6.2	0	0.8	4.5	0	9.1	0	4.3	0.7
Pedestrians	0	0	0	3	3	0	0	0	0	0	0	0	0	1	1	0	0	0	26	26	30
% Pedestrians	0	0	0	100	0.2	0	0	0	0	0	0	0	0	100	0.1	0	0	0	100	37.1	1.1

Colliers Engineering

400 Columbus Avenue Suite 180 E
Valhalla, NY, 10595

Customer Loyalty through Client Satisfaction

File Name : 1-_FISHKILL_AVE_&_CONKLIN_ST-SAT_998946_10-08-2022
Site Code :
Start Date : 10/8/2022

	FISHKILL AVE From North					From East					FISHKILL AVE From South					Eastbound Approach From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	**1**	137	0	0	138	0	0	0	0	0	0	**115**	0	0	**115**	1	0	0	**4**	5	**258**
01:15 PM	1	127	0	0	128	0	0	0	0	0	0	89	**2**	0	91	1	0	1	1	3	222
01:30 PM	0	**141**	0	**1**	**142**	0	0	0	0	0	0	82	1	0	83	0	0	1	4	5	230
01:45 PM	1	126	0	0	127	0	0	0	0	0	0	115	0	0	115	**4**	0	**2**	3	**9**	251
Total Volume	3	531	0	1	535	0	0	0	0	0	0	401	3	0	404	6	0	4	12	22	961
% App. Total	0.6	99.3	0	0.2		0	0	0	0		0	99.3	0.7	0		27.3	0	18.2	54.5		
PHF	.750	.941	.000	.250	.942	.000	.000	.000	.000	.000	.000	.872	.375	.000	.878	.375	.000	.500	.750	.611	.931
Lights	3	529	0	0	532	0	0	0	0	0	0	397	3	0	400	6	0	4	0	10	942
% Lights	100	99.6	0	0	99.4	0	0	0	0	0	0	99.0	100	0	99.0	100	0	100	0	45.5	98.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
% Trucks	0	0.4	0	0	0.4	0	0	0	0	0	0	1.0	0	0	1.0	0	0	0	0	0	0.6
Pedestrians	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	13
% Pedestrians	0	0	0	100	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	100	54.5	1.4

Dutchess County
Traffic Count Hourly Report

Source: Speed Data

ROAD #: ROAD NAME: **FISHKILL AVE** FROM: **VERPLANCK AVE** TO: **PROSPECT ST** COUNTY: **Dutchess**
DIRECTION: Northbound FACTOR GROUP: 30 REC. SERIAL #: SB88 FUNC. CLASS: 16 CITY:
STATE DIR CODE: 6 WK OF YR: 17 PLACEMENT: 21ft N/O Larch St NHS: no LION#:
DATE OF COUNT: 04/30/2023 @ REF MARKER: JURIS: County BIN:
NOTES LANE 1: ADDL DATA: Class Speed CC Stn: RR CROSSING:
COUNT TYPE: VEHICLES BATCH ID: DCTC List 1 HPMS SAMPLE:
COUNT TAKEN BY: ORG CODE: NDS INITIALS: ATA PROCESSED BY: ORG CODE: NDS INITIALS: ATA

		AM												PM													
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
DATE	DAY																										
30	S													**308**	**337**	**280**	**272**	**212**	**259**	**195**	**175**	**124**	**90**	**67**	**42**			
1	M	**31**	**7**	**11**	**3**	**7**	**19**	**67**	**183**	**369**	**327**	**253**	**266**	**299**	**308**	**323**	**338**	**385**	**395**	**358**	**305**	**241**	**181**	**107**	**70**	4853	395	17
2	T	**36**	**10**	**8**	**4**	**4**	**16**	**71**	**185**	**331**	**288**	**253**	**261**	**284**	**278**	**257**	**335**	**365**	**355**	**343**	**348**	**263**	**224**	**124**	**71**	4714	365	16
3	W	**44**	**16**	**13**	**6**	**11**	**23**	**66**	**178**	**358**	**321**	**264**	**250**	**270**	**274**	**284**	**399**	**413**	**441**	**356**	**307**	**205**	**153**	**100**	**46**	4798	441	17
4	T	**27**	**11**	**5**	**4**	**5**	**18**	**64**	**162**	**356**	**284**	**272**	**269**														

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
36	**12**	**9**	**5**	**7**	**19**	**67**	**177**	**354**	**305**	**260**	**262**	**284**	**287**	**288**	**357**	**388**	**397**	**352**	**320**	**236**	**186**	**110**	**62**	**4780**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	96	3	78	397	8%	1.000	1.053

ESTIMATED

AADT
4539

Dutchess County
Traffic Count Hourly Report

ROAD #: ROAD NAME: **FISHKILL AVE**
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 7 WK OF YR: 17
DATE OF COUNT: 04/30/2023
NOTES LANE 1:

COUNT TAKEN BY: ORG CODE: NDS INITIALS: ATA

FROM: **VERPLANCK AVE**
REC. SERIAL #: SB88
PLACEMENT: 21ft N/O Larch St
@ REF MARKER:
ADDL DATA: Class Speed
COUNT TYPE: VEHICLES

PROCESSED BY: ORG CODE: NDS INITIALS: ATA

TO: **PROSPECT ST**
FUNC. CLASS: 16
NHS: no
JURIS: County
CC Stn:
BATCH ID: DCTC List 1

COUNTY: **Dutchess**
CITY:
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

		AM												PM													
DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
30	S													**298**	**347**	**281**	**265**	**242**	**231**	**221**	**186**	**124**	**87**	**62**	**34**			
1	M	**22**	**16**	**2**	**9**	**10**	**18**	**36**	**98**	**213**	**287**	**244**	**238**	**308**	**316**	**254**	**353**	**358**	**406**	**405**	**322**	**230**	**153**	**94**	**75**	4467	406	17
2	T	**34**	**18**	**5**	**8**	**5**	**19**	**30**	**102**	**238**	**251**	**237**	**235**	**278**	**271**	**288**	**319**	**367**	**403**	**366**	**297**	**231**	**179**	**102**	**64**	4347	403	17
3	W	**35**	**19**	**5**	**7**	**9**	**23**	**42**	**108**	**232**	**302**	**257**	**223**	**273**	**297**	**277**	**378**	**350**	**426**	**417**	**312**	**203**	**177**	**93**	**67**	4532	426	17
4	T	**34**	**12**	**4**	**5**	**9**	**23**	**37**	**124**	**212**	**242**	**265**	**228**															

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
34	**16**	**5**	**7**	**8**	**22**	**36**	**108**	**224**	**270**	**251**	**231**	**286**	**295**	**273**	**350**	**358**	**412**	**396**	**310**	**221**	**170**	**96**	**69**	**4448**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	96	3	78	412	9%	1.000	1.053

ESTIMATED

AADT
4224

Dutchess County
Classification Count Average Weekday Data Report

ROAD #:
COUNTY NAME: Dutchess
REGION CODE: 8
FROM: VERPLANCK AVE
TO: PROSPECT ST
REF-MARKER:
END MILEPOINT: 157
FUNC-CLASS: 16
STATION NO: 8612
COUNT TAKEN BY: ORG CODE: NDS INITIALS: ATA
PROCESSED BY: ORG CODE: NDS INITIALS: ATA

ROAD NAME: FISHKILL AVE
NO. OF LANES: 2
HPMS NO:
LION#:
BATCH ID: DCTC List 1

YEAR: 2023
MONTH: April

STATION: 828612

DIRECTION	North	South	TOTAL
NUMBER OF VEHICLES	**4753**	**4443**	**9196**
NUMBER OF AXLES	**9538**	**8916**	**18454**
% HEAVY VEHICLES (F4-F13)	**2.84%**	**2.34%**	**2.60%**
% TRUCKS AND BUSES (F3-F13)	**15.76%**	**14.81%**	**15.30%**
AXLE CORRECTION FACTOR	**1.00**	**1.00**	**1.00**

VEHICLE CLASS		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	TOTAL
NO. OF AXLES		2	2	2	2.5	2	3	4	3.5	5	6	5	6	8.75	
ENDING HOUR	1:00	0	32	3	0	0	0	0	0	0	0	0	0	0	**35**
	2:00	0	11	1	0	0	0	0	0	0	0	0	0	0	**12**
	3:00	1	6	2	0	0	0	0	0	0	0	0	0	0	**9**
	4:00	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
	5:00	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
	6:00	0	14	3	1	0	0	0	0	0	0	0	0	0	**18**
	7:00	0	56	7	2	1	0	0	0	0	0	0	0	0	**66**
	8:00	0	135	32	5	4	0	0	0	0	0	0	0	0	**176**
	9:00	1	293	44	4	10	1	0	0	0	0	0	0	0	**353**
	10:00	1	246	46	0	8	0	0	0	1	0	0	0	0	**302**
DIRECTION	11:00	0	205	42	3	8	1	0	0	0	0	0	0	0	**259**
North	12:00	2	205	42	3	7	1	0	0	0	0	0	0	0	**260**
	13:00	4	226	42	1	10	1	0	1	0	0	0	0	0	**285**
	14:00	0	232	42	1	9	1	0	0	0	0	0	0	0	**285**
	15:00	1	231	44	1	8	0	0	2	0	0	0	0	0	**287**
	16:00	0	293	47	2	9	1	0	1	1	0	0	0	0	**354**
	17:00	1	333	43	2	7	0	0	0	0	0	0	0	0	**386**
	18:00	1	347	44	0	4	0	0	0	0	0	0	0	0	**396**
	19:00	0	309	36	1	3	0	0	0	0	0	0	0	0	**349**
	20:00	0	285	30	0	2	0	0	0	0	0	0	0	0	**317**
	21:00	0	208	25	0	2	0	0	0	0	0	0	0	0	**235**
	22:00	0	163	20	0	2	0	0	0	0	0	0	0	0	**185**
	23:00	0	95	14	0	1	0	0	0	0	0	0	0	0	**110**
	24:00	0	57	3	1	1	0	0	0	0	0	0	0	0	**62**
TOTAL VEHICLES		**12**	**3992**	**614**	**27**	**96**	**6**	**0**	**4**	**2**	**0**	**0**	**0**	**0**	**4753**
TOTAL AXLES		24	7984	1228	68	192	18	0	14	10	0	0	0	0	9538
ENDING HOUR	1:00	0	31	3	0	0	0	0	0	0	0	0	0	0	**34**
	2:00	0	15	1	0	0	0	0	0	0	0	0	0	0	**16**
	3:00	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
	4:00	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
	5:00	0	4	3	0	1	0	0	0	0	0	0	0	0	**8**
	6:00	0	17	2	0	1	1	0	0	0	0	0	0	0	**21**
	7:00	0	26	8	0	0	1	0	0	0	0	0	0	0	**35**
	8:00	0	89	15	2	1	0	0	0	0	0	0	0	0	**107**
	9:00	0	179	34	4	6	0	0	1	0	0	0	0	0	**224**
	10:00	1	220	41	0	7	1	0	0	0	0	0	0	0	**270**
	11:00	1	197	39	2	10	1	0	0	0	0	0	0	0	**250**
DIRECTION	12:00	0	182	41	2	5	1	0	0	0	0	0	0	0	**231**
South	13:00	1	233	43	1	6	1	1	1	0	0	0	0	0	**287**
	14:00	1	245	36	1	9	1	0	1	0	0	0	0	0	**294**
	15:00	1	233	33	0	4	0	0	2	0	0	0	0	0	**273**
	16:00	1	298	42	1	5	1	0	2	0	0	0	0	0	**350**
	17:00	1	303	49	1	4	0	0	0	0	0	0	0	0	**358**
	18:00	0	360	45	0	5	0	0	0	0	0	0	0	0	**410**
	19:00	0	354	40	0	2	1	0	0	0	0	0	0	0	**397**
	20:00	0	279	28	1	3	0	0	0	0	0	0	0	0	**311**
	21:00	0	199	22	0	0	0	0	0	0	0	0	0	0	**221**
	22:00	0	155	15	0	0	0	0	0	0	0	0	0	0	**170**
	23:00	0	87	8	0	1	1	0	0	0	0	0	0	0	**97**
	24:00	0	62	5	1	0	0	0	0	0	0	0	0	0	**68**
TOTAL VEHICLES		**7**	**3778**	**554**	**16**	**70**	**10**	**1**	**7**	**0**	**0**	**0**	**0**	**0**	**4443**
TOTAL AXLES		14	7556	1108	40	140	30	4	24	0	0	0	0	0	8916
GRAND TOTAL VEHICLES		**19**	**7770**	**1168**	**43**	**166**	**16**	**1**	**11**	**2**	**0**	**0**	**0**	**0**	**9196**
GRAND TOTAL AXLES		38	15540	2336	108	332	48	4	38	10	0	0	0	0	18454

TRAFFIC FLOW BY DIRECTION

--- North - -South

PEAK HOUR DATA

DIRECTION	HOUR	COUNT	2-WAY	HOUR	COUNT
North	**18**	**396**	**A.M.**	**9**	**577**
South	**18**	**410**	**P.M.**	**18**	**806**

VEHICLE CLASSIFICATION CODES:

F1. Motorcycles
F2. Autos*
F3. 2 Axle, 4-Tire Pickups, Vans, Motorhomes*
F4. Buses
F5. 2 Axle, 6-Tire Single Unit Trucks
F6. 3 Axle Single Unit Trucks
F7. 4 or More Axle Single Unit Trucks
F8. 4 or Less Axle Vehicles, One Unit is a Truck
F9. 5 Axle Double Unit Vehicles, One Unit is a Truck
F10. 6 or More Double Unit Vehicles, One Unit is a Truck
F11. 5 or Less Axle Multi-Unit Trucks
F12. 6 Axle Multi-Unit Trucks
F13. 7 or More Axle Multi-Unit Trucks

* INCLUDING THOSE HAULING TRAILERS

FUNCTIONAL CLASS CODES:

RURAL	URBAN	SYSTEM
01	11	PRINCIPAL ARTERIAL-INTERSTATE
02	12	PRINCIPAL ARTERIAL-EXPRESSWAY
02	14	PRINCIPAL ARTERIAL-OTHER
06	16	MINOR ARTERIAL
07	17	MAJOR COLLECTOR
08	17	MINOR COLLECTOR
09	19	LOCAL SYSTEM

SOURCE: NYSDOT DATA SERVICES BUREAU

Dutchess County
Speed Count Average Weekday Report

Station:	828612	Start date:	Sun 04/30/2023 11:00	Count duration:	97 hours
Road #:	Road name: FISHKILL AVE	End date:	Thu 05/04/2023 11:45	Functional class:	16
From:	VERPLANCK AVE	County:	Dutchess	Factor group:	30
To:	PROSPECT ST	Town:		Batch ID:	DCTC List 1
Direction:	North	Speed limit:	30	Count taken by:	Org: NDS Init: ATA
		LION#:		Processed by:	Org: NDS Init: ATA

Speeds, mph

Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	0	0	7	15	10	3	1	0	0	0	0	0	0	2.8	0.0	0.0	0.0	0.0	33.5	33.7	39.4	36
2:00	0	1	1	7	3	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	31.9	32.9	37.0	12
3:00	0	1	0	4	3	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	33.2	34.4	39.5	9
4:00	0	0	1	2	1	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	33.8	33.8	41.3	5
5:00	0	0	1	3	2	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	34.1	34.2	39.9	7
6:00	1	1	3	7	6	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	30.7	33.6	39.2	20
7:00	1	2	6	26	22	7	3	0	0	0	0	0	0	4.5	0.0	0.0	0.0	0.0	33.6	34.8	40.0	67
8:00	2	4	25	83	53	9	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	32.5	33.5	38.4	176
9:00	8	21	86	168	62	7	2	0	0	0	0	0	0	0.6	0.0	0.0	0.0	0.0	30.3	31.9	36.5	354
10:00	10	22	66	137	62	7	1	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	30.0	32.0	37.0	305
11:00	3	15	60	123	54	6	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	30.9	32.2	37.0	261
12:00	6	10	53	136	48	8	2	0	0	0	0	0	0	0.8	0.0	0.0	0.0	0.0	30.9	32.3	37.0	263
13:00	6	20	63	127	59	9	1	0	0	0	0	0	0	0.4	0.0	0.0	0.0	0.0	30.5	32.2	37.3	285
14:00	7	17	71	136	48	6	1	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	30.1	31.8	36.3	286
15:00	5	11	67	137	57	9	1	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	31.0	32.3	37.2	287
16:00	7	22	94	161	63	10	1	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	30.3	31.8	36.7	358
17:00	5	21	96	190	65	9	1	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	30.7	31.9	36.4	387
18:00	10	34	106	180	60	7	1	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	29.6	31.4	35.7	398
19:00	5	16	80	172	69	9	1	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	31.0	32.2	36.9	352
20:00	8	18	64	157	67	7	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	30.5	32.3	37.0	321
21:00	3	7	50	120	50	4	1	0	0	0	0	0	0	0.4	0.0	0.0	0.0	0.0	31.4	32.4	37.0	235
22:00	3	7	40	87	38	10	1	0	0	0	0	0	0	0.5	0.0	0.0	0.0	0.0	31.3	32.5	37.8	186
23:00	1	5	24	47	28	4	1	0	0	0	0	0	0	0.9	0.0	0.0	0.0	0.0	31.6	32.7	38.0	110
24:00	1	1	11	32	13	4	1	0	0	0	0	0	0	1.6	0.0	0.0	0.0	0.0	32.0	32.9	38.3	63
Avg. Daily Total	92	256	1075	2257	943	140	20	0	0	0	0	0	0	0.4	0.0	0.0	0.0	0.0	30.7	32.2	37.1	4783
Percent	1.9%	5.4%	22.5%	47.2%	19.7%	2.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	1.9%	7.3%	29.8%	76.9%	96.7%	99.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	4	11	45	94	39	6	1	0	0	0	0	0	0									199

	Avg. Speed	50th% Speed	85th% Speed
North	30.7	32.2	37.1
South	29.0	30.3	34.5

Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	18	398	A.M.	9	578
South	18	412	P.M.	18	810

TRAFFIC FLOW BY DIRECTION

Dutchess County
Speed Count Average Weekday Report

Station:	828612	Start date:	Sun 04/30/2023 11:00	Count duration:	97 hours
Road #:	Road name: FISHKILL AVE	End date:	Thu 05/04/2023 11:45	Functional class:	16
From:	VERPLANCK AVE	County:	Dutchess	Factor group:	30
To:	PROSPECT ST	Town:		Batch ID:	DCTC List 1
Direction:	South	Speed limit:	30	Count taken by:	Org: NDS Init: ATA
		LION#:		Processed by:	Org: NDS Init: ATA

Speeds, mph

Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	0	1	8	18	6	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	31.7	32.3	36.6	34
2:00	0	0	4	7	5	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	32.4	32.9	37.6	16
3:00	0	0	1	2	1	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	33.8	33.8	41.3	5
4:00	0	0	0	5	1	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	34.3	33.6	39.8	7
5:00	0	0	1	2	3	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	33.7	35.0	38.6	6
6:00	1	0	8	7	5	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	29.8	31.5	37.8	22
7:00	0	1	6	18	8	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	32.5	33.0	38.0	35
8:00	2	5	16	52	29	4	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	31.6	33.0	37.9	108
9:00	6	16	71	102	25	4	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	29.3	31.0	34.8	224
10:00	6	16	99	114	31	3	1	0	0	0	0	0	0	0.4	0.0	0.0	0.0	0.0	29.4	30.7	34.8	270
11:00	7	18	96	101	26	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	28.9	30.2	34.6	250
12:00	4	15	92	96	22	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	29.2	30.3	34.5	231
13:00	14	29	112	103	27	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	27.7	29.5	34.4	287
14:00	16	26	106	124	21	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	27.7	30.0	34.2	295
15:00	4	25	112	105	24	2	1	0	0	0	0	0	0	0.4	0.0	0.0	0.0	0.0	29.0	29.8	34.4	273
16:00	7	43	155	119	24	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	28.2	29.1	33.9	350
17:00	7	27	139	163	20	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	28.9	30.2	34.1	358
18:00	10	48	174	151	26	3	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	28.2	29.3	34.0	412
19:00	9	31	151	173	29	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	28.9	30.2	34.2	395
20:00	3	19	120	139	25	4	1	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	29.6	30.5	34.5	311
21:00	2	15	93	89	18	4	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	29.4	30.1	34.4	221
22:00	3	9	68	74	16	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	29.4	30.4	34.5	171
23:00	1	5	32	49	9	1	1	0	0	0	0	0	0	1.0	0.0	0.0	0.0	0.0	30.1	31.2	34.7	98
24:00	0	2	23	31	10	4	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	31.3	31.7	36.8	70
Avg. Daily Total	102	351	1687	1844	411	50	4	0	0	0	0	0	0	0.1	0.0	0.0	0.0	0.0	29.0	30.3	34.5	4449
Percent	2.3%	7.9%	37.9%	41.4%	9.2%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	2.3%	10.2%	48.1%	89.5%	98.8%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	4	15	70	77	17	2	0	0	0	0	0	0	0									185

	Avg. Speed	50th% Speed	85th% Speed
North	30.7	32.2	37.1
South	29.0	30.3	34.5

Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	18	398	A.M.	9	578
South	18	412	P.M.	18	810

TRAFFIC FLOW BY DIRECTION

Colliers Engineering & Design

NYSDOT VOLUME DATA SUMMARY

ROADWAY: NYS ROUTE 52 (FISHKILL AVENUE)
SEGMENT: FROM VERPLANK AVENUE TO PROSPECT STREET
LOCATION: 125' E OF LINCOLN AVE
START DATE OF COUNT: Monday, May 13, 2019
NYSDOT COUNT STATION: 828612
FUNCTIONAL CLASS: 16 - URBAN MINOR ARTERIAL
FACTOR GROUP: 30
SEASONAL FACTOR: 1.089

TIME PERIOD		DIRECTIONAL VOLUMES		TOTAL VOLUME
START	FINISH	EASTBOUND	WESTBOUND	
12:00 AM	1:00 AM	23	23	46
1:00 AM	2:00 AM	13	13	26
2:00 AM	3:00 AM	6	8	14
3:00 AM	4:00 AM	14	8	22
4:00 AM	5:00 AM	27	19	46
5:00 AM	6:00 AM	70	41	111
6:00 AM	7:00 AM	184	120	304
7:00 AM	8:00 AM	382	241	623
8:00 AM	9:00 AM	345	326	671
9:00 AM	10:00 AM	292	268	560
10:00 AM	11:00 AM	289	272	561
11:00 AM	12:00 PM	298	301	599
12:00 PM	1:00 PM	329	319	648
1:00 PM	2:00 PM	306	323	629
2:00 PM	3:00 PM	373	348	721
3:00 PM	4:00 PM	389	388	777
4:00 PM	5:00 PM	392	404	796
5:00 PM	6:00 PM	398	491	889
6:00 PM	7:00 PM	365	406	771
7:00 PM	8:00 PM	268	274	542
8:00 PM	9:00 PM	171	197	368
9:00 PM	10:00 PM	114	136	250
10:00 PM	11:00 PM	76	83	159
11:00 PM	12:00 AM	47	57	104
AVERAGE WEEKDAY DAILY TRAFFIC		**5171**	**5066**	**10237**
	AADT	**4748**	**4652**	**9400**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT CLASSIFICATION DATA SUMMARY

ROADWAY: NYS ROUTE 52 (FISHKILL AVENUE)
SEGMENT: FROM VERPLANK AVENUE TO PROSPECT STREET
LOCATION: 125' E OF LINCOLN AVE
START DATE OF COUNT: Monday, May 13, 2019
NYSDOT COUNT STATION: 828612
FUNCTIONAL CLASS: 16 - URBAN MINOR ARTERIAL
FACTOR GROUP: 30

VEHICLE CLASS	DIRECTIONAL VOLUMES		TOTAL VEHICLES	TOTAL AXLES
	EASTBOUND	WESTBOUND		
F1	13	10	23	46
F2	4387	4248	8635	17270
F3	587	498	1085	2170
F4	26	16	42	105
F5	101	69	170	340
F6	14	10	24	72
F7	0	0	0	0
F8	6	2	8	28
F9	3	1	4	20
F10	0	0	0	0
F11	0	0	0	0
F12	0	0	0	0
F13	0	0	0	0
AVERAGE WEEKDAY TOTAL	**5137**	**4854**	**9991**	**20051**

	EASTBOUND	WESTBOUND	TOTAL
% TRUCKS & BUSES (F3 - F13)	14%	12%	13%
% HEAVY VEHICLES (F4 - F13)	3%	2%	2%
% F3 - F7	3%	2%	2%
% F8 - F13	0%	0%	0%
% F1	0%	0%	0%
% F2	85%	88%	86%
% F3	11%	10%	11%
% F4	1%	0%	0%
% F5 - F7	2%	2%	2%

VEHICLE CLASSIFICATION CODES:

- **F1** MOTORCYCLES
- **F2** AUTOS (INCLUDING THOSE HAULING TRAILERS)
- **F3** 2 AXLE, 4-TIRE PICKUPS, VANS, MOTORHOMES (INCLUDING THOSE HAULING TRAILERS)
- **F4** BUSES
- **F5** 2 AXLE, 6-TIRE SINGLE UNIT TRUCKS
- **F6** 3 AXLE SINGLE UNIT TRUCKS
- **F7** 4 OR MORE AXLE SINGLE UNIT TRUCKS
- **F8** 4 OR LESS AXLE VEHICLES, ONE UNIT IS A TRUCK
- **F9** 5 AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F10** 6 OR MORE AXLE DOUBLE UNIT VEHICLES, ONE UNIT IS A TRUCK
- **F11** 5 OR LESS AXLE MULTI-UNIT TRUCKS
- **F12** 6 AXLE MULTI UNIT TRUCKS
- **F13** 7 OR MORE AXLE MULTI-UNIT TRUCKS

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

NYSDOT SPEED DATA SUMMARY

ROADWAY: NYS ROUTE 52 (FISHKILL AVENUE)
SEGMENT: FROM VERPLANK AVENUE TO PROSPECT STREET
LOCATION: 125' E OF LINCOLN AVE
START DATE OF COUNT: Monday, May 13, 2019
NYSDOT COUNT STATION: 828612
FUNCTIONAL CLASS: 16 - URBAN MINOR ARTERIAL
POSTED SPEED LIMIT: 30
FACTOR GROUP: 30

SPEEDS (MPH)	DIRECTIONAL VOLUMES		TOTAL VOLUME
	EASTBOUND	WESTBOUND	
0 - 20.0	84	109	193
20.1 - 25.0	214	372	586
25.1 - 30.0	936	1840	2776
30.1 - 35.0	2435	2074	4509
35.1 - 40.0	1244	435	1679
40.1 - 45.0	197	42	239
45.1 - 50.0	19	2	21
50.1 - 55.0	0	0	0
55.1 - 60.0	0	0	0
60.1 - 65.0	0	0	0
65.1 - 70.0	0	0	0
70.1 - 75.0	0	0	0
75.1 - 80.0	0	0	0
80.1+	0	0	0
UNCLASSIFIED	0	0	0
AVERAGE SPEED (MPH)	**31**	**29**	**30**
50TH PERCENTILE SPEED (MPH)	**33**	**30**	**32**
85TH PERCENTILE SPEED (MPH)	**38**	**34**	**36**

NOTES:

1) DATA SOURCE: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) TRAFFIC DATA VIEWER AVERAGE WEEKDAY VOLUMES

HUDSON LAND DESIGN

Civil & Environmental Engineering Consultants
174 Main Street, Beacon, New York 12508 (Main Office and Mailing Address)
13 Chambers Street, Newburgh, New York 12550 (Satellite Office)
Phone: 845-440-6926
www.HudsonLandDesign.com

November 28, 2023

Mr. Bruce Flower
City of Building Inspector
1 Municipal Center
Beacon, NY 12508

Re: Infiltration and Inflow Investigation – 409 Fishkill Ave
409 Fishkill Ave Site Plan
City of Beacon, New York
Tax ID: 6055-80-403061 (Mead Avenue)
6055-80-399053 (Mead Avenue)
6055-80-406047 (Fishkill Avenue)
6055-80-411056 (Fishkill Avenue)
6055-80-416064 (409 Fishkill Avenue)
6055-80-418071 (Fishkill Avenue)

Dear Mr. Buckley,

Hudson Land Design (HLD) has completed an infiltration and inflow investigation (I&I) at the above referenced parcels as required by the City of Beacon. The investigation was conducted on July 20, 2023 at the existing building located at 409 Fishkill Ave. 409 consists of a 1-story automobile dealership.

The first phase of the study consisted of an exterior inspection of the building to determine the location of roof leader discharge points. The building at 409 Fishkill Avenue has a flat roof slightly sloped to the gutter on the rear side of building. Runoff travels via 5 downspouts to existing surface grade.

The second phase of the study consisted of interior inspection of the building to determine if there are any illicit connections to the building sewer line from sump pumps, floor drains and the like. At 409 Fishkill Avenue HLD personnel located a floor drain in the southeastern side of the garage that is assumed to be connected to the building's sanitary line based on historic architectural plans for the building. The floor drainage shall be removed, and the pipe capped.

Exhibit 1-4: View of building rear where gutter and downspouts can be seen.

Exhibit 5: View of floor drain in the southeastern side of the garage area.

Based on our observations, HLD believes that the floor drain at 409 Fishkill Avenue is connected to the building's sanitary line.

The following mitigation notes have been placed on the plans for the project:

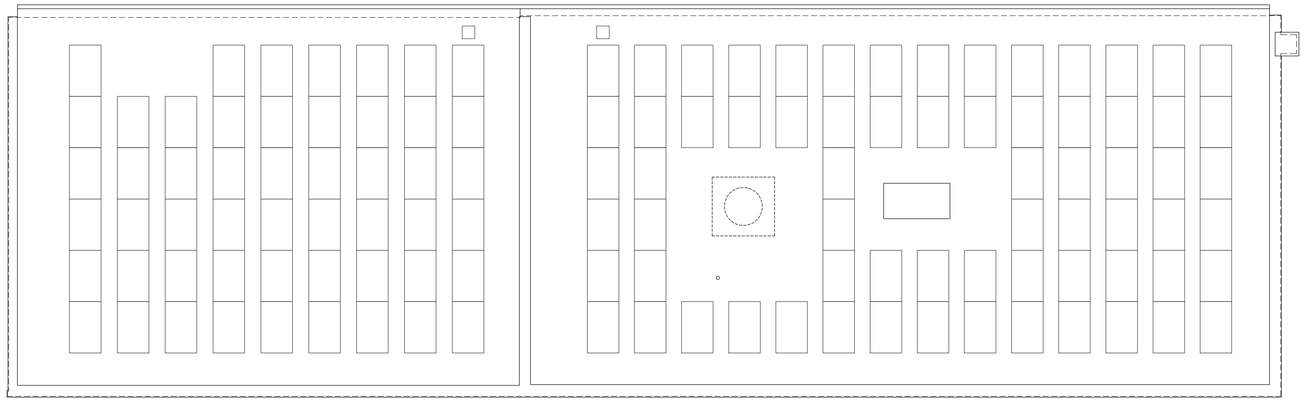
- The floor drain in the southeastern side of the garage area of 409 Fishkill Avenue shall be removed and the discharge pipe shall be capped, as noted on the plans.

Should you have any questions, please feel free to call me at 845-440-6926.

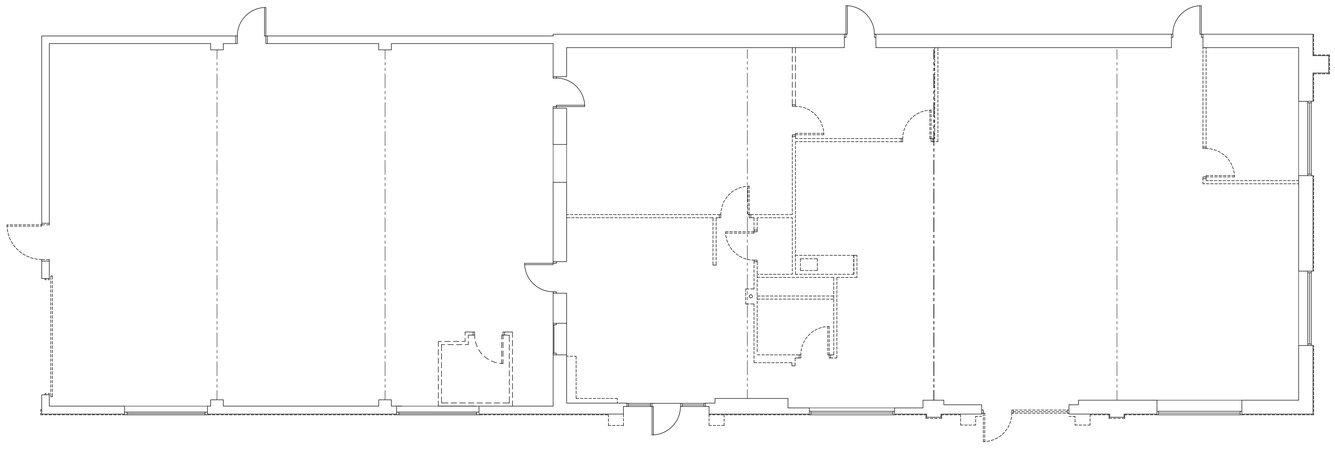
Sincerely,

Daniel G. Koehler, P.E.
Principal

cc: SGI USA (via email)
Michael A. Bodendorf, P.E. (HLD file)



ROOF PLAN



FLOOR PLAN

NORTH

JOB NORTH

NOTE:

DOTTED LINES INDICATE EXISTING CONSTRUCTION TO BE REMOVED

NOTE: ALL CONDITIONS TO BE FIELD VERIFIED

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OWNER:

SGI-USA

606 WILSHIRE BOULEVARD
SANTA MONICA, CA 90401

ARCHITECT:

ROBERT W SCARPA JR ARCHITECT

345 EAST 73RD STREET
NEW YORK, NY 10021

TEL 212 988 5209 FAX 212 320 0646

REVISIONS:

PROJECT:

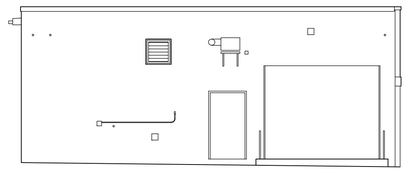
RENOVATION OF
COMMERCIAL BUILDING
409 FISHKILL AVENUE
BEACON, NY

DRAWING TITLE:

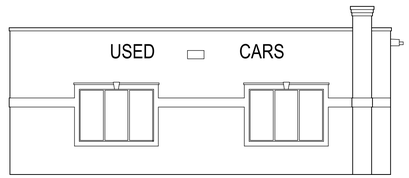
EXISTING CONDITIONS
FLOOR AND ROOF PLAN

SCALE: 1/8" = 1'-0"	DATE: 11-28-23
SEAL @SIGNATURE	PROJECT NO. 2305
	DRAWN BY: RWS
	CHK. BY:
	DWG.NO. EC-100
	PAGE: 1 0F 2

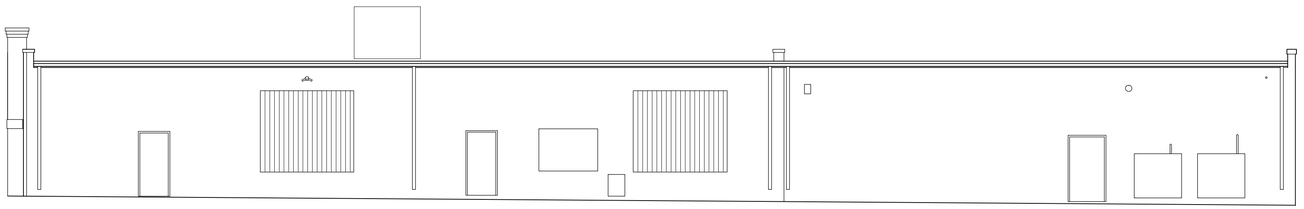
EAST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION



WEST ELEVATION

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NOTE: ALL CONDITIONS TO BE FIELD VERIFIED

OWNER:
SGI-USA
606 WILSHIRE BOULEVARD
SANTA MONICA, CA 90401

ARCHITECT:
ROBERT W SCARPA JR ARCHITECT
345 EAST 73RD STREET
NEW YORK, NY 10021
TEL 212 988 5209 FAX 212 320 0646

REVISIONS:

PROJECT:
RENOVATION OF
COMMERCIAL BUILDING
409 FISHKILL AVENUE
BEACON, NY

DRAWING TITLE:
EXISTING CONDITIONS
EXTERIOR ELEVATIONS

SCALE: 1/8" = 1'-0"	DATE: 11-28-23
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	CHK. BY:
	DWG.NO. EC-200
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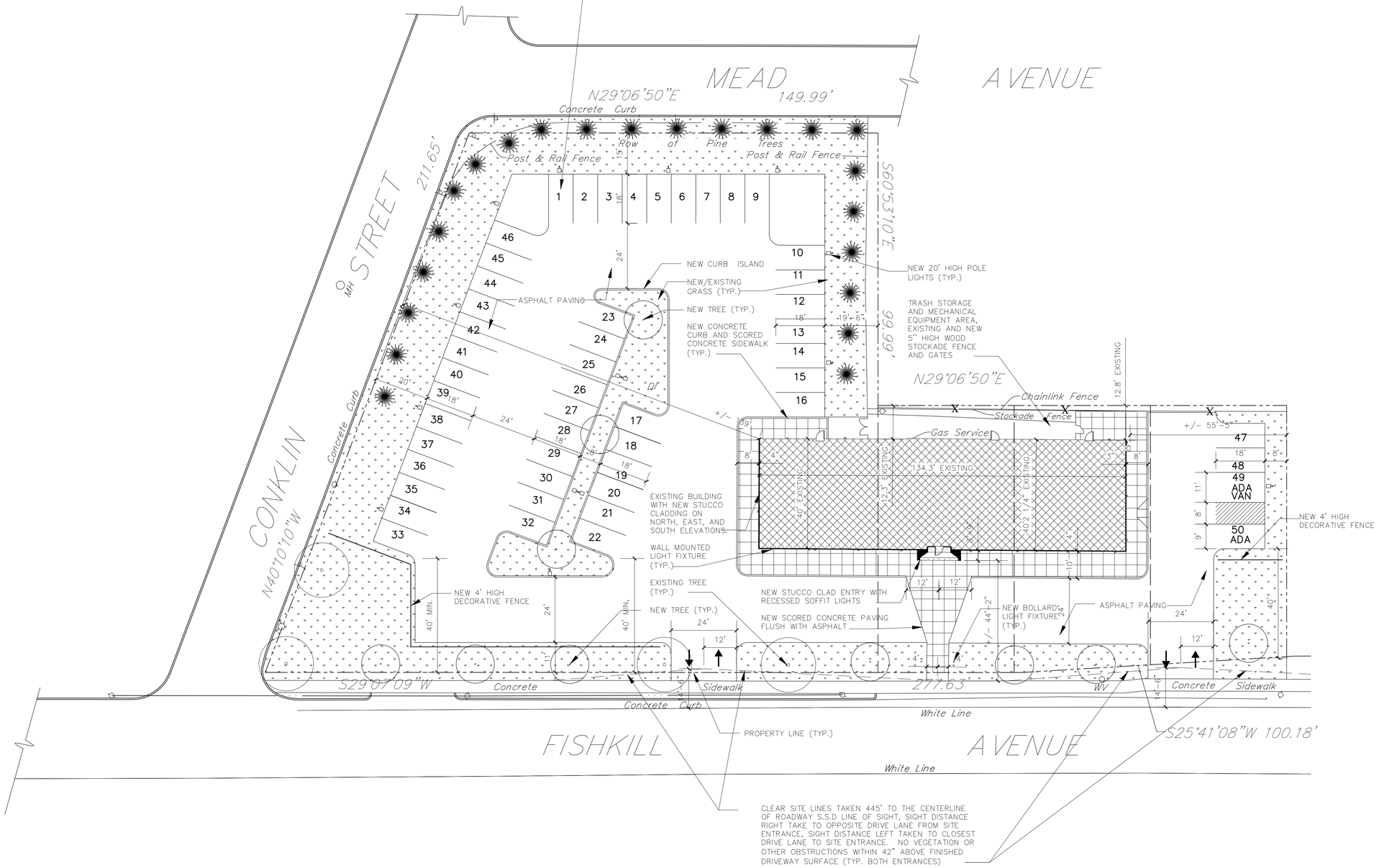

NORTH

JOB NORTH

NOTE: SEE CIVIL ENGINEERING DRAWINGS FOR FURTHER INFORMATION

NOTE: DRAWING BASED ON A SURVEY PREPARED BY BADEY AND WATSON 1/29/2014

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OWNER:

SGI-USA
606 WILSHIRE BOULEVARD
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345 EAST 73RD STREET
NEW YORK, NY 10021

TEL 212 988 5209 FAX 212 320 0646

REVISIONS:

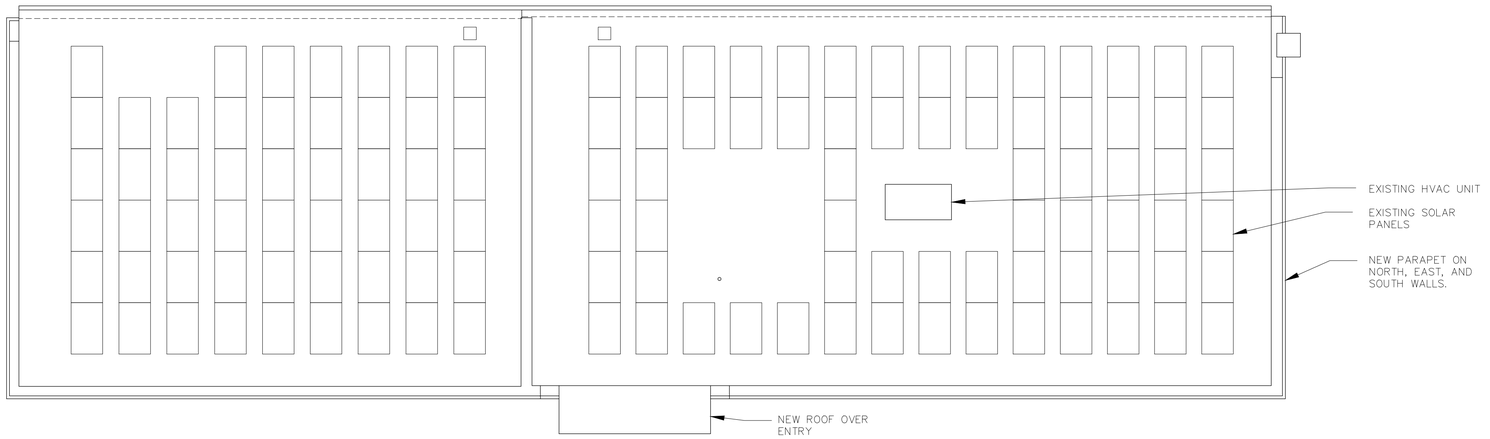
PROJECT:

RENOVATION OF COMMERCIAL BUILDING
409 FISHKILL AVENUE
BEACON, NY

DRAWING TITLE:

PROPOSED ARCHITECTURAL SITE PLAN

SCALE: 1" =20'-0"	DATE: 11-28-23
SEAL @SIGNATURE	PROJECT NO. 2305
	DRAWN BY: RWS
	CHK. BY:
	DWG.NO. SD-100
	PAGE: 1 0F 3



ROOF PLAN

FLOOR PLAN

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NOTE: ALL CONDITIONS TO BE FIELD VERIFIED

OWNER:
SGI-USA
606 WILSHIRE BOULEVARD
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ROBERT W SCARPA JR ARCHITECT
345 EAST 73RD STREET
NEW YORK, NY 10021
TEL 212 988 5209 FAX 212 320 0646

REVISIONS:

PROJECT:
RENOVATION OF
COMMERCIAL BUILDING
409 FISHKILL AVENUE
BEACON, NY

DRAWING TITLE:
PROPOSED DESIGN
FLOOR AND ROOF PLAN

SCALE: 1/8" = 1'-0"	DATE: 11-28-23
SEAL @SIGNATURE	PROJECT NO. 2305
	DRAWN BY: RWS
	CHK. BY:
	DWG.NO. SD-200
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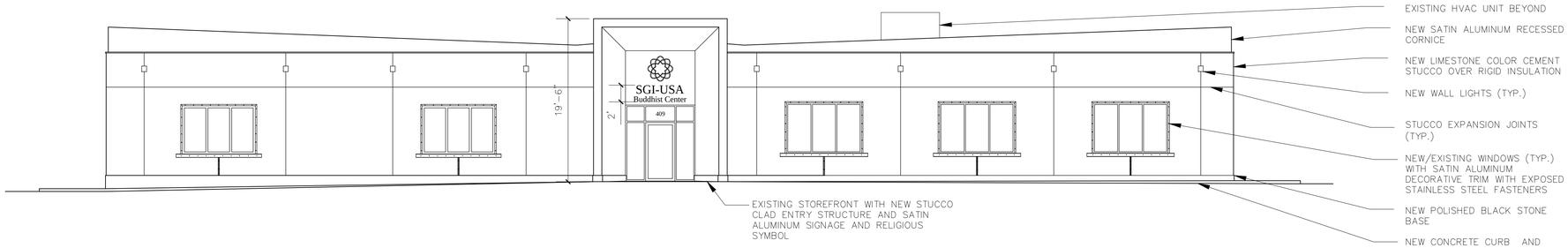
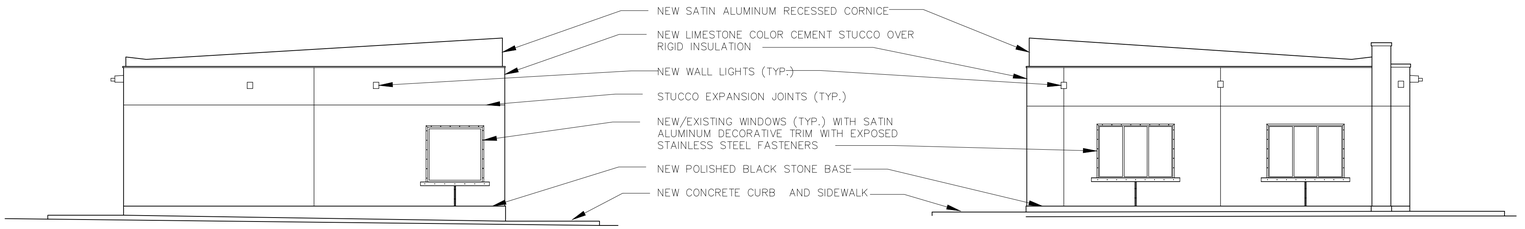
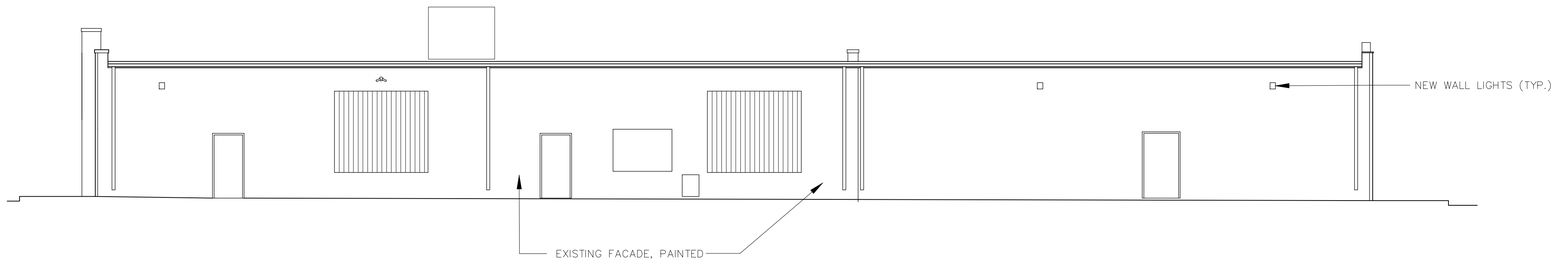


EAST ELEVATION



SOUTH ELEVATION

NORTH ELEVATION



WEST ELEVATION

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NOTE: ALL CONDITIONS TO BE FIELD VERIFIED

OWNER:
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TEL 212 988 5209 FAX 212 320 0646

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PROPOSED DESIGN
EXTERIOR ELEVATIONS

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SEAL @SIGNATURE	PROJECT NO. 2305
	DRAWN BY: RWS
	CHK. BY:
	DWG.NO. SD-201
	PAGE: 3 0F 3

SGI-USA
Buddhist Cente

409 FISHKILL AVE
SITE DEVELOPMENT

409 FISHKILL AVE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK

PARCEL INFORMATION:
TAX ID: 6055-80-403061 (±0.23 AC), 399053 (±0.16 AC),
406047 (±0.23 AC), 411056 (±0.22 AC), 416064 (±0.22 AC) & 418071 (±0.11 AC)
TOTAL LOT AREA: ±1.183 ACRES
ZONING DISTRICT: GB (GENERAL BUSINESS) – PARCELS 406047, 411056, 416064 & 418071
ZONING DISTRICT: R1-5 (RESIDENTIAL) – PARCELS 403061 & 399053

SIGHT DISTANCE NOTES:
REFER TO OCTOBER 30TH 2023 TRAFFIC EVALUATION PREPARED BY COLLIERS ENGINEERING & DESIGN.

ADA CONSTRUCTION NOTES:
1. ADA ACCESSIBLE COMPONENTS AND ACCESS ROUTES FOR THE SITE MUST COMPLY WITH ALL APPLICABLE STATE AND LOCAL ACCESSIBILITY LAWS AND REGULATIONS AND THE CURRENT ADA STANDARDS. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE FROM PARKING SPACE OR PEDESTRIAN ACCESS TO POINTS OF ACCESSIBLE BUILDING INGRESS/OR EGRESS, MUST COMPLY WITH ADA REQUIREMENTS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
   - 1.1. PARKING SPACES AND PARKING AISLES – SLOPE SHALL NOT EXCEED 1:48 IN ANY DIRECTION.
   - 1.2. CURB RAMPS – SLOPE MUST NOT EXCEED 1:12 (8.3%) FOR A MAXIMUM OF SIX (6) FEET.
   - 1.3. LANDINGS – MUST BE PROVIDED AT EACH END OF RAMPS, MUST PROVIDE POSITIVE DRAINAGE, AND MUST NOT EXCEED 1:48 IN ANY DIRECTION.
   - 1.4. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE – MUST PROVIDE A 36-INCH OR GREATER UNOBSTRUCTED WIDTH OF TRAVEL. THE SLOPE MUST BE NO GREATER THAN 1:20 IN THE DIRECTION OF TRAVEL, AND MUST NOT EXCEED 1:48 IN CROSS SLOPE. WHERE PATH OF TRAVEL WILL BE GREATER THAN 1:20, ADA RAMP STANDARDS MUST BE MET WITH A MAXIMUM SLOPE OF 1:12, FOR A MAXIMUM RISE OF 30 INCHES. RAMPS MUST HAVE ADA HAND RAILS AND LANDINGS AT BOTH THE TOP AND BOTTOM OF EACH RAMP, WITH CROSS SLOPES NO MORE THAN 1:48 IN ANY DIRECTION.
   - 1.5. DOORWAYS – MUST HAVE A LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED AWAY FROM THE DOOR NO MORE THAN 1:48 AND MUST BE NO LESS THAN 60 INCHES LONG.
2. WHEN THE PROPOSED CONSTRUCTION INCLUDES CONNECTION TO EXISTING ADA COMPONENTS, CONTRACTOR MUST VERIFY EXISTING ELEVATIONS SHOWN. NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF THERE ARE ANY DISCREPANCIES OR FIELD CONDITIONS THAT DIFFER FROM WHAT IS SHOWN BEFORE COMMENCING WORK. CONSTRUCTED IMPROVEMENTS MUST COMPLY WITH THE MAXIMUM AND MINIMUM ADA REQUIREMENTS.
3. THE CONTRACTOR MUST VERIFY THE SLOPES OF THE FORMWORK PRIOR TO POURING CONCRETE. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND REPLACE NON-CONFORMING CONCRETE.

SITE LOCATION MAP SCALE: 1" = 400'

ADJOINING OWNERS WITHIN 200':

PARCEL: OWNER & ADDRESS
1. LAURIE GONZALEZ, 14 MEAD AVE, BEACON NY 12508
2. HOWARD BANICK, 18 MEAD AVE, BEACON NY 12508
3. AUDREY HENDERSON, 22 MEAD AVE, BEACON NY 12508
4. AARON YERKS, 26 MEAD AVE, BEACON NY 12508
5. BRENT STAPLETON, 30 MEAD AVE, BEACON NY 12508
6. PETER NETTLETON, 34 MEAD AVE, BEACON NY 12508
7. JOSEPH POWERS, 40 MEAD AVE, BEACON NY 12508
8. DKH REALTY LLC, PO BOX 859, GOSHEN NY 10924
9. DKH REALTY LLC, PO BOX 859, GOSHEN NY 10924
10. DKH REALTY LLC, 2528 ROUTE 17M, GOSHEN NY 10924
11. DKH REALTY LLC, 2528 ROUTE 17M, GOSHEN NY 10924
12. DKH REALTY LLC, PO BOX 859, GOSHEN NY 10924
13. DKH REALTY LLC, PO BOX 859, GOSHEN NY 10924
14. LANK'S AUTOMOTIVE INC, 394 FISHKILL AVE, BEACON NY 12508
15. METROPOLITAN TRANSPORTATION, 2 BROADWAY, NEW YORK NY 10004
16. 397 FISHKILL AVENUE, LLC., 397 FISHKILL AVE UNIT A, BEACON NY 12508
17. 397 FISHKILL AVENUE, LLC., 397 FISHKILL AVE UNIT A, BEACON NY 12508
18. IRMGARD DI CASTRO, 21 CONKLIN STREET, BEACON NY 12508
19. IRMGARD DI CASTRO, 21 CONKLIN STREET, BEACON NY 12508
20. IRMGARD DI CASTRO, 21 CONKLIN STREET, BEACON NY 12508
21. FANNY SHEFFIELD, 31 CONKLIN STREET, BEACON NY 12508
22. CRAIG CHISOLM, 33 CONKLIN STREET, BEACON NY 12508
23. 393 FISHKILL AVENUE, LLC., 397 FISHKILL AVE UNIT A, BEACON NY 12508
24. JOSHUA KOGAN, 389 FISHKILL AVE, BEACON NY 12508
25. DAVID W. ALLIS, 20 DALLIS PLACE, BEACON NY 12508
26. BARBARA WINTHER, 7 MEAD AVE, BEACON NY 12508
27. AMANDA CARDONI, 6 ROUNDTREE COURT, BEACON NY 12508
28. DARYL EMBRY, 11 MEAD AVE, BEACON NY 12508
29. DENNIS SCHNETZLER, 19 MEAD AVE, BEACON NY 12508
30. MICHAL MART, 49 SYCAMORE DRIVE, BEACON NY 12508
31. MICHAEL ALLGOOD, 506 SANTIGUAY STREET, PUNTA GORDA FL 33983
32. MIRJAN CURMA, 47 QUAIL RUN ROAD, HOPEWELL JUNCTION, NY 12533
33. MARIE A. LEGER, 30 CONKLIN STREET, BEACON NY 12508
34. GLENN ROY, 8 DESOTO AVE, BEACON NY 12508
35. MONIQUE QUIGLEY, 12 DESOTO AVE, BEACON NY 12508
36. MICHAEL TANCREDI, 16 DESOTO AVE, BEACON NY 12508
37. STEVEN GARCIA, 20 DESOTO AVE, BEACON NY 12508
38. JOSEPH PORPEGLIA, 44-27 PURVES STREET APT 4A, LONG ISLAND CITY NY 11101

SITE SPECIFIC NOTES:
1. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1-800-962-7962. SPECIFIC ATTENTION SHALL BE PAID TO THE LOCATIONS OF THE GAS, WATER AND SEWER MAINS WITH RESPECT TO THE PROPOSED LOCATIONS FOR THE SERVICE AND DRAINAGE LINES.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND INVERTS OF ALL DRAINAGE, SANITARY SEWER, WATER AND GAS LINES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT.
3. THE EXISTING BUILDING AND SHALL BE SERVED BY THE CITY OF BEACON MUNICIPAL WATER AND SEWER SERVICES VIA EXISTING WATER AND SANITARY SEWER SERVICE LINES.
4. STREET CLOSURE FOR DRIVEWAY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF BEACON REQUIREMENTS. A PLAN SHALL BE IN PLACE FOR MAINTENANCE AND PROTECTION OF TRAFFIC.
5. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION. FISHKILL AVENUE & CONKLIN STREET SHALL BE KEPT CLEAN AND SWEPT DURING CONSTRUCTION.
6. THE BUILDING DEPARTMENT SHALL HAVE THE RIGHT TO INSPECT THE EXISTING BUILDING TO CONFIRM THAT THERE ARE NOT EXISTING STORMWATER CONNECTIONS TO THE CITY'S SANITARY SEWER SYSTEM PRIOR TO THE MAP BEING SIGNED. AN INFLOW & INFILTRATION (I&I) STUDY HAS BEEN CONDUCTED FOR THE PROJECT. REFER TO I&I NOTES FOR MITIGATION PROCEDURES.

INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES

CATCH BASINS AND PIPING:

ALL CATCH BASINS SHALL BE INSPECTED AFTER EACH STORM EVENT FOR SEDIMENT ACCUMULATION, AND DEBRIS, AND REMOVE AS NECESSARY. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN SUMP REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED. ASSOCIATED PIPING SHALL BE INSPECTED ANNUALLY AND ACCUMULATED SEDIMENT SHALL BE REMOVED AS NEEDED.

APPLICANT'S CONSENT:
THE UNDERSIGNED APPLICANT OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ _____
SGI – USA DATE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWING INDEX:

SHEET 1: COVER SHEET (CV-1)
SHEET 2: EXISTING CONDITIONS & REMOVALS PLAN (XC-1)
SHEET 3: SITE PLAN (SP-1)
SHEET 4: GRADING PLAN (GD-1)
SHEET 5: EROSION & SEDIMENT CONTROL PLAN (ESC-1)
SHEET 6: UTILITY PLAN (UT-1)
SHEET 7: LANDSCAPING PLAN (LS-1)
SHEET 8: LIGHTING PLAN (LT-1)
SHEET 9: CONSTRUCTION DETAILS (CD-1)

PROJECT ENGINEER:
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN STREET
BEACON, NEW YORK 12508
PH: 845-440-6926

PROPERTY OWNER:
DKH REALTY, LLC
PO BOX 859
GOSHEN, NY 10924
PH: 845-291-1998

APPLICANT:
SGI – USA.
606 WILSHIRE BLVD.
SANTA MONICA, CA 90401
PH: 914-649-9534

PROJECT SURVEYOR:
BADEY & WATSON SURVEYING & ENGINEERING
3063 ROUTE 9
COLD SPRING NY 10516
PH: 845-265-9217

PROJECT ARCHITECT:
ROBERT W SCARPA JR ARCHITECT
345 EAST 73RD ST
NEW YORK NY 10021
PH: 212-988-5209

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

COVER SHEET

409 FISHKILL AVE

409 FISHKILL AVE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6055-80-403061, 399053, 406047, 411056, 416064 & 418071

JOB #:	2023:032
DATE:	11/28/23
SCALE:	AS SHOWN
TITLE:	CV-1
SHEET:	1 OF 9

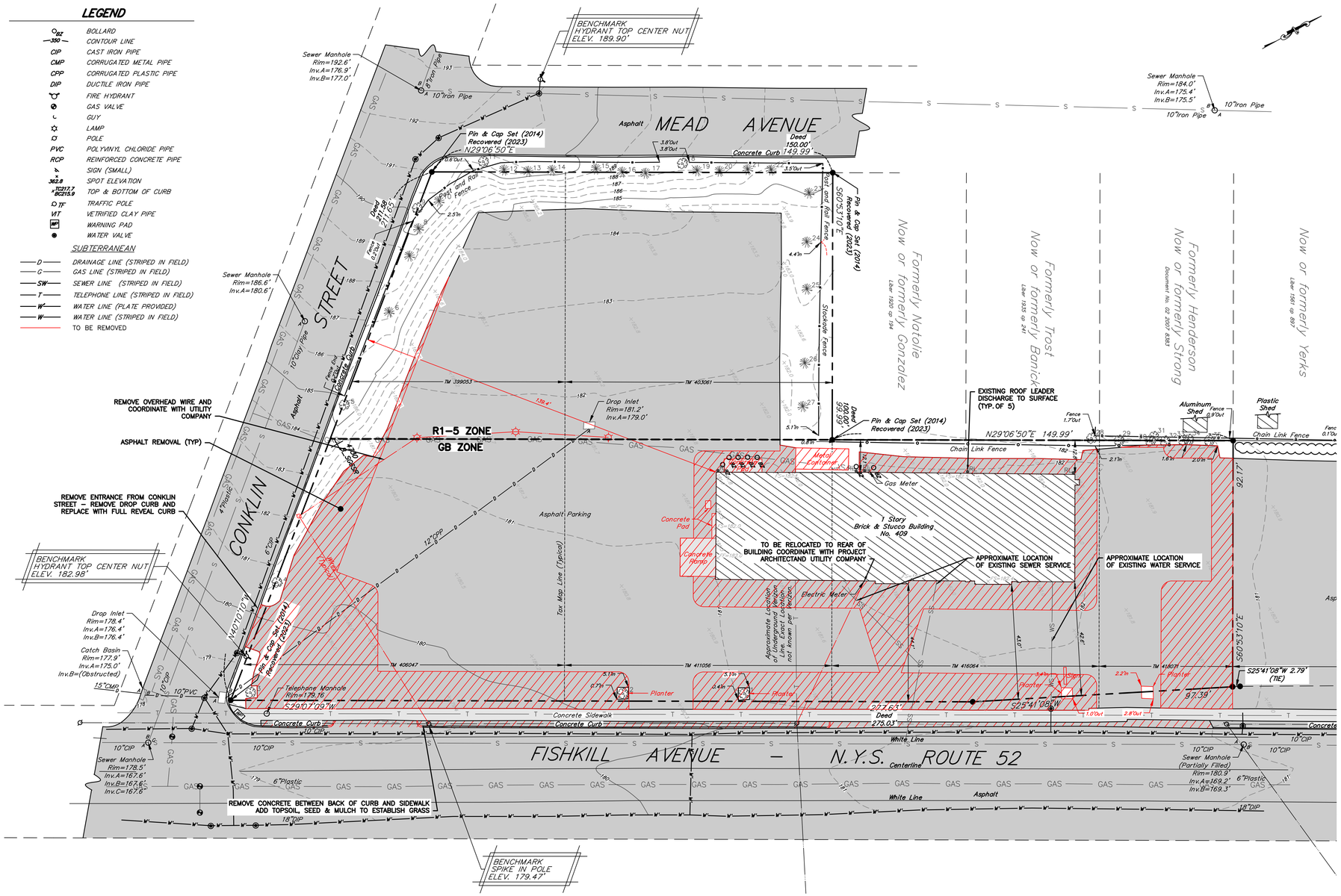
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

LEGEND

- BOLLARD
- CONTOUR LINE
- CIP — CAST IRON PIPE
- CMP — CORRUGATED METAL PIPE
- CPP — CORRUGATED PLASTIC PIPE
- DIP — DUCTILE IRON PIPE
- FIRE HYDRANT
- GAS VALVE
- GUY
- LAMP
- POLE
- PVC — POLYVINYL CHLORIDE PIPE
- RCP — REINFORCED CONCRETE PIPE
- SIGN (SMALL)
- 362.8 — SPOT ELEVATION
- TC217.7 / BC215.9 — TOP & BOTTOM OF CURB
- TF — TRAFFIC POLE
- VT — VERIFIED CLAY PIPE
- WARNING PAD
- WATER VALVE

SUBTERRANEAN

- D — DRAINAGE LINE (STRIPED IN FIELD)
- G — GAS LINE (STRIPED IN FIELD)
- SW — SEWER LINE (STRIPED IN FIELD)
- T — TELEPHONE LINE (STRIPED IN FIELD)
- W — WATER LINE (PLATE PROVIDED)
- W — WATER LINE (STRIPED IN FIELD)
- TO BE REMOVED



EXISTING TREE & REMOVAL SCHEDULE:

1. 16" APPLE	19. 12" PINE
2. 12" APPLE	20. 14" PINE
3. 10" APPLE	21. 4" PINE
4. 22" SYCAMORE	22. 4" PINE
5. 20" SYCAMORE	23. 22" PINE
6. 14" PINE	24. 10" PINE
7. 14" PINE	25. 16" PINE
8. 10" PINE	26. 12" PINE
9. 24" SYCAMORE	27. 18" PINE
10. 14" PINE	28. 16" MAPLE
11. 24" SYCAMORE	29. 8" MAPLE TWIN
12. 4" PINE	30. 8" MAPLE
13. 6" PINE	31. 6" HACKBERRY
14. 6" PINE	32. 8" MAPLE
15. 6" PINE TWIN	33. 10" MAPLE TRIPLE
16. 6" PINE	34. 8" MAPLE
17. 4" PINE	35. 8" MAPLE CLUMP
18. 24" SYCAMORE	

NOTES:
1. TREE LOCATIONS BY BADEY & WATSON SURVEYING.
2. SPECIES ID PER BADEY & WATSON SURVEYING.
3. **TBR** = TO BE REMOVED

SURVEY REFERENCE:

1. REFERENCE IS HEREBY MADE TO "SURVEY OF PROPERTY PREPARED FOR SOKA GOKKAI INTERNATIONAL – USA" DATED SEPTEMBER 26, 2023 AND PREPARED BY BADEY & WATSON SURVEYING & ENGINEERING DPC.

SURVEY NOTES:

1. COPYRIGHT "2023" BY BADEY & WATSON, SURVEYING & ENGINEERING, D.P.C. ALL RIGHTS RESERVED. UNAUTHORIZED DUPLICATION IS A VIOLATION OF APPLICABLE LAWS.
2. UNAUTHORIZED ALTERATION OR ADDITION TO A DOCUMENT PREPARED BY A LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.
3. ALL CERTIFICATIONS ARE VALID FOR THIS MAP AND COPIES THEREOF ONLY IF SAID MAP OR COPIES BEAR THE EMBOSSED SEAL OF THE SURVEYOR WHOSE SIGNATURE APPEARS HEREON.
4. IF UNDERGROUND IMPROVEMENTS, EASEMENTS, OR ENCROACHMENTS EXIST AND ARE NEITHER VISIBLE DURING NORMAL FIELD SURVEY OPERATIONS NOR DESCRIBED IN INSTRUMENTS PROVIDED TO THESE SURVEYORS, THEY MAY NOT BE SHOWN ON THIS MAP.
5. THIS PROPERTY MAY BE AFFECTED BY INSTRUMENTS WHICH HAVE NOT BEEN PROVIDED TO THESE SURVEYORS. USERS OF THIS MAP SHOULD VERIFY TITLE WITH THEIR ATTORNEY OR A QUALIFIED TITLE EXAMINER.
6. THIS SURVEY IS A PORTION OF PARCEL I DESCRIBED IN THE DUTCHESS COUNTY CLERK'S DOCUMENT NUMBER 02-2000-8802 (HEALEY TO DKH REALTY LLC.).
7. THE VERTICAL DATUM HEREON IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
8. THE MERIDIAN AND COORDINATE VALUES HEREON REFER TO THE NEW YORK STATE COORDINATE SYSTEM, EAST ZONE (NAS 83) EXPRESSED IN U.S. SURVEY FEET. THE DISTANCES SHOWN ON THIS SURVEY ARE GRID DISTANCES. THEY HAVE BEEN SCALED BY A GRID FACTOR (SCALE FACTOR X SEA LEVEL FACTOR) OF 0.9999166Z. TO OBTAIN GROUND DISTANCES, DIVIDE THE DISTANCES ON THIS MAP BY THE GRID FACTOR. TO OBTAIN GROUND AREA DIVIDE THE AREA ON THIS MAP BY THE SQUARE OF THE GRID FACTOR.
9. THE TOPOGRAPHIC DATA HEREON WAS COMPILED FROM AN ACTUAL FIELD SURVEY CONDUCTED BY BADEY & WATSON ON SEPTEMBER 26, 2023.
10. THE NORTHWESTERLY LINE OF FISHKILL AVENUE WAS REPRODUCED FROM THAT CERTAIN MAP ENTITLED "PLAN AND PROFILE OF CURB AND SIDEWALK ON NORTH SIDE OF FISHKILL AVENUE ...," WHICH WAS FILED IN THE DUTCHESS COUNTY CLERK'S OFFICE ON AUGUST 1, 1922 AS MAP NO. 1243.

APPLICANT'S CONSENT:

THE UNDERSIGNED APPLICANT OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ _____
SGI – USA DATE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

EXISTING CONDITIONS & REMOVALS PLAN
SCALE: 1" = 20'
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

DANIEL G. KOERNER — 083715 — LICENSED PROFESSIONAL ENGINEER — STATE OF NEW YORK
SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

EXISTING CONDITIONS & REMOVALS PLAN

409 FISHKILL AVE

409 FISHKILL AVE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6055-80-403061, 399053, 406047, 411056, 416064 & 418071

JOB #:	2023:032
DATE:	11/28/23
SCALE:	1" = 20'
TITLE:	XC-1
SHEET:	2 OF 9

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING STREAM
- EXISTING WETLAND BOUNDARY
- 100' WETLAND BUFFER
- 250 EXISTING MAJOR CONTOUR
- 252 EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- OHW EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- SS EXISTING SEWER SERVICE LINE
- S EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- W EXISTING WATER LINE
- WS EXISTING WATER SERVICE LINE
- EXISTING WELL
- EXISTING HYDRANT
- WV EXISTING WATER SHUT OFF VALVE
- EXISTING WATER VALVE
- EXISTING STORM WATER LINE
- RL EXISTING ROOF LEADER
- EXISTING CATCH BASIN

- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
- 250 PROPOSED MAJOR CONTOUR
- 252 PROPOSED MINOR CONTOUR
- PROPOSED EASEMENT
- PROPOSED TREE LINE
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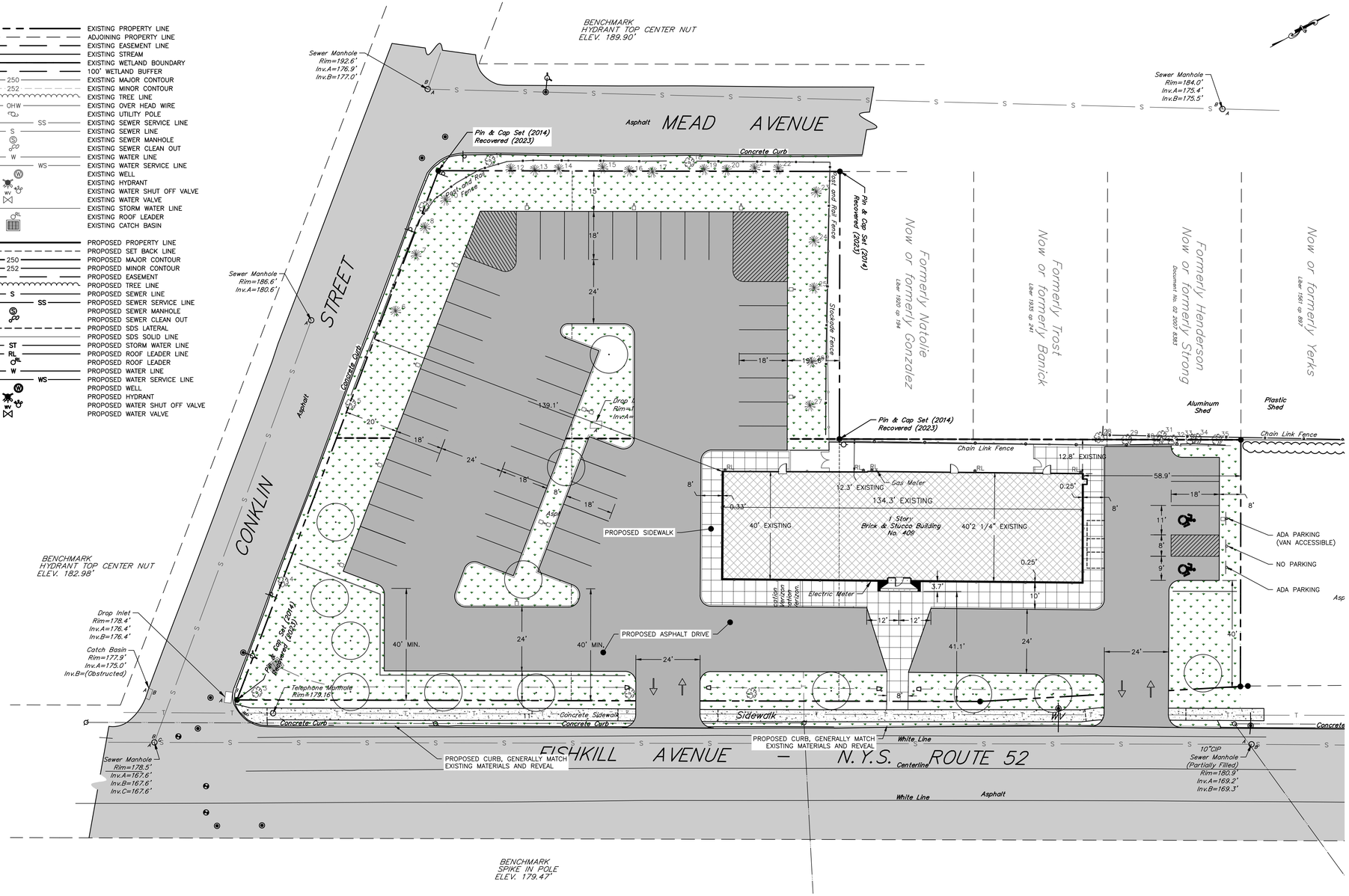

SCHEDULE OF REGULATIONS (GB ZONING DISTRICT) AND LOT CONFORMANCE TABLE:

PARAMETER	REQUIREMENT	EXISTING	PROVIDED
LOT AREA:	N/A	±34,543 SQFT	±34,543 SQFT
LOT WIDTH:	N/A	N/A	N/A FEET
LOT DEPTH:	100 FEET MINIMUM	±98 FEET*	±98 FEET*
YARD SETBACKS:			
FRONT YARD:	15 FEET MINIMUM	±41.1 FEET	±41.1 FEET
SIDE YARD:	20 FEET MINIMUM	±58.9 FEET	±58.9 FEET
REAR YARD:	25 FEET MINIMUM	±12.3 FEET*	±12.3 FEET*
MAX. BUILDING HEIGHT:	35 FT MAX.	±20 FEET	±20 FEET

*EXISTING NON-CONFORMING

SCHEDULE OF REGULATIONS (R1-5 ZONING DISTRICT) AND LOT CONFORMANCE TABLE:

PARAMETER	REQUIREMENT	EXISTING	PROVIDED
LOT AREA:	5,000 SQFT	±16,988 SQFT	±16,988 SQFT
LOT AREA PER UNIT:	5,000 SQFT MINIMUM	N/A	N/A
LOT WIDTH:	50	±100 FEET	±100 FEET
LOT DEPTH:	100 FEET MINIMUM	±150 FEET	±150 FEET
YARD SETBACKS:			
FRONT YARD:	10 FEET MINIMUM	N/A	N/A
SIDE YARD:	10 FEET MINIMUM	N/A	N/A
REAR YARD:	20 FEET MINIMUM	N/A	N/A
MAX. BUILDING HEIGHT:	35 FT MAX.	N/A	N/A

SITE PLAN NOTES:

1. THE PROJECT PROPOSES AN ADAPTIVE REUSE OF THE EXISTING AUTOMOBILE DEALERSHIP LOCATED ON THE SUBJECT PROPERTY, WITH NO INCREASE TO THE BUILDING SIZE. THE APPLICANT, SGI-USA WILL UTILIZE THE BUILDING FOR RELIGIOUS ASSEMBLY AND GATHERINGS OF UP TO 200 PERSONS. SITE IMPROVEMENTS TO THE PARKING AREAS ARE ALSO PROPOSED AS PART OF THE PROJECT THAT WILL PROVIDE A TOTAL OF 50 PARKING SPACES ON THE SITE INCLUDING TWO (2) ADA ACCESSIBLE PARKING SPACES. ADDITIONAL IMPROVEMENTS INCLUDE ARCHITECTURAL ALTERATIONS TO THE BUILDING FACADE, NEW SIDEWALK AROUND THE EXISTING BUILDING, REDUCTION IN PAVED AREAS, ELIMINATION OF EXISTING SITE ENTRY POINTS ON CONKLIN STREET AND FISHKILL AVENUE, NEW LIGHTING, AND ADDITIONAL LANDSCAPING. PLACES OF WORSHIP ARE PERMITTED USES IN THE GENERAL BUSINESS AND THE R1-5 ZONING DISTRICTS, AND REQUIRE SITE PLAN APPROVAL FROM THE PLANNING BOARD.
2. THE FACILITY WILL OPERATE MONDAY THROUGH WEDNESDAY BETWEEN 6:00 PM – 9:30 PM AND ON SATURDAYS & SUNDAYS BETWEEN 7:00 AM – 6:00 PM. THE WEEKNIGHT (MONDAY THROUGH WEDNESDAY) OPERATIONS WILL CONSIST OF GATHERINGS OF BETWEEN 30–50 ATTENDEES OCCURRING BETWEEN 7:00 PM – 8:30 PM. SATURDAY OPERATIONS WILL CONSIST OF TWO (2) GATHERINGS WITH A TOTAL OF 50 – 100 ATTENDEES OVER THE COURSE OF THE DAY. THE GATHERINGS WILL BE HELD BETWEEN 11:00 AM – 12:30 PM AND BETWEEN 1:00 PM – 3:00 PM. SUNDAY OPERATIONS WILL CONSIST OF THREE (3) GATHERINGS ALSO WITH A TOTAL OF 50 – 100 ATTENDEES OVER THE COURSE OF THE DAY. THE SUNDAY GATHERING TIMES WILL BE 8:00 AM – 9:30 AM, 10:00 AM – 12:00 PM AND 1:00 PM – 3:00 PM. IN ADDITION, A LARGER MONTHLY GATHERING WILL BE HELD ONCE A MONTH ON A SUNDAY MORNING THAT WILL HAVE 150 – 200 ATTENDEES.
3. THERE ARE NO WETLANDS OR FLOODPLAINS ASSOCIATED WITH THE PROJECT SITE.
4. INDIANA BAT WAS IDENTIFIED AS AN ENDANGERED SPECIES NEAR THE PROJECT SITE. THE PLAN CALLS FOR LIMITED REMOVAL OF EXSITING TREES; HOWEVER, A RESTRICTION FOR THE REMOVAL OF ANY TREES HAS BEEN INCLDUED IN THE DEMOLITION NOTES.
5. TOTAL SITE IMPERVIOUS REDUCED FROM 86% TO 69%.
6. REFUSE TO BE ROLLED OUT. NO DUMPSTER ENCLOSURE IS PROPOSED.
7. THERE ARE NO PROPOSED FREE STANDING SIGNS. SIGNAGE WILL BE BUILDING MOUNTED PER THE ARCHITECTURAL PLANS.

PARKING NOTES:

1. PER §223-26, 1 SPACE IS REQUIRED FOR EVERY 4 SEATS FOR PLACE OF WORSHIP. THE MAXIMUM SEAT COUNT IS 200, REQUIRING 50 PARKING SPACES. THE PLAN CALLS FOR 50 PARKING SPACES, INCLUDING 2 ADA ACCESSIBLE PARKING SPACES.

APPLICANT'S CONSENT:

THE UNDERSIGNED APPLICANT OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

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SGI – USA DATE

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_____ CHAIRMAN

_____ SECRETARY

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DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

SITE PLAN
SCALE: 1" = 20'
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

STATE OF NEW YORK · DANIEL G. KOENIG · 087716 · LICENSED PROFESSIONAL ENGINEER
SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

SITE PLAN
409 FISHKILL AVE
409 FISHKILL AVE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6055-80-403061, 399053, 406047, 411056, 416064 & 418071

JOB #: 2023:032
DATE: 11/28/23
SCALE: 1" = 20'
TITLE: SP-1
SHEET: 3 OF 9

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

LEGEND:

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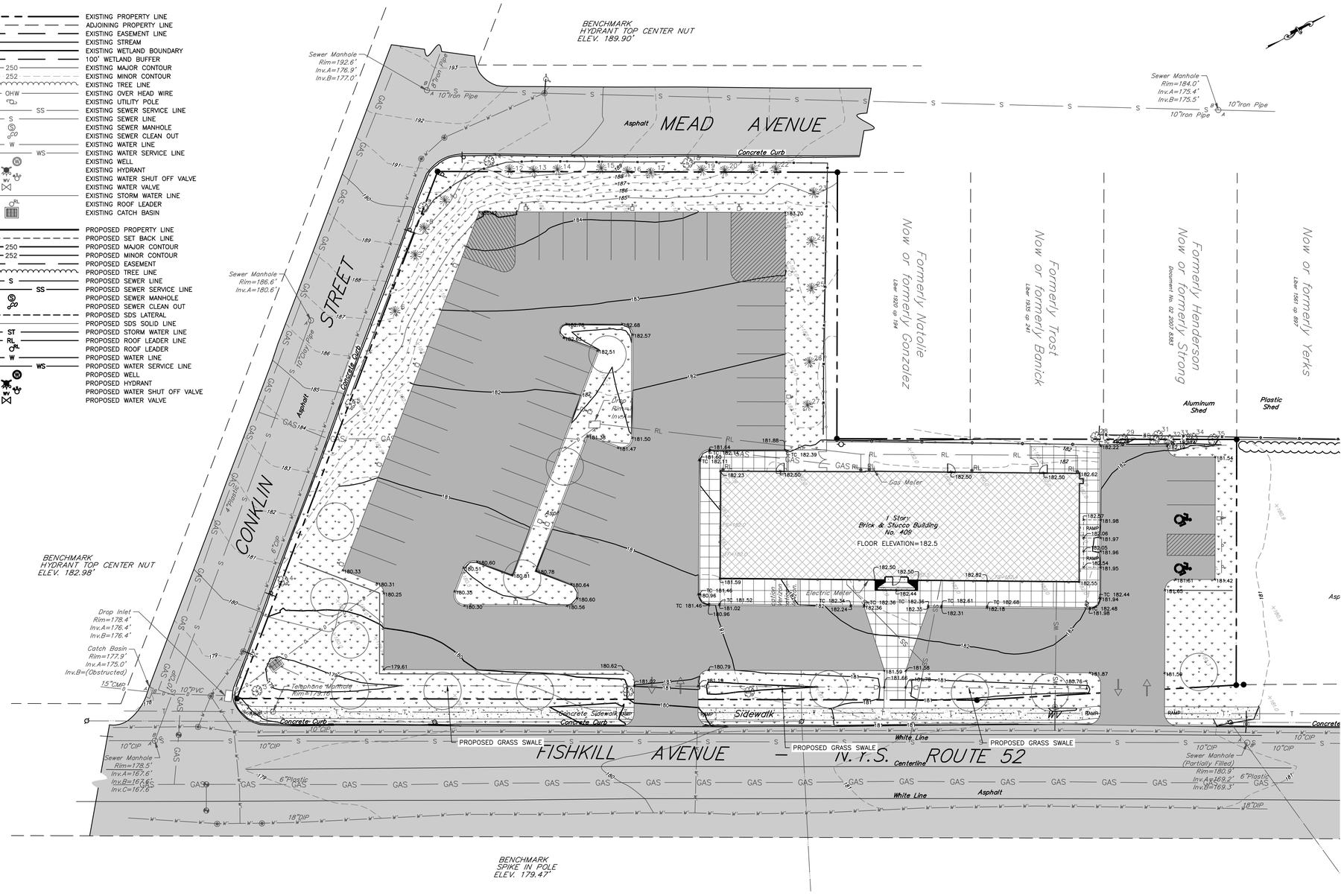

GRADING NOTES:

1. ALL PROPOSED SPOT ELEVATIONS REPRESENT BOTTOM CURB ELEVATION UNLESS OTHERWISE NOTED. TC REPRESENTS TOP CURB ELEVATION.
2. CONTRACTOR SHALL ENSURE POSITIVE SURFACE WATER FLOW TO THE INTENDED DRAINAGE FACILITIES.
3. SEE ALSO ADA CONSTRUCTION NOTES ON SHEET CV-1.

APPLICANT'S CONSENT:

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GRADING PLAN
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GRAPHIC SCALE
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1 inch = 30 ft.

STATE OF NEW YORK
DANIEL G. KOETTER
083716
LICENSED PROFESSIONAL ENGINEER
SEAL

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GRADING PLAN

409 FISHKILL AVE

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JOB #:	2023:032
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SCALE:	1" = 20'
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SHEET:	4 OF 9

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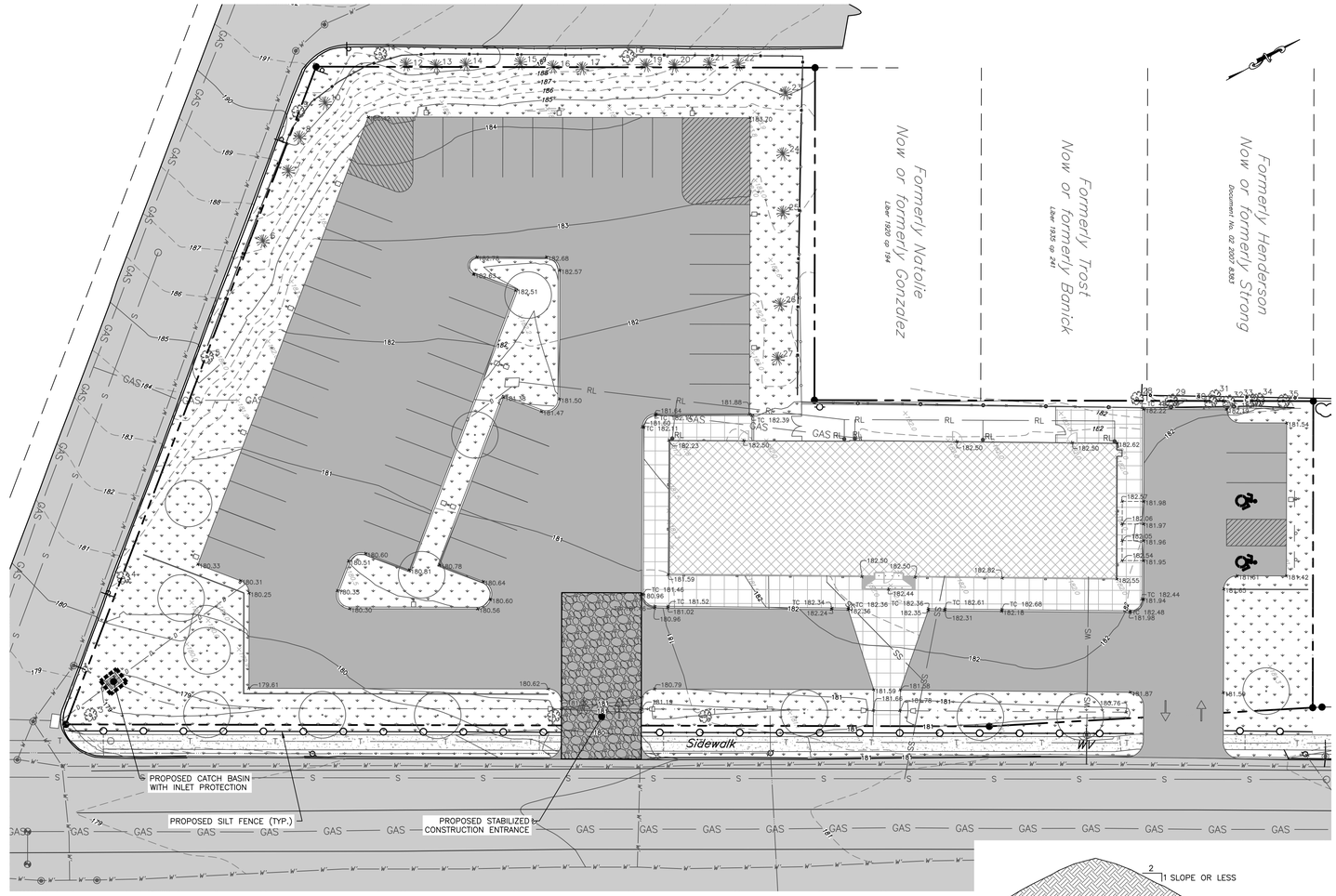
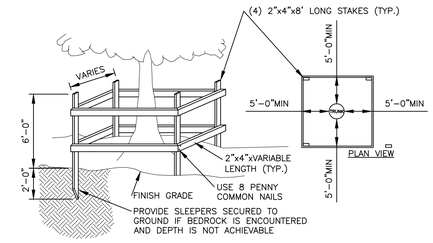
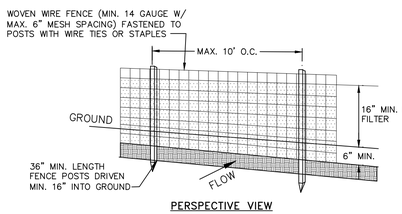
- PROPOSED HYDRANT
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE
- PROPOSED SILT FENCE
- LOD PROPOSED LIMIT OF DISTURBANCE
- PROPOSED CATCH BASIN INLET PROTECTION
- PROPOSED CONSTRUCTION ENTRANCE



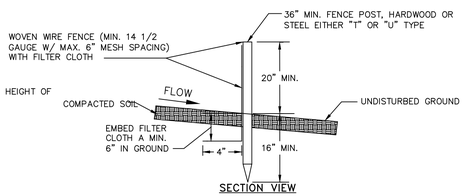


NOTES:
1. TREES TO REMAIN NOTED ON EXISTING CONDITIONS PLAN.
2. NOT ALL TREES TO REMAIN REQUIRE PROTECTION. TREE PROTECTION TO BE UTILIZED ON TREES WHERE CONSTRUCTION TRAFFIC WOULD COMPACT THE ROOT ZONE OF THE TREE.

TEMPORARY TREE PROTECTION DETAIL
NOT TO SCALE



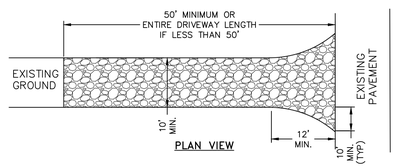
PERSPECTIVE VIEW



SECTION VIEW

NOTES:
1. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
3. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUAL.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

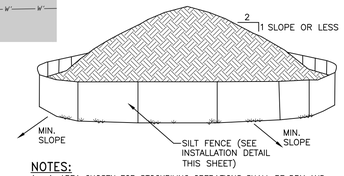
SILT FENCE DETAIL
NOT TO SCALE



PLAN VIEW

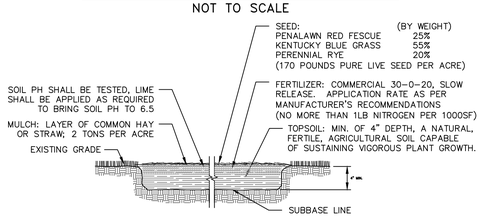
NOTES:
1. STONE SIZE – USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. THICKNESS – NOT LESS THAN SIX (6) INCHES.
3. WIDTH – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24 FOOT MINIMUM IF SINGLE ENTRANCE TO SITE.
4. GEOTEXTILE – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
5. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
7. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



NOTES:
1. 1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.

TEMPORARY SOIL STOCKPILE DETAIL
NOT TO SCALE



TOPSOIL SEED, FERTILIZER AND MULCH DETAIL
NOT TO SCALE

INSPECTION SCHEDULE & MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES

PERMANENT AND TEMPORARY VEGETATION:
INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE:
INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. CHECK FOR MUD, SEDIMENT BUILD-UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. REGRADE PAD AS NEEDED FOR RUNOFF CONTROL. WASH AND REPLACE STONE AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF SITE BY VEHICLES. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE AS DIRECTED BY PROJECT ENGINEER.

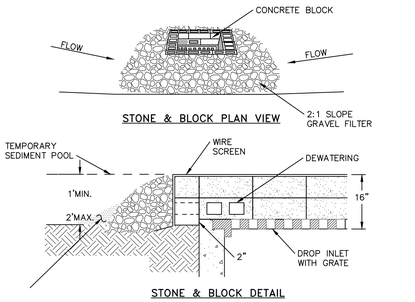
SILT FENCE:
INSPECT FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE FENCE. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.

SOIL STOCKPILE:
INSPECT SEDIMENT CONTROL BARRIERS (SILT FENCE) AND VEGETATION FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE SEDIMENT CONTROL BARRIER BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE SEDIMENT CONTROL BARRIER. IF SEDIMENT CONTROL BARRIER TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF SEDIMENT CONTROL BARRIER IMMEDIATELY. REVEGETATE DISTURBED AREA TO STABILIZE SOIL STOCKPILE. REMOVE THE SEDIMENT CONTROL BARRIER WHEN THE SOIL STOCKPILE HAS BEEN REMOVED.

DUST CONTROL:
SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORKS. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

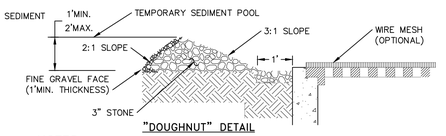
DEWATERING PITS:
(IF REQUIRED) – INSPECT DAILY DURING OPERATION FOR CLOGGING OR OVERFLOW. CLEAR INLET AND DISCHARGE PIPES OF OBSTRUCTIONS. IF A FILTER MATERIAL BECOMES CLOGGED WITH SEDIMENT, PIT SHALL BE DISMANTLED AND NEW PITS SHALL BE CONSTRUCTED AS NEEDED.

CATCH BASINS:
ALL CATCH BASINS SHALL BE INSPECTED AFTER EACH STORM EVENT FOR SEDIMENT ACCUMULATION, AND DEBRIS, AND REMOVE AS NECESSARY. THE INLET PROTECTION SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION AND REPLACED AS NECESSARY. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN SUMP REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED.



STONE & BLOCK PLAN VIEW

STONE & BLOCK DETAIL



"DOUGHNUT" DETAIL

NOTES:
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS. MAXIMUM DRAINAGE AREA 1 ACRE

CATCH BASIN INLET PROTECTION DETAIL
NOT TO SCALE

APPLICANT'S CONSENT:

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SGI – USA DATE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

EROSION & SEDIMENT CONTROL
SCALE: 1" = 20'
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

STATE OF NEW YORK DANIEL G. KOBYLT LICENSED PROFESSIONAL ENGINEER 082716
SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

EROSION & SEDIMENT CONTROL PLAN

409 FISHKILL AVE

409 FISHKILL AVE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6055-80-403061, 399053, 406047, 411056, 416064 & 418071

JOB #:	2023:032
DATE:	11/28/23
SCALE:	1" = 20'
TITLE:	ESC-1
SHEET:	5 OF 9

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING STREAM
- EXISTING WETLAND BOUNDARY
- 100' WETLAND BUFFER
- 250 EXISTING MAJOR CONTOUR
- 252 EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- OHW EXISTING OVER HEAD WIRE
- EXISTING UTILITY POLE
- SS EXISTING SEWER SERVICE LINE
- S EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER CLEAN OUT
- W EXISTING WATER LINE
- WS EXISTING WATER SERVICE LINE
- EXISTING WELL
- EXISTING HYDRANT
- WV EXISTING WATER SHUT OFF VALVE
- EXISTING WATER VALVE
- EXISTING STORM WATER LINE
- RL EXISTING ROOF LEADER
- EXISTING CATCH BASIN

- PROPOSED PROPERTY LINE
- PROPOSED SET BACK LINE
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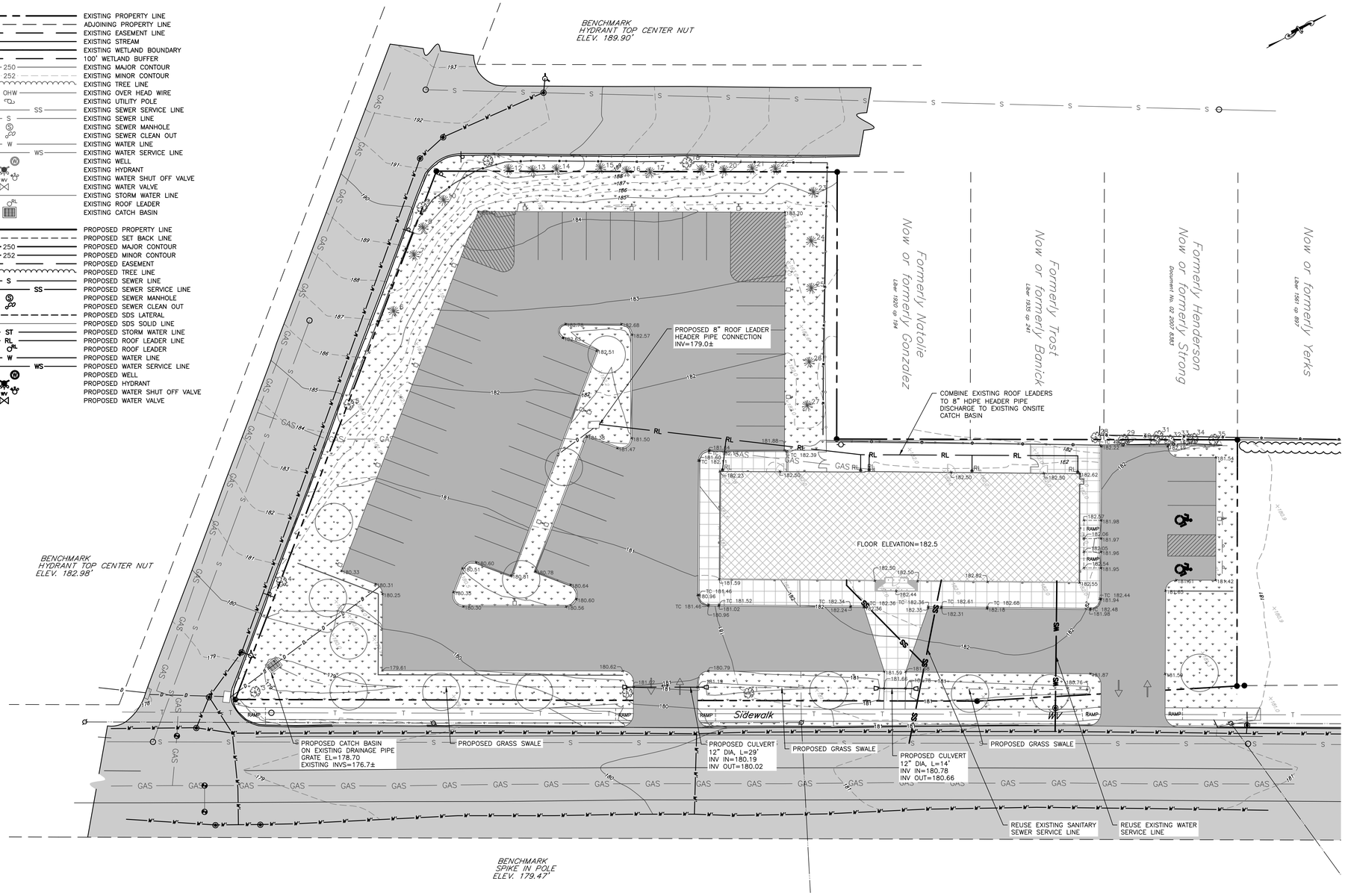

I&I NOTES:

1. A FLOOR DRAIN WAS FOUND DURING THE INSPECTION BY HUDSON LAND DESIGN PERSONNEL, LOCATED GENERALLY ALONG THE SOUTHEAST PORTION OF THE GARAGE AREA. THE FLOOR DRAIN CONVEYS FLOW TO A TRAP IN THE FLOOR, AND IS ASSUMED TO DRAIN TO THE BUILDING'S SANITARY SEWER LINE. ALL COMPONENTS OF THE FLOOR DRAIN SHALL BE REMOVED AND THE DISCHARGE PIPE SHALL BE CAPPED.

APPLICANT'S CONSENT:

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_____ SECRETARY

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DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

UTILITY PLAN
SCALE: 1" = 20'
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

STATE OF NEW YORK
DANIEL G. KOEPPEL
082716
LICENSED PROFESSIONAL ENGINEER
SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

UTILITY PLAN

409 FISHKILL AVE

409 FISHKILL AVE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6055-80-403061, 399053, 406047, 411056, 416064 & 418071

JOB #:	2023:032
DATE:	11/28/23
SCALE:	1" = 20'
TITLE:	UT-1
SHEET:	6 OF 9

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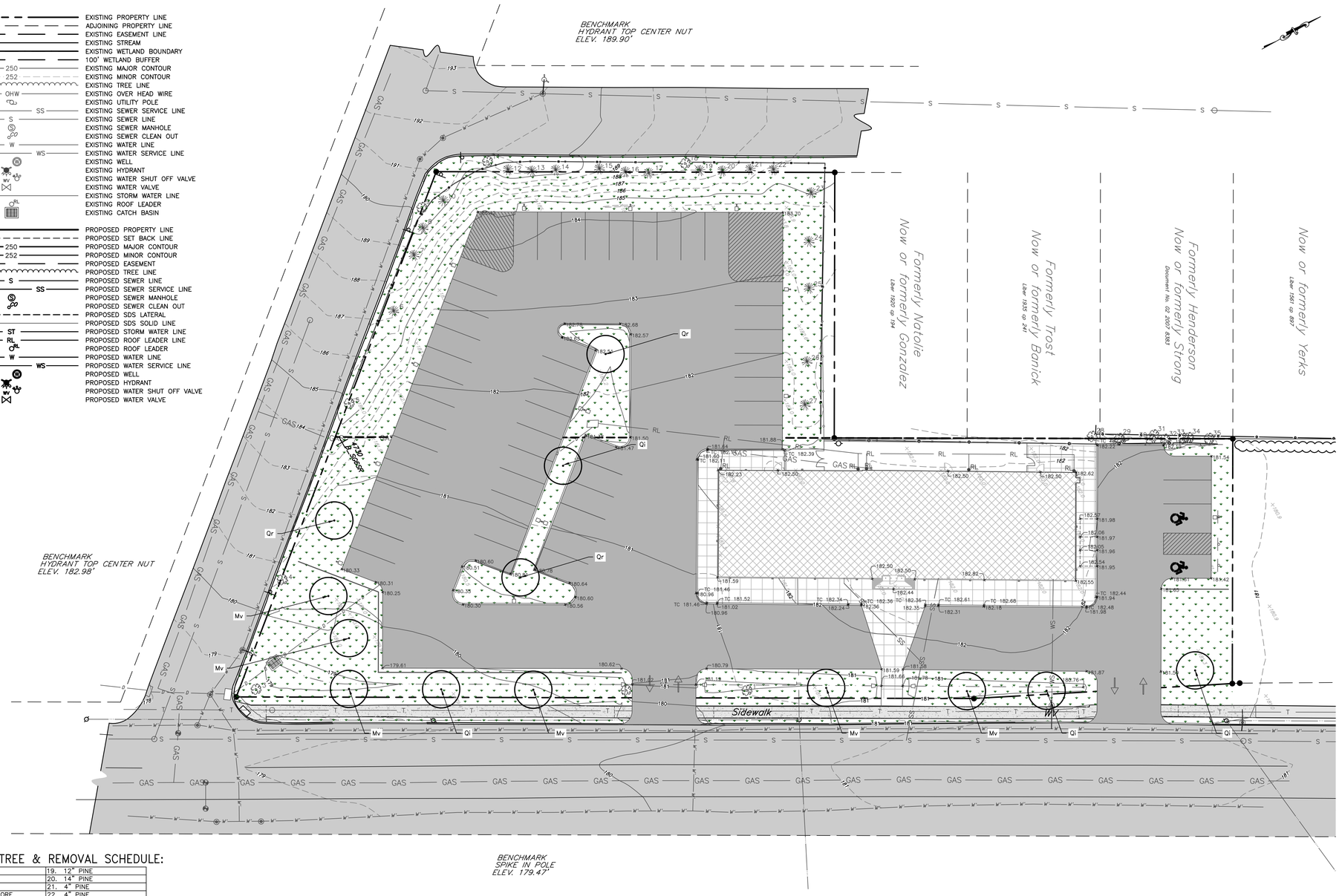
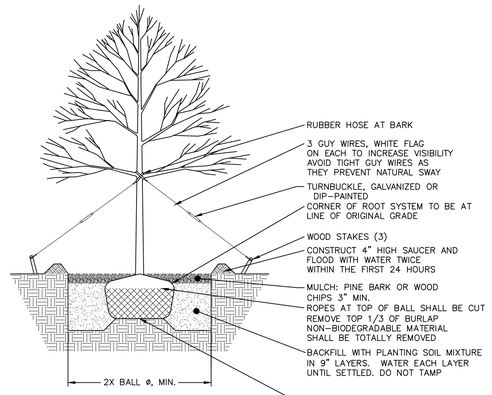


LANDSCAPE NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL CAREFULLY COORDINATE CONSTRUCTION ACTIVITIES WITH THAT OF THE EARTHWORK CONTRACTOR AND OTHER SITE DEVELOPMENT.
2. THE CONTRACTOR SHALL VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS AND INSPECT RELATED WORK AND ADJACENT SURFACES. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF ALL FINISH GRADES WITHIN THE WORK AREA. THE CONTRACTOR SHALL REPORT TO THE ENGINEER AND OWNER ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
3. THE EXACT LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND UNDERGROUND UTILITIES, WHICH MAY NOT BE INDICATED ON THE DRAWINGS, SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROTECT EXISTING STRUCTURES AND UTILITY SERVICES AND IS RESPONSIBLE FOR THEIR REPLACEMENT IF DAMAGED.
4. THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM RUBBISH AND ALL DEBRIS AT ALL TIMES AND SHALL ARRANGE MATERIAL STORAGE SO AS NOT TO INTERFERE WITH THE OPERATION OF THE PROJECT. ALL UNUSED MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED FROM THE SITE.
5. NO TREES OR SHRUBS SHALL BE PLANTED ON EXISTING OR PROPOSED UTILITY LINES.
6. QUALITY ASSURANCE:
   A. PLANT NAMES SHALL CONFORM TO THE LATEST EDITION OF "STANDARDIZED PLANT NAMES" AS ADOPTED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.
   B. SIZE AND GRADING: PLANT SIZES AND GRADING SHALL CONFORM TO THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" AS SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC (AAN), UNLESS OTHERWISE SPECIFIED.
   C. NURSERY SOURCE: OBTAIN FRESHLY DUG, HEALTHY, VIGOROUS PLANTS NURSERY GROWN UNDER CLIMACTIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR A MINIMUM OF 2 YEARS. PLANTS SHALL HAVE BEEN LINED OUT IN ROWS, ANNUALLY CULTIVATED, SPRAYED, PRUNED AND FERTILIZED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. ALL PLANTS SHALL HAVE BEEN TRANSPLANTED OR ROOT PRUNED AT LEAST ONCE IN THE PAST 3 YEARS. BALLED AND BURLAPPED PLANTS MUST COME FROM SOIL WHICH WILL HOLD A FIRM ROOT BALL. HEELED IN PLANTS AND PLANTS FROM COLD STORAGE ARE NOT ACCEPTABLE.
   D. SUBSTITUTIONS: DO NOT MAKE SUBSTITUTIONS OF TREES AND/OR SHRUB MATERIALS. IF REQUIRED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY AND PROPOSAL FOR USE OF EQUIVALENT MATERIAL.
7. SEEDING & PLANTING SEASONS AND TIMING CONDITIONS:
   A. UNLESS OTHERWISE DIRECTED IN WRITING, SEED LAWNS FROM MARCH 15 TO JUNE 15, AND FROM AUGUST 15 TO OCTOBER 15.
   B. UNLESS OTHERWISE DIRECTED IN WRITING PLANT TREES AND SHRUBS FROM MARCH 15 TO JUNE 1, AND FROM AUGUST 15 TO OCTOBER 30.
8. ALL LANDSCAPING SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE SITE.



TREE PLANTING DETAIL
NOT TO SCALE

EXISTING TREE & REMOVAL SCHEDULE:

1. 16" APPLE	19. 12" PINE
2. 12" APPLE	20. 14" PINE
3. 10" APPLE	21. 4" PINE
4. 22" SYCAMORE	22. 4" PINE
5. 20" SYCAMORE	23. 22" PINE
6. 14" PINE	24. 10" PINE
7. 14" PINE	25. 16" PINE
8. 10" PINE	26. 12" PINE
9. 24" SYCAMORE	27. 18" PINE
10. 14" PINE	28. 16" MAPLE
11. 24" SYCAMORE	29. 8" MAPLE TWIN
12. 4" PINE	30. 8" MAPLE
13. 6" PINE	31. 6" HACKBERRY
14. 6" PINE	32. 8" MAPLE
15. 6" PINE TWIN	33. 10" MAPLE TRIPLE
16. 6" PINE	34. 8" MAPLE
17. 4" PINE	35. 8" MAPLE CLUMP
18. 24" SYCAMORE	

NOTES:
1. TREE LOCATIONS BY BADEY & WATSON SURVEYING.
2. SPECIES ID PER BADEY & WATSON SURVEYING.
3. TBR = TO BE REMOVED

PLANTING SCHEDULE

TREES

KEY	QTY	BOTANICAL NAME	COMMON NAME	CALIPER	SPACING
Qi	4	QUERCUS ILLICIFOLIA	SHRUB OAK	2.5 INCH (DBH)	AS SHOWN
Mv	6	MAGNOLIA VIRGINIANA	SWEETHAY MAGNOLIA	2.5 INCH (DBH)	AS SHOWN
Qr	3	QUERCUS RUBRA	RED OAK	2.5 INCH (DBH)	AS SHOWN

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LANDSCAPING PLAN
SCALE: 1" = 20'
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
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13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926

LANDSCAPING PLAN

409 FISHKILL AVE

409 FISHKILL AVE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6055-80-403061, 399053, 406047, 411056, 416064 & 418071

JOB #:	2023:032
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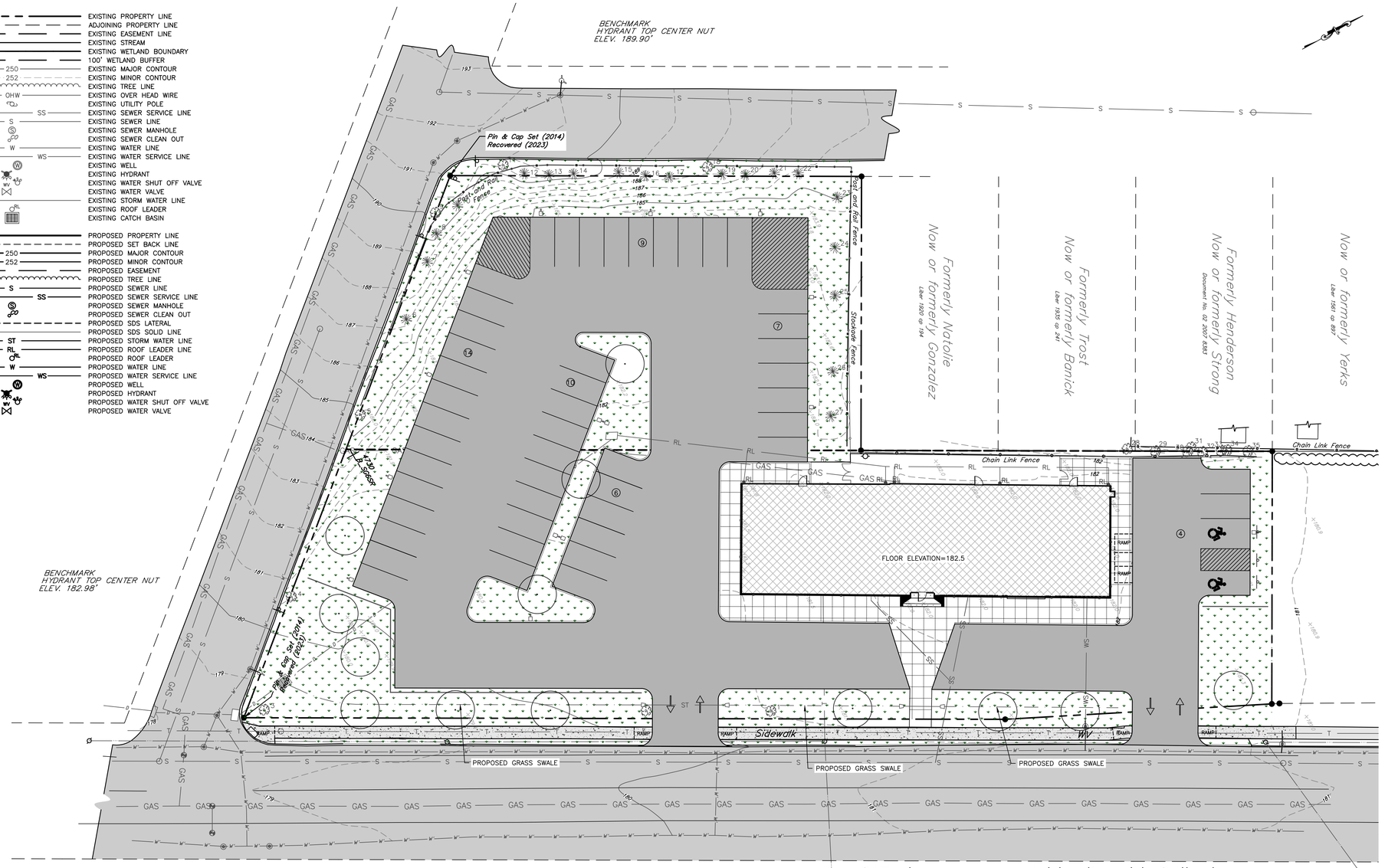
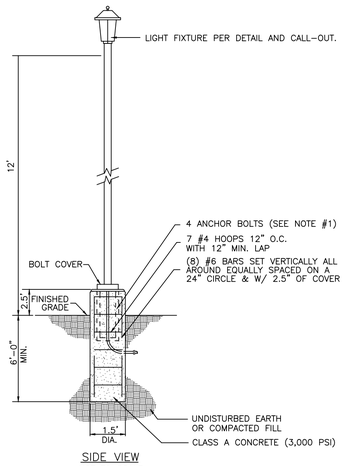


LIGHTING NOTES:

1. ALL LIGHTING SHALL BE DARK SKY COMPLIANT WITH CUTOFF SHIELDS AS NOTED.
2. ILLUMINATION IN FOOT-CANDLES, ONLY CONSIDERS PROPOSED LIGHTING, AND WILL BE PROVIDED IN FUTURE SUBMITTALS.
3. EXISTING LIGHTING LEVELS ALONG CONKLIN STREET AND FISHKILL AVENUE NOT MODELED.



SIDE VIEW
NOT TO SCALE

NOTES
1. LIGHT FIXTURE SHALL BE DIRECTED AND/OR SHADED AS NECESSARY TO PREVENT LIGHT FROM SPLAYING OFF-SITE AND TO PREVENT UNREASONABLE GLARE FROM BEING OBSERVED ON ADJACENT ROADWAY OR PROPERTY.

POLE AND LUMINARE DETAIL
NOT TO SCALE

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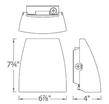
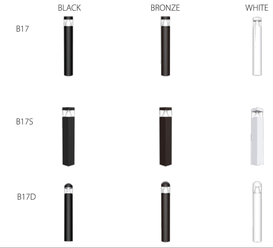
FIN - MODEL: WP-LED1
Endurance Wallpack

IP66, WET



AETHER ATOMIC
R1ASDL, R1ASPL - Square Downlight and Pinhole

B17 Ultra-Economy, Field-Adjustable Bollards



DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

LIGHTING PLAN
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1 inch = 30 ft.

STATE OF NEW YORK
DANIEL G. KOEPPEL
082716
LICENSED PROFESSIONAL ENGINEER
SEAL

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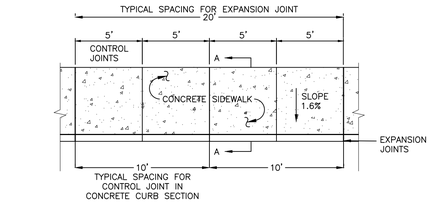
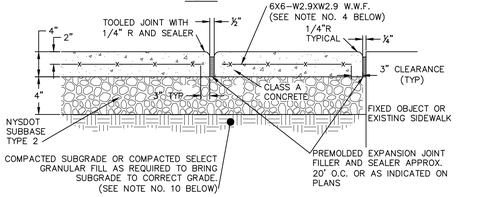
TAX ID: 6055-80-403061, 399053, 406047, 411056, 416064 & 418071

JOB #:	2023:032
DATE:	11/28/23
SCALE:	1" = 20'
TITLE:	LT-1
SHEET:	8 OF 9

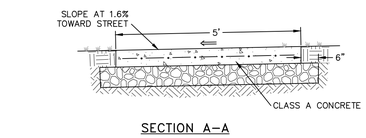
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



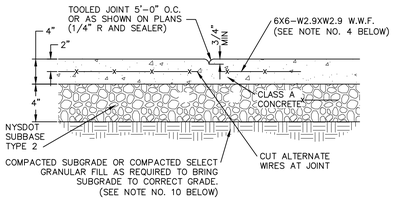
PLAN



EXPANSION JOINT



SECTION A–A

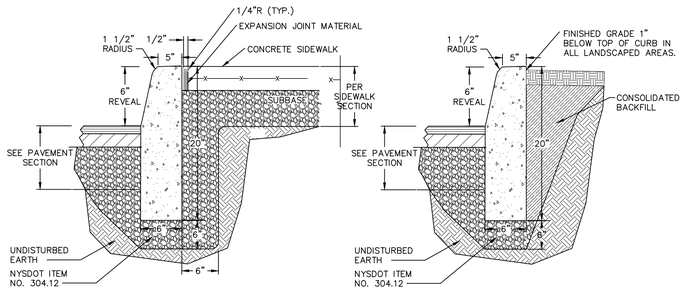


CONTROL JOINT

NOTES:

1. 10' SPACING OF CONTROL JOINTS SHALL BE USED FOR CAST IN PLACE CONCRETE CURBS.
2. MATERIAL AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 2, 2002, AND ALL ADDENDA THERETO; THE ONLY EXCEPTION BEING THAT THE WORK OF THIS CONTRACT SHALL BE MEASURED IN ENGLISH UNITS.
3. ALL CONCRETE SHALL BE 4,000 PSI CLASS A CONCRETE. CONCRETE MATERIALS, PLACEMENT, AND CONSTRUCTION SHALL CONFORM WITH SECTION 500 OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
4. REINFORCING STEEL FOR CONCRETE SHALL CONFORM WITH SECTION 556 – REINFORCING STEEL FOR CONCRETE STRUCTURES OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND AS SPECIFICALLY CALLED OUT IN THE DRAWINGS.
5. ALL EXPOSED SURFACED SHALL HAVE A BROOM TEXTURED FINISH.
6. EXPANSION JOINTS SHALL BE LOCATED A MAXIMUM OF 20' ON CENTER, OR AS INDICATED ON PLANS.
7. JOINTS SHALL NOT BE SAW CUT.
8. EXPOSED CONCRETE SURFACES SHALL BE TREATED WITH "SUREBOND"/"SAFEBOND" SB–7000 INTENSIFIER BRIGHT PROTECTOR AND SIDEWALK SEALER, OR EQUAL. RATE AND METHOD OF APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS.
9. SUBBASE MATERIAL SHALL CONFORM WITH SECTION 304 OF THE ABOVE REFERENCED NYSDOT STANDARD.
10. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSE OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMATION WITH SECTION 203–EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
11. ALL WORK SHALL CONFORM WITH SECTION 608–SIDEWALK, DRIVEWAYS, AND BICYCLE PATHS OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
12. CONCRETE SHALL BE SEALED WITH A SALT RESISTANT SEALER.

CONCRETE SIDEWALK DETAIL
NOT TO SCALE



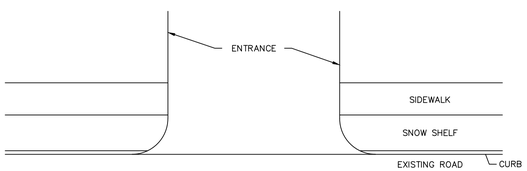
ABUTTING SIDEWALK

ABUTTING GRASS OR LANDSCAPE

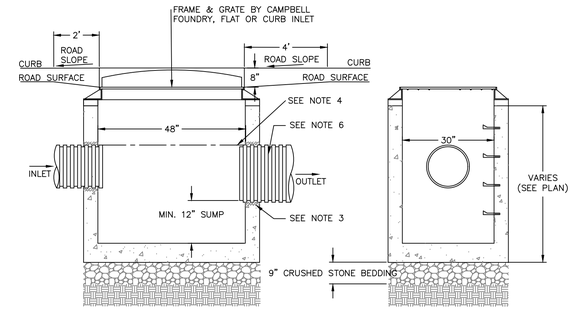
NOTES:

1. CONCRETE CURB SHALL BE 4,000 PSI CAST–IN–PLACE, AND IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
2. EXPANSION JOINTS OF 1/2" CELLULOSE OR SIMILAR MATERIAL SHALL BE PLACED AT 10 FOOT INTERVALS.
3. FOR MOUNTABLE CURBS ABUTTING SIDEWALK OR OTHER HARDSCAPE, REFER TO "ABUTTING SIDEWALK" DETAIL.
4. CONCRETE SHALL BE SEALED WITH A SALT RESISTANT SEALER.

CAST–IN–PLACE CONCRETE CURB DETAIL
NOT TO SCALE



DOT ENTRANCE DETAIL
NOT TO SCALE



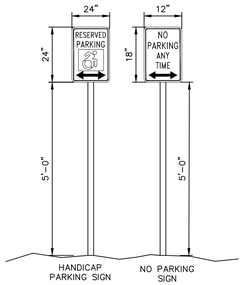
FRONT VIEW

SIDE VIEW

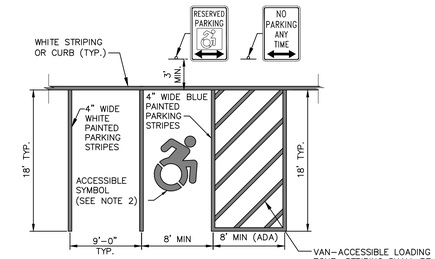
NOTES:

1. PRECAST CONCRETE CATCH BASIN WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE CATCH BASIN AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE. CONNECTIONS MADE WITHIN 10 FEET OF A WATER MAIN (OR SERVICE LINE) OR A SEWER MAIN (OR SERVICE LATERAL) SHALL BE MADE WATERTIGHT.
4. PROVIDE A MINIMUM 0.1' DROP BETWEEN INLET AND OUTLET INVERTS (MATCH CROWNS FOR PIPES WITH DIFFERENT SIZE) UNLESS OTHERWISE NOTED ON THE PLAN.
5. CATCH BASINS WITH AN INTERIOR DEPTH OF 4' AND GREATER SHALL BE FURNISHED WITH STEEL REINFORCED POLYPROPYLENE PLASTIC STEPS AT 12" INTERVALS.
6. HDPE PIPE SHALL BE PROVIDED WITH WATERTIGHT CONNECTIONS. ADS MODEL N12 WT IB OR APPROVED EQUAL.

CATCH BASIN DETAIL
NOT TO SCALE



SIGN DETAILS
NOT TO SCALE



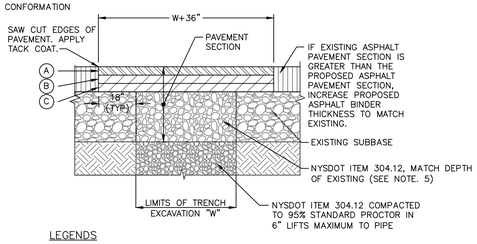
TYPICAL PARKING STRIPING

ACCESSIBLE PARKING STRIPING

NOTES:

1. ALL DIMENSIONS SUBJECT TO CURRENT MUNICIPALITY ZONING AND SITE REGULATIONS.
2. PAINTED HANDICAP SYMBOL TO BE IN ACCORDANCE WITH NYSDOT AND ADA STANDARDS.
3. IF PARKING ABUTS A SIDEWALK, THEN THE REGULATORY SIGNS SHALL BE PLACED BEHIND THE SIDEWALK.
4. PARALLEL SPACES SHALL BE 10'W X 20L'.

PARKING AND STRIPING DETAIL
NOT TO SCALE



LEGENDS

CONKLIN STREET RESTORATION COURSES:

- (A) 1–1/2" ASPHALT CONCRETE TOP COURSE– NYSDOT TYPE 6F
- (B) 3–1/2" ASPHALT CONCRETE BINDER COURSE– NYSDOT TYPE 3
- (C) NO ASPHALTIC BASE COURSE

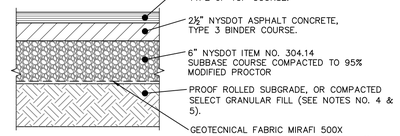
FISHKILL AVENUE RESTORATION COURSES:

- (A) 1–1/2" ASPHALT CONCRETE TOP COURSE– NYSDOT TYPE 6F
- (B) 2–1/2" ASPHALT CONCRETE BINDER COURSE– NYSDOT TYPE 3
- (C) 8" ASPHALTIC BASE COURSE– NYSDOT TYPE 1 (4" LIFTS)

NOTES:

1. SAW CUT MIN. 18" BEYOND EXCAVATION WITH SMOOTH EDGES. 18" JOINT BETWEEN EXISTING AND NEW TOP COURSE TO BE MILLED. JOINT TO BE SEALED WITH POLYMER MODIFIED SEALER.
2. FURNISH, PLACE, AND COMPACT SUBBASE IN TWO 4" LIFTS.
3. TACK COAT IN ACCORDANCE WITH NYSDOT STANDARD SPEC.
4. FURNISH AND PLACE ASPHALT CONCRETE PAVEMENT AS SPECIFIED.
5. PROVIDE 10" GRANULAR SUBBASE COURSE – NYSDOT ITEM 304.12 FOR CONKLIN STREET RESTORATION.

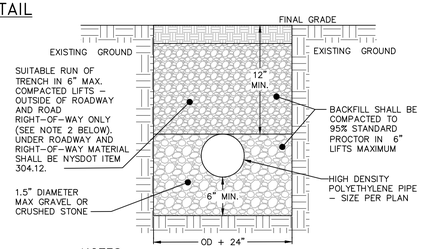
PAVEMENT RESTORATION DETAIL
NOT TO SCALE



NOTES:

1. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JANUARY 2, 2002.
2. SUBGRADE SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS.
3. TACK COAT WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407–TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
4. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSES OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203–EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
5. IT IS EXPECTED THAT THE EXISTING SITE SUB–SOILS ARE SAND AND GRAVEL IN NATURE (CALIFORNIA BEARING RATIO RANGE BETWEEN 40 AND 80) IF UNSUITABLE SOILS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR POSSIBLE MODIFICATIONS TO THE PAVEMENT DETAIL.

PAVEMENT SECTION DETAIL
NOT TO SCALE



NOTES:

1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

STORM LINE TRENCH DETAIL
NOT TO SCALE

APPLICANT'S CONSENT:

THE UNDERSIGNED APPLICANT OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ _____
SGI – USA DATE

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

DRAWN BY: CMB				CHECKED BY: DGK			
REVISIONS:				REVISIONS:			
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY

STATE OF NEW YORK — DANIEL G. KOERNER — 082716 — LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845–440–6926

CONSTRUCTION DETAILS

409 FISHKILL AVE

409 FISHKILL AVE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6055–80–403061, 399053, 406047, 411056, 416064 & 418071

JOB #:	2023:032
DATE:	11/28/23
SCALE:	AS SHOWN
TITLE:	CD–1
SHEET:	9 OF 9

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

LANC & TULLY
Engineering and Surveying, P.C.

December 7, 2023

Mr. John Gunn
Beacon Planning Board Chair
City of Beacon
1 Municipal Plaza
Beacon, NY 12508

RE: 409 Fishkill Ave.
SGI-USA Site Plan
Tax Nos. 6055-80-399053, 403061,406047, 411056, 416064 & 418071
City of Beacon

Dear Mr. Gunn:

My office has received the following regarding the proposed re-use of the building located at 409 Fishkill Avenue:

- Cover letter correspondence dated November 28, 2023, from Hudson Land Design.
- Application for site plan approval, Entity Disclosure Form from SGI, Affidavit of Property Owner, and Entity Disclosure Form from Healey.
- Short Environmental Assessment Form dated November 28, 2023.
- Infiltration and Inflow Investigation Report, dated November 28, 2023, as prepared by Hudson Land Design.
- Traffic Evaluation Report, dated October 30, 2023, as prepared by Colliers Engineering & Design.
- Architectural rendering plan.
- Plans titled "Renovation of Commercial Building – 409 Fishkill Avenue", consisting of 5 sheets as prepared by Robert W. Scarpa Jr., Architect, dated November 28, 2023.
- Engineering plan set titled "409 Fishkill Avenue", consisting of sheets 1 of 9 through 9, dated November 28, 2023, as prepared by Hudson Land Design.

The proposed project, located at the intersection of Fishkill Avenue and Conklin Street, entails the re-use of the existing car dealership building located at 409 Fishkill Avenue as a place of worship. The project site consists of 6 different parcels, with two (2) of the parcels located in the R1-5 Zone and 4 of the parcels located in the GB (General Business) Zone, with the 6 parcels combined having a total area of ±1.183 acres. It should be noted that a "Place of worship" is allowed in all R1 zones, as well as the GB zone.

Based on our review of the above documents and plans, we would like to offer the following comments:

General Comments:

1. The "Application for Site Plan Approval" was not signed and dated. The application shall be resubmitted once it has been signed and dated.

2. The "Entity Disclosure Form" submitted by SGI shall be properly completed and resubmitted.

3. The rendering plan shall include a date as to when it was prepared and who prepared it.

4. We would recommend that the 6 parcels that comprise the proposed project be consolidated into a single parcel.

5. The applicant would be required to obtain a highway work permit for the project, as so noted in the submitted EAF.

Architectural Plans:

1. Sheet 1 of 3 notes the installation of a 5 inches stockade fence. This should be revised to reflect the actual height of the proposed fence.

Engineering Plans:

1. Sheet 2 of 9 should be revised to address the following:
    a. The size of the existing water service line to the building.
    b. The size of the existing sewer lateral to the building.
    c. Provide a note as how much impervious area exists on the site and how much impervious area is being removed.

2. Sheet 3 of 9 should be revised to address the following:
    a. The fencing proposed along the left and right sides of the front of the project shall be called out, as well as noting the proposed height of the fence and the type of fence to be installed.
    b. Sheet 2 of 9 notes that the electric meter is to be relocated, but Sheets 3 and 4 show the meter in the same location. If the meter is to be relocated, then it should accurately be reflected on the plans as to where it is to be located.
    c. A tree is proposed in direct vicinity of the existing water service line to the building. It is recommended that additional separation distance be provided between the tree and the water line.

d. In accordance with ICC A117.1 and Chapter 11 of the 2020 NYS Building Code, the ADA compliant parking stalls are only required to be 8 feet in width. Based upon the proposed sizes for the ADA parking stalls provided on the plan, the overall ADA compliant parking area could be reduced in width by 4 feet, further reducing impervious coverage on the site.
e. The site distances for both site drives shall be provided on the plan.
f. The architectural plans note the installation of a stockade fence to the rear of the building. This shall be shown on the plan.
g. The architectural plans note the storage area to be located at the rear right-side of the building. This should be shown on the plan.
h. Is the existing building sprinklered? If so, this shall be noted on the plans. We would recommend that the applicant's consultants meet with the Building Inspector as to the type of sprinkler system that may be required due to an area of public assembly. This may impact the size of the water line that currently serves the building.
i. Is any signage proposed along the front of the project site? If so, it should be shown on the plans.
j. The plan shall note the installation of ADA compliant ramps to allow for crossing of the 2 entrance ways.

3. Sheet 4 of 9 should be revised to address the following:
   a. Is the sidewalk along the front of the project to be replaced? The grading plan shows grading occurring with the state right-of-way in the areas of the sidewalk. If so, Sheet 2 of 9 should be revised to reflect the removal of the sidewalk.

4. Sheet 6 of 9 should be revised to address the following:
   a. The size of the water and sewer services shall be noted on the plan.

5. Sheet 7 of 9 should be revised to address the following:
   a. Consideration should be given to providing additional landscaping along the north-east side of the project to buffer the site from the neighboring parcel.
   b. Consideration should be given to providing additional landscape screening (shrubs) along the rear and left side of the parking lot along Conklin Street to reduce visual impacts of the parking lot from the residential neighbors.

6. Sheet 8 of 9 should be revised to address the following:
   a. The lighting plan shall be updated to include the photometrics of the proposed lighting for the site.
   b. How will the lighting be controlled on the site? Will lighting be present from dusk to dawn, or will lighting be turned off at a given time of the night?

7. Sheet 9 of 9 should be revised to address the following:
   a. The plan shall be updated to include construction details for the various fencing proposed on the site.

This completes our review at this time. Further comments may be provided based on future submissions. **A written response letter addressing each of the above comments should be provided with the next submission.** If you have any questions, or require any additional information, please do not hesitate to contact our office.

Very truly,

LANC & TULLY, P.C.

John Russo, P.E.

cc: John Clarke, Planner
Jennifer Gray, Esq.
Bruce Flower, Building Inspector

John Clarke Planning and Design jclarkeplandesign@gmail.com
845.797.4152

To: John Gunn, Chair, and the City of Beacon Planning Board
Date: December 8, 2023
Re: **409 Fishkill Avenue Site Plan, Soka Gakkai International - USA**

I have reviewed the November 28, 2023 cover letter from Hudson Land Design, November 28, 2023 Short EAF Part 1, November 16, 2023 Site Plan Application, October 30, 2023 Traffic Evaluation by Colliers Engineering, 5-sheets of building plans with an undated rendering by Robert W. Scarpa Jr. Architect, and 9-sheet Site Plan set by Hudson Land Design, with all plans dated November 28, 2023.

Proposal

The applicant is proposing to convert an existing one-story auto dealer building, having a total of 5,454 square feet, into a place of worship with 50 parking spaces. The 1.183-acre site includes four parcels in the General Business (GB) district and two rear parcels in the R1-5 Residential district.

Comments and Recommendations

1. The site includes six separate parcels in two different districts. Parking is not a permitted principal use on the R1-5 district parcels and needs a special permit for GB parcels. The Building Inspector should determine if this proposal needs special permits (see Section 223-26C(9)). The applicant should consider a lot merger, making the GB parking a permitted accessory use.

2. The proposed plan has less asphalt than the previous car dealer, but still significantly more than necessary. The parking lot layout could be more efficient and would offer better walking and wheeling paths from the spaces to the building entrance if the aisles were parallel with the building. The attached alternative parking option provides 50 spaces on the south side of the building, including an additional ADA space. This allows the proposed north parking lot and much of the front driveway to be turned into a landscaped garden area.

3. Street trees every 30 feet or so across the frontage will be welcomed along this relatively bleak street, but the landscaping plan should include additional lower shrubs and planting beds, not just grass. Some lower planting should also fill in the gaps between the taller evergreens adjacent to the residential neighbors.

4. Under Section 223-26C(3), the parking lot must have at least one 3-inch diameter tree for every 10 spaces.

5. The Lighting Plan should show footcandle levels across the site, include a fixture specifications table that demonstrates compliance with all the requirements in 223-14B, and include clear locations for the wallpacks and bollards on the plan.

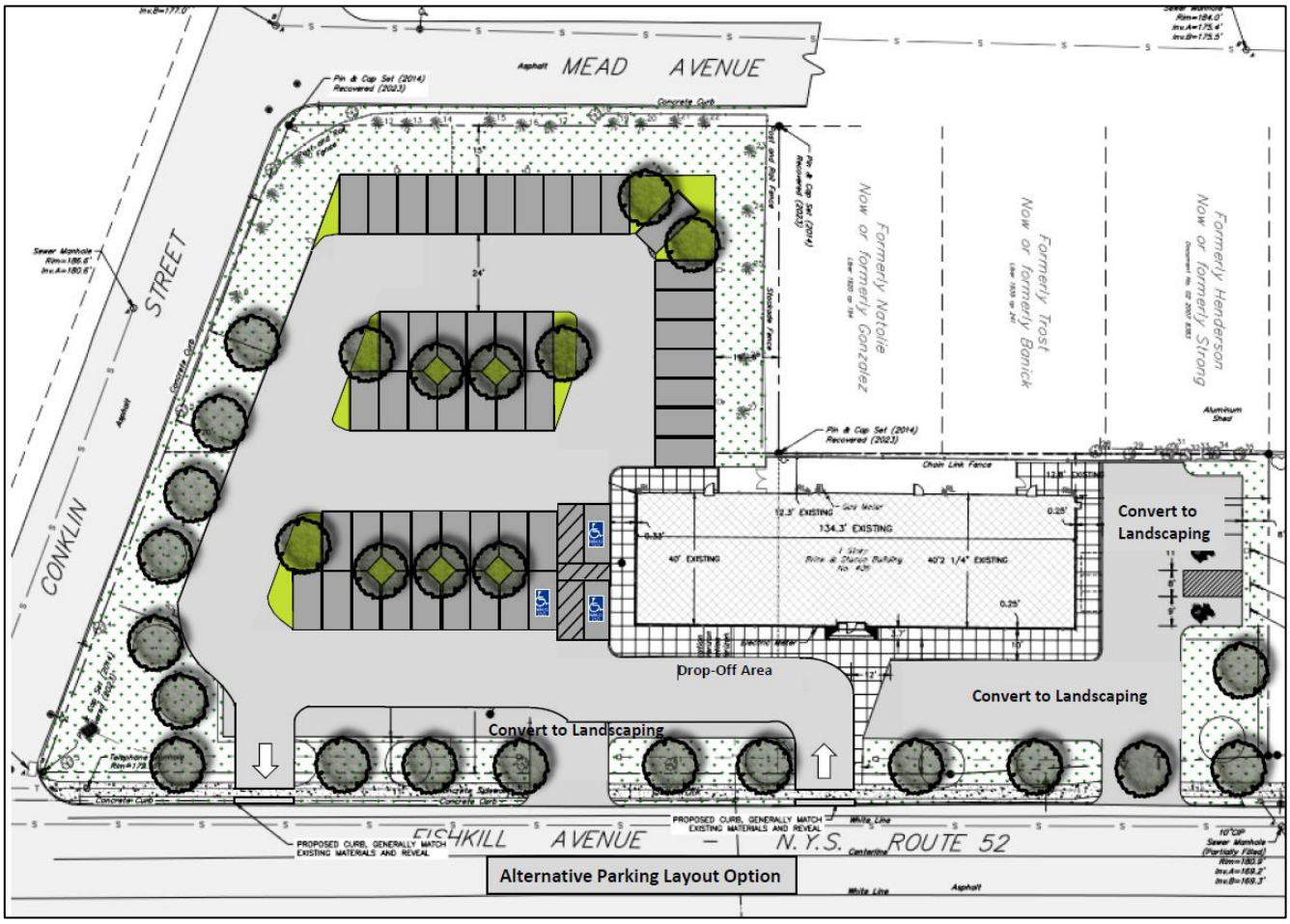
6. Sheet SD-100 indicates that the pole lights will be 20 feet high, while the Lighting Plan shows a 12-foot pole.

7. A detail needs to be provided for the 4-foot decorative fence shown on Sheet SD-100.

If you have any questions or need additional information, please feel free to contact me.

John Clarke, Beacon Planning Consultant

c: Bruce Flower, Building Inspector
Jennifer L. Gray, Esq., City Attorney
John Russo, P.E., City Engineer
Daniel Koehler, P.E., Project Engineer



City of Beacon Planning Board Agenda
12/12/2023

Title:

Certificate of Appropriateness - 177 Main Street; Facade

ATTACHMENTS

177 Main St ARB PB 12.12.23.pdf

679

ARCHITECTURAL REVIEW BOARD APPLICATION

RECEIVED 11/28/23

Date: Nov 26 2023

Project Address: 177 MAIN St

Project Architect/Engineer: _____

Owner/Builder: EAST MOUNTAIN ASSOCIATES LLC

Contact Phone No.: 845-309-0427 Email: EMA58@optonline.net

Approval Requested: ✓ Certificate of Appropriateness (sign or façade change) _____ New Single-Family House

Color/Materials:

Siding: _____

Roofing: Vermont BLACK SLATE

Windows: Color: BM. HUNTER GREEN Type: _____

Trim: (MATCH EXISTING) BORAL

Garage Door: _____

Stone/Brick: _____

_____

Signature of Owner

Applications for sign approval must also submit a sign permit application & supporting documents

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____ (Date)

Plan Approved _____ (Date)

Subject to the following:

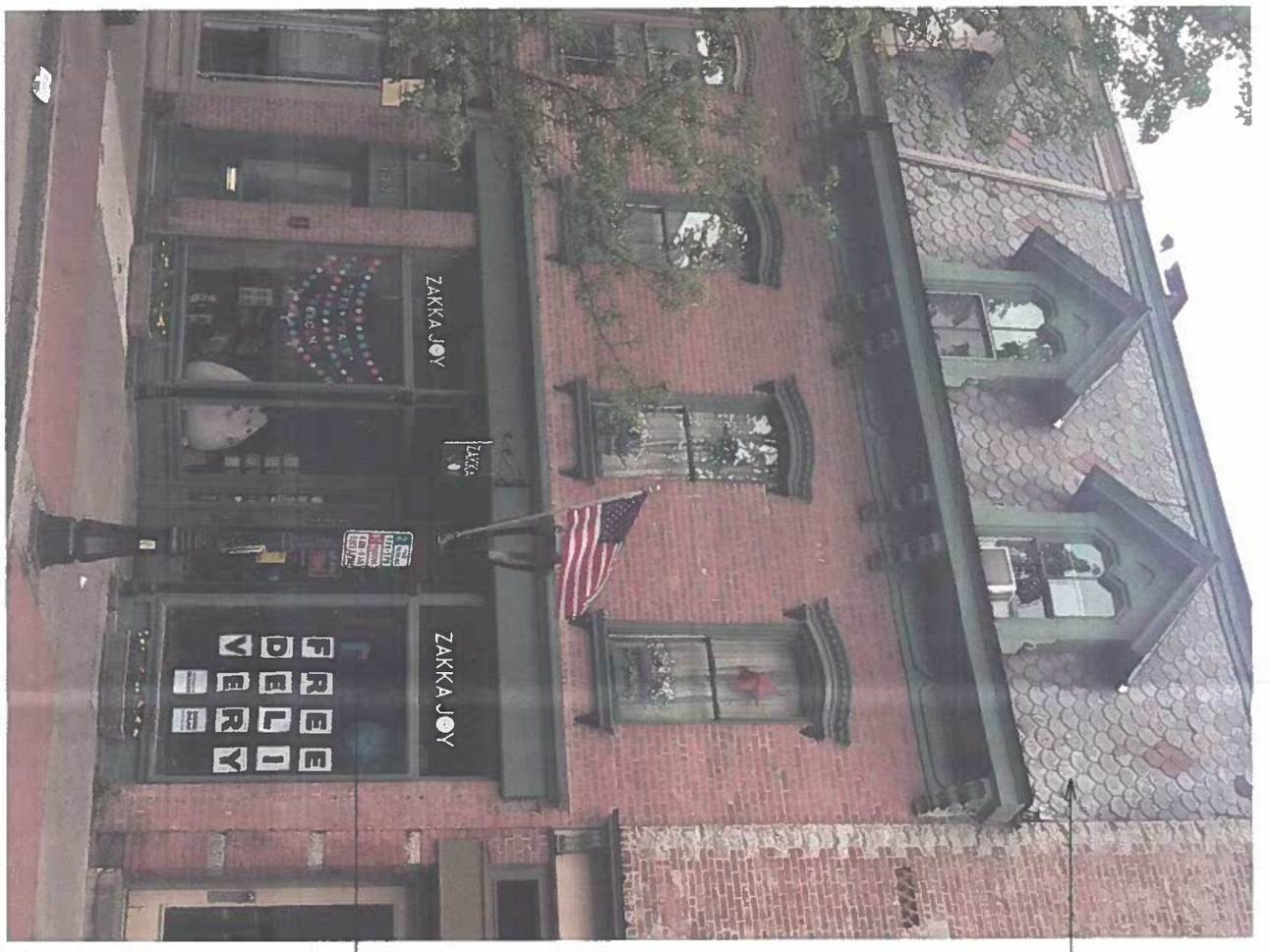
_____

_____

FEE: $100.00

Proposed finishes

EXISTING CONDITIONS



Remove existing glass and non bearing storefront

Existing Slate roof to be removed

SOFTPLAN
ARCHITECTURAL DESIGN SOFTWARE

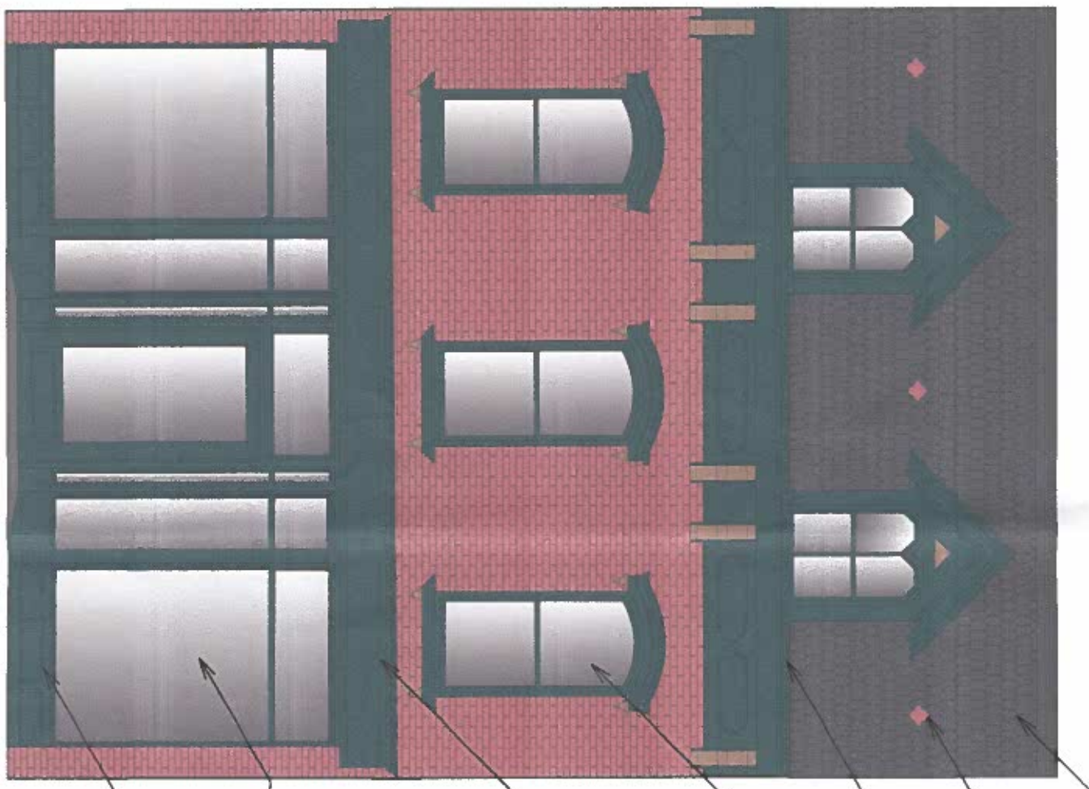
gary wood
110 anderson st
beacon
ny
12508
PHONE:8453090427
FAX:
MOBILE:
ema58@optonline.net

SECTION LETTER
A
1 1
PAGE NUMBERS

177 Main St
177 Main St
Beacon
NY
12508
PHONE:
FAX:
MOBILE:

DRAWN BY:
SCALE: As Noted
DATE: Saturday, November 25, 2023

PAGE: 2/2 Existing



Supply and install new 8"x16" Vermont Black Slate with deep bevel cut

Save and reinstall accent Slate shingle

16 oz. Copper dip edge and valley flashing

Dormer and trim to remain Windows to remain

Storefront cornice to remain

Remove existing storefront trim and glass. Rebuild Storefront and reinstall existing Glass

Rebuild storefront /clad with Boral and Paint to match existing

SOFTPLAN
ARCHITECTURAL DESIGN SOFTWARE

gary wood
110 anderson st
beacon
ny
12508
PHONE:8453090427
FAX:
MOBILE:
ema58@optonline.net

SECTION LETTER
A
1 1
PAGE NUMBERS

177 Main St
177 Main St
Beacon
NY
12508
PHONE:
FAX:
MOBILE:

DRAWN BY:
SCALE: As Noted
DATE: Saturday, November 25, 2023

PAGE: 1/2
Proposed

City of Beacon Planning Board Agenda
12/12/2023

Title:

Certificate of Appropriateness - 146 Main Street, #2; Sign

ATTACHMENTS

146 Main St #2 ARB PB 12.12.23.pdf

$100.00

684

ARCHITECTURAL REVIEW BOARD APPLICATION

RECEIVED

Date: 11/30/2023

Project Address: 146 Main St #2, Beacon, NY 12508

Project Architect/Engineer: Fast Signs

Owner/Builder: The Lindley Todd

Contact Phone No.: 617-335-4446 Email: jdonovan@hudsontodd.com

Approval Requested: ✓ Certificate of Appropriateness (sign or façade change) _____ New Single-Family House

Color/Materials: Black + white PVC

Siding: _____

Roofing: _____

Windows: Color: _____ Type: _____

Trim: _____

Garage Door: _____

Stone/Brick: _____

_____
Signature of Owner

Applications for sign approval must also submit a sign permit application & supporting documents

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____
(Date)

Plan Approved _____
(Date)

Subject to the following:

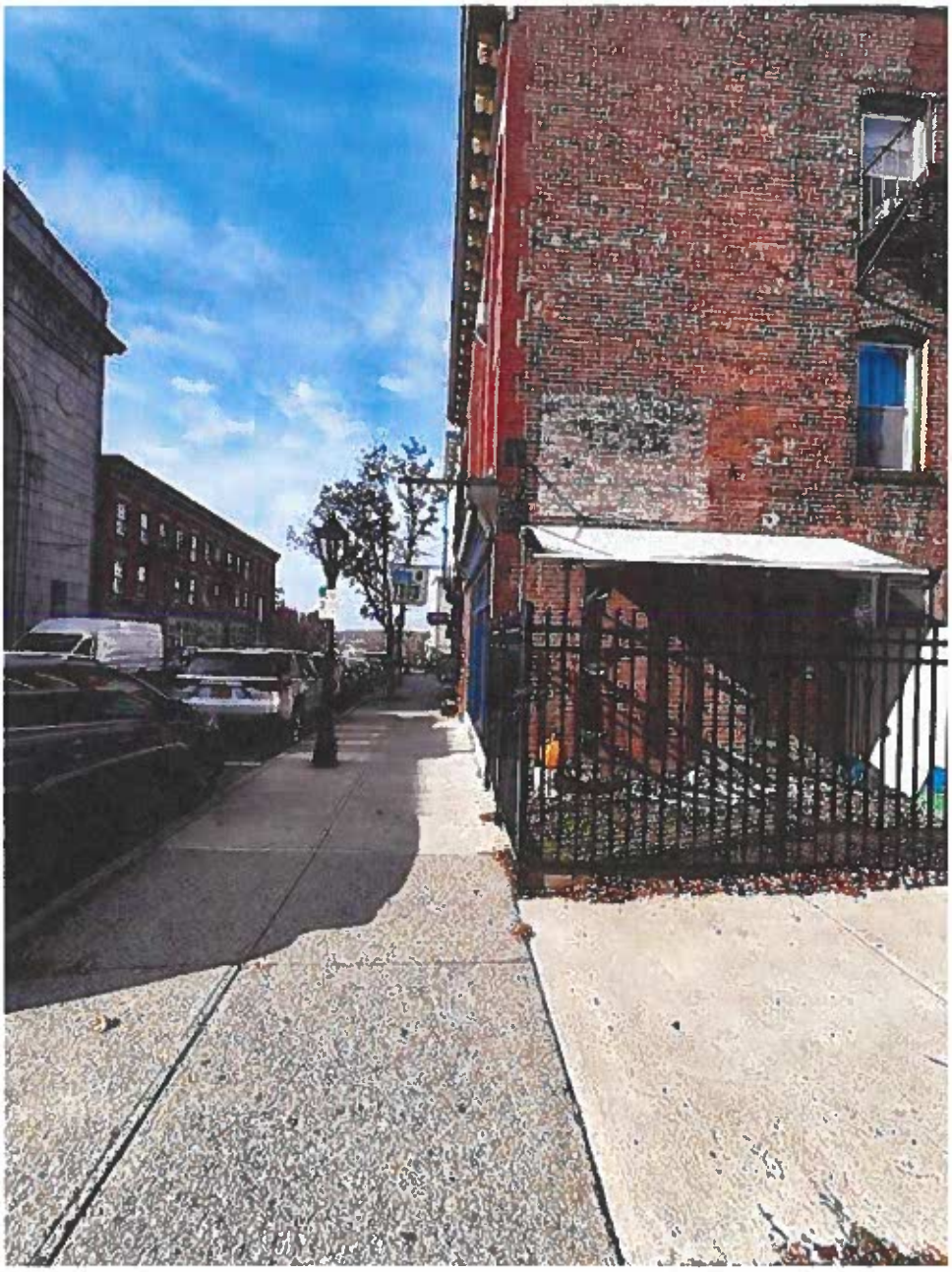
_____

_____

FEE: $100.00

Rendering of the sign to be mounted

(will be in black + white)



City of Beacon Planning Board Agenda
12/12/2023

Title:

Consider request for one 90-day extension of Site Plan and Subdivision Approval, 37 units, "Beacon Views Townhouses" at Conklin Street, submitted by Beacon Views LLC.

ATTACHMENTS

City of Beacon Planning Board Agenda
12/12/2023

Title:

City Council request to review proposed Local Law to amend parking requirements in the City of Beacon.

ATTACHMENTS

Beacon - SEAF Part 1 - Minimum Parking Requirements LL (4895-9741-0962.2).pdf

Resolution Setting a Public Hearing for Proposed Local Law No 8 of 2023.pdf

Beacon - Draft LL re Parking Requirements (4867-2988-1746.4).pdf

Beacon-SEAF Part 1 Narrative-Local Law re Parking Requirements (4878-7656-7186.1).pdf

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

City of Beacon

Name of Action or Project:

Proposed Local Law Amending Chapter 223 of the Zoning Code of the City of Beacon Concerning Parking Requirements

Project Location (describe, and attach a location map):

City of Beacon

Brief Description of Proposed Action:

The City Council of the City of Beacon (the "City") has introduced a local law to amend Chapter 223 of the City Code (the "Zoning Code") concerning parking requirements. Under the existing Zoning Code, Section 223-26, new land developments must provide a minimum number of parking spaces which varies depending on the proposed use. However, such minimum parking requirements often conflict with the promotion of the efficient use of mixed-use establishments, multistory buildings and walkable areas due to the need to provide such minimum number of parking spaces. Therefore, under the proposed amendment, the Planning Board would have the authority to determine the parking needs of each new mixed-use, commercial, and multi-family development on a case-by-case basis, except for one-family and two-family residences as well as accessory apartments which shall require at least one parking space per dwelling unit.

Name of Applicant or Sponsor:	Telephone: 845-838-5000
City of Beacon	E-Mail: cityofbeacon@beaconny.gov

Address:

1 Municipal Plaza

City/PO:	State:	Zip Code:
Beacon	New York	12508

	NO	YES
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.	☐	☑
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:	☐	☐

3. a. Total acreage of the site of the proposed action? _____ acres
   b. Total acreage to be physically disturbed? _____ acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☐ Residential (suburban)

☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):

☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☐	☐
b. Consistent with the adopted comprehensive plan?	☐	☐	☐

	NO	YES
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?		
If Yes, identify: _____	☐	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☐	☐
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?	☐	☐

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies: _____ _____	☐	☐

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water: _____ _____	☐	☐

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment: _____ _____	☐	☐

	NO	YES
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?	☐	☐
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?	☐	☐

	NO	YES
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?	☐	☐
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

	NO	YES
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?	☐	☐
16. Is the project site located in the 100-year flood plan?	☐	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☐	☐
If 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: _____		
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: _____		
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: _____		
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: _____		

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: City of Beacon Date: November 22, 2023

Signature: [signature] ESQ. Title: City Attorney

PRINT FORM

CITY OF BEACON
CITY COUNCIL

RESOLUTION NO. 123 OF 2023

SETTING A PUBLIC HEARING FOR PROPOSED LOCAL LAW NO. 8 OF 2023 TO AMEND THE ZONING CODE CONCERNING PARKING REQUIREMENTS

BE IT RESOLVED THAT the City Council hereby schedules a public hearing for December 18, 2023 at 7:00 pm for Proposed Local Law No. 8 of 2023 to amend the Zoning Code concerning parking requirements.

BE IT FURTHER RESOLVED THAT, the City Council refers the above proposed local law to the Dutchess County and City of Beacon Planning Boards for a report and recommendation.

Resolution No. 123 of 2023		**Date: November 27, 2023**					
☐ Amendments						**☐ 2/3 Required**	
☐ Not on roll call.			**☐ On roll call**			**☐ 3/4 Required**	
Motion	Second	Council Member	Yes	No	Abstain	Reason	Absent
		Paloma Wake					**x**
		Justice McCray	**x**				
		George Mansfield	**x**				
x		**Wren Longno**	**x**				
	x	**Molly Rhodes**	**x**				
		Dan Aymar-Blair	**x**				
		Mayor Lee Kyriacou	**x**				
		Motion Carried	**x**				

PROPOSED LOCAL LAW NO. 8 OF 2023

CITY COUNCIL
CITY OF BEACON

A LOCAL LAW TO AMEND PARKING REQUIREMENTS IN THE CITY OF BEACON

A LOCAL LAW to amend the Zoning Code concerning parking requirements.

BE IT ENACTED by the City Council of the City of Beacon as follows:

Section 1. Chapter 223 of the City Code of the City of Beacon, Article III, General Regulations, Section 223-26, entitled "Off-street parking, loading and vehicular access" is hereby amended as follows:

§ 223-26 **Off-street parking, loading and vehicular access.**

A. General.

~~All structures and land uses hereafter erected, enlarged, created or extended shall be provided with the amount of off-street automobile parking space and loading and unloading space required by the terms of this section to meet the needs of persons making use of such structures or land.~~ A permit for the erection, replacement, reconstruction, extension or substantial alteration of a structure or the development of a land use shall not be issued unless off-street automobile parking ~~facilities~~ areas or structures and, where ~~required~~ appropriate loading and unloading spaces ~~shall have been laid out in plan in accordance~~are consistent with the ~~appropriate requirements for structures and uses as set forth~~provisions in this section~~, and such required parking and loading facilities shall be completed before a certificate of occupancy shall be issued. As used herein, "parking facilities" shall be construed to include loading and unloading spaces required by this section~~.

~~(1) In case of exceptional difficulty or unusual hardship to such properties arising out of the requirements of this section, the Board of Appeals may reduce the parking requirements but shall require such degree of compliance as it may deem reasonable for that part of the structure or use that is legally nonconforming and shall not waive any part of the requirement for that part of the structure or use that constitutes an enlargement or expansion and shall not permit reduction or elimination of whatever quantity of parking may already exist, unless it is in excess of requirements.~~

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~~(2) Required off-street parking facilities which, after development, are later dedicated to and accepted by the City shall be deemed to continue to serve the uses or structures for which they were originally provided.~~

~~B. Effect on existing uses.~~

~~(1) Structures and land uses in existence on April 20, 1964, or structures and uses for which building permits had been approved on or before said date, shall not be subject to the requirements set forth in this section, unless there shall occur an increased intensity of use, provided that any parking facilities now existing to serve such structures or uses shall not in the future be reduced, except where they exceed such requirement, in which case they may not be reduced below such requirement.~~

~~(2) Whenever a building or structure erected prior to or after April 20, 1964. or any land use shall undergo any increase in intensity of use in the number of dwelling units, floor area, seating capacity, number of employees or other unit of measurement specified hereinafter for required parking facilities, or from other causes, and further when said increase would result in a requirement for additional parking facilities through application of the Schedule of Off-Street Parking Requirements (Subsection F), additional parking facilities shall be provided accordingly, except that no building or structure erected prior to said date shall be required to provide parking facilities unless the aforesaid additional required facilities amount to a cumulative total increase of at least 25% over the existing use as of said date, in which case parking spaces shall be provided on the basis of the total units of measurements of the new use or of the alteration or expansion of the existing use.~~

~~C.~~B. Location, use, design, construction and maintenance.

(1) Location. ~~The~~Except as required elsewhere under the City Code, any approved off-street parking ~~facilities~~ area or structure ~~which are required by this section~~ shall be provided on the same lot or premises with such structure or land use; ~~except~~ unless ~~that~~ such off-street parking spaces ~~required~~ for structures or land uses on two or more adjoining lots may be provided in a single common facility on one or more of said lots, provided that a binding agreement, in a form approved by the Corporation Counsel, assuring the continued operation of said parking facility during the life of the structure or the land use the parking is designed to serve, is filed on the land records prior to approval of the plans for said parking facility.

~~(1)~~(2) In any residence district, no designated off-street parking ~~facility~~ area or structure shall be developed in any ~~required~~ front yard forward of the principal building, except as approved by the Building Inspector or Planning Board for an unusual lot configuration. Nor shall any residence district off-street parking area or structure be developed ~~or~~ in any ~~required~~ minimum side or rear yard setback adjacent to a street line or in any other side or rear yard within five feet of the lot

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line. However, off-street parking spaces shall be permitted in residential districts as indicated in § **223-17C**.

~~(2)~~(3) Parking specifications.

(a) Each parking space provided in an unenclosed area shall be at least nine feet wide and at least 18 feet long, except that the Planning Board, in approving a plan under § **223-25**, may permit that portion of the total ~~required~~ parking which is specifically set aside for and limited to employee parking to have a width of at least 8 1/2 feet and a depth of at least 18 feet. This possible exception shall not be permitted in the CMS District.

(b) Each parking space which is bordered by walls or columns on two or more sides shall be not less than 10 feet wide nor less than 18 feet long. Enclosed or garaged parking areas shall not contain any columns, walls or other obstacles which would prevent or obstruct the use of any parking space.

(c) Except for one-family and two-family dwellings, ~~The~~ the maneuvering area needed to permit parked vehicles to enter and exit off-street parking spaces shall have a width of at least 24 feet, ~~except~~ unless ~~where~~ the Planning Board approves a lesser distance as adequate for areas with parallel or angled parking spaces.

(4) Landscaping. Except for parking spaces accessory to a one-family and two-family dwellings and accessory apartment dwelling units subject to approval by the Building Inspector, all off-street parking areas shall be landscaped with appropriate trees, shrubs and other plant materials and ground cover, as approved by the Planning Board based upon consideration of the adequacy of the proposed landscaping to assure the establishment of a safe, convenient and attractive parking facility with a minimum amount of maintenance, including plant care, snowplowing and the removal of leaves and other debris.

~~(d)~~(a) At least one tree with a minimum caliper of three inches at a height of four feet above ground level shall be provided within such parking area for each ~~10~~ 8 parking spaces.

~~(e)~~(b) Wherever possible, planting islands, at least eight feet in width, shall be provided to guide vehicle movement and to separate opposing rows of parking spaces so as to provide adequate space for plant growth, pedestrian circulation and vehicle overhang. Such planting islands and the landscaping within them shall be designed and arranged in such a way as to provide vertical definition to major traffic circulation aisles, entrances and exits, to channel internal traffic flow and prevent indiscriminate diagonal movement of vehicles and to provide relief from the visual monotony and shadeless expanse of a large parking area.

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~~(f)~~(c) The Planning Board may require curbing to facilitate surface drainage and prevent vehicles from overlapping sidewalks and damaging landscaping materials.

(d) No obstruction to driver vision shall be erected or maintained on any lot within the triangle formed by the street line of such lot, the outer edge of the access driveway to the parking area and a line drawn between points along such street line and access drive ~~30~~ 25 feet distant from their point of intersection.

~~(g)~~(e)Such property owner shall have an obligation to maintain and replace any landscaping which dies or becomes unsightly.

~~(3)~~(5) Grades, drainage, paving and marking. All proposed and ~~required~~ approved parking ~~facilities~~areas and structures, regardless of size, shall be graded, surfaced, drained and maintained throughout the duration of their use so as to comply with the New York State Stormwater Management Design Manual, as amended from time to time, and/or Chapter **190**, Stormwater Management and Erosion and Sediment Control, of this Code, or other acceptable stormwater management practice(s), as deemed suitable to the City Engineer to the extent necessary to avoid nuisances of dust, erosion or excessive water flow across public ways or adjacent lands. The drainage analysis for said parking ~~facilities~~ areas or structures shall include pre- and post-development conditions as well as remediation and/or mitigation of stormwater runoff. The maximum slope within a parking area shall not exceed 5%. In RD Districts and in nonresidential developments, the Planning Board shall require the provision of suitable markings to indicate individual parking spaces, maneuvering area, entrances and exits. The Planning Board shall require pervious surfaces for the parking spaces, unless the Applicant establishes to the Planning Board's satisfaction that ~~if~~ the underlying soils do not allow natural drainage.

~~(4)~~(6) Traffic circulation. In order to encourage safe and convenient traffic circulation, the Planning Board may require the interconnection of parking areas via access drives within and between adjacent lots. The Board shall require ~~written assurance and/or deed restrictions~~easements, satisfactory to the Corporation Counsel, binding the owner and his heirs and assignees to permit and maintain such internal access and circulation and inter-use of parking ~~facilities~~areas or structures.

~~(5)~~(7) Two or more uses on same lot. Where two or more different uses occur on a single lot, ~~the total amount of parking facilities to be provided shall be the sum of the requirements of each individual use on the lot, except that~~ the Planning Board may approve the joint use of parking space by two or more establishments on the same lot or on contiguous lots, the total capacity of which is less than the sum of the spaces ~~required~~ needed for each, provided that said Board finds that the capacity to be provided will substantially meet the intent of this article by reason of variation

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in the probable time of maximum use by patrons or employees at such establishments and provided that such approval of such joint use shall be automatically terminated upon a change of use at any such establishment.

~~(6)~~(8) Designed residence and multifamily residence districts.

(a) In RD Districts, in order that some of the ~~required~~ parking spaces may be convenient for use by visitors as well as by occupants, 2/3 of the ~~required~~ car spaces for a residential building shall, whenever possible, be directly accessible to a main entrance to that building and within 100 feet of that entrance.

(b) In RD Districts, off-street parking lots shall be located behind, underneath, or to the side of the building, whenever possible. Any parking to the side of the building shall be screened from street views by a low wall, hedge, fence, and/or other landscaping and, whenever possible, it shall be located at least 40 feet from any property line that fronts on a street.

~~(7)~~(9) Off-street parking for private passenger vehicles may be allowed by a special permit from the Planning Board on a vacant lot in a residential district which has a shared parcel line for at least 20 feet with a commercial or industrial district, provided that the off-street parking shall be on a portion of the lot within 200 feet of the commercial or industrial district and that the use shall not include fee-based parking for railroad commuters.

~~D.~~C. Alternatives to providing parking spaces.

(1) Conveyance of land. Where, because of limitations of size, dimensions or topography of a lot, an applicant for a building permit in a business district finds it impractical to provide all or a portion of the off-street parking spaces required by ~~Subsection F herein~~the Planning Board, in connection with a proposed building or addition, ~~he~~ the applicant may grant and convey to the City of Beacon, and the City Council, at its discretion, may accept, appropriately located and developed land for commercial parking as a permitted use equivalent, provided that said land is permanently dedicated to the City.

~~(1)~~(2) Waiver of improvement. Except within the Central Main Street District, and notwithstanding any other provision of this chapter, the City Council or Planning Board, in reviewing plans submitted in accordance with the provisions of this section or § **223-18** or **223-25**, may waive the initial improvement of up to 50% of the ~~required~~ off-street parking spaces, provided that all of the ~~required~~ spaces are shown on the proposed plan and further provided that suitable agreements, satisfactory to the City Council or Planning Board, are obtained assuring the City that the property owner(s) will be responsible for the construction of such waived

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spaces, or any portion thereof, within six months of the date such spaces may be deemed necessary by the City Council or Planning Board.

D. Schedule of Off-Street Parking ~~Requirements~~Standards. ~~Off-street parking spaces shall be provided as follows, except that the Board of Appeals may modify these provisions as a condition of the issuance of a special permit according to the provisions of § **223-19**.~~

(1) In order to promote walkability and other transportation alternatives and to avoid excessive automobile traffic and unnecessarily large paved parking lots, no minimum number of off-street parking spaces are required, except for one-family and two-family dwellings as well as accessory apartment dwelling units which shall require a minimum of one off-street parking space per dwelling unit.

(2) The Planning Board shall determine the appropriate number of on-site parking spaces as part of site plan approval and based on the context of the property, including but not limited to the size of the parcel, proposed uses, existing buildings on the parcel, especially if they are designated as historic, availability of public and street parking in the area, walkable access to public transit, a parking study prepared by the applicant, shared parking arrangements, land-banking waivers under § **223-26C(2)**, compliance with the Americans with Disabilities Act (ADA) and any state requirements for accessible parking, and input from any public hearing.

(3) Any professional parking study requested by the Planning Board and reviewed by the City's consultant shall be based primarily on specific site-related information, a comparable analysis of similar uses and properties in the area or region, and an examination of demand reduction strategies, including such elements as promotion of walking, bicycle parking or storage facilities, alternative mobility options, transit access opportunities, care-share rentals, and ride-sharing or carpooling services.

(4) The following table gives guidance to the Planning Board on the maximum parking allowed, notwithstanding, the Planning Board may approve fewer spaces:

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Use	~~Minimum~~ Maximum Off-Street Parking
1- and 2-family dwelling	~~2 spaces~~ 3 spaces for each dwelling unit
Multifamily dwelling and/or apartment or artist live/work space	1 space for each dwelling unit, plus 1/4 space for each bedroom, plus 1/2 space for each live/work space containing retail area
Professional home office or home occupation permitted in a residential district	2 spaces in addition to spaces ~~required~~ for the residential use, except that there shall be a maximum 4 spaces for each medical or dental practitioner in addition to spaces ~~required~~ for the residential use
Bed-and-breakfast establishment	1 space for each guest sleeping room, plus 2 spaces for the dwelling unit, plus 1 space for each nonresident employee
Hotel or inn	~~Subject to § 223-14.1C~~ 1 for each hotel guest room, plus 1 for each employee on site at any one time
Place of worship, theater, auditorium, athletic field or other place of assembly	1 space for each 4 seats or pew spaces or~~, in places or,~~ in places without seats, 1 space for each 100 square feet of floor space used for public assembly
Nursery school or day-care center	1 per employee plus 1 per classroom
Primary or secondary school	1 per employee plus 1 per 5 students in the 11th grade or above~~, or 1 per 4 assembly seats, whichever is greater~~
Dance, art, tutorial, martial arts or similar instructional school	1 space for each 150 square feet of gross floor space
Hospital, nursing home, convalescent home or home for the aged	1 space for each 3 resident persons, plus space for each employee~~, including medical, nursing and service staff employed at the same time~~ when the building is operating at full capacity
Golf and country club	1 space for each 2 memberships

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Use	~~Minimum~~ Maximum Off-Street Parking
Bowling alley or other place of indoor commercial recreation or public amusement	5 spaces for each bowling lane; all others, 1 space for each 4 persons of maximum occupancy or 1 space for each 200 square feet of gross floor area~~, whichever is greater~~
Retail or service business, including auction gallery	1 space for each ~~200~~ 250 square feet of gross floor area, excluding utility areas
Restaurant or coffee house	1 space for each 3 patron seats or 1 space for each ~~150~~ 200 square feet of gross floor area, excluding kitchen and storage areas~~, whichever is greater~~
Office for business or professional use (other than accessory to residential use)	1 space for each ~~200~~ 300 square feet of gross floor area, excluding utility areas
Banking office	1 space for each ~~200~~ 300 square feet of gross floor area, excluding utility areas
Funeral home or undertaking establishment	10 spaces per establishment, plus 1 space per employee
Motor vehicle sales and service	1 space per employee, plus 1 space per 150 square feet of gross floor space
Animal care facility	1 space per employee, plus 1 space per 300 square feet of gross floor space
Car washing establishment	~~Subject to § **223-21F** ~~1 space per each two persons working at the same time at full capacity or 1 space for each 400 square feet of gross floor area~~, whichever is greater~~
Research or development laboratory	1 space per employee~~, but not less than~~ or 1 space per 600 square feet of gross floor space

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Use	~~Minimum~~ Maximum Off-Street Parking
Manufacturing or industrial use	1 space per 2 employees ~~but not less than~~ or 1 space per 400 square feet of gross floor space
Wholesale, warehouse storage, utility or other similar commercial use	1 space per employee ~~but not less than~~ or 1 space per 1,000 square feet of gross floor space
Self-storage facility	1 space per 10,000 square feet of gross floor space, plus one space per employee
Senior housing	2 spaces for each 3 dwelling units
Museums located within walking distance (3,000 feet) of entrance to train station	1 parking space per 3,000 feet of gross floor space
Artist studio	1 space for each 500 square feet of gross floor space
Art gallery/exhibit space	1 space for each 250 square feet of gross floor area
Bar or brew pub	1 space for each 3 patron seats or 1 space for each 250 square feet of gross floor area, excluding kitchen and storage areas~~, whichever is greater~~
Microbrewery or microdistillery	1 space for each employee on the largest shift, plus 1 space for each 3-patron sitting or standing spaces in any tasting room or other visitor facility open to the general public
Museum	1 space for each ~~300~~ 500 square feet of gross floor area
Other uses not listed	Off-street parking requirements for types of uses which do not fall within the categories listed above shall be determined by the Planning Board or the Building Inspector, as the case may be, upon consideration of relevant factors entering into the parking needs of each such use

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~~(1) Notwithstanding § **223-26F** above, with respect to lots which, on the effective date of this section, are located wholly or partially within 2,500 feet of the train station platform, the City Council shall have the authority to limit the amount of parking to be provided for multifamily and nonresidential development projects on said lots having a parking requirement in accordance with § **223-26F** of 25 spaces or more, in the interest of appropriately and reasonably minimizing the environmental impact of the project's vehicular traffic accessing the train station. In such cases, the City Council shall ensure that convenient pedestrian access is provided by the project, or is otherwise available between the project and the train station. Where a substantial change in elevation exists between the project and the train station, the City Council may require the project to provide, if deemed feasible by the Council, an elevator, escalator, stairs and/or other similar pedestrian conveyance or access for such purpose.~~

E. Operation and maintenance of off-street parking ~~facilities~~areas and structures. ~~Required~~ Approved off-street parking ~~facilities~~ areas or structures shall be maintained as long as the use of the structure exists which the ~~facilities~~ parking areas or structures are designed to serve. ~~Required~~ Designated parking areas developed for specific structures and uses shall be reserved at all times to those persons who are employed at or make use of such structures and land uses, except when dedicated to and accepted by the City as public parking areas.

F. Off-street loading requirements. Off-street loading and unloading facilities ~~shall be located on the same site with the use to be served, except as provided in Subsection **C(1)**, and~~ shall be provided as follows:

(1) Size. Each off-street loading space shall be at least 14 feet in width, at least 35 feet in length and at least 14 feet in height, exclusive of access and turning areas, except that adjacent loading spaces may be each 12 feet in width.

(2) ~~Required number~~ Number of spaces. The Planning Board shall determine the location (on-site or off-site) and appropriate number of on-site loading spaces as part of site plan approval and based on the context of the property, including but not limited to the size of the parcel, proposed uses, existing buildings on the parcel, a professional study prepared by the applicant, and input from any public hearing.

~~(a) For retail and/or service business establishments: a minimum of one space for the first 7,500 square feet or major portion thereof, plus one space for each additional 10,000 square feet of gross floor area or major portion thereof, except that no berths shall be required for buildings with a gross floor area of less than 5,000 square feet.~~

~~(b) For office establishments: a minimum of one space for the first 20,000 square feet of gross floor area or major portion thereof, plus one space for each additional 40,000 square feet of gross floor area or major portion~~

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~~thereof, except that no berths are required for buildings of less than 10,000 square feet of gross floor area.~~

~~(c) For research establishments: a minimum of one space for the first 12,000 square feet of gross floor area of building or major portion thereof, plus one space for each additional 20,000 square feet of gross floor area or major portion thereof.~~

~~(d) For wholesale business, industry, storage, warehouses and other commercial establishments: a minimum of one space for each establishment, plus one space for each 10,000 square feet of gross floor area or major portion thereof.~~

~~(e) For nursing homes: a minimum of one space for each establishment.~~

~~(f) For museums, a minimum of one space for each establishment.~~

~~(g) Other uses which do not fall within the categories listed above shall be determined by the City Council and adopted as an amendment to this section.~~

G. Driveways. For reasons of traffic and pedestrian safety, both on and off street, as well as to provide for possible future road widening or other improvements, all new driveways and sidewalk crossings entering onto any street shall comply with all requirements of Chapter **100**, Driveways, and shall be subject to the approval of the Highway Superintendent, except where such are part of a use subject to special permit or site development plan approval, in accordance with §§ **223-18** and **223-25**, in which case they shall be subject to approval by the Planning Board and/or City Council.

Section 2. Ratification, Readoption and Confirmation.

Except as specifically modified by the amendments contained herein, Chapters 223 of the City of Beacon is otherwise to remain in full force and effect and is otherwise ratified, readopted and confirmed.

Section 3. Numbering for Codification.

It is the intention of the City of Beacon and it is hereby enacted that the provisions of this Local Law shall be included in the Code of the City of Beacon; that the sections and subsections of this Local Law may be re-numbered or re-lettered by the Codifier to accomplish such intention; that the Codifier shall make no substantive changes to this Local Law; that the word "Local Law" shall be changed to "Chapter," "Section" or other appropriate word as required for codification; and that any such rearranging of the numbering and editing shall not affect the validity of this Local Law or the provisions of the Code affected thereby.

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Section 4. Severability.

The provisions of this Local Law are separable and if any provision, clause, sentence, subsection, word or part thereof is held illegal, invalid or unconstitutional, or inapplicable to any person or circumstance, such illegality, invalidity or unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, clauses, sentences, subsections, words or parts of this Local Law or their petition to other persons or circumstances. It is hereby declared to be the legislative intent that this Local law would have been adopted if such illegal, invalid or unconstitutional provision, clause, sentence, subsection, word or part had not been included therein, and if such person or circumstance to which the Local Law or part hereof is held inapplicable had been specifically exempt there from.

Section 5. Effective Date.

This local law shall take effect immediately upon filing with the Office of the Secretary of State.

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SEAF Part 1: Narrative

A Proposed Local Law Concerning Parking Requirements

The City Council of the City of Beacon (the "City") introduced a local law to amend the text of Section 223-26 of the Beacon City Code (the "Zoning Code") concerning parking requirements. Presently, the Zoning Code mandates minimum parking requirements for all new developments within the City. However, at times such minimum parking requirements conflict with the City's planning goals to encourage the efficient use of diverse land uses, including multistory buildings and walkable areas. Thus, this proposed local law would eliminate minimum parking requirements within the City, except for one-family and two-family dwellings as well as accessory apartments which shall require at least one parking space per dwelling unit. Therefore, the Planning Board will have the ability to determine the appropriate number of parking spaces for mixed-use, commercial, and multifamily dwellings on a case-by-case basis.

In addition to gathering input from the public during any public hearing on a particular application, the Planning Board will be charged with determining the appropriate number of parking spaces for each new mixed-use, commercial, or multifamily dwelling based upon an evaluation of the context of the property, the size of the parcel, proposed uses, existing buildings on the parcel, availability of public and street parking in the vicinity, walkability and access to public transit, parking studies prepared by the applicant, shared parking arrangements, land-banking waivers, and compliance with the Americans with Disabilities Act. Moreover, this proposed local law would not alter permitted uses, setbacks, lot coverages, lot sizes, building heights, or any other use or dimensional requirements provided under the City's Zoning Code.