

EXPANDED ENVIRONMENTAL ASSESSMENT FORM

SEQR Full Environmental Assessment Form and Supplemental Studies

Bear Mountain Triangle Rezoning

Old Crompond Road
Town of Yorktown, Westchester County, New York

Tax Lots: 26.18-1-9, 26.18-1-10, 26.18-1-11, 26.18-1-12, 26.18-1-13,
26.18-1-14, 26.18-1-15, 26.18-1-16,

Project Sponsor: MANDALAY BUILDERS, LLC
5507-10 Nesconset Highway, Suite 168, Mount Sinai, NY 11766
Attention: Roy Baiata
(631) 476-6522

Developer Representative: RED TAPE RESCUERS
3302 Old Crompond Road, Yorktown, NY 10598
Attention: Ann Kutter
(914) 930-0316

Project Engineer: CIARCIA ENGINEERING, P.C.
360 Underhill Avenue, Yorktown Heights, New York 10598
Attention: Daniel Ciarcia, P.E.
(914) 245-0123

Environmental Planner: TIM MILLER ASSOCIATES, INC.
10 North Street, Cold Spring, New York 10516
Attention: Ann Cutignola, AICP
(845) 265-4400

Lead Agency: TOWN OF YORKTOWN TOWN BOARD
363 Underhill Avenue, Yorktown Heights, New York 10598
Attention: Supervisor Michael Grace
(914) 962-5722

Submitted September 25, 2015

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TABLE OF CONTENTS

Bear Mountain Triangle Rezoning

Full Environmental Assessment Form Part I

Environmental Assessment Form Part II

Environmental Assessment Form Part III - Narrative

	<u>Page</u>
1.0 Project Description	1-1
2.0 Land Use, Zoning and Community Character	2-1
3.0 Economic and Demographic Resources	3-1
4.0 Soils and Topography	4-1
5.0 Water	5-1
6.0 Ecology	6-1
7.0 Traffic	7-1
8.0 Construction Related Effects	8-1
9.0 Alternatives	9-1
• No Action alternative.	
• C-2 vs. C-2R alternative.	
• RSP-1 vs. R-3 alternative.	
• Single Family alternative	
• Industrial Alternative.	

List of Figures

	<u>End of Section</u>
Figure 1-1: Proposed Site Location	1.0
Figure 1-2: Rezoning Area	1.0
Figure 1-3: Conceptual Bear Mountain Triangle Master Plan	1.0
Figure 1-4: Conceptual Site Plan	1.0
Figure 1-5: Representative Landscape Plan	1.0
Figure 2-1: Proposed Re-Zoning Map	2.0
Figure 2-2: Zoning Comparison	2.0
Figure 2-3: Site Profile "AA"	2.0
Figure 2-4: Key Map of Site Profile Location	2.0
Figure 4-1: Soils Map	4.0
Figure 4-2: Slope Disturbance Map	4.0
Figure 4-3: Test Pit Location Map	4.0
Figure 4-4: Preliminary Earthwork Estimate	4.0
Figure 5-1: FEMA Flood Plain Map	5.0
Figure 6-1 to 6-6: Historic Aerial Photos	6.0
Figure 6-7: Vegetative Communities on 2013 Aerial Photo	6.0
Figure 6-8: NWI Wetlands Map	6.0
Figure 6-9: Site Photos for Ecology Section	6.0
Figure 7-1: Traffic Network - Intersections Studied	7.0
Figure 7-2: Pedestrian Access - Sidewalks and Walking Trails	7.0
Figure 7-3: Conceptual Traffic and Pedestrian Improvement Plan	7.0
Figure 9-1: Single Family Residential Alternative	9.0
Figure 9-2: Industrial Alternative	9.0

Appendices

- A. Zoning Petitions by Adjoiners
- B. Correspondence
- C. Traffic Study
- D. KW Housing Trends
- E. Soil Sample Data Sheets
- F. Westchester Bee-Line Route 15 Map
- G. Fiscal Analysis

Full Environmental Assessment Form
Part 1 - Project and Setting

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 project sponsor to verify that the information contained in Part I is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Bear Mountain Triangle Rezoning (Crompond Terraces)		
Project Location (describe, and attach a general location map): Old Crompond Road, Yorktown, NY		
Brief Description of Proposed Action (include purpose or need): The Applicant has petitioned the Town to rezone six (6) parcels to multi-family residential (R-3) and commercial (C-2R) from single family residential (R1-20). The Town of Yorktown wishes to consider two (2) additional adjacent parcels in the rezoning action that the Applicant does not control, for a total of eight (8) parcels, encompassing a total area of 23.61 acres. The Applicant is requesting the rezoning for the purpose of developing up to 80 residential townhouse units, 16 affordable rental apartments, a 12,000 square foot multi purpose recreational facility, up to 45,000 square feet of office space and up to 32,000 square feet of small scale retail space.		
Name of Applicant/Sponsor: Mandalay Builders, LLC	Telephone: (631) 476-6522	E-Mail: casaroyal@optonline.net
Address: 5507-10 Nesconset Highway, Suite 168		
City/PO: Mount Sinai	State: New York	Zip Code: 11766
Project Contact (if not same as sponsor; give name and title/role): Roy Baiata	Telephone: (631) 476-6522	E-Mail: casaroyal@optonline.net
Address: 5507-10 Nesconset Highway, Suite 168		
City/PO: Mount Sinai	State: New York	Zip Code: 11766
Property Owner (if not same as sponsor): See attached list of owners.	Telephone:	E-Mail:
Address: 3258, 3290, 3302, 3314, and 3326 Old Crompond Road,		
City/PO: Yorktown Heights	State: New York	Zip Code: 10598

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 Council, Town Board, <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No or Village Board of Trustees	Town Board - Rezoning	December 1, 2014
b. City, Town or Village <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Planning Board or Commission	Planning Board - Site Plan Approval	October 2015
c. City Council, Town or <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Village Zoning Board of Appeals		
d. Other local agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
e. County agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Westchester CTY DEF - County Sewer District	October 2015
f. Regional agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NYC DEP - Stormwater	March 2016
g. State agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NYS DEC - Stormwater	March 2016
h. Federal agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
i. Coastal Resources.		
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
iii. Is the project site within a Coastal Erosion Hazard Area?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> • 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, identify the plan(s): NYC Watershed Boundary _____ _____ _____	
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?
R-120

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? R-3 Residential Multifamily and C-2R Commercial Hamlet Center Residential

C.4. Existing community services.

a. In what school district is the project site located? Yorktown Central School District

b. What police or other public protection forces serve the project site?
Yorktown Municipal Police Department

c. Which fire protection and emergency medical services serve the project site?
Mohegan Lake Fire Department

d. What parks serve the project site?
FDR State Park, Slyvan Glen County Park, Town of Yorktown Municipal Parks

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)? Residential and Commercial

b. a. Total acreage of the site of the proposed action? 23.61 acres
 b. Total acreage to be physically disturbed? 19.53 acres
 c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 20.57 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)
Residential + Commercial
 ii. Is a cluster/conservation layout proposed? Yes No
 iii. Number of lots proposed? TBD
 iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? Yes No
 i. If No, anticipated period of construction: 36 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: _____
Not Applicable

f. Does the project include new residential uses? Yes No
 If Yes, show numbers of units proposed.

	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	16 Rental Ap	40		40
At completion of all phases	16 Rental Ap	40		40

g. Does the proposed action include new non-residential construction (including expansions)? Yes No
 If Yes,
 i. Total number of structures 8
 ii. Dimensions (in feet) of largest proposed structure: 30 height; 60 width; and 125 length
 iii. Approximate extent of building space to be heated or cooled: 89,000 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: Stormwater Management
 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: 0.40 million gallons; surface area: 0.45 acres
 v. Dimensions of the proposed dam or impounding structure: 75 height; 75 length
 vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
Earth fill, rock and concrete

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? Yes No
 (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
 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 proposed action cause or result in disturbance to bottom sediments? Yes No
 If Yes, describe: _____

iv. Will 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: _____ 40,000 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: Yorktown Consolidated Water District
- 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: Amawalk Reservoir and the NY City Aqueduct from the Catskills.

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: _____

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? Yes No
 If Yes:

i. Total anticipated liquid waste generation per day: _____ 40,000 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: Peekskill Treatment Plant
- Name of district: Westchester County Peekskill Sanitary Sewer District
- 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 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: _____
 _____ New 8-inch Sewer Line

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? Yes No
 If Yes:
 • Applicant/sponsor for new district: Breslin Realty (Costco)
 • Date application submitted or anticipated: T/C
 • What is the receiving water for the wastewater discharge? Hudson River

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):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

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 8.92 acres (impervious surface) 37.0%
 _____ Square feet or 23.61 acres (parcel size)
 ii. Describe types of new point sources. none

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 Management Facilities

 • If to surface waters, identify receiving water bodies or wetlands: _____
 _____ Hunter Brook

 • Will stormwater runoff flow to adjacent properties? Yes No

iv. Does 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)
 _____ Construction Equipment
 ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

 iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

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 (CO₂)
 • _____ Tons/year (short tons) of Nitrous Oxide (N₂O)
 • _____ Tons/year (short tons) of Perfluorocarbons (PFCs)
 • _____ Tons/year (short tons) of Sulfur Hexafluoride (SF₆)
 • _____ Tons/year (short tons) of Carbon Dioxide equivalent of Hydrofluorocarbons (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

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 semi-trailer truck trips/day: _____ 0.5

iii. Parking spaces: Existing _____ 15 _____ Proposed _____ 175 _____ Net increase/decrease _____ 160

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: _____
Improvements to Old Crompond Road including intersection with US Route 202.

vi. Are public/private transportation service(s) or facilities available within 1/2 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: _____
200,000 Kwh

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): _____
Con Edison

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:		ii. During Operations:	
• Monday - Friday:	<u>7: AM to 6: PM</u>	• Monday - Friday:	<u>9: AM to 9: PM</u>
• Saturday:	<u>7: AM to 5: PM</u>	• Saturday:	<u>9 AM to 9 PM</u>
• Sunday:	<u>None</u>	• Sunday:	<u>9 AM to 9 PM</u>
• Holidays:	<u>None</u>	• Holidays:	<u>9 AM to 12 AM</u>

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:
Construction Noise only 7:00 AM to 6:00 PM, sporadically

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? Yes No
Describe: _____

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:
Parking Lots within 50 feet of proposed Structures. Light poles not to exceed 16' in height.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? Yes No
Describe: _____

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 Heating Oil

ii. Volume(s) 3,000 gal per unit time bi-monthly (e.g., month, year)

iii. Generally describe proposed storage facilities: _____
Above Ground, double walled with containment tray for Heating Oil Tanks

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: TBD tons per 36 (unit of time)
- Operation : 0.50 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: Recycling as appropriate, Reuse of building materials as appropriate.
- Operation: Weekly Recycling

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: containment in dumpsters; bi-weekly pick up of dumpster materials
- Operation: Containment in dumpsters, weekly pick up of recycled materials

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): 1/3 Residential Recycling
- 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 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: n/a
- ii. Generally describe processes or activities involving hazardous wastes or constituents: n/a
- iii. Specify amount to be handled or generated n/a tons/month
- iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: n/a
- v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? Yes No

If Yes: provide name and location of facility: n/a

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility: n/a

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: _____

b. Land uses and covertypes on the project site.

Land use or Covertypes	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	2.52 acres	8.92	+6.4
• Forested	16.7	4.1	-12.6
• 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	0.5	+0.5
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: <u>Lawn & Landscaping</u>	4.4	10.1	+5.7

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: _____
n/a

e. Does the project site contain an existing dam? Yes No
If Yes:
i. Dimensions of the dam and impoundment:
• Dam height: _____ n/a feet
• Dam length: _____ n/a feet
• Surface area: _____ n/a acres
• Volume impounded: _____ n/a gallons OR acre-feet
ii. Dam's existing hazard classification: n/a
iii. Provide date and summarize results of last inspection:
n/a

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:
n/a
iii. Describe any development constraints due to the prior solid waste activities: _____
n/a

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
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:
n/a

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): n/a
 Yes – Environmental Site Remediation database Provide DEC ID number(s): n/a
 Neither database
ii. If site has been subject of RCRA corrective activities, describe control measures: _____
n/a
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): n/a
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s): _____
n/a

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 feet

b. Are there bedrock outcroppings on the project site? Yes No
 If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ <5% %

c. Predominant soil type(s) present on project site: Chatfield-Charlton complex Hilly _____ 95 %
 _____ %
 _____ %

d. What is the average depth to the water table on the project site? Average: _____ 6 feet

e. Drainage status of project site soils: Well Drained: _____ 20 % of site
 Moderately Well Drained: _____ 75 % of site
 Poorly Drained _____ 5 % of site

f. Approximate proportion of proposed action site with slopes: 0-10%: _____ 38.9 % of site
 10-15%: _____ 16.4 % of site
 15% or greater: _____ 44.7 % 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 Hunter Brook Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Unnamed Town wetland-offsite Approximate Size 0.9 AC
- 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 Map pending revision by FEMA

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: _____
 _____ Refer to Section 6.0 _____

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: Site evaluation by Biologist, Tim Miller Associates
 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

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

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, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes:	
i. Nature of historic/archaeological resource: <input type="checkbox"/> Archaeological Site <input checked="" type="checkbox"/> Historic Building or District	
ii. Name: Taconic State Parkway	
iii. Brief description of attributes on which listing is based: Designated in 2005 for its aesthetics.	
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
g. Have additional archaeological or historic site(s) or resources been identified on the project site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes:	
i. Describe possible resource(s): _____	
ii. Basis for identification: _____	
h. Is the project site within five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes:	
i. Identify resource: Franklin D. Roosevelt State Park; Sylvan Glen Nature Preserve (T. Yorktown); Taconic State Parkway	
ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): State park designation; Town nature preserve; Parkway is National Register listed.	
iii. Distance between project and resource: nearby and within 2. miles.	
i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	
	<input type="checkbox"/> Yes <input type="checkbox"/> No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

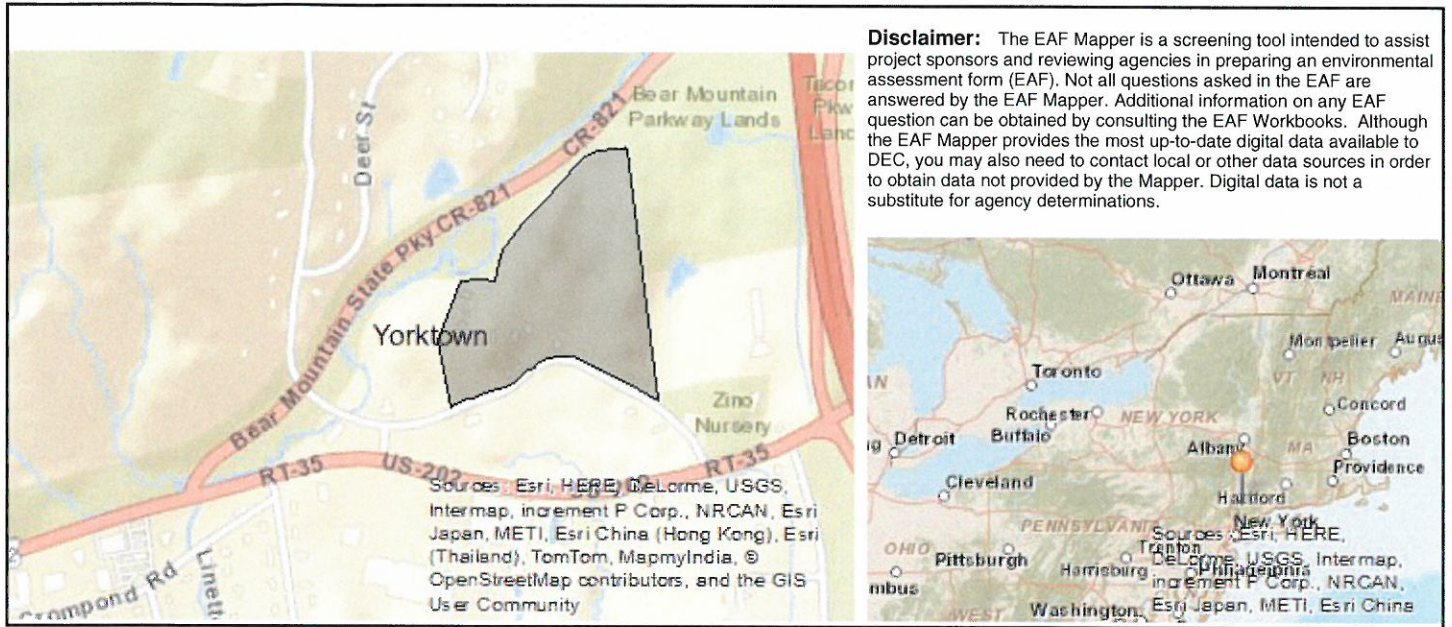
If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Ann Cutignola, AICP (for Applicant) Date September 25, 2015

Signature  Title Senior Environmental Planner



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYC Watershed Boundary
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]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	Yes
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]	No

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 Register of Historic Places]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National Register of Historic Places - Name]	Taconic State Parkway
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Project :

Date :

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency’s reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer “**Yes**” to a numbered question, please complete all the questions that follow in that section.
- If you answer “**No**” to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box “Moderate to large impact may occur.”
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the “whole action”.
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land			
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)		<input type="checkbox"/> NO	<input type="checkbox"/> YES
<i>If “Yes”, answer questions a - j. If “No”, move on to Section 2.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

2. Impact on Geological Features The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) <input type="checkbox"/> NO <input type="checkbox"/> YES <i>If "Yes", answer questions a - c. If "No", move on to Section 3.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

3. Impacts on Surface Water The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) <input type="checkbox"/> NO <input type="checkbox"/> YES <i>If "Yes", answer questions a - l. If "No", move on to Section 4.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	<input type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	<input type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	<input type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	<input type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	<input type="checkbox"/>	<input type="checkbox"/>

I. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
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4. Impact on groundwater The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. <input type="checkbox"/> NO <input type="checkbox"/> YES (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) <i>If "Yes", answer questions a - h. If "No", move on to Section 5.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	<input type="checkbox"/>	<input type="checkbox"/>
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

5. Impact on Flooding The proposed action may result in development on lands subject to flooding. <input type="checkbox"/> NO <input type="checkbox"/> YES (See Part 1. E.2) <i>If "Yes", answer questions a - g. If "No", move on to Section 6.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in development within a 100 year floodplain.	E2j	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in development within a 500 year floodplain.	E2k	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	<input type="checkbox"/>	<input type="checkbox"/>
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	<input type="checkbox"/>	<input type="checkbox"/>

g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
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6. Impacts on Air			
The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) <i>If "Yes", answer questions a - f. If "No", move on to Section 7.</i>		<input type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels: i. More than 1000 tons/year of carbon dioxide (CO ₂) ii. More than 3.5 tons/year of nitrous oxide (N ₂ O) iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs) iv. More than .045 tons/year of sulfur hexafluoride (SF ₆) v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions vi. 43 tons/year or more of methane	D2g D2g D2g D2g D2g D2h	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

7. Impact on Plants and Animals			
The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) <i>If "Yes", answer questions a - j. If "No", move on to Section 8.</i>		<input type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	<input type="checkbox"/>	<input type="checkbox"/>

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	<input type="checkbox"/>	<input type="checkbox"/>
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____	E1b	<input type="checkbox"/>	<input type="checkbox"/>
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	<input type="checkbox"/>	<input type="checkbox"/>
j. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

8. Impact on Agricultural Resources			
The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.)		<input type="checkbox"/> NO	<input type="checkbox"/> YES
<i>If "Yes", answer questions a - h. If "No", move on to Section 9.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

9. Impact on Aesthetic Resources The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.) <i>If "Yes", answer questions a - g. If "No", go to Section 10.</i>				<input type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur		
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	<input type="checkbox"/>	<input type="checkbox"/>		
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	<input type="checkbox"/>	<input type="checkbox"/>		
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>		
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>		
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	<input type="checkbox"/>	<input type="checkbox"/>		
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile 1/2 -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	<input type="checkbox"/>	<input type="checkbox"/>		
g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>		

10. Impact on Historic and Archeological Resources The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) <i>If "Yes", answer questions a - e. If "No", go to Section 11.</i>				<input type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur		
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on or has been nominated by the NYS Board of Historic Preservation for inclusion on the State or National Register of Historic Places.	E3e	<input type="checkbox"/>	<input type="checkbox"/>		
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	<input type="checkbox"/>	<input type="checkbox"/>		
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	<input type="checkbox"/>	<input type="checkbox"/>		

d. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
e. If any of the above (a-d) are answered “Yes”, continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	<input type="checkbox"/>	<input type="checkbox"/>
ii. The proposed action may result in the alteration of the property’s setting or integrity.	E3e, E3f, E3g, E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	<input type="checkbox"/>	<input type="checkbox"/>

11. Impact on Open Space and Recreation			
The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan. (See Part 1. C.2.c, E.1.c., E.2.q.) <i>If “Yes”, answer questions a - e. If “No”, go to Section 12.</i>		<input type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or “ecosystem services”, provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	<input type="checkbox"/>	<input type="checkbox"/>
e. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

12. Impact on Critical Environmental Areas			
The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d) <i>If “Yes”, answer questions a - c. If “No”, go to Section 13.</i>		<input type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

13. Impact on Transportation The proposed action may result in a change to existing transportation systems. <input type="checkbox"/> NO <input type="checkbox"/> YES (See Part 1. D.2.j) <i>If "Yes", answer questions a - g. If "No", go to Section 14.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action will degrade existing transit access.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

14. Impact on Energy The proposed action may cause an increase in the use of any form of energy. <input type="checkbox"/> NO <input type="checkbox"/> YES (See Part 1. D.2.k) <i>If "Yes", answer questions a - e. If "No", go to Section 15.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	<input type="checkbox"/>	<input type="checkbox"/>
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light The proposed action may result in an increase in noise, odors, or outdoor lighting. <input type="checkbox"/> NO <input type="checkbox"/> YES (See Part 1. D.2.m., n., and o.) <i>If "Yes", answer questions a - f. If "No", go to Section 16.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in routine odors for more than one hour per day.	D2o	<input type="checkbox"/>	<input type="checkbox"/>

d. The proposed action may result in light shining onto adjoining properties.	D2n	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

16. Impact on Human Health			
The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) <i>If "Yes", answer questions a - m. If "No", go to Section 17.</i>		<input type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	<input type="checkbox"/>	<input type="checkbox"/>
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	<input type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	<input type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	<input type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	<input type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	<input type="checkbox"/>	<input type="checkbox"/>
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	<input type="checkbox"/>	<input type="checkbox"/>
m. Other impacts: _____ _____			

17. Consistency with Community Plans			
The proposed action is not consistent with adopted land use plans. (See Part 1. C.1, C.2. and C.3.) <i>If “Yes”, answer questions a - h. If “No”, go to Section 18.</i>		<input type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action’s land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	<input type="checkbox"/>	<input type="checkbox"/>
h. Other: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

18. Consistency with Community Character			
The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) <i>If “Yes”, answer questions a - g. If “No”, proceed to Part 3.</i>		<input type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	<input type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

EXPANDED ENVIRONMENTAL ASSESSMENT FORM

PART III

Bear Mountain Triangle Rezoning

Town of Yorktown, NY

Introduction

The Environmental Assessment Form (EAF) examines the environmental implications of the proposed rezoning of several parcels of land bordering on Old Crompond Road in the Town of Yorktown. This area is in the center of an area referred to as the Bear Mountain Triangle (“BMT”), which is generally defined as the land surrounded by Crompond Road (US Route 202/ NYS Route 35), the Bear Mountain Parkway Extension, and the Taconic Parkway. The land that is the subject of this rezoning comprises a 23.61-acre portion of the BMT. The proposed rezoning area as currently planned will conform to the pattern of zoning that exists on adjoining parcels of the BMT.

On July 24, 2014, Mandalay Builders, LLC, (“Applicant”) petitioned the Town of Yorktown, Town Board for the rezoning of land to enable development of said land as a mixed use development called “Crompond Terraces” in similar fashion to the recently developed Crompond Crossing project. In early conversations with the Town Board, the Town determined that other adjoining parcels should also be so rezoned in a manner that would provide opportunities to implement the Town’s vision for a hamlet-style neighborhood at Old Crompond Road. In response to the Town’s request that additional parcels be included in the rezoning, the adjoining lot owners have submitted petitions to the Town to implement the proposed rezoning over the entire subject area (Refer to Appendix A). These adjoining property owners have each expressed both support for this rezoning and a desire to be granted the same zoning.

Mandalay Builders is the contract vendee for six (6) of the parcels of property within the proposed rezoning area. The two adjoining parcels are controlled by other future applicants. In addition to Mandalay Builders, LLC, petitions to be included in the proposed rezoning action have been submitted by Americo Reality, LLC, and Alfio Della Vecchia, included in Appendix A.

Representatives of the eight (8) lots involved are collectively referred to hereinafter as the “project sponsors”.

Approval by the Town of Yorktown Town Board is the only agency approval needed for this change in the Town’s Zoning Map. The Town Board will be the lead agency for the purposes of the environmental review.

This EAF is prepared in accordance with Section 8-0101 of New York State Environmental Conservation Law and the regulations promulgated by the New York State Department of Environmental Conservation thereunder which appear at 6 NYCRR Part 617 (known as the New York State Environmental Quality Review Act, "SEQRA", or "SEQR"). The SEQR Full Environmental Assessment Form is included in this document along with supplemental studies intended to assist the SEQR lead agency and other potential regulatory agencies ("involved agencies") in making a determination whether the proposed action would likely result in any potentially significant environmental impacts. While some of the information and graphics in this document is conceptual in nature, the analyses, illustrations, and maps provided herein have been advanced in sufficient detail to assess the extent of potential environmental impacts.

Environmental Assessment Form Parts 1, 2 and 3 have been prepared to describe the potential environmental effects of the proposed action. EAF Part 3 includes narratives and supplemental studies that evaluate the relevant issues of concern identified in Part 2 and identify appropriate measures to minimize or avoid potential impacts.

1.0 PROJECT DESCRIPTION

The proposed rezoning will permit implementation of the recommendations of the 2010 Town Comprehensive Plan which envisions development of the Crompond hamlet area with a combination of residential and commercial uses. This is further described in Section 2.0.

The Project Sponsors (Mandalay Builders, LLC, and two other property owners) have petitioned the Town to rezone eight (8) parcels of land totaling approximately 23.61 acres to a multi-family residential (R-3) district (on 16.9 acres) and a commercial (C2-R) district (on 6.71 acres). The existing zoning is single family residential (R1-20) district, unlike all of the

land surrounding the petition area. (See Figure 2-2.) The requested rezoning is for the purpose of establishing contiguous zoning along the road frontage on Old Crompond Road, which totals close to 1,290 feet, to allow future development in a hamlet concept as envisioned by the Town in its Comprehensive Plan.

The Project Sponsors request the rezoning of their lands for the purpose of allowing the development of up to 80 residential townhouse units, up to 16 affordable rental apartments, a 12,000 square foot multi-purpose recreational facility, up to 45,000 square feet of office space, and up to 32,000 square feet of small scale retail space. The Applicant proposes that the multi-purpose recreational facility will be designed for and given to the Town as a public benefit of the project.

The site is located on Old Crompond Road in the Town of Yorktown, Westchester County, New York, and would connect to available municipal water and sewer services. Refer to Figures 1-1 and 1-2 showing the site location.

A possible future hamlet concept plan drawn by the Yorktown Planning Department is presented in Figure 1-3. Figure 1-4 reflects this concept in a plan showing the nearby existing and future development in the BMT and highlighting the area proposed for rezoning ("the Site"). A Representative Landscape Plan is included as Figure 1-5 which shows the site design concept in more detail. This EAF evaluates the eight parcels within the hamlet concept that are proposed for rezoning. The remaining parcels in the Town's concept plan are already appropriately zoned to implement the Town's master plan for this area. It is acknowledged that further site engineering and architectural designs will need to be done as part of any site-specific development application, along with further supporting documentation relative to avoid or minimize any potential site-specific environmental impacts at the time of site plan review.

Mandalay Builders is the contract vendee for approximately 20.57 acres of land within the BMT between Old Crompond Road and the Bear Mountain Parkway Extension. The lands proposed for rezoning encompass 23.61 acres as contiguous lots, including the Mandalay land (6 lots) and two additional lots owned by others. Information about the eight parcels is tabulated in Table 1-1.

Table 1-1		
Lots Proposed to be Rezoned		
	Area (Acres)	Existing Use
26.18-1-9	2.59	SF Residence
26.18-1-10	0.45	SF Residence
*26.18-1-11	1.82	SF Residence
*26.18-1-12	0.28	SF Residence
*26.18-1-13	0.47	SF Residence
*26.18-1-14	3.39	SF Residence
*26.18-1-15	5.45	SF Residence
*26.18-1-16	9.16	SF Residence
TOTAL:	23.61	
* Parcel included in the Mandalay Petition (20.57 Ac.)		

Summary of Topics Further Described in the Expanded EAF

This Expanded EAF has been prepared to assess the potential for environmental impacts as a result of the proposed rezoning. A full description of the zoning, land-use and community character has been provided which demonstrates how the proposed rezoning would serve to implement the Town's desire for creation of a hamlet within the Bear Mountain Triangle area. A full discussion of land use shows how the proposed rezoning is consistent with the surrounding area and describes how the conceptual hamlet plan may affect community character as relates to the US Route 202/NYS Route 35 corridor and the Bear Mountain Parkway.

A discussion of the demographic and economic implications of the proposed rezoning shows that the project will result in a substantial net benefit to both the Town of Yorktown and the Yorktown School District.

The EAF includes a full discussion of the soils and topography in the rezoning area and identifies the procedures and measures to avoid erosion and manage the future stormwater management needs of the area.

An assessment of the ecological resources including the adjacent Hunter Brook has been conducted which indicates there will be no potential impacts to regional flora and fauna.

Mandalay Builders has hired a traffic consultant to update existing studies and calculate the extent of potential impact from this concept proposal, and to identify strategies that would minimize or avoid traffic impacts, as needed.

Development Sequence

It is anticipated that the SEQRA review for the proposed rezoning will be completed in the second half of 2015. Following a public hearing and a positive zoning decision by the Town, the Applicant will make a formal application for site plan approval with the Town Planning Board to begin the site-specific review for the proposed development of the six Mandalay lots -- a project proposal to be known as Crompond Terraces. A thorough review, including site-specific SEQRA review to the extent needed, is anticipated to conclude with a site plan approval that would then allow the Applicant's project, as approved, to start construction.

Also following a positive zoning decision, the owners of the other two lots that are part of this rezoning action may make formal application for site plan approval on their respective parcels. For the purposes of SEQRA for the instant action, the potential environmental effects of development as shown in the concept plan for the eight lots being considered for rezoning are evaluated generically in this EAF to demonstrate a reasonable full development scenario.

For this EAF, construction of the overall concept plan is projected to last approximately 36 months. Development is not proposed in discrete phases but will likely involve continuous construction, anticipated to follow a common sequence of activities. After site plan approvals, the project would commence with road and infrastructure improvements (including water and sewer utilities and stormwater management facilities) along the Old Crompond Road corridor, and preparation of the site by clearing and grading. Generally, initial project construction on the property would then entail the internal road and infrastructure improvements prior to construction of the residential buildings, followed by the recreation facility, and concluding with development of the office and retail project components. Additionally, any off-site improvements that are part of the project would likely be undertaken concurrent with related on-site work.

Project Description

September 25, 2015

Overall, construction will be driven by market conditions and it is possible that there may be overlap between construction areas for the various components of the project.

Site

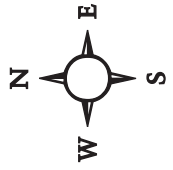
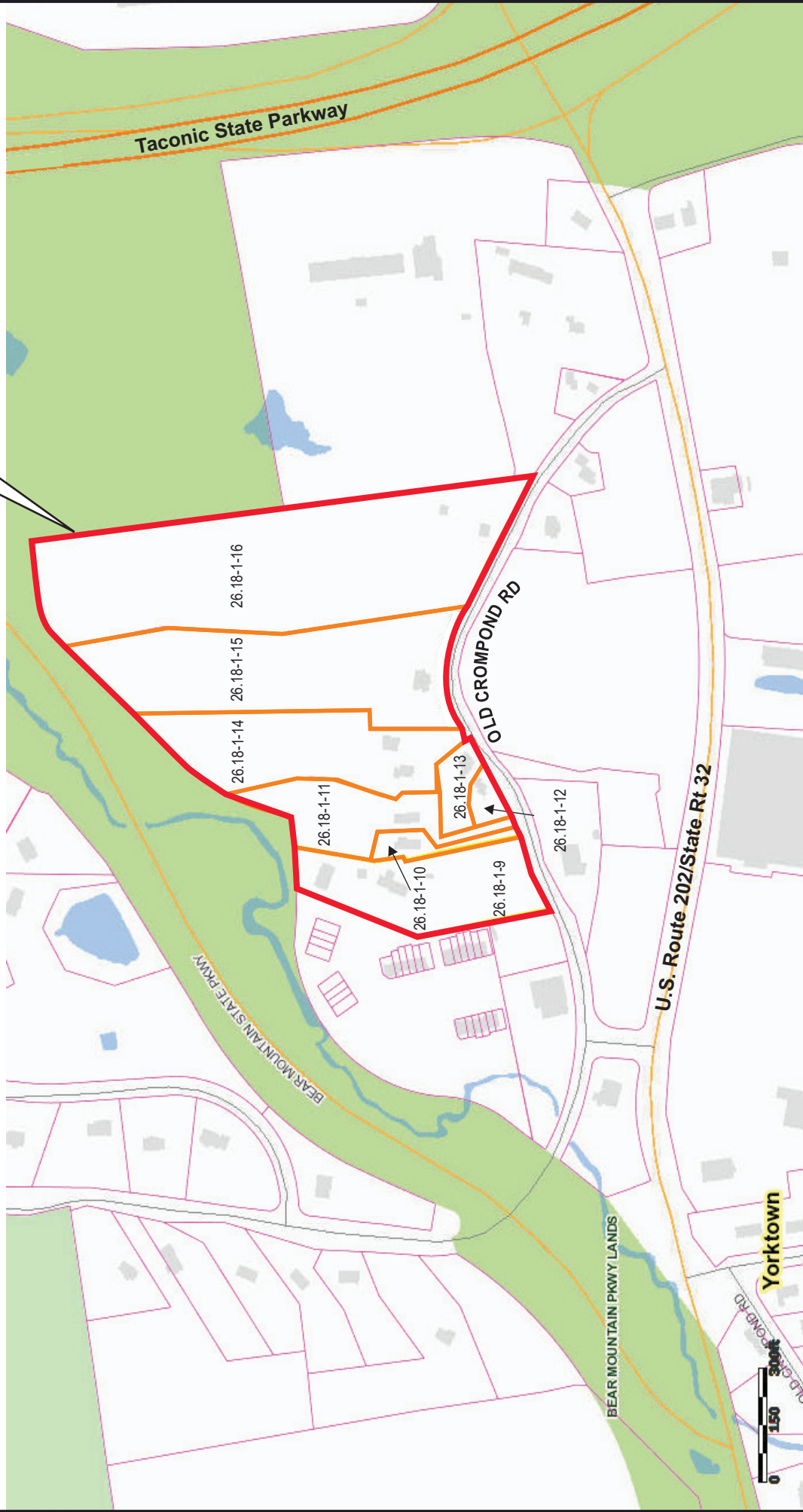
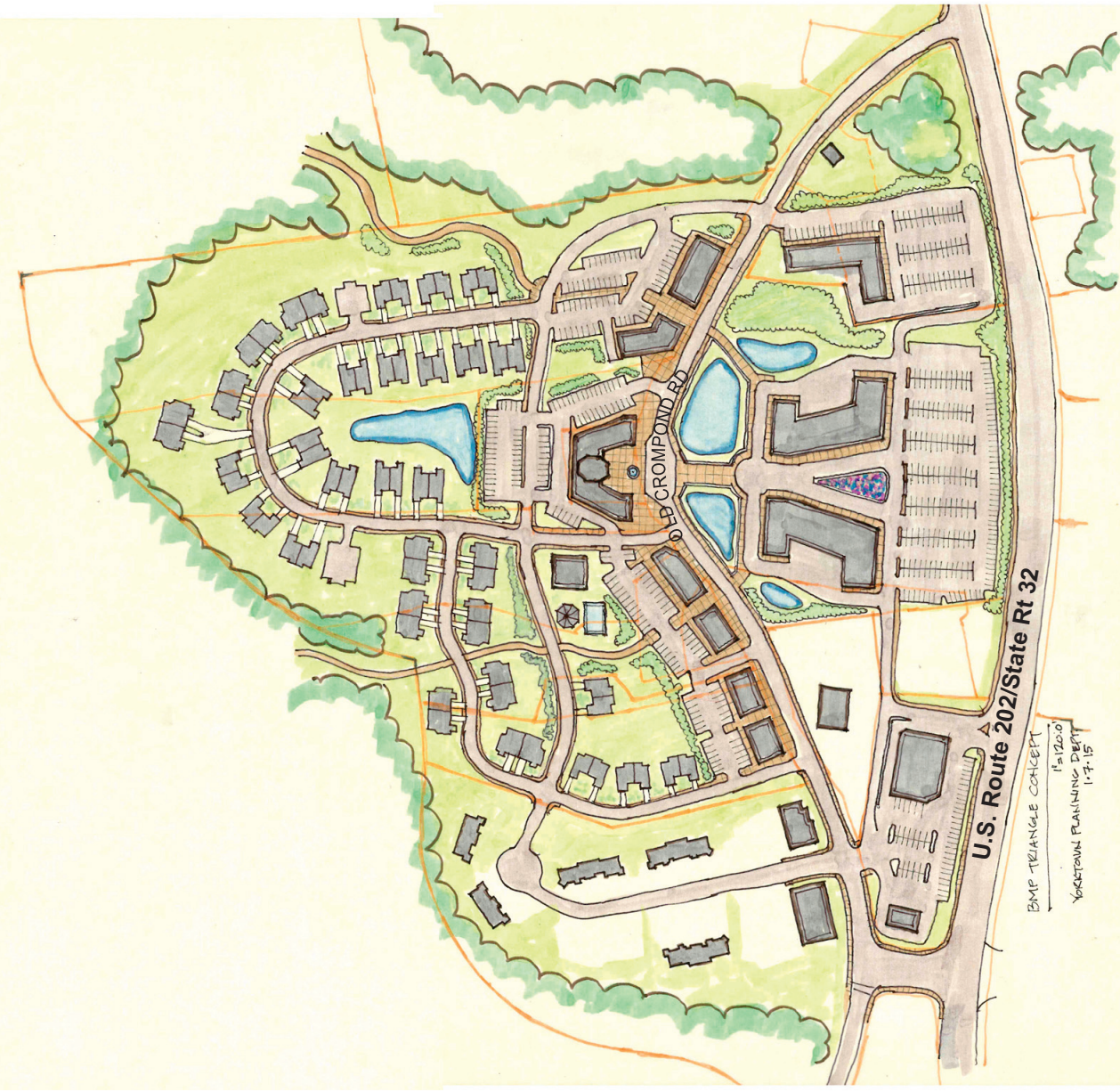


Figure 1-1: Proposed Site Location
Old Crompond Road, Town of Yorktown
Westchester County, New York
Scale: Graphic Scale as shown



Figure 1-2: Rezoning Area
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 Scale: Graphic Scale as shown



BMP TRIANGLE CONCEPT
 1-12-00
 YORKTOWN PLANNING DEPT
 1-7-15

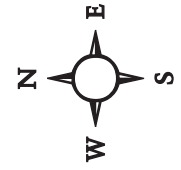


Figure 1-3: Conceptual Bear Mountain Triangle Master Plan
 Old Crompond Road, Town of Yorktown
 Westchester County, New York



Figure 1-4: Conceptual Site Plan*
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 Scale: 1" ≈ 300 ft.

*Commercial Development slightly modified. Refer to Representative Landscape Plan for updated layout.



- Notes:
1. All base data by others. No representation or warranty is expressed or implied as to accuracy of same.
 2. Layout of conceptual design is for illustrative purposes only, and is subject to review and conditions of approval to be established by the municipality.
 3. All environmental constraints subject to local, state and/or federal jurisdiction must be reviewed by appropriate agencies.

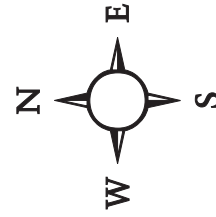


Figure 1-5: Representative Landscape
 Bear Mountain Triangle Rezoning
 Town of Yorktown, New York
 Source: Tim Miller Associates, Inc.
 Approx. Scale: 1" = 160'

2.0 LAND USE, ZONING AND COMMUNITY CHARACTER

The 2010 Comprehensive Plan, herein referred to as the 2010 Plan, refers to the Bear Mountain Triangle (BMT) as Yorktown's major opportunity site for economic development and recommends that the area should have a mix of housing, office and retail uses. In addition, the Routes 202/35/6 Bear Mountain Parkway Sustainable Development Plan of 2004 sought the establishment of neighborhood centers with transit and pedestrian access in communities with "a mix of uses and civic facilities."

As discussed in the 2010 Town of Yorktown Comprehensive Plan: ¹

"Yorktown should have a vibrant economy that provides abundant job opportunities and contributes to an improved and fair local tax base....The five hamlet business centers should be enhanced and improved, so that they not only provide shopping and services. They also should function as centers of community life, featuring civic uses, greening and park features. As additional development occurs, infrastructure improvements must be provided."

In response to the applicant's petition, the Town Department of Planning staff developed a rendering illustrating the Town's vision for the Bear Mountain Triangle, as shown Figure 1-3, Concept Plan. Figure 1-4 incorporates the potential Concept Plan for land proposed for rezoning by Mandalay Builders and others, and serves as the basis for the requested rezoning action.

A comparison of Figures 1-3 and 1-4 demonstrates that the proposed rezoning and subsequent implementation of the concept plan, mirrors quite closely the Town's vision for this area.

Description of Zone Change from R1-20 to R-3 and C-2R

The proposed change to the Town Zoning Map involves eight (8) parcels of land now located in the R1-20 zoning district. R1-20 is a single family residential zone and as such does not provide a framework for the Town's stated goals of encouraging development of a mixed use hamlet center in this area. Specifically this area has been referred to as the Town's last opportunity to significantly increase retail and office development within the Town. Figures

¹ Town of Yorktown Comprehensive Plan; Section 4. Economic Development and Hamlet Business Centers.

2-1 and 2-2 illustrate the proposed zoning for the Bear Mountain Triangle which would allow development of the Crompond Hamlet, consistent with the Town’s vision, to be realized.

Mandalay Builders is the contract vendee for approximately 20.57 acres of land within the BMT between Old Crompond Road and the Bear Mountain Parkway Extension. The land proposed for rezoning encompasses 23.61 acres in contiguous lots, including the Mandalay lands (6 lots) and 2 additional lots owned by others. Information about the eight parcels is tabulated below.

Table 2-1 Lots Proposed to be Rezoned		
Lot (SBL)	Area (Acres)	Existing Use
26.18-1-9	2.59	Residential
26.18-1-10	0.45	Residential
*26.18-1-11	1.82	Residential
*26.18-1-12	0.28	Residential
*26.18-1-13	0.47	Residential
*26.18-1-14	3.39	Residential
*26.18-1-15	5.45	Residential
*26.18-1-16	9.16	Residential
TOTAL:	23.61	
* Parcels included in the Mandalay Zoning Petition (20.57 Ac.)		

The proposed zone change from R1-20 to a combination of R-3, which permits multifamily housing; and C-2R Commercial Hamlet Residential, which permits small scale retail and office development and allows residential rental apartments above the retail or office space; would encourage the type of development which is the basis of a hamlet. As can be seen in Figure 2-1, the proposed zone change is a continuation of the zoning boundaries on the adjacent parcels, thereby fostering consistent land use. The recent development of the Crompond Crossing project to the west and the planned Costco development to the east has stimulated the development of the Crompond Hamlet. This is also the first time the collective property owners of the Bear Mountain Triangle have joined together in a focused effort towards a specific land development proposal. The proposed rezoning will facilitate the intended land use consistent with the Town’s goals for the area.

Discussion of Previous Master Plan Designation for Subject Properties

The unique attributes of the BMT area are twofold; the area has excellent access to both local and regional transportation arteries, and it is a self contained area such that the land use will not be in conflict with surrounding neighborhoods. These attributes have led to a number of different land use plans for the BMT over the years. For any plan to be implemented, the required infrastructure, market desirability and changing land use patterns all need to converge in order to bring development to fruition.

Land use planning objectives for the Town as a whole have changed little over the years. The Town of Yorktown is first and foremost a place to live, a place where people can raise their families in well balanced communities. From the very first planning documents published in 1956 through the Town's first Master Plan published in 1970, updated in 1980 and still true today in the current 2010 Comprehensive Plan, priority is given to residential development and there is an emphasis on locating commercial development in and around the five hamlet areas of Yorktown Heights, Jefferson Valley, Shrub Oak, Mohegan Lake, and, prospectively, the Crompond Hamlet where the BMT is located. All development options for the BMT including business, retail, office and industrial uses have been contemplated on the premise that hamlet areas provide essential support for the Town's residential population.

1955 Town Plan

The 1955 Town Development Plan "did not contemplate any large industrial development in the Town in the foreseeable future for three reasons - one being the evident desire of the Town's residents to maintain the Town primarily as a residential community without a substantial amount of other uses. Another being the limited area in the Town suitable for such use, and the third being the availability of more desirable locations for such use in the southern and central sections of the County."

1970 Town Development Plan

The 1970 Town Development Plan identified six additional sites, beyond what was already in place, for laboratory-office or general light industry. One of these sites was identified as the north side of the Bear Mountain Parkway, west of Stony Street.

It was the 1970 Plan that first made the statement that “The problem of fitting non-residential development into the Town’s overall pattern of land use resolves itself into the selection of those few areas where non-residential use can be located without a detrimental effect on neighboring residences and still be reasonably attractive to developers of such use.” Although planning documents may espouse the perfect plan, it is not until there is interest in developing a particular site that plan implementation becomes a reality.

During the 1970’s, in spite of Plan recommendations, there was no interest in industrial development at the BMT site. It should also be noted that the sewer infrastructure necessary to support increased development of almost any kind was not available in this area during this time. Further discussion of industrial / commercial development, and how it was found to be not viable for this area is included in Section 9.0 Alternatives.

1980 Town Development Plan

In the economic downturn of the 1980’s there was significant pressure to expand the Town’s tax base and to promote policies which would allow the Town to be more self-sufficient in terms of employment opportunities. The BMT area was again selected to address this need because it is an area isolated from neighboring uses and as such an appropriate site to put uses that might not fit well elsewhere in town. (Environmental Assessment Form and Review. Proposed Rezoning Bear Mountain Area. Town of Yorktown, New York. October 1988. page 1-3 General Policies). The document went on to reference the potential for an upgraded Old Crompond Road to be used for truck and vehicle access to serve the area. To this end the Town gave serious consideration to a rezoning of the BMT area to light industrial and highway interchange uses. One of the existing property owners prepared an application for a rezoning to allow an automotive use. However, ultimately this rezoning did not occur due

primarily to the sensitivity toward ecological resources that could be impacted by proposed industrial uses.

2010 Town Comprehensive Plan.

As stated in the 2010 Town Comprehensive Plan, its Land Use chapter 2.0 is the keystone of the 2010 Plan. It synthesizes all of the goals and policies of the other elements into a single, coherent vision. As described below, this vision continues to place priority on residential development and continues to emphasize the importance of the Town's hamlet centers, which specifically identified the inclusion of the Crompond Hamlet where the BMT is located.

The 2010 Plan states: "In the 1950's and 1960's, Yorktown was at the edge of the New York metropolitan region and experiencing rapid growth. Since the 1970's, growth in Yorktown has been occurring at a very slow pace. Today, it is an established community of more than 36,000 residents. Slow growth results from the relatively small amount of remaining vacant, developable land in Yorktown." The Plan also states that about 20 percent of the Town's total developable land is zoned for residential use, affirming the Town's priority for residential development.

The Land Use Vision Statement of the 2010 Plan states: "Yorktown will continue to be primarily a low-density community of single-family homes, with strong neighborhoods that have a balance of developed areas and open space. Yorktown's five hamlet business centers should be vital centers of community life, with a mix of retail, office, civic, and residential uses. Throughout Yorktown, development should be carefully balanced with natural resource conservation and scenic and historic preservation, and it should be coordinated with circulation and infrastructure improvements."

Specific Land Use Recommendations include:

- Promote residential development and preserve open space in a manner consistent with community character. Promote land uses and development patterns that help implement the conceptual vision established for each hamlet business center and encourage a mix of residential, retail, office, civic, and park uses in the hamlet centers.
- Ensure that land uses and development patterns are compatible with the goals and policies in the 2010 Comprehensive Plan which have been established to protect natural resources, historic resources, and scenic corridors and vistas.
- Adopt the Proposed Land Use Plan, contained in the 2010 Plan, as Yorktown's zoning map. The Land Use Plan synthesizes the concepts of Chapters 4 and 5, which deal with Yorktown's hamlet business centers and residential neighborhoods.
- Where adequate infrastructure is not present, or sensitive environmental features are present, development should be restricted.

With the recent New York State Department of Transportation improvements to the US Route 202/35 corridor, in combination with the area infrastructure improvements anticipated as part of the recently approved Costco development, the traffic infrastructure and the sewer infrastructure are now practical realities to support the Crompond Hamlet Center and enable the Town's vision for this hamlet to develop.

Description of Conformance with 2010 Comprehensive Plan

The 2010 Comprehensive Plan addresses its vision for the BMT in Chapter 4, Economic Development, which lays out the Hamlet Center concept and details how it should be implemented.

4.1 Vision Statement

- *Crompond.* The Bear Mountain Triangle, Yorktown's major opportunity site for economic development, should have a mix of housing, office, and retail uses, and possibly a hotel or country inn as well, and the commercial strip along Route 202 should be greened, also with preservation of open space over the north side of Route 202.

The Comprehensive Plan also details specific goals to enable creation of Hamlet Centers. Certain of these goals, as listed below, are particularly applicable to the proposed rezoning;

4.2 Goals

- Goal 4-E: Promote the five hamlet business centers as hubs of civic life and community identity, and promote a mix of retail, professional office, park/civic uses, and compatible residential uses that create an atmosphere of vitality.
- Goal 4-F: Avoid sprawl along Yorktown's commercial corridors, and encourage a high standard of architectural design, landscaping, and maintenance for all development.
- Goal 4-I: Improve access into and circulation throughout the five hamlet business centers through roadway and intersection improvements, but also promote walking and biking by creating safer and more comfortable environments for pedestrians and cyclists.
- Goal 4-J: Promote convenient parking, while also promoting more efficient parking patterns and striving to reduce unnecessary expanses of blacktop.
- Goal 4-K: Ensure that infrastructure improvements are provided before or concurrent with significant new development.

Implementation of the Crompond Hamlet Center would not be feasible without the Route 202 corridor improvements recently completed by the NYS DOT and the projected corridor improvements associated with the Costco proposal. In particular, the installation of sidewalks creating connections along Route 202 from Strang Boulevard to Parkside Corner create pedestrian access where none previously existed. The existing and proposed sidewalks will also create connections to parks and trails in the vicinity of the BMT, fulfilling Goal 4-I as well as 4-K. Refer to Figure 7-2 which illustrates these connections.

The 2010 Plan provides further details:

4.3 Overview of Economic Development

- Hamlet business centers that have vacant or underutilized land can accommodate new business activity for the purpose of economic development. By attracting more business activity, the Town can gain more tax revenue to pay for Town services.

- Before any significant new development takes place, traffic problems need to be addressed. There needs to be a link between continued development and infrastructure improvements. In particular, infrastructure improvements must be provided before or concurrent with significant development.
- The automobile will continue to be the primary mode of travel for most customers, and therefore, the Town needs to continue to provide convenient access and parking.
- At the same time, creating more walkable environments can actually help reduce traffic congestion and parking needs. Some of the land now given over to roads and parking lots is excessive and can be broken up and used for a combination of infill buildings, expanded pedestrian areas, and landscaping.
 - Hamlet business centers are not just places of business activity. They are also centers of community life. Their character and quality contribute to the Town's quality of life and community pride and identity. There are many opportunities in the hamlet business centers to provide additional park space, village greens, and landscaping. Such green space complements the built-up nature of the hamlet business centers and adds to the unique identity and character of the place.
 - An attractive commercial area not only contributes to community pride, but also helps attract customers.

As discussed above, infrastructure improvements have been and are projected to be implemented that will address the traffic and many of the pedestrian related economic development priorities above. However, design of any new site plans within this Hamlet Center should add bike lanes and bike amenities, and facilitate friendlier pedestrian correspondence between the retail uses within the BMT. The Town's Concept Plan for the Crompond Hamlet envisions several of these amenities, including bike paths, additional pedestrian access routes, and multiple green spaces within both the residential section and the retail section that can function as "gathering places" within the context of a Hamlet Community. It is envisioned that the future Mandalay application will certainly include these elements.

The following policies are listed in the 2010 Comprehensive Plan, Section 4.4 to foster the development of hamlet areas. Adherence to these policies is evident in the proposed Concept Plan envisioned by the project sponsors upon implementation of the proposed zoning.

Policy 4-1: Promote a mix of retail shopping, professional offices, and housing in the hamlet business centers, and in specified locations, promote mixed-use "Main Street" or "Village Center" development.

- Retail-only districts are most active on weekends, whereas office-only districts are active mornings and evenings. Mixing the two creates a district that is vital and busy every day, all week long.

Policy 4-5: Allow second-floor apartments in C-2 zoned hamlet centers above retail or office uses.

- This increases the diversity of housing types and adds more units that are affordable to working families.
- A mix of uses adds vitality to the hamlet business centers and provides a customer base for the retail uses.

Policy 4-24: At the eastern end of the hamlet business center, promote retail, office, and country inn uses with a regional draw in a high-quality master-planned format, with compatible residential uses as well.

- On the north side of Route 202, adjoining the Taconic State Parkway, there should be areas for retail, retail/mixed use, housing, and office/country inn.
 - At the bottom of the hill, the "village center" should have a mix of uses, including a "Main Street" shopping spine, with limits on floor area and an emphasis on small stores, possible second-floor apartments, and professional offices, in a pedestrian-oriented format.
 - At the top of the hill, leave as C-3 zoning and adopt an overlay for office and/or hotel or country inn uses, building off the location next to the Taconic-Route 202 interchange and highway visibility.

- In between, plan for a mix of senior housing and small-scale professional offices, with conservation of open space and protection of wetlands and steep slopes.
- Set aside space that can be converted into a village green.
- These three areas should be integrated, rather than having each element feed only Route 202. There would be pedestrian amenities, with parkland and public spaces.
- Landscaping would be abundant, and except for the area in front of the "village center" there would be significant buffering along the Route 202 frontage.
- Parking lots would be shared and interconnected, forming a parking network.

By placing commercial/professional office space and small scale retail development along Old Crompond Road, the Town's Concept Plan creates a "Main Street" shopping spine. It's placement within the Hamlet Center should allow for interconnected parking areas, integrated pedestrian access, diverse housing stock, mixed use office/retail and a pedestrian plaza that anchors the Hamlet. The proposed Concept Plan provides substantial creative guidance for developers looking to build in this area, and should lead to a vibrant business and residential center as envisioned by the 2010 Comprehensive Plan.

Appropriateness of this type of housing in Yorktown and on this Site

The 2010 Comprehensive Plan provides policy guidance for future development in town, as noted above. It also discusses (in the Appendix to Chapter 5: Existing Conditions Report) "Observations of Realtors" that "The supply of townhouse units, condos, apartments and senior housing is limited. Some of the demand goes unmet. Empty nesters often want to downsize, but have limited options for housing in Town." The report goes on to say "There is unmet demand for *less expensive* housing, including senior housing."

A Housing Trends analysis has been prepared by the Applicant and is included in Appendix D of this Expanded EAF. The analysis details current market trends and shows how the residential housing proposed in the BMT is appropriate in today's market environment.

Recent experience of a local realtor has also shown that similarly designed townhome developments have been successful in Yorktown. In spite of coming on the market at approximately the same time as Trump Parc and thus subject to similar market conditions, Glassbury Court sold out rather rapidly. This is not only due to price point, but is based on extensive "green" amenities in this town house community. It should be noted that many of the buyers in Glassbury Court were Yorktowners, empty nesters, who chose to stay in their town but live less expensively.

Choice of this specific site for new housing and commercial development has also been guided by market realities (its proximity to the Taconic State Parkway, the proposed Costco, the existing Staples Plaza, as well as the new similar density Crompond Crossing project). It is however, an attractive site for sustainable building reasons as well. The US Green Building Council has established a credit system for LEED residential development award levels, some of which are based on location and transportation options. Examples that could apply to the subject site: up to 16 points are available based on Neighborhood Development location (Intent: To avoid development on inappropriate sites. To reduce vehicle distance traveled. To enhance livability and improve human health by encouraging daily physical activity.). Another 5 points are potentially awarded for Surrounding Density and diverse uses (Intent: To conserve land and protect farmland and wildlife habitat by encouraging development in areas with existing infrastructure. To promote walkability, and transportation efficiency and reduce vehicle distance traveled. To improve public health by encouraging daily physical activity.), and Access to quality transit (Intent: To encourage development in locations shown to have multimodal transportation choices or otherwise reduce motor vehicle use, thereby reducing greenhouse gas emissions, air pollution, and other environmental and public health harms associated with motor vehicle use.) could earn another 5 points. Bicycle facilities could gain another point (Intent: To promote bicycling and transportation efficiency and reduce vehicle distance traveled. To improve public health by encouraging utilitarian and recreational physical activity.).

The Bear Mountain Triangle is already proximate to shopping, walking trails, and public transportation. The Applicant's concept for Crompond Terraces includes small scale retail and office space suitable to local shops and offices for doctors, lawyers and the like, which adds to the desirability of the location. The future concept plan is envisioned as a green community including Energy Star rated housing, pervious pavers for the residential parking areas, consideration of

geothermal heating and cooling, incorporation of green roofs and rain gardens and extensive landscaping as shown in Figure 1-5. The Crompond Terraces concept realistically creates the 2010 Comprehensive Plan vision.

Discussion of Affordable Housing Compliance

Chapter 102 of the Town Code identifies the following Findings relative to Affordable Housing;

- A. The Town faces a shortage of affordable housing due to the high cost of housing in the Town which impacts the general welfare of the municipality.
- B. The social and economic diversity of the Town is dependent upon a reasonable supply of affordable housing.
- C. Certain development projects attract new residents to the Town, placing pressure on the supply and availability of affordable housing.
- D. The Town's Comprehensive Plan supports the creation of affordable housing within the Town.
- E. The Yorktown Community Housing Board (YCHB) administers the Town's affordable housing program and establishes affordability guidelines.
- F. It is the policy of the Town to require builders to share the affordable housing burdens caused by their developments.

It is anticipated that the multifamily units which will be permitted under the proposed R-3 zoning will provide a diversity of housing types and price points compared to a typical single family subdivision in the Town of Yorktown. It is also anticipated that the multifamily units contemplated for the subject site will likely be under condominium ownership thus providing a measure of relief from the property tax burden associated with single family homes.

Designation of the proposed commercial zone within the Triangle as C-2R permits the inclusion of rental apartments which serves to increase the options for affordable housing. It is the Applicant's intent that the residential rental apartments will meet the affordability

guideline criteria established by the Yorktown Community Housing Board, and will thus fulfill the requirement for affordable housing at this site..

Chapter 102 specifies the number of Affordable Housing Units (AHU) on a sliding scale and identifies that a development of 80 townhouse units would be required to include 12 AHU. As proposed on the Concept Plan which underlies this zoning petition, there are 16 AHU in addition to the 80 market rate townhouse units.

These affordable units are proposed to be rental units. To calculate the initial rent for the AHU, the YCHB will use the HOME rents based upon unit size, as set forth in the most recent edition of the Westchester County Area Medial Income (AMI) Sales and Rent Limits. The maximum shall be the Low HOME rent, if the unit size is less than 120% of the minimum floor area as specified in subsection C of the code. If the gross square footage of the unit is 120% or more of the minimum floor area, the maximum rent shall be the High HOME rent.

For 2015 the Low HOME rent equates to approximately \$900 and the High HOME rent equals approximately \$1,150.

Community Character / Visual Analysis

The foregoing discussions identify the unique attributes of the BMT area -- excellent access to the regional transportation network and its self-contained nature wherein the potential for a mixed use hamlet envisioned by the Town may be developed within the Triangle without conflict with surrounding uses. The existing setting of the BMT includes a notable amount of wooded land that connects the project area biologically to larger wooded areas to the north and west. However, development of the surrounding roadway systems, commercial development along Crompond Road to the southwest and soon on adjacent land to the east (for Costco), and the single-family residential development that exists throughout the general area have fragmented the natural landscape in years past². Figure 1-4 shows additional nearby development that has expanded the mixed use component into the BMT -- the recently built mixed use Crompond Crossing project on adjoining land to the west, and the proposed CVS project and existing Chase bank to the southwest.³

² EAF Section 6 further discusses the ecological value of the site area.

³ Figure 1-4 highlights the area proposed for rezoning as "the Site".

The character of the remaining single-family residential lots along Old Crompond Road which are the subject of this rezoning application will change as a result of the rezoning to realize the Town's vision for the BMT hamlet. While residential use is a part of the Mandalay site development concept, the overall plan for the hamlet is intended to establish a mix of activities that will interact with each other. The conceptual site plan in Figure 1-4 (that incorporates the Town's concept plan in Figure 1-3) illustrates a variety of building types that may be possible to support the variety of activities that could make up a hamlet community.

The south side of the hamlet is envisioned in the Town's concept plan to include commercial buildings (up to three story is allowed by current zoning) along with parking and circulation for vehicles and extensive pedestrian facilities -- sidewalks, green spaces, and a pedestrian plaza potentially with open water features which would also provide stormwater management functions for the project.

The central hamlet area, which includes the Old Crompond Road right-of-way, would include a "Main Street" style development of commercial/office and retail buildings with appurtenant parking and stormwater management facilities, residence apartments above first floor uses in some cases, extensive pedestrian amenities, green spaces, and a multi-function, public recreation facility. (Mandalay Builders proposes to build a recreation facility for the Town in its concept design for property under its control.) A variety of building styles are shown in Figure 1-3 which would be designed to accommodate particular uses as the project design moves forward, and all of which are anticipated to be designed according to an integrative architectural theme in spaces designed to a cohesive landscape theme. Such themes would be important in establishing the hamlet "sense of place".

The north side of the hamlet is planned by Mandalay Builders as a residential community with duplex, townhouse-style units and appurtenant parking, circulation, a central "commons" and other green spaces. Walkability within the community and connections to other facilities in the hamlet and adjoining areas will be an integral part of the hamlet development.

The Crompond Hamlet, which would be facilitated by the rezoning that is proposed, would therefore be focused internally on Old Crompond Road rather than the surrounding arterial roads.

Visual Analysis

Topography of the subject area generally rises gently from west to east. A portion of the project area, which is predominately wooded, would be cleared and graded to facilitate new development. The visual character of the project area will change with the development allowed under the proposed zoning. Views from Route 202 as one passes the BMT after full development will reveal new development of commercial uses close to Route 202, with glimpses of other buildings in the hamlet area beyond. Route 202 rises in grade from west to east, affording a potential view overlooking the south side of the hamlet. Views from the Bear Mountain Parkway into the development, on the other hand, will be shielded by the wooded terrain within the Parkway lands and perimeter buffer of the BMT lands.

Figure 2-3 depicts these sight lines in a north/south profile taken through the subject area to illustrate the general "lay of the land" as relates to potential sight lines from Route 202 (on the right side of the figure) and from the Bear Mountain Parkway (on the left). (Refer to Figure 2-4 showing the location in plan view where the profile is taken.)

Viability of Commercial Zoning on Old Crompond Road

Concerns have been voiced regarding the viability of commercial activities on Old Crompond Road given that it is now a minor Town road and the concern that commercial buildings constructed along the road would not likely be visible from Route 202.

Among the specific concerns raised has been the idea that small scale retail and medical office spaces not visible from nearby arterial roads would not get enough patron traffic to be economically viable. The Applicant has retained a traffic expert who has determined on the contrary, that traffic from the envisioned development of the concept plan in combination with the substantial pass-by traffic, including the Crompond Crossing project, will generate adequate patron traffic for the scale and type of commercial space the project expects to attract. The plethora of successful doctors' offices and other small commercial space, both north and south of Route 6, few of which are visible from that state highway, show this to be a valid expectation.

The potential spill over traffic from the proposed Costco at one end of the street and the proposed CVS at the other add the possibility that trips to those destination stores could also

generate traffic to the Crompond Hamlet professional offices and commercial space. As noted above, the Comprehensive Plan also envisions just this type of small local retail and office hamlet design, and sees it as an integral component in successful hamlet development.

Construction of additional traffic lanes on Route 202 at the eastern intersection with Old Crompond Rd as part of the Costco project will also serve to enhance accessibility to the retail and commercial space within the Crompond Hamlet concept.

It should be noted that the specific layout of roads and buildings shown in the Concept Plan is clearly conceptual and subject to revision during site plan review where improvement in access, interrelation of buildings and uses, etc., is concerned. The overreaching concept of a traditional “Main Street look” along Old Crompond Road with the emphasis on being pedestrian oriented is well articulated in this conceptual hamlet design, where popular commercial/retail destinations would be readily accessible but off of the main arterial transportation routes through Yorktown. The hamlet is also readily accessible via existing public transportation services. The orientation of the businesses would be inward, in true hamlet style.

Concerns regarding visibility of the commercial development along Old Crompond Road can be readily addressed during the site plan review process of future applications.

Infrastructure Water & Sewer Availability, Capacity and Demand

The development in the BMT rezoning area will be connected to the Town’s infrastructure and will use water and sewer. Sewer service to the surrounding area is treated at the Peekskill Sanitary Sewer Treatment Plant. It is anticipated the district boundary will be expanded to include the Costco site and the Bear Mountain Triangle rezoning area. The Town Board recently passed a resolution authorizing the creation of the Hunterbrook 20 Sewer District, which, upon Westchester County approval, will utilize the Peekskill Sanitary Sewer Treatment Plant to provide sewer service to this area. New sewer lines are proposed to be built along Old Crompond Road by the Costco project. Sewer service would be funded by a combination of taxes and usage fees which would cover the ongoing maintenance and

Land Use, Zoning and Community Character

September 25, 2015

usage costs for sewer service. Future site plan development of the Costco site and the BMT rezoning area would anticipate construction of the sewer infrastructure as necessary.

The Bear Mountain Triangle rezoning area is currently located in the Yorktown Consolidated Water District, and has been paying taxes to the benefit of this district for over 30 years. In addition to the taxes paid, the Town charges user fees based on a flat fee structure plus user fees based on the volume of water used. These taxes and fees are the revenue source the Town uses to cover the cost of the water and sewer service provided.

Residences currently pay a metered usage fee of \$5.00 per 1,000 gallons of water usage. plus \$1.20 per 1,000 gallons of metered water for sewer service.

It is projected that the overall project envisioned for the rezoning area will use approximately 34,412 gallons per day of water and generate approximately 30,480 gallons per day of sewage.

**Table 2-2
Domestic Water and Sewer Demand**

Unit Type	Number of Units or Commercial Square Foot	NYS DEC Wastewater Generation Rate (per unit)	Wastewater Generated	Water Demand Rate +10% of Wastewater (per unit)	Water Demand
1 Bedroom plus Den	40	300 gpd	12,000 gpd	330 gpd	13,200 gpd
3 Bedroom	40	400 gpd	16,000 gpd	440 gpd	17,600 gpd
1 Bedroom Apartment	16	150 gpd	2,400 gpd	165 gpd	2,640 gpd
Sub-total			30,400 gpd		33,440 gpd
20% Savings for use of water conservation fixtures			-6,080 gpd		6,688 gpd
Total Residential Demand			24,320 gpd		26,712 gpd
Non Residential Demand	77,000 sf	0.08 gpd	6,160 gpd	0.1 gpd	7,700 gpd
TOTAL DEMAND			30,480 gpd		34,412 gpd

NYS DEC Ten State Standards; Table prepared by TMA 2015.

Description of Multi-use Recreational Facility

As part of the proposed rezoning, Mandalay Builders has indicated a willingness to provide the Town with a two story, 12,000 square foot multi-function building to be used to supplement the Town's recreation programs. The Town currently subsidizes a variety of programs including the Yorktown Athletic Club basketball program, girls basketball and Shrub Oak Club (SOC). Use of the proposed multifunction building to accommodate these programs could result in savings to the Town, which would help to offset annual maintenance of the facility. The facility could also accommodate expansion of the recreation programs which would not be possible otherwise. Further discussion of potential cost savings to the Town and potential maintenance costs can be found in Section 3.0.

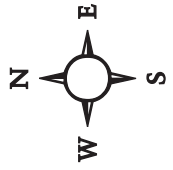
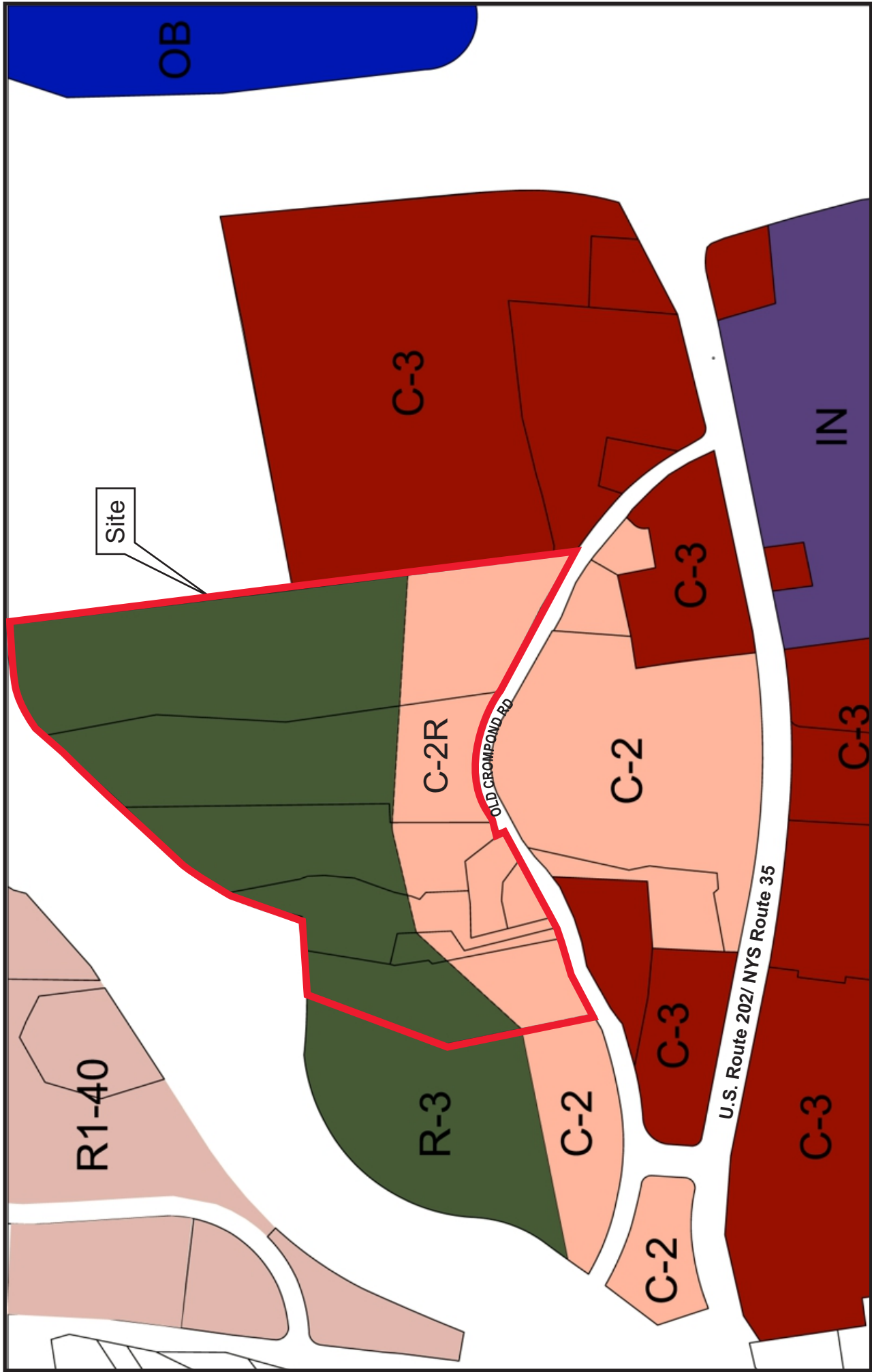
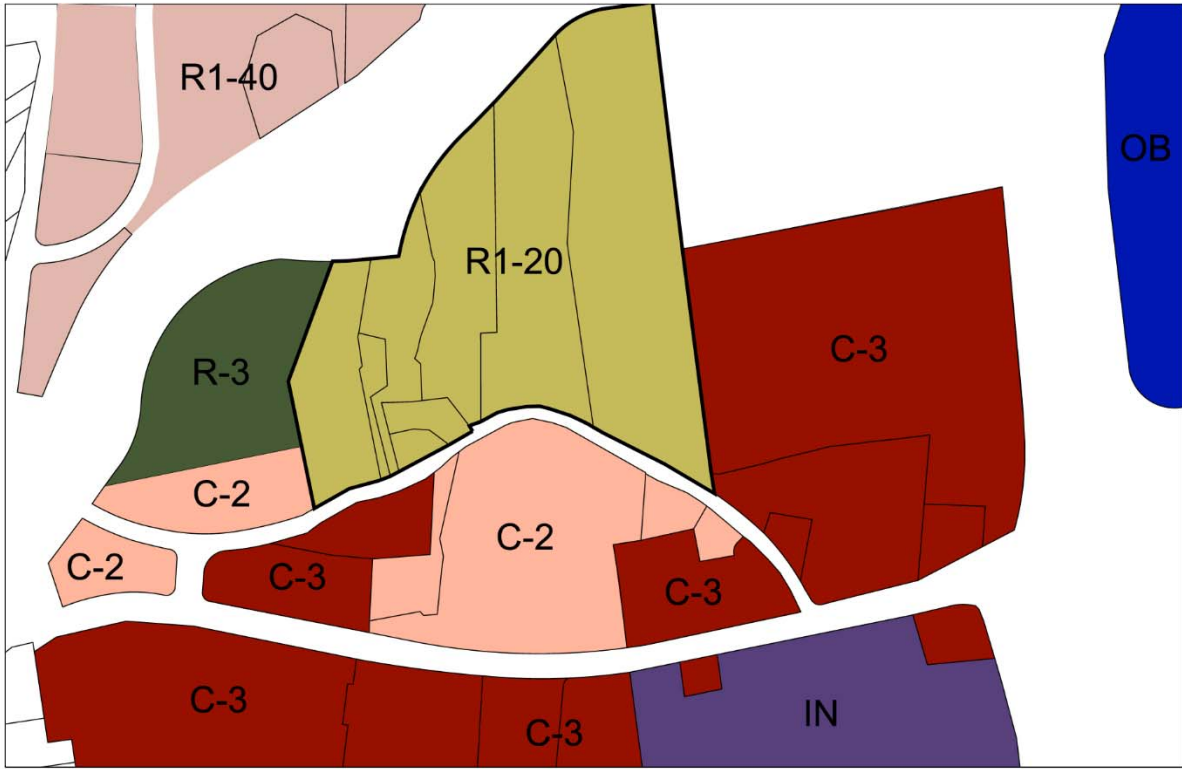
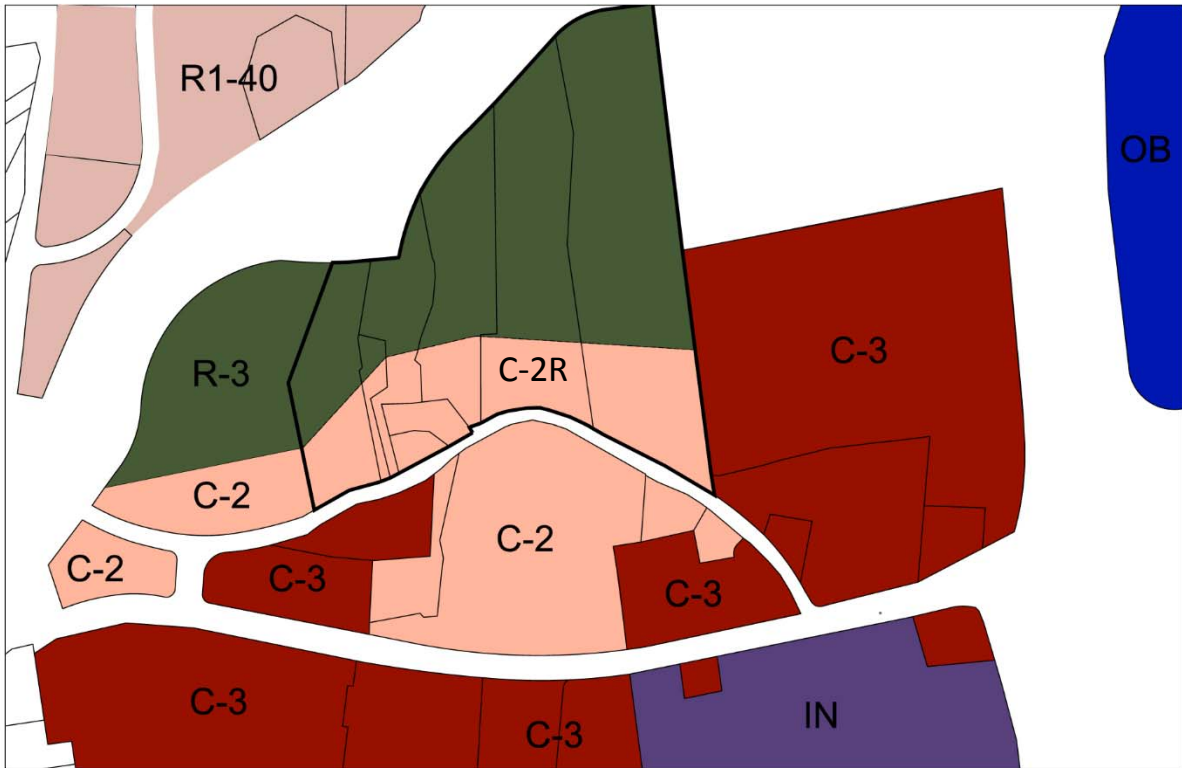


Figure 2-1: Proposed Rezoning Map
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 Scale: 1" \approx 300 ft.

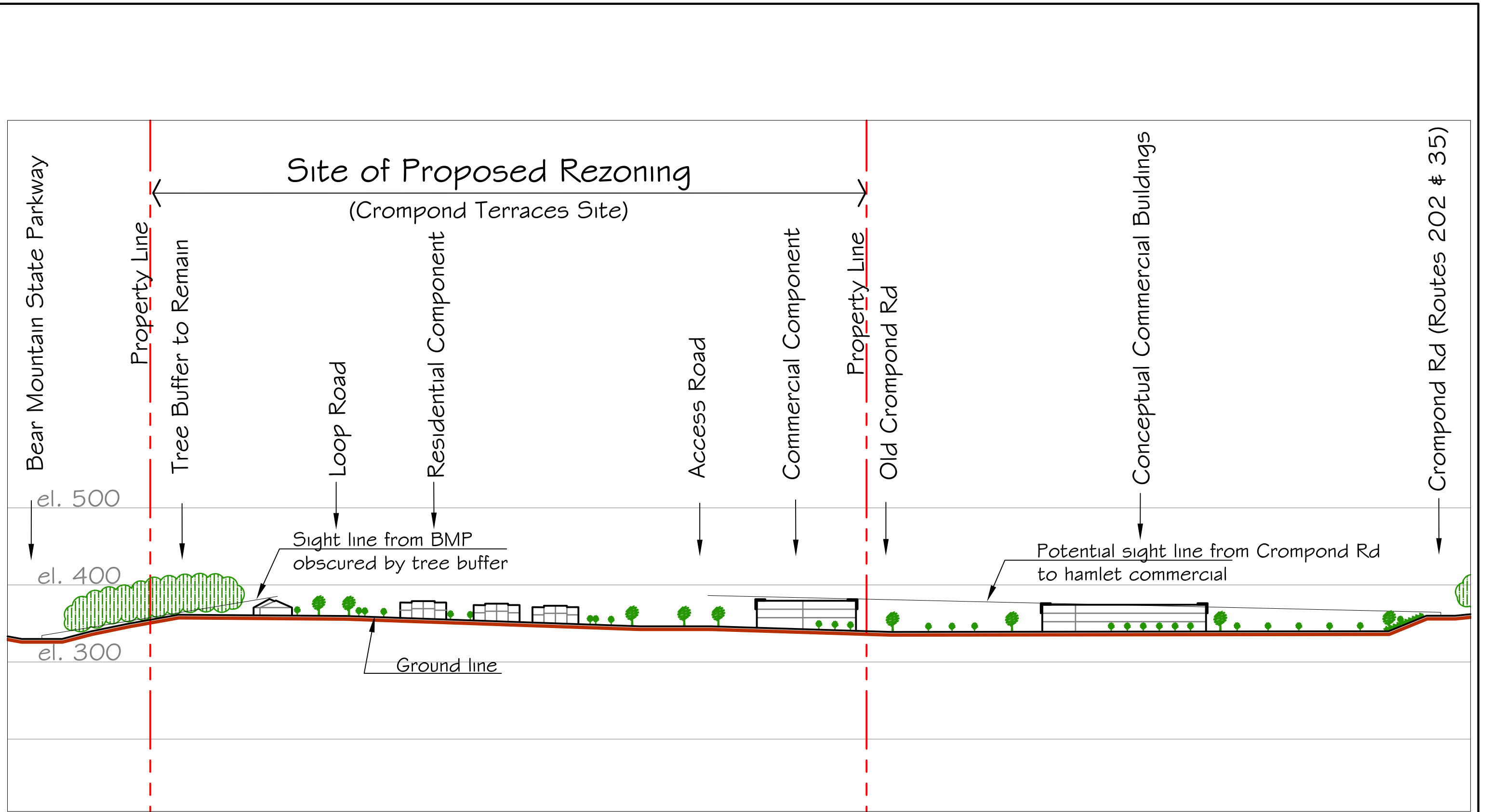


EXISTING ZONING



PROPOSED ZONING

Figure 2-2: Zoning Comparison
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 No Scale



5/13/15
 Scale: 1" = 120' (horiz. & vert.)

TMA14052: Yorktown Mandalay\drawings\visual\Mandalay visual.dwg

Tim Miller Associates, Inc., 10 North Street, Cold Spring, New York 10516 (845) 265-4400

Figure 2-3: Site Profile "AA"
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 Source: Ciarcia Engineering, & County Topo



Figure 2-4: Key Map of Site Profile Location
 Old Crompond Road, Town of Yorktown
 Westchester County, New York

5/13/15
 Scale: 1" = 150'

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Source: Ciarcia Engineering

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3.0 ECONOMIC and DEMOGRAPHIC RESOURCES

3.1 Economic and Demographic Resources

As discussed, the proposed project is a proposed rezoning of the properties located along Old Crompond Road in the Town of Yorktown. The Project Sponsor has petitioned the Town to rezone eight (8) parcels of land totaling approximately 23.61 acres to a multi-family residential (R-3) district (on 16.9 acres) and a commercial (C-2R) district (on 6.71 acres). The proposed development will include private roads and appurtenances. The residences and commercial buildings would be served by public sewer and water.

The subject parcels are all presently zoned R1-20, One Family Residential, on 20,000 square foot lots. The subject parcels are underdeveloped and contain a total of nine existing residences on the 23.61 acres. Anticipated development of the subject parcels would result in the existing structures being removed.

Mandalay Builders, LLC seeks an amendment to the Zoning Map of the Town of Yorktown to change the zoning designation of the subject parcels from R1-20 to R-3, residential multifamily and C-2R Commercial Hamlet-Residential.

A Concept Site Plan has been developed to a level of detail which allows consideration of the impacts of the proposed zone amendment. As Figure 1-4 shows, the conceptual site plan includes the potential for development of up to 80 residential townhouse units, up to 16 affordable rental apartments, a 12,000 square foot municipal multi-use recreational facility, up to 45,000 square feet of office space and up to 32,000 square feet of small scale retail space.

The Project Sponsor proposes to construct up to 80 units of market rate townhouses plus up to 16 rental apartment units to help meet the housing needs of the Town. The townhouse buildings will contain a mix of one and three bedroom units. For the purpose of this analysis the project is envisioned to include 40 one bedroom plus den units, (evaluated as two bedroom units) and 40 three bedroom units. The actual number of units and the proposed bedroom counts will be finalized prior to site plan approval. The units are projected to sell for approximately \$350,000 to \$525,000, depending upon unit size and subject to market conditions. The project also includes 16 affordable one bedroom rental apartments envisioned for

the top floor of some of the commercial buildings in the C-2R zone. These units will be rented consistent with the guidelines in Chapter 102 of the Town Code. For the purpose of this analysis the rental value of these units are conservatively projected to be \$995 per month.

Demographic multipliers published by the Rutgers University Center for Urban Policy Research (CUPR) were used to project the future population of the Bear Mountain Triangle Rezoning area. Population projections are based upon the geographic region, type of unit, number of bedrooms, and the market value or anticipated rental value. As shown in Table 3-1, Based upon the nature of this development, the multipliers used to project the population for the Bear Mountain Triangle Rezoning are as follows; three bedroom units range from 2.83 to 3.62 persons per unit, 2.63 persons per one bedroom plus den townhouse unit and 1.99 persons per one bedroom rental apartment. By comparison, 2010 U.S. Census data indicate that the average household size for all housing types in the Town of Yorktown is 2.75 persons, and the average family size is 3.23 persons.

Based upon the residential multipliers, approximately 263 persons, including 45 school age children are projected to reside in the anticipated housing.

**Table 3-1
Population Projections**

Unit Type	Number of Units	Population Multiplier	Population	School Age Children Multiplier	School Age Population
Type A Units (3-BR 2,500 sf)	24	2.83	68	0.39	9
Type B Units (3-BR 1,200 sf)	16	3.62	58	0.83	13
Type C Units (2-BR 1,050 sf)	40	2.63	105	0.45	18
Rental Apartments (1-BR 850 sf)	16	1.99	32	0.30	5
TOTAL	96		263		45

Source: Rutgers University Center for Urban Policy Research, June 2006. Table prepared by TMA, 2015.

Current and Projected Assessed Value

The Bear Mountain Triangle Rezoning area is contained on the following Town Tax Parcels;

- 26.18-1-9
- 26.18-1-10
- 26.18-1-11
- 26.18-1-12
- 26.18-1-13
- 26.18-1-14
- 26.18-1-15
- 26.18-1-16

The current equalized assessed value of the proposed rezoning area is \$64,350. This represents 2.56 percent of the total market value of the properties. According to a review of the 2015 tax bills for the subject parcels, the total annual property taxes paid to the Town of Yorktown are \$18,971. The municipal taxes paid to Westchester County are \$9,068. Thus, the total municipal taxes paid are \$28,039 while the annual property taxes paid to the school district are \$62,404.

The New York State Office of Real Property Services (NYSRPS), Section 339-y of the Condominium Act requires that each condominium unit, together with its common interest, be assessed as one parcel, and provides that the sum of the assessments of all the units cannot exceed the valuation that the condominium as a whole would have if it were assessed as a single parcel. Thus, in New York State, condominium units are assessed generally at a lower value per unit than fee simple units and the assessment is based on the income value of the property.

Based upon the income value of the townhouses and affordable rental apartments described above, the total value of the residential component is estimated to be \$19,085,880. For the purpose of this analysis, the projected commercial development in the rezoning area was assumed to include up to 32,000 square foot of retail space and up to 45,000 square foot of general office space. Based upon the income value of these components, the total value of the commercial development is estimated to be \$19,771,875. Thus the combined market value of

the anticipated development is \$38,857,755. Using the current 2015 equalization rate of 2.56 percent, the total future Assessed Value for this analysis is estimated to be \$994,759.

Current and Projected Revenues

Table 3-2 compares the revenues generated presently by the property to the revenues to be generated after the Bear Mountain Triangle development is complete. Revenues are based on 2015 tax rates (2014-2015 tax rate for the Yorktown Central School District).

According to the Town of Yorktown annual budget, the Town's tax rate includes Town governmental services, highway maintenance, justice court, police services, fire protection services, street maintenance, public parking, lighting and parks & recreation.

As presented in Table 3-2, annual revenues to the Town of Yorktown are projected to be approximately \$243,097. The tax revenues to Westchester County would be approximately \$140,180 annually, thus the total municipal revenue is estimated to be \$383,277. Once the sewer district is extended to include this area, the properties will pay taxes to the sewer district, in addition to usage fees. Additional discussion of anticipated water & sewer usage and fees is provided on page 3-8.

Table 3-2 Current & Projected Taxes Generated by the Bear Mountain Triangle			
Taxing Authority	Current Taxes (\$)	Bear Mountain Triangle Development Projected Taxes Total (\$)	Net Increase Between Current & Projected Taxes (\$)
Westchester County	\$9,068	\$140,180	\$131,112
Total Westchester County	\$9,068	\$140,180	\$131,112
Town of Yorktown	\$9,948	\$153,785	\$143,837
Mohegan Fire District	\$3,915	\$60,522	\$56,607
Yorktown Consolidated Water District	\$763	\$11,792	\$11,029
Emergency Medical Services	\$253	\$3,911	\$3,658
Westchester County Refuse	\$847	\$13,087	\$12,240
Town of Yorktown Refuse	\$3,245	\$38,943	\$35,698
Total Town of Yorktown	\$18,971	\$243,097	\$263,069
Total Municipal	\$28,039	\$383,277	\$355,238
Yorktown Central School District	\$62,404	\$964,679	\$902,275
TOTAL	\$90,443	\$1,347,957	\$1,296,456
Notes:			
Municipal taxes are based upon Town of Yorktown 2015 Tax Rates.			
Yorktown Central School Tax Rates are for the 2014-2015 school year.			

Annual revenues to the Yorktown Central School District would be approximately \$964,679. The net *increase* between the current tax revenues generated by the site and paid to the School District and the total future project-generated revenues to the school district are projected to be more than \$900,000 annually. Table 3-2 also indicates the net increase in revenues to each jurisdiction which in total is projected to be almost \$1.3 million annually.

The proposed residential development could be developed as shown on the Concept Plan but taxed with a fee simple tax structure. Under this scenario Westchester County revenue is estimated at \$197,645. The total Town of Yorktown revenue would increase to \$381,693 and the revenue to the Yorktown Central School District would be approximately \$1,360,131. However, this tax structure would mean the average tax on each Townhouse unit would be in excess of \$16,000 annually which may make expenses cost prohibitive to the marketing of the units and defeat the objective of providing a diversity of housing options.

Costs Associated with the Proposed Project

Town of Yorktown

An approximate estimate of costs to the Town of Yorktown associated with the proposed residential development has been determined by obtaining a reasonable composite of current costs on a per capita basis and multiplying this amount by the anticipated population. Through a review of the Town's operating budget, the amount of expenditures can be derived and, by dividing the population into the amount of expenditures, the per capita cost can be determined. To estimate the portion of the per capita cost which is paid for by property tax revenues (as opposed to other forms of income to the Town), the per capita cost is multiplied by the proportion that property tax revenue comprises of the overall income stream.

This methodology provides a reasonable estimate of the overall costs. The incremental costs which would be applicable to this project are anticipated to be substantially lower. Certain fixed costs would not actually be affected by an increase in population. For example the Supervisor's salary or the cost of running Town Hall are expenses that are paid by the Town Budget, but would not be expected to increase based on an increase in population. It is also noted that commercial and other land uses in the Town place demand on the various Town and other governmental services which contribute to the per capita costs being overstated. Based on these factors the generalized methodology projects a conservative estimate of the revenues above costs.

In this instance, the adopted 2015 municipal budget for the Town of Yorktown amounts to \$57,086,852 of which \$34,992,549 is the budget for the General, Highways and Libraries, the A,D, and L, funds, herein referred to as General Fund. The remaining funds in the Town Budget are primarily related to the Town's water and sewer districts. The total amount of the General Funds to be raised by taxes is \$19,595,406. The tax levy represents 56 percent of the General Fund budget. Other sources of revenue come from NY State Aid, service and user fees, fines, and appropriated fund balances.

According to the US Census data, the 2010 estimated service area population for the Town is 37,538 persons. Dividing the budget to be raised by taxes by the population results in a per capita Town municipal expenditure per person of \$522.

As described earlier, the proposed project would add approximately 263 persons to the population of the Town. It should be noted that not all Town costs will increase based upon this modest increase in population, thus the municipal costs are conservatively overstated. Based on a per capita cost of \$522, the additional costs to the Town of Yorktown are projected to be up to approximately \$137,286. As presented in Table 3-2, the municipal tax revenues to the Town from the proposed Bear Mountain Triangle Rezoning would amount to a total of \$243,097, thus, **after** covering the cost of municipal services, the project will result in an annual net benefit to the Town of more than \$105,000.

Yorktown Central School District

It is estimated that the proposed project may add up to 45 students to the Yorktown Central School District. For purposes of this analysis, the instructional and transportation costs associated with the addition of 45 students to the Yorktown School District were examined. Costs were compared with anticipated tax revenue increases to the District to determine the fiscal impact which would result.

The School District's budget for the 2014-2015 school year is \$97,018,000. Of the total budget, direct programming costs, including Instruction, all transportation costs and employee benefits associated with teacher salaries amounts to \$48,539,820. The School District's enrollment is approximately 3,750 students (October, 2014). Thus, the average expenditure for programming costs per student is \$12,944. However, the School District receives state aid and other sources of funding which offset a portion of its costs. Based upon the current budget approximately 79 percent of the budget is raised from local property taxes. Thus the per student programming and transportation costs to be raised by property taxes is estimated at \$10,220. Thus, School District costs to be paid by tax revenue to educate the additional 45 students introduced by the proposed Bear Mountain Triangle Rezoning is estimated to be \$459,900.

Economic and Demographic Resources

September 25, 2015

The proposed Bear Mountain Triangle Rezoning will generate a total of \$964,679 in annual property revenues to the Yorktown School District. The development permitted by the proposed rezoning will generate \$902,275 above current taxes. Costs to the School District are estimated to total \$459,900, thus after covering costs the Yorktown School District will realize a net benefit of more than \$500,000 annually.

Summary of Revenues and Costs

Table 3-3 presents a summary of the anticipated revenues compared to the generalized estimate of costs of the Bear Mountain Triangle Rezoning. The net positive revenues after considering the costs to the Town and the School District results in a benefit of approximately \$610,590.

There are no payment in lieu of taxes (PILOT) or other tax abatement programs anticipated in connection with the proposed Bear Mountain Triangle Rezoning and subsequent development.

Table 3-3			
Revenue & Cost Summary: Bear Mountain Triangle Rezoning Project			
Jurisdiction	Projected Taxes (\$)	Projected Costs (\$)	Net Tax Revenue
Town of Yorktown	\$243,097	(\$137,286)	\$105,811
Yorktown Central Schools	\$964,679	(\$459,900)	\$504,779
Total	\$1,207,776	(\$597,186)	\$610,590

Source: Tim Miller Associates, Inc., 2015

Water & Sewer User Fees

The development in the Bear Mountain Triangle Rezoning area will be connected to the Town's infrastructure and will use water and sewer. Sewer service to the surrounding area is treated at the Peekskill Sanitary Sewer Treatment Plant. It is anticipated the district boundary will be expanded to include the COSTCO site and the Bear Mountain Triangle Rezoning area. The Town Board recently passed a resolution authorizing the creation of the Hunterbrook 20 Sewer District, which, upon Westchester County approval, will utilize the Peekskill Sanitary Sewer Treatment Plant to provide sewer service to this area. Sewers

Economic and Demographic Resources

September 25, 2015

would be funded by a combination of taxes and usage fees which would cover the ongoing maintenance and usage costs for sewer service. Future site plan development of the Costco site and the Bear Mountain Triangle Rezoning area would anticipate construction of the sewer infrastructure as necessary.

The Bear Mountain Triangle Rezoning area is currently located in the Yorktown Consolidated Water District, and has been paying taxes to the benefit of this district for over 30 years. In addition to the taxes paid, the Town charges user fees based on a flat fee structure plus user fees based on the volume of water used. These taxes and fees are the revenue source the Town uses to cover the cost of the water and sewer service provided.

Residences currently pay a metered usage fee of \$5.00 per 1,000 gallons of water usage, plus \$1.20 per 1,000 gallons of metered water for sewer service. Commercial development also pays a usage fee at commercial rates. It is projected that the project will use approximately 30,480 gallons per day of water and generate approximately 34,412 gallons per day of sewage.

**Table 3-4
Domestic Water and Sewer Demand**

Unit Type	Number of Units Or Commercial Square Footage	NYS DEC Wastewater Generation Rate (per unit)	Wastewater Generated	Water Demand Rate +10% of Wastewater (per unit)	Water Demand
1 Bedroom plus Den	40	300 gpd	12,000 gpd	330 gpd	13,200 gpd
3 Bedroom	40	400 gpd	16,000 gpd	440 gpd	17,600 gpd
1 Bedroom Apartment	16	150 gpd	2,400 gpd	165 gpd	2,640 gpd
Sub-total			30,400 gpd		33,440 gpd
20% Savings for use of water conservation fixtures			-6,080 gpd		6,688 gpd
Total Residential Demand			24,320 gpd		26,712 gpd
Non Residential Demand	77,000 sf	0.08 gpd	6,160 gpd	0.1 gpd	7,700 gpd
TOTAL DEMAND			30,480 gpd		34,412 gpd

NYS DEC Ten State Standards; Table prepared by TMA 2015.

3.2 Community Facilities and Services

3.2.1 Existing Conditions

Police Protection

The Yorktown Police Department provides police protection services to properties within the 42 square mile area that comprises the Town of Yorktown. The police department headquarters is located at 2281 Crompond Road, Yorktown, NY, approximately 3 miles west of the Bear Mountain Triangle. Typical response time to the Bear Mountain Triangle would be approximately three to five minutes.

The Yorktown Police Department employs 58 police officers who provide 24-hour per day coverage. The department handles approximately 12,000 service calls per year with a service area of approximately 36,360 persons. Thus there are presently 1.6 police officers per 1,000 residents.¹

Fire Protection

The Mohegan Volunteer Fire Association, also known as the Lake Mohegan Fire Department (LMFD) provides fire, rescue, and emergency medical services within the Lake Mohegan Fire District, a 42 square mile area in northern Westchester County, New York providing fire protection service to portions of the Town of Yorktown and the Town of Cortlandt. According to the one of the Department Captains², there are approximately 50 highly trained volunteer firefighters and 28 paid career fire fighters, who respond to emergency calls annually, 24 hours a day, 365 days a year. In addition, these volunteers spend numerous hours each week in training, fire prevention, and fire education activities. The LMFD responds to approximately 3,000 calls for service annually of which approximately one third are calls for fire protection service.

¹ Town of Yorktown/Police/Website.

² Phone Conversation with Chief Lou Barbieri, on May 1, 2015.

The LMFD covers two major shopping malls (Jefferson Valley Mall & Cortlandt Town Center), numerous strip malls, numerous factories/manufacturers, industrial warehouses, one medical research laboratory, one, regional hospital, three nursing homes, numerous public/private schools, and portions of major thoroughfares including U.S. Rt. 6, U.S. Rt. 202, State Rt. 35, State Rt. 132, Bear Mountain State Parkway, and the Taconic State Parkway.

The LMFD operates with 6 Engines, 2 Ladder trucks, and 1 Rescue Vehicle, out of four stations. The Bear Mountain Rezoning area is centrally located among the four station locations. Station 1 is located at 1975 East Main Street, Mohegan Lake, Station 2 is located at 500 Lee Boulevard in Jefferson Valley, Station 3 is located at 260 Croton Avenue, in Cortlandt Manor and Station 4 is located at 1130 Oregon Road also in Cortlandt Manor. Typical response time to the Bear Mountain Triangle would be within five minutes.

The LMFD responds to a variety of incidents, including but not limited to: structure fires, vehicle fires, fire alarms, inside/outside smoke investigations, gas leaks, motor vehicle accidents, hazardous materials incidents, vehicle extrication, and CO alarms. Volunteers are alerted to runs via Westchester County dispatch.

Ambulance Services

The Lake Mohegan Volunteer Ambulance Corps (LMVA) provides emergency ambulance service to the project area. The LMVA operates and maintains two New York State certified ambulances which are manned by New York State certified Emergency Medical Technicians, all certified in the use of defibrillators. The majority of members are volunteers. The Corps has approximately 25 active volunteers and supplemental paid staff providing coverage 24/7. The LMVA responds to approximately 200 calls for service per month.

The Yorktown Volunteer Ambulance Corp. (YVAC) is available for mutual aid as necessary. The YVAC ambulance station is located at 2600 Loretta Street in Yorktown, approximately one mile from the Bear Mountain Triangle.

Parks & Recreation

The Town of Yorktown provides Parks & Receptions services at various facilities as shown on Figure 7-2. Consistent with Section 195-35 of the Yorktown Town Code, the provision of active recreational land or a payment in lieu of land is required for a land development application. Section 168-1, the Master Fee Schedule of the Town indicates that a payment in lieu would equate to \$4,000 per Townhouse unit. As part of the Bear Mountain Rezoning, one of the future applicants has indicated a willingness to provide the Town with a 12,000 square foot multi-function building which could be used to supplement the Town's recreation programs fulfilling the applicant's requirement for the provision of recreational amenities.

The Town currently provides nearly \$80,000 in subsidizes to a variety of recreational programs including the Yorktown Athletic Club basketball program, girls basketball and Shrub Oak Club (SOC) to help compensate for the cost of using non-town owned recreation space for these programs. Use of the proposed multifunction building could result in significant savings to the Town which could offset annual maintenance of the multipurpose facility. This multifunction facility is envisioned as a two story structure, with 7,500 square feet which could be devoted to basketball court space or other uses on the first floor and potentially could be used for Town office space on the second floor. This office space could be used for the Parks & Recreation Department or the Planning Department which is currently located in the Yorktown Community Cultural Center (YCCC).

A review of the maintenance costs of the Town's Yorktown Community Cultural Center indicates an average annual per square foot maintenance cost of approximately \$2.25. Thus, anticipated maintenance costs of the 12,000 square foot multi-function building could be estimated at approximately \$27,000. This may be something of an overstatement as the building will be a new facility specifically designed for its intended use compared to an older retrofitted building.

Should space become available, the Town could realize rental revenue from the 2,000 square foot currently occupied by the Planning Department and/or the 7,000 square foot occupied by the Yorktown Senior and Nutritional Center. At an estimated \$20 per square foot rental revenue, this could result in an additional \$180,000 income to the Town which would more than cover the cost of maintaining the multi-purpose facility.

3.2.2 Minimization of Potential Impacts

As described earlier in this section, the Bear Mountain Triangle Rezoning is expected to permit development to accommodate 263 residents, including up to 45 students. Based on multipliers described later in this chapter, at three employees per 1,000 foot of space, it is estimated that the 77,000 square foot of new retail/office space could result in employment for approximately 231 persons.

Police Protection

Based on planning standards contained in the Development Impact Assessment Handbook, model factors for police protection recommend two (2) police personnel per 1,000 persons which further breaks down to 1.5 police personnel per 1,000 persons for residential uses and 0.5 police personnel per 1,000 persons for nonresidential uses. Based on this standard, 263 persons would increase police staffing needs by less than one half of a police officer which is not likely to have a significant impact on the Town's police personnel ratio of 1.6 personnel per 1,000 residents. Police protection for up to 231 new employees is a negligible impact based on the standards described above.

Fire Protection

Based on planning standards published in the Development Impact Assessment Handbook, approximately 1.65 fire department personnel per 1,000 population is recommended to provide adequate fire protection service. After multiplying this standard to account for the projected population, up to 263 new residents would generate demand for less than one half of an additional fire department personnel. The proposed roads within the project will be designed in accordance with Town specifications and can adequately accommodate emergency service vehicles. Fire hydrants will be installed according to Town standards.

Ambulance Services

Based on planning standards contained in the Development Impact Assessment Handbook, approximately 36.5 calls per 1,000 population are made annually. Based on this standard, the additional 263 residents would increase EMS calls by approximately 10 calls annually on average. The proposed development would not have a significant impact on emergency medical services.

Solid Waste Disposal

The per household rate for solid waste generation according to the Urban Land Institute's Development Impact Handbook is .00175 tons per person per day. The proposed development projects an increase in population by 263 persons, resulting in an estimated solid waste generation of 13.8 tons per month.

Dumpsters and solid waste storage areas will be indicated on future site plan applications. All refuse storage areas would be screened from view of public roads. Solid waste will be collected according to the schedules applicable to a private contractor. Since the Town of Yorktown does not supply solid waste pickup within multifamily developments, thus this development will not have an impact on the Town's solid waste facilities.

The Town of Yorktown annual budget includes tax levys to provide for services which include Police, Fire and Ambulance service. Based upon the modest population increase, no new police officers are warranted and no new equipment is required as a result of the proposed project.

Fiscal Benefits

The project will induce construction employment in the short term. In the long-term, the new resident population would introduce consumer demand for the retail and service establishments located within the Town of Yorktown, as well as the larger commercial area within the region.

Short Term Employment Opportunities

The construction value of the proposed project is estimated to total approximately \$37 million. Construction of the project would require a commitment of person hours of labor, which can be viewed as beneficial to the community, the local economy, and the construction industry with respect to the generation of jobs. Based on labor hour estimates published by the Urban Land Institute, and accounting for secondary employment resulting from the construction, this project would generate up to 150 full time equivalent jobs in the various construction trades associated with this project.

It is anticipated that a number of construction workers would come from Westchester County and nearby counties in the region. These workers are expected to have a positive impact on existing local businesses that provide such services as food, convenience shopping, gasoline, etc.

Long Term Employment Opportunities

The proposed rezoning development would permit construction of 77,000 square feet of new retail and office space. There are several multipliers available to estimate the number of employees generated by non-residential development. The Institute of Transportation Engineers (ITE) Parking Generation³ estimates 3.4 jobs per 1,000 square foot of office building space. The ITE Trip Generation Handbook⁴ indicates approximately 3.3 employees per 1,000 square foot of Office Space. A conservative multiplier of three jobs per 1,000 square foot has been used for the purpose of this analysis to estimate the number of jobs that could be generated.

Utilizing the 3.0 employees per 1,000 square foot of office/retail space, the 77,000 square foot of space used for this analysis, has the potential to add approximately 231 new jobs to the Town's employment base.

³ ITE Parking Generation (4th Edition 2010. Page 201)

⁴ ITE Trip Generation for Land Use 710. General Office Building

Local Economy Spending

Future residents would utilize retail, personal service, and other commercial uses located in the project vicinity. Businesses within the project vicinity, especially those located within the Town, would benefit from new resident expenditures. Approximately 30 percent of household income is spent on retail goods and services.⁵

A household income ranging from \$50,000 to \$85,000 annually, depending upon the amount of financing necessary, would be required to support the average value of \$375,000 of the proposed market rate housing. Using an average household income of \$50,000, it is estimated that 80 households would spend more than \$1,200,000 annually. A substantial portion of these expenditures would be made at supermarkets, local convenience stores, apparel stores, restaurants and service businesses such as gas stations and hair salons in the area.

Sales Tax

Providing local shopping opportunities will serve to capture sales tax dollars in Westchester County. Based upon an average annual revenue of \$300 per square foot⁶, sales expected from the 32,000 square foot retail portion of the proposed development, would be approximately \$9.6 million. Applying the 8.375 percent sales tax to the proposed retail use, future sales tax revenues generated from the proposed development, would be more than \$800,000 annually.

⁵ Consumer Expenditure data is drawn from Consumer Buying Power, a database of estimated expenditures based on the Bureau of Labor Statistics' Consumer Expenditure Survey.

⁶ Simon Properties Annual Report 2010.

3.3 Commercial Market Analysis

Mandalay Builders proposes to build up to 45,000 square feet of small scale office space and up to 32,000 square feet of small scale retail space along Old Crompond Road as illustrated in Figure 1-5. This combined 77,000 square foot of space will be offered for sale and it is anticipated that the space will be owner occupied.

Concerns have been voiced regarding the viability of commercial activities on Old Crompond Road given that commercial buildings constructed along the road may not be readily visible from Route 202. A visual cross section has been included which demonstrates the visual linkage between US Route 202 and commercial development along Old Crompond Road, refer to Figure 2-4. In addition, this is a high traffic volume corridor. As referenced in the Traffic Study, according to the NYS DOT the 2013 Adjusted Average Daily Traffic volume (AADT) along US Route 202 in the project vicinity is estimated to be 21,980. A substantial volume of traffic utilizes this corridor on a daily basis providing a consistent supply of pass-by trips.

In addition, there is a local perception that there is a lot of commercial real estate available in the Town. Appendix D contains an evaluation by a local real estate agent which indicates that most of the vacant store fronts visible in town, are for rent, not "for sale" properties. From 2010 to the present, there has been a reasonably stable commercial market for sale, with active listings ranging from 16-24 properties in 2012, 10-18 properties in 2013, and 15 - 23 properties in 2014. Each year averages 6-7 actual sales.

An analysis of the available commercial real estate both for sale and for lease was conducted and then compared to the total commercial real estate inventory of the Town of Yorktown. There are 278 commercial properties listed on the 2014 assessment roll, excluding residential condominiums. The combined assessed valuation of these properties totals approximately \$12,706,910. This represents approximately 10 percent of the Town's total 2014 assessed valuation of \$126,617,107.

Economic and Demographic Resources

September 25, 2015

Consistent with the data presented above, as of August 2015, there are currently 10 commercial properties for sale with a total of 220,126 square feet, of which 200,050 square feet or 91 percent is occupied.

By comparison there is currently 29 commercial properties with a combined 561,645 square feet of unoccupied lease space available in the Town. Based upon a review of the property cards of the Town's commercial property, there is a total of approximately 3,672,133 square foot of commercial space in the Town. Thus the 561,645 unoccupied lease space represents vacancy of 15 percent which translates to an 85 percent occupancy of the Town's commercial market. Based upon a review of the available space, this vacancy rate appears to be a function of location, lease prices, and other marketability factors such as size, parking, condition of the real estate etc.

Mandalay Builders proposal to construct up to an additional 77,000 square foot of small scale retail and office space, which would be owner occupied, represents at most a 2.1 percent increase in total available commercial space.

Mandalay Builders, one of the future applicants, has had serious negotiations for the purchase (and occupancy) of several of the proposed retail spaces and is confident the development will be a success. Historical trends indicate that newly constructed owner occupied commercial property, would sell quite well. Therefore the Crompond Terraces commercial units, which will be offered as condominium units, should provide an asset to the Yorktown retail community.

It should also be noted that the Town has seen an increase in interest in commercial properties along Route 202, perhaps in anticipation of the Costco project. The potential spill over traffic from the proposed Costco at one end of the street and the proposed CVS at the other add the possibility that trips to those destination stores will also generate traffic to the Crompond Hamlet professional offices and commercial space. As noted above, the Comprehensive Plan envisions just this type of small local retail and office hamlet design, and sees it as an integral component in successful hamlet development.

3.4 Summary of Economic Benefits

The proposed Bear Mountain Triangle Rezoning will provide for diversity of housing in the Town of Yorktown, in addition to an increase in small scale office space and new retail opportunities, the community will realize the following economic benefits as a result of this project:

- Collective municipal and school revenues are projected to total approximately \$1,347,957 annually.
- Tax revenue to the School District will increase by approximately \$902,275, and result in an annual net benefit to the district *after covering costs* by more than \$500,000.
- The project will result in net benefit revenue to the Town of more than \$100,000 annually *after covering costs*.
- The project-generated annual revenues to Westchester County would be approximately \$140,180 annually.
- Retail spending by the new residents of the community is projected to exceed \$1,200,000 annually.
- Based upon the development of up to 32,000 square foot of small scale retail space, sales tax revenue is projected to be more than \$800,000 annually.
- There is currently an 85 percent occupancy of the Town's commercial market. Historical trends indicate that newly constructed owner occupied commercial property is highly desirable. An increase of approximately two percent of available commercial space should provide an asset to the Yorktown retail community.
- The project would generate 125 to 150 full time equivalent jobs in the various construction trades associated with this project and approximately 231 full time jobs upon completion.

4.0 SOILS AND TOPOGRAPHY

The Bear Mountain Triangle Rezoning area is located in the Town of Yorktown. The property is proposed to be rezoned to conform to surrounding land use. The area is surrounded by Crompond Road (US Route 202/US Route 35) to the south, the Bear Mountain Extension to the north and west and the Taconic Parkway to the east.

4.1.1 Existing Conditions

The area, contains primarily three types of soils, mapped by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS) of Putnam and Westchester Counties, New York as Charlton Soils, Leicester Soils, and Charlton-Chatfield Complex. The location of these soils groups on the site is shown in Figure 4-1, Soils Map.

The Charlton Loam soils (ChC and CIB listed on the soils map) are strongly sloping, very deep and well drained. Slopes for these soils groups are typically 8 to 15 percent for ChC soils and 2 to 8 percent for CIB soils. Depth to water is found at more than 6 feet below the ground surface throughout the year, permeability is moderate or moderately rapid and the available water capacity is moderate. The depth to bedrock can be found at more than 60 inches below the ground surface.

Leicester soils (LcA and LcB) are nearly level to gently sloping, very deep and poorly drained. Slopes are typically 0 to 3 percent for LcA soils and 3 to 8 percent for LcB soils. Depth to water is within 1.5 feet below the ground surface from November through May, permeability is moderate or low and the available water capacity is moderate. The depth to bedrock is more than 60 inches below the ground surface.

Charlton-Chatfield complex (CrC) and Chatfield-Charlton complex (CsD) are soils that are very deep, well drained and located on hillsides and underlain by folded bedrock. Depth to water can be found more than 6 feet below the ground surface throughout the year, permeability is moderate or moderately rapid, and the available water capacity is moderate. The depth to bedrock can be found more than 60 inches below the ground surface.

The site generally slopes down from the eastern portion with rocky slopes on the eastern portion of the property.

Preliminary soils testing was conducted on June 23, 2015 and June 30, 2015. Figure 4-3 illustrates the test pit locations. The Soils data sheets are included in Appendix E. The results of this testing confirm the presence of the Charlton-Chatfield complex (CrC) and Chatfield-Charlton complex (CsD) and the Leicester soils (LcA and LcB) as discussed above.

4.1.2 Avoidance or Minimization of Potential Impacts

Soils

Grading is required to build the internal roads, install utilities, prepare areas for the proposed residential and commercial buildings, and to create two infiltration basins, one in the center of the site and the second in the northeastern portion of the project site. The conceptual grading is shown in Figure 4-4 - Preliminary Earthwork Estimate. It should be noted, for the purpose of this environmental review, an analysis of the maximum impact scenario has been evaluated. As an actual site plan for development of this area is prepared, measures will be incorporated to work with the existing topography thus minimizing the amount of earthwork necessary.

Based upon preliminary engineering estimates, a total of approximately 223,000 cubic yards of material will be cut and approximately 85,000 cubic yards will be filled. Of the remaining 138,000 cubic yards, it is estimated that approximately 130,000 cubic yards of rock will be crushed to be used a base for the parking areas and the road improvements to Old Crompond Road. The areas of cut and fill are shown in Figure 4-4. The balance, or approximately 8,000 cubic yards, will be removed from the site. This is a preliminary estimate based upon the conceptual grading plan and information provided by the project engineers. Upon development every effort will be made to use all or a portion of the 8,000 cubic yards on the site. Excess material will be transported off-site by tri-axel trucks with a 28 ton capacity. It is anticipated that grading will occur over the first 6 months of the project resulting in a maximum of two truckloads per day on average.

Engineering measures such as proper design of foundations, subsurface drainage as needed, and proper designs of pavement subbase and excavated slopes can be utilized to overcome any construction limitations of the onsite soils. An erosion and sediment control plan will be prepared to assure proper handling of soils to avoid undue erosion. Currently the site is developed with several structures. Historic use of part of the property shows that it is capable of supporting structures and is conducive to being used in a developed manner.

Bedrock outcrops are more prevalent in the soils located on the eastern portion of the site located on the hillside. Development on this hillside is proposed in the general project outline and if bedrock were to be encountered during construction, mechanical means (i.e. ripping, chipping) would be employed first to avoid any unnecessary blasting.

Blasting

Any necessary blasting would only be carried out in conformance with an approved Blasting Plan, specific to this project, developed between the Blasting Contractor and the Town. The Blasting Plan would include, but not be limited to the following:

- Determination of a radius of sensitive receptors to the blasting site.
- Notification of property owners within the radius of sensitive receptors. This notification would provide warning that blasting will occur and the dates it is planned to start and finish.
- Conducting pre-blasting inspections for buildings within the radius of sensitive receptors. This will be completed by the Blasting Contractor.
- Conducting post-blasting inspections of the buildings within the specified radius.
- Blasting would only be conducted during specified hours in conformance with the Town of Yorktown code, or may be further restricted in the Blasting Protocol to be approved by the Town's representative.

The Blasting Plan would be developed in full conformance with all Town of Yorktown regulations and in accordance with New York State blasting law. The contractor's Blasting Contract would be based on site specific blasting requirements, and would be submitted to the Town for approval in advance of any site work activity. Peak particle velocity would be maintained at the property line so as to avoid any effects on off-site structures.

Topography

The anticipated development includes the demolition of the existing buildings on the subject property and regrading for any proposed development. The proposed commercial buildings are generally envisioned along the southern boundary of the rezoning area on Old Crompond Road. The proposed residential zoning is located within the interior of the Property from the western boundary to the eastern boundary on the hillside, as shown on Figure 1-5, Representative Landscape Plan. Slope Disturbance areas are shown on Figure 4-2. During construction, erosion control measures will be implemented to mitigate any steep slope disturbance.

Potential Erosion

A soil Erosion and Sediment Control Plan for the project will be designed to conform to applicable requirements of the New York State Department of Environmental Conservation. The Plan will be completed in accordance with New York State Department of Environmental Conservation best management practices ("BMPs") as listed below;

Best Management Practices (BMPs)

The principle objectives of the Soil Erosion and Sediment Control Plan shall include the following:

- divert clean surface water before it reaches the construction area;
- control erosion at its source with temporary and permanent soil protection measures;
- capture sediment-laden runoff from areas of disturbance and filter the runoff prior to discharge; and,
- decelerate and distribute storm water runoff through use of natural vegetative buffers or structural means before discharge to off-site areas.

These objectives will be achieved by utilizing a collective approach to managing runoff, i.e. Best Management Practices (BMPs).

Divert clean runoff - Diversion of runoff from off-site or stabilized areas will be accomplished through surface swales and erosion control barriers in order to keep clean water clean.

Time grading and construction to minimize soil exposure - To the extent practical, the development will be phased to limit the area of disturbed soil exposed at any particular time.

Retain existing vegetation wherever feasible - Construction fencing or silt fencing will be used to physically define the limits of work. Areas not to be developed (regraded), will be retained in the existing condition until the developed areas are completed and stabilized.

Stabilize disturbed areas as soon as possible - In areas where work will not occur for periods longer than two weeks, soil stabilization by hydroseeding or mulching will be done within 48 hours after the soil has been exposed. Following completion of grading operations, level areas will be immediately seeded and mulched. Sloped areas, such as fill slopes will be treated as exposed areas and will be seeded or stabilized using an appropriate approved method such as matting. depending upon weather conditions at the time of carrying out the work.

Minimize the length and steepness of slopes - The steepness and length of project associated slopes have been designed to minimize runoff velocities and to control concentrated flow. Should any concentrated (swale) flow from exposed surfaces be expected to be greater than 3 feet per second, haybale or stone check dams will be installed in the swale. The check dams will be placed so that unchecked flow lengths will not be greater than 100 feet.

Maintain low runoff velocities - To protect disturbed areas from storm water runoff, haybale diversion berms and/or soil diversion berms and channels will be installed wherever runoff is likely to traverse newly exposed soil. Immediately following the clearing and stripping of topsoil, rough grading for the temporary and permanent swales and ponds will take place. The swales will direct runoff so that it can be checked or impounded.

Trap sediment on-site and prior to reaching critical downstream areas - Silt fences, hay bale check dams, filter strips, ponds, sediment traps (in areas where no ponds are

proposed), and catch basin filters will be used to either impound sediment-carrying runoff and/or to filter the runoff as it flows through an area. A stabilized construction entrance will be installed to prevent construction vehicles from tracking soil onto public roadways. All temporary erosion control devices will be installed prior to the commencement of construction. The permanent storm water management systems will be installed in conjunction with the construction.

Establish a thorough maintenance and repair program - Erosion control measures will be inspected frequently and following rain events during which 0.5 inches of precipitation or greater falls in a 24 hour period, particularly prior to and following storms, and these features will be repaired as needed to ensure that they continue to function properly. The Project Sponsor will be responsible for monitoring and maintaining the soil erosion and sedimentation controls.

Prior to any disturbance, erosion and sediment control measures will be installed in accordance with the specifications of the Erosion Control Plan. The construction contractor will be required to install all sediment and erosion control measures and maintain them throughout the entire construction process.

Based on the identified erosion control measures being implemented, construction on the site's topography is not anticipated to result in any significant impact.

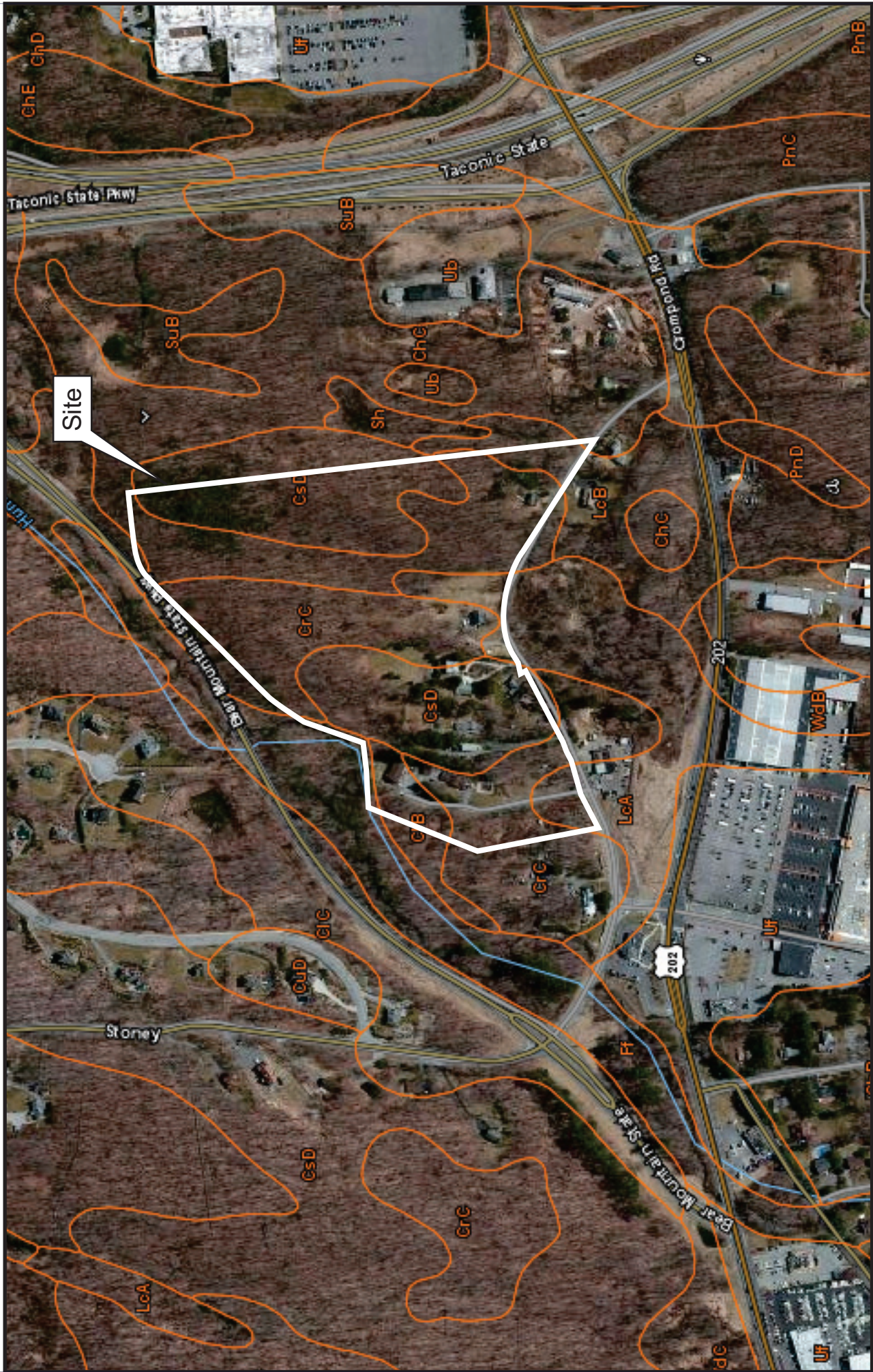
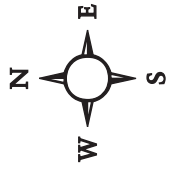
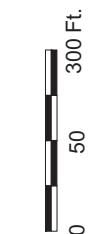


Figure 4-1: Soils Map
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 Scale: Graphic Scale as shown



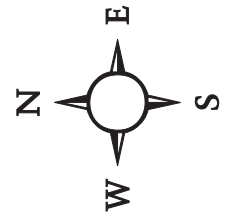
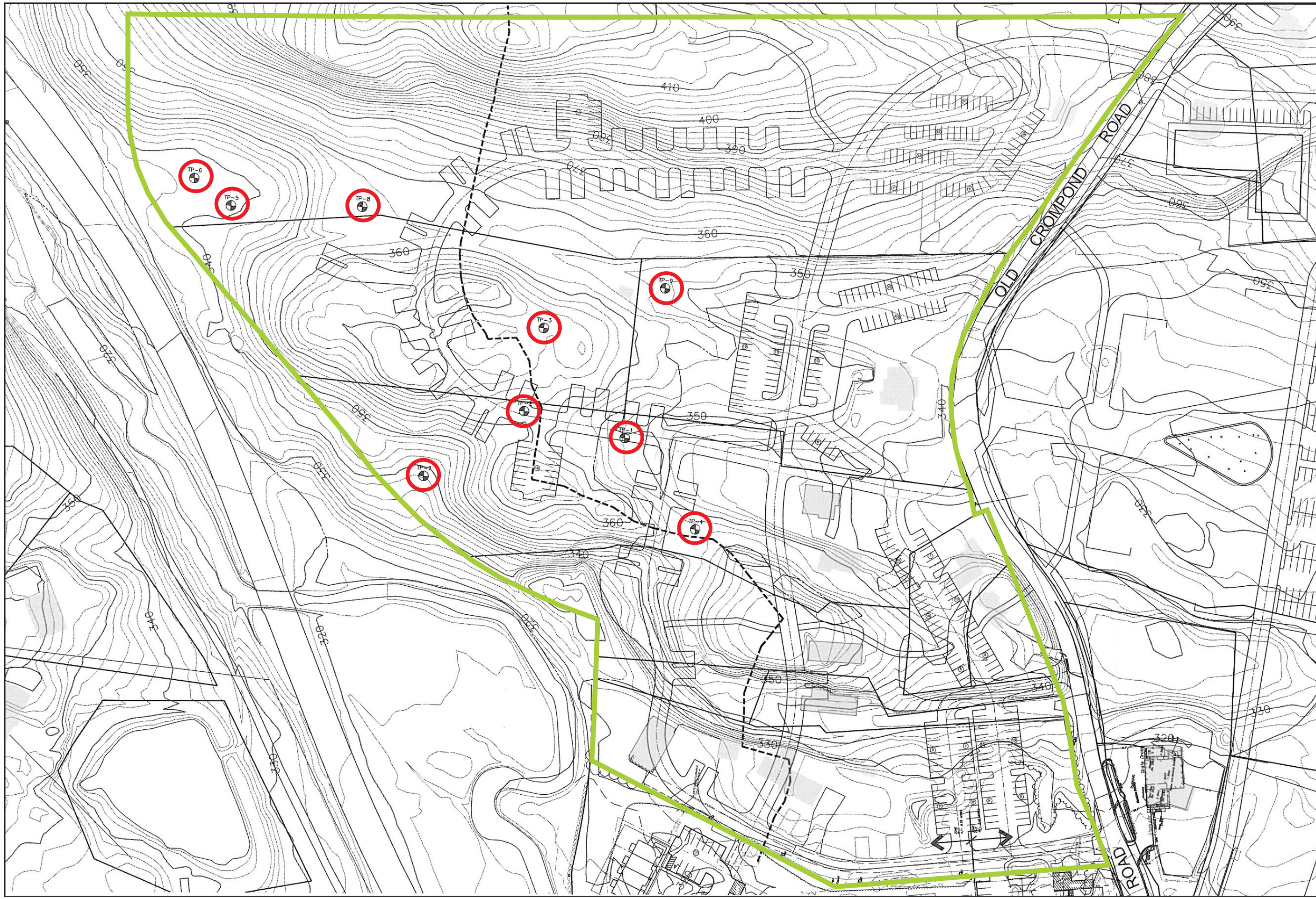


Figure 4-2: Slope Disturbance Map
 Bear Mountain Triangle Rezoning
 Town of Yorktown, New York
 Source: Ciarcia Engineering, P.C.
 Approx. Scale: 1" = 175'



○ - Test Pit Location

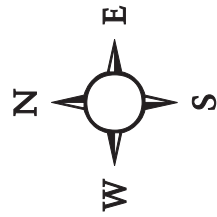


Figure 4-3: Test Pit Location Map
 Bear Mountain Triangle Rezoning
 Town of Yorktown, New York
 Source: Ciarcia Engineering, P.C.
 Approx. Scale: 1" = 60'

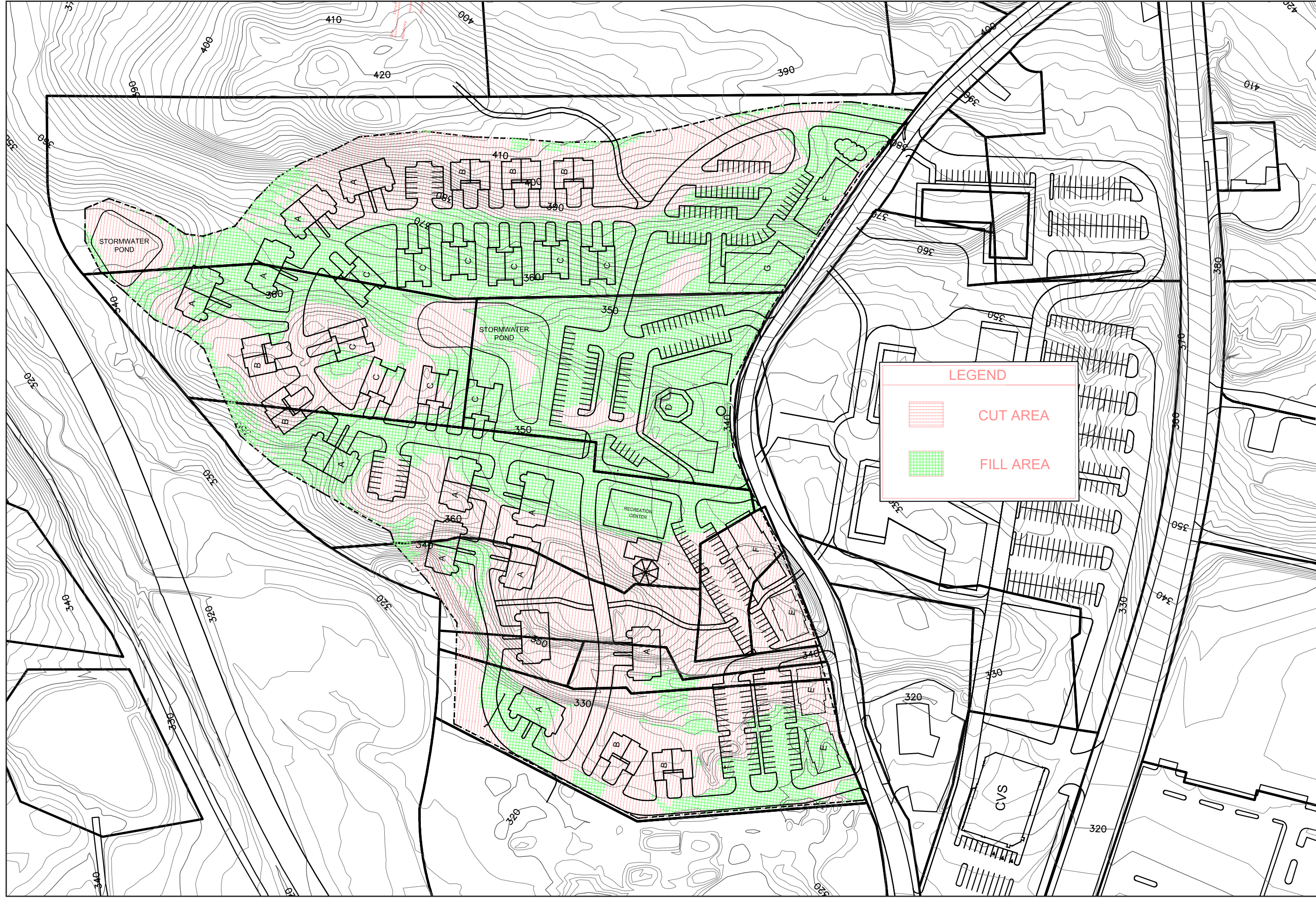
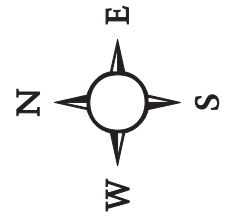


Figure 4-4: Preliminary Earthwork Estimate
 Bear Mountain Triangle Rezoning
 Town of Yorktown, New York
 Source: Ciarcia Engineering, P.C.
 Approx. Scale: 1" = 150'



5.0 WATER RESOURCES

Surface Water

The subject property contains no wetlands, watercourses or waterbodies. The site slopes up from US Route 202 toward the northeast, such that the rezoning area generally drains overland and through storm drains toward US Route 202, and ultimately into the Hunter Brook. This rezoning will permit redevelopment of the areas where residential dwellings are now located.

Based upon preliminary engineering review of the rezoning area, it is anticipated the proposed stormwater maintenance facilities will include two surface detention ponds and subsurface infrastructure located generally under the southwest portion of the site. According to a review of the United States Department of Agriculture (USDA) Soil Conservation Service (SCS) of Putnam and Westchester Counties, the soils located on this site were found to be medium to course sandy soils consistent with Charlton loam which are classified as well drained and suitable for construction. The site generally slopes down from the eastern portion with rocky slopes on the eastern portion of the property. All indications are that onsite soils are pervious and do not exhibit shallow groundwater.

Installation of infrastructure for sanitary sewer will connect directly to the sewer main to be located along Old Crompond Road. The connection be a new direct connection thereby eliminating concerns over additional infiltration and inflow.

Stormwater Pollution Prevention Plan

A SWPPP is a plan to reduce off site impacts associated with stormwater from a project site by controlling changes in runoff, and pollutants associated with runoff. The NYSDEC State Pollution Discharge Elimination System Stormwater General Permit for Construction Activities (GP-0-15-002), requires SWPPPs for certain projects, such as the Bear Mountain Triangle development, that disturb or expose one or more acres of soil during construction. To comply with GP-0-15-002, a SWPPP must include erosion and sediment controls for implementation during construction and measures to control changes in stormwater quantity and quality once the project is complete. The SWPPP will be developed such that runoff from the entire site meets the permitting requirements of GP-0-15-002, including the

approximately 8.9 acres of impervious development for the residential, office and retail buildings.

The proposed stormwater treatment measures to be included in the SWPPP will satisfy NYSDEC standards by including provisions for stormwater treatment to avoid potential impacts on receiving waters and downstream properties. Per the NYSDEC requirements the project will not result in **any** increase in water volume or rate discharged from the site compared to existing conditions. State standards for water quality treatment, as set forth in NYSDEC GP-0-15-002, specifically require the water quality volume (WQv) to be calculated, and treated, in accordance with the NYSDEC Stormwater Management Design Manual (the "Manual"). In addition, the calculated Runoff Reduction Volume (RRv) will be designed to infiltrate into the underlying soils, as required. The stormwater practices proposed for the Bear Mountain Triangle rezoning area will be designed in accordance with the Manual and are intended to satisfy New York State mandates.

The rezoning area will need to comply with standards applicable to new development as outlined in the 2015 NYS DEC Stormwater Design Manual. For these areas, Runoff Reduction Volume (RRv) must equal Water Quality volume (WQv). RRv will be met using a combination of surface water quality detention features and underground infiltration measures which have RRv capacity of 90 percent, such as cultec rechargers, perforated pipes in gravel, or infiltration basins. RRv will be infiltrated into the ground. Based on preliminary soils tests the site contains mostly Charlton Loam soils which have excellent permeability. As such it is anticipated the infiltration rate (fc) of the underlying soils will enable the use of Best Management Practices to address the sites stormwater management needs.

Sanitary sewage will not be mixed with stormwater, but rather will be conveyed to the sewer lines to be installed in Old Crompond Road and then to the Peekskill Wastewater Treatment Plant.

In preparing the final site plan to be submitted for approval, the applicant will consider green stormwater options including green roofs, shared parking, pervious pavement and rain gardens.

Stormwater Discharge Rate

The peak flow discharge for the post development conditions under various storm events will be analyzed at the design point to the existing storm drain system located along Old Crompond Road.

The soil across most of the rezoning area is mapped as Charlton Soils, Leichester Soils and Charlton-Chatfield Complex. Permeability is considered moderate to moderately rapid for each of these soils groups. For the entire site, the post-construction 1-year 24-hour discharge rate (CPv), 10-year 24-hour discharge rate (Qp), and 100-year 24-hour discharge rate (Qf) will be controlled to less than the pre-development discharge rate.

As the developed condition peak discharges will be less than in the existing condition, there will be no anticipated impacts to off-site storm drain systems or surface waters. A detailed analysis of pre- and post-development drainage conditions will be provided in the appropriate SWPPP to be submitted with future site plan development applications.

The proposed stormwater management measures will be designed to minimize the potential impact to downstream, water resources through the implementation of collection and treatment practices that will treat pollutants associated with developed sites and maintain the quantity of runoff resulting from the project to a level that does not exceed pre-development peak flow rates. The proposed plan is designed to address both water quality and quantity in accordance with NYSDEC standards.

Erosion and Sediment Control

As will be specified in the future SWPPP, soil erosion and sedimentation measures, such as silt fencing, will be installed prior to any construction activities. Erosion control methods to be employed are based upon the guidelines within the New York State Standards and Specifications for Erosion and Sediment Controls for New Developments. Construction will be phased, so that no more than 5 acres of the site is disturbed at one time.

Implementation of soil erosion and sediment controls in accordance with the New York standards and specifications for erosion and sediment control will avoid or minimize any adverse effect on surface waters down gradient from the site including the Hunter Brook. The applicant will engage a Certified Professional in Stormwater Quality/Erosion and Sediment Control to oversee implementation of the SWPPP, including its site specific Erosion and Sediment Control Plan.

The site-specific SWPPP to be prepared at the time of site plan application will describe additional pollution prevention measures to be implemented during the construction and operation of the site facilities, addressing activities such as pesticide use, material storage, waste disposal and spill response for further protection of surface water resources. Implementation of the SWPPP will include certifications by the project owner and contractors at the site, and approval by the Town of Yorktown (as the MS4) and notification of NYS DEC prior to the commencement of construction.

Ground Water

Groundwater is the subsurface water found in the saturated zones within the soil and rock mantle of the earth. Groundwater is presumed to flow to the west, generally following the topography of the site.

Depth to water table (surficial groundwater elevations) varies on the site and during seasonally wet periods. Based on data published in the USDA's *Soil Survey for Westchester and Putnam County*, the majority of the soils have a groundwater table greater than five feet below the surface throughout the year.

The project site and surrounding areas receive potable water from the Town of Yorktown Consolidated Water District, which is proposed as the source of drinking water for this project. As public water serves the site and nearby properties, potential impacts to groundwater use is not considered a significant issue.

There are no plans to use groundwater at this site. There will be no water taking from the local aquifer. Recharge will be slightly affected by the installation of road, driveways and

other impervious surfaces on the site. However, stormwater runoff collected from these surfaces will be directed into proposed stormwater management infrastructure designed for infiltration. Therefore, the project is not anticipated to adversely impact groundwater conditions in the area.

The type of heating system for the proposed project has not yet been determined. Options for heating include geo-thermal, heating oil, propane gas, heat pumps and electrical service. Natural gas service is not currently available in this area of the Town, but is pending installation as part of the Costco project. In the event that heating oil is selected, any proposed underground storage tanks will be fully vaulted to minimize any risk to groundwater. In addition, the proposed homes will be sewered. Therefore, the development is not projected to result in adverse groundwater-related impacts.

Potential for Impacts

Drainage patterns are substantially the same as they are under existing conditions. The increase in impervious surface area for the subject site is typical for developed suburban hamlet areas and totals approximately 8.92 acres.

As stated, the site requires a NYSDEC General Permit, currently (GP-0-15-002), which requires that there be no increase in the quantity or the rate of stormwater runoff from the site after construction as compared to existing conditions. The Stormwater Pollution Prevention Plan prepared for the site will identify measures as necessary to insure compliance with this standard. In addition, a site specific erosion control plan will be submitted for review and approval by the Town as part of the Planning Board's site plan review process. As a result of these measures no impacts to stormwater are anticipated.

The Site will be served by the Town of Yorktown Municipal Water System. The Water Superintendent has indicated there is sufficient water available to meet the needs of the Bear Mountain Rezoning as described herein. A review of the Westchester County Soils Survey indicate that onsite soils are pervious and do not exhibit shallow groundwater. Any fuel oil storage tanks will be located above ground in double walled tanks with leak alarms installed. No impacts to ground water are anticipated.

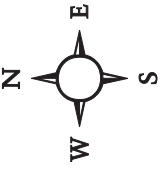
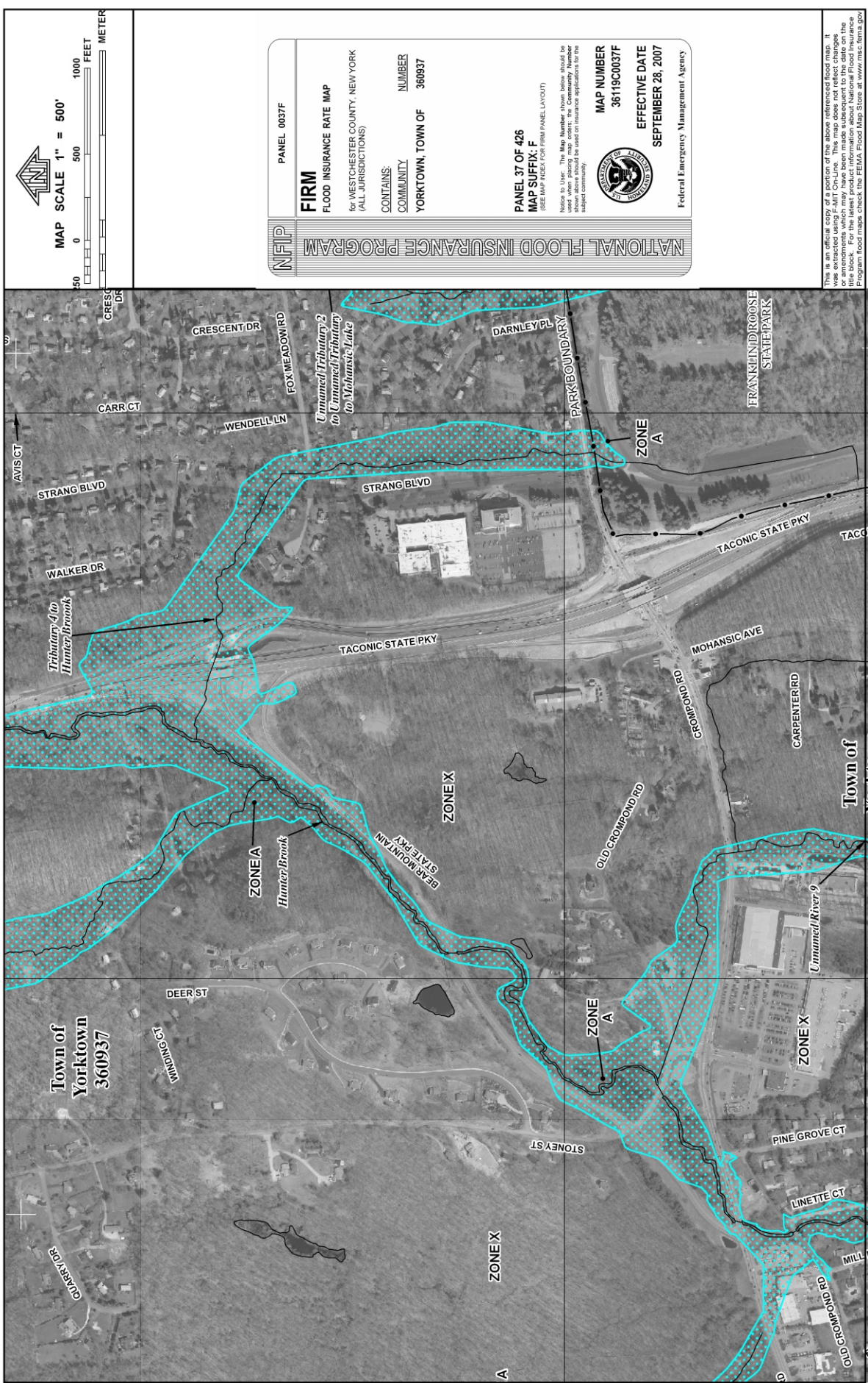


Figure 5-1: FEMA Flood Plain Map
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 Scale: Graphic Scale as shown
 Source: FIRM Flood Insurance Rate Map

6.0 ECOLOGY

Field investigations for the presence of wetlands were done by Mary Jaehnig of Pfizer-Jaehnig Environmental Consulting in December 2011 and Spring 2013. Her investigations show there are no regulated wetlands on the rezoning area. Her determination was verified by the Town's wetlands consultant Bruce Barber on July 10, 2013.

Existing Conditions - Flora and Fauna

The 23.61 acres of the proposed re-zoning area are located within an historically residential area on the north side of Old Crompond Road. Historic aerial photos (Figures 6-1 through 6-6) show that portions of the subject area were used for agricultural purposes as well as low density residential. The northern and eastern parts of the site were sparsely vegetated as recently as 1968.

The subject parcels are located in a moderately developed part of Yorktown, just west of the Taconic Parkway and south of the Bear Mountain Parkway Extension. Recent development on Stoney Street to the north and the Crompond Crossings development to the west have isolated these parcels from other large open space parcels to the west and north. This combined with the Taconic Parkway to the east, Bear Mountain Parkway to the north and west, and heavily traveled Route 202 to the south, limit these properties in terms of ecological value as part of a larger wildlife corridor. The Hunter Brook, which flows from northeast to southwest in the area (although not on the subject properties), does provide a narrow nearby corridor for wildlife movement. The proposed Costco development, which will affect similar vegetative cover and habitat features, is located directly to the east of the site. See attached location map (Figure 1-1) and aerial photos (Figures 6-1 to 6-6) for the site context.

The Town's Biodiversity Conservation Study, completed by Stearns and Wheler in 2010 does not identify the subject parcels as being of particular ecological sensitivity, or representing a significant potential wildlife corridor. The plan does show the Hunter Brook corridor generally as a potential corridor, but with limitations due to the amount of development and traffic in the immediate area.

In April of 2015 a biologist from Tim Miller Associates conducted a natural resources inventory of the parcels to evaluate the quality of wildlife habitat potential and plant species diversity. Table 6-1 lists those plant species that were observed during the two site walks. Table 6-2 lists those animal species that were observed or would be most likely to utilize the property.

Table 6-1	
Trees and Shrubs - Observed Species (Northern Hardwood Successional Forest)	
Common name (Scientific name)	
Trees	
American beech (<i>Fagus grandifolia</i>)	Slippery elm (<i>Ulmus rubra</i>)
Black cherry (<i>Prunus serotina</i>)	Shagbark hickory (<i>Carya ovata</i>)
Black locust (<i>Robinia pseudoacacia</i>)	Sugar maple (<i>Acer saccharum</i>)
Hemlock (<i>Tsuga canadensis</i>)	Sweet (black) birch (<i>Betula lenta</i>)
Pignut hickory (<i>Carya glabra</i>)	White ash (<i>Fraxinus americana</i>)
Red maple (<i>Acer rubrum</i>)	White oak (<i>Quercus alba</i>)
Red oak (<i>Quercus rubra</i>)	
Shrubs, Vines and Herbaceous Species	
Garlic mustard (<i>Alliaria petiolata</i>)	Pennsylvania sedge (<i>Carex pennsylvanica</i>)
Pachysandra (<i>Pachysandra terminalis</i>)	Spotted wintergreen (<i>Chimaphila maculata</i>)
Christmas fern (<i>Polystichum acrostichoides</i>)	Japanese barberry (<i>Berberis thunbergii</i>)

Table 6-2 Observed and Expected Wildlife List			
Common Name	Scientific Name	Common Name	Scientific Name
Mammals		Birds	
white tailed deer *	<i>Odocoileus virginianus</i>	wild turkey	<i>Meleagris gallopavo</i>
Eastern chipmunk *	<i>Tamias striatus</i>	wood thrush	<i>Hylocichla mustelina</i>
raccoon *	<i>Procyon lotor</i>	pileated woodpecker	<i>Dryocopus pileatus</i>
gray squirrel *	<i>Sciurus carolinensis</i>	hairy woodpecker*	<i>Picoides villosus</i>
red fox	<i>Vulpes vulpes</i>	Yellow-shafted (northern) flicker	<i>Colaptes auratus</i>
opossum	<i>Didelphis virginiana</i>	downy woodpecker	<i>Picoides pubescens</i>
striped skunk	<i>Mephitis mephitis</i>	Red-bellied woodpecker	<i>Melanerpes carolinus</i>
white-footed mouse	<i>Peromyscus leucopus</i>	Eastern bluebird*	<i>Sialis sialis</i>
deer mouse	<i>Peromyscus maniculatus</i>	red-tailed hawk	<i>Buteo jamaicensis</i>
house mouse	<i>Mus musculus</i>	American robin *	<i>Turdus migratorius</i>
meadow vole	<i>Microtus pennsylvanicus</i>	gray catbird*	<i>Dumetella carolinensis</i>
woodchuck*	<i>Marmota monax</i>	northern mockingbird*	<i>Mimus polyglottos</i>
short-tailed shrew	<i>Blarina brevicauda</i>	flycatchers	<i>Empidonax sp.</i>
common shrew	<i>Sorex cinereus</i>	eastern phoebe	<i>Sayornis phoebe</i>
star-nosed mole	<i>Codylura cristata</i>	American redstart	<i>Setophaga ruticella</i>
Eastern mole	<i>Scalopus aquaticus</i>	red-eyed vireo	<i>Vireo olivaceus</i>
little brown bat	<i>Myotis lucifugus</i>	American crow *	<i>Corvus brachyrhynchos</i>
		blue jay*	<i>Cyanocitta cristata</i>
		scarlet tanager	<i>Piranga olivaceae</i>
Reptiles		American goldfinch	<i>Carduelis tristis</i>
garter snake	<i>Thamnophis sirtalis</i>	northern cardinal *	<i>Cardinalis cardinalis</i>
Eastern racer	<i>Coluber constrictor</i>	chipping sparrow*	<i>Spizella passerina</i>
brown snake	<i>Storeria dekayi</i>	eastern towhee	<i>Pipilo erythrophthalmus</i>
		slate-colored junco*	<i>Junco hyemalis</i>
Amphibians		mourning dove	<i>Zenaida macroura</i>
red-backed salamander	<i>Plethodon cinereus</i>	black-capped chickadee *	<i>Poecile atricapilla</i>
American toad	<i>Bufo americanus</i>	White-breasted nuthatch *	<i>Sitta carolinensis</i>
		turkey vulture *	<i>Cathartes aura</i>
		house wren	<i>Troglodytes aedon</i>
		house finch	<i>Carpodacus mexicanus</i>
		Purple finch	<i>Carpodacus purpureus</i>
		Northern (Baltimore) oriole	<i>Icterus galbula</i>
		tufted titmouse	<i>Parus bicolor</i>
		warbler	<i>Dendroica spp.</i>
		eastern wood-pewee	<i>Contopus virens</i>
		common yellowthroat	<i>Geothlypis trichas</i>
		ovenbird	<i>Seiurus aurocapillus</i>
		rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>
		brown thrasher	<i>Toxostoma rufum</i>
		Brown-headed cowbird	<i>Molothrus ater</i>

* observed individuals or indicators.
 Note: this list represents many species that could potentially inhabit this site. It is not, however, an exhaustive list.
 Field survey dates: April 13 and April 24, 2015
 Prepared by: Tim Miller Associates, Inc., 2015

The “Mandalay” site is entirely upland, although the Hunter Brook corridor is near the site to the north and west, and a small isolated wetland exists to the east. At present, there are approximately 16.7 acres of woodlands, 5.9 acres of lawn and landscaped areas, and 1.0 acre of impervious surfaces (pavement and buildings) on the property. Most of the managed landscape areas are located closest to Old Crompond Road in the southwest portion of the site. A small area of managed landscape is also present in the southeast corner.

The wooded areas of the site are made up of three different tree communities, although significant overlap of species does exist. The vegetative communities are best defined as successional hardwoods, but the dominant species in these three different parts of the site vary.

On the eastern part of the site (Area 1 on Figure 6-7, Photos 1 and 2), the dominant tree species are sugar maple (*Acer saccharum*) and black locust (*Robinia pseudoacacia*). Black birch (*Betula lenta*) and white ash (*Fraxinus americana*) are occasional species. Other individual trees include red maple (*Acer rubrum*), slippery elm (*Ulmus rubra*), black cherry (*Prunus serotina*) and shagbark hickory (*Carya ovata*). Due to heavy deer browse, there is almost no understory or groundcover in this area. Garlic mustard (*Alliaria petiolata*), pachysandra (*Pachysandra terminalis*) and japanese barberry (*Berberis thunbergii*) were the common groundcovers and shrubs observed during site walks in April of 2015. Each of these species are introduced non-natives that are not preferred by deer. Also observed were Christmas fern (*Polystichum acrostichoides*) and Pennsylvania sedge (*Carex pennsylvanica*).

The majority of the trees in this area range from six to fourteen inches in diameter, and the woodland is moderately dense with these young trees. The leaf litter is deep. Rock walls are present throughout the property and are expected to support a number of small reptile, amphibian and mammal species. There are enough standing dead trees with cavities to support cavity nesting birds and mammal species such as striped skunks (*Mephitis mephitis*), chipmunks (*Tamias striatus*) and eastern gray squirrels (*Sciurus carolinensis*).

Area 2 is at a higher elevation and is made up of stonier upland soils and ledge outcroppings (Photos 3 and 4). In this area the dominant species of trees change to red maple, beech (*Fagus grandifolia*) and red oak (*Quercus rubra*). Occasional hemlock (*Tsuga canadensis*) and white oak (*Quercus alba*) were also observed. Understory and groundcover were very sparse. Hemlock is dominant in the northeast portion of the site. Area 2 is also represented on the higher areas above the Hunter Brook corridor along the western edge of the site.

Area 3 represents a drop in elevation to a topographic draw, with the site ultimately draining to the north, toward the Bear Mountain extension and the Hunter Brook (Photos 5 and 6). Dominant species in this section of the site include sugar maple, pignut hickory (*Carya glabra*) and occasional young hemlocks and black birch. Thin areas of maple saplings make up the understory, with very few shrubs present. Spotted wintergreen (*Chimaphila maculata*) was observed as an occasional groundcover, but only in small patches.

The Hunter Brook corridor (Area 4) is located off the site to the north and west (Photos 7 and 8). The brook in this area is entirely a stream channel, with no fringing wetlands along the riparian corridor. No wetlands or floodplain area associated with the brook extend onto the subject properties. A portion of the northwest corner does drain directly to the brook, which is contained entirely within the State right of way for the Bear Mountain extension. In order to adequately provide protection of the Hunter Brook corridor, future development proposals which include the disturbance of the areas closest to the brook must include consideration of water quality and temperature in preparation of site specific Stormwater Management Plans as part of the mitigation for the site changes.

As noted above, the vegetative communities on the parcels subject to rezoning are connected to adjoining areas which contain similar habitat off of the property to the north, via the narrow Hunter Brook corridor. Previous development has essentially isolated this part of the woodland from adjoining open spaces, and it presents limited opportunities for food and cover for all but some urban-tolerant wildlife species. Unsurprisingly, given the developed nature of the site and surrounding area, no sensitive wildlife habitat was observed to occur on the site. Figure 6-8 illustrates there are no NYS DEC wetlands on the site.

Potential Impacts & Mitigation

The rezoning of this area of Yorktown would allow for an increase in development density, with several possible uses ranging from retail commercial use along Old Crompond Road and multi-family residential on the northern parts of the property. The commercial uses in the C-2R zone would represent the most significant changes to the site, including an increase in impervious surfaces and more intense human presence. However, the majority of the proposed C-2R zone is located in the area of the existing residences, where the lowest tree density and existing site disturbance has historically occurred.

The remainder of the site is proposed for R-3, which allows medium density multi-family development. This use would require a significant amount of tree clearing and removal if fully built out, but as described above the forest here is of low value considering the relatively young age of the tree community and the sparse cover available for wildlife. A comprehensive landscape plan, using native trees and shrubs and strategies for the deterrence of deer browsing could offset the vegetative impacts. Because the site does not appear to be heavily used by sensitive wildlife, changes in this regard are expected to be negligible. Many of the wildlife species that are likely to use the site currently or that were observed will be adaptable to most new conditions if areas of open space and thoughtful landscape design are utilized.

The proposed Concept Plan would result in retention of approximately 4.1 acres of woodland and 10.6 acres of lawn and landscaped areas. Combined these areas would cover 62 percent of the project site in Open Space. Impervious coverage would increase to approximately 8.9 acres or 38 percent of the site.

Pollutant Loading & Thermal Loading to Hunter Brook

The Hunter Brook is designated as Class C(TS). According to NYS DEC “The best usage of Class C waters is fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.” The (TS) means that it has the potential to support a trout fishery and possibly trout spawning.

Any project that requires an Article 15 permit for activity near a Class C(TS) stream, must provide assurances that the discharge will not impact the water temperature or dissolved oxygen content of the Hunter Brook.

The envisioned stormwater management infrastructure will provide for the detention and attenuation of stormwater such that pollutants and thermal loading will be minimized or avoided prior to any discharge to the Hunter Brook.

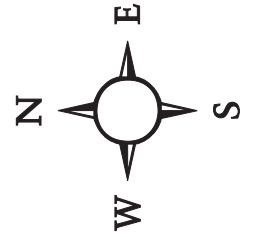


Figure 6-1: Rezoning Area on 1947 Aerial Photo
Old Crompond Road, Town of Yorktown
Westchester County, New York
Source: Westchester County GIS

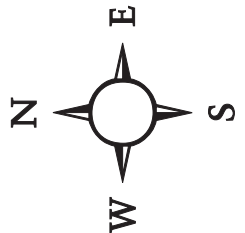
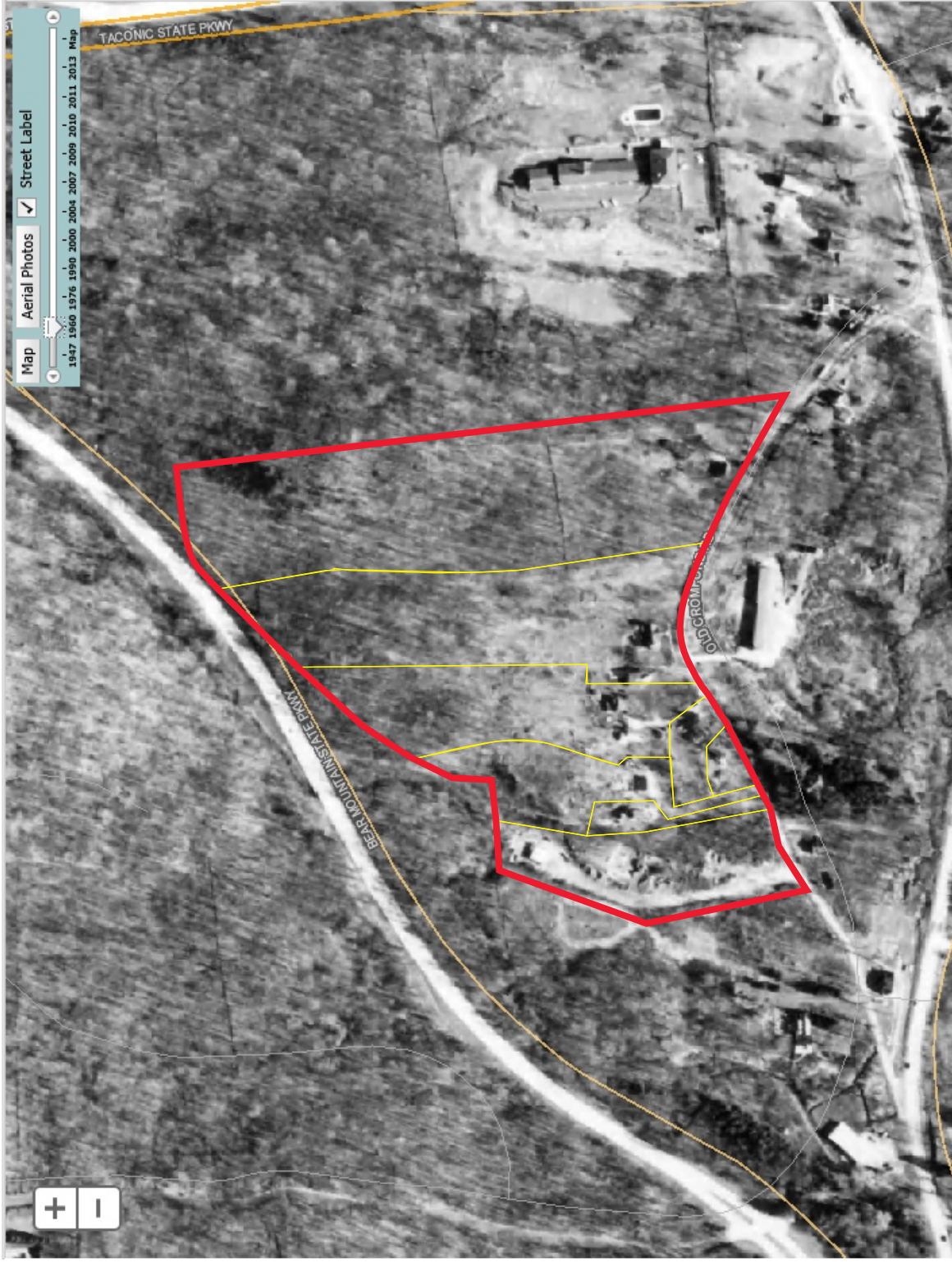


Figure 6-2: Rezoning Area on 1960 Aerial Photo
Old Crompond Road, Town of Yorktown
Westchester County, New York
Source: Westchester County GIS

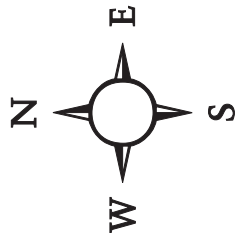


Figure 6-3: Rezoning Area on 1976 Aerial Photo
Old Crompond Road, Town of Yorktown
Westchester County, New York
Source: Westchester County GIS



Figure 6-4: Rezoning Area on 2000 Aerial Photo
Old Crompond Road, Town of Yorktown
Westchester County, New York
Source: Westchester County GIS

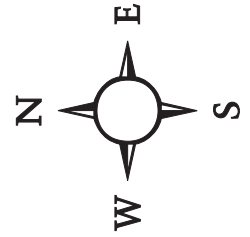


Figure 6-5: Rezoning Area on 2009 Aerial Photo
Old Crompond Road, Town of Yorktown
Westchester County, New York
Source: Westchester County GIS

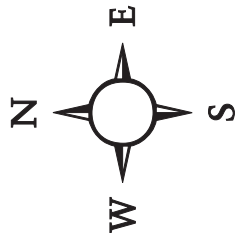


Figure 6-6: Rezoning Area on 2013 Aerial Photo
Old Crompond Road, Town of Yorktown
Westchester County, New York
Source: Westchester County GIS



- Area 1: Successional Forest, sugar maple/black locust dominant
- Area 2: Successional Forest, red maple/beech/hemlock dominant
- Area 3: Successional Forest, sugar maple/pignut hickory/young hemlock dominant
- Area 4: Hunter Brook riparian corridor (off site)
- ML: Existing managed landscape

Figure 6-7: Vegetative Communities on 2013 Aerial Photo
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 Base Photo: Westchester County GIS



Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

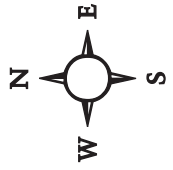


Figure 6-8: NWI Wetlands Map
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 Scale: Graphic Scale as shown



Photo 1 - Area 1



Photo 2 - Area 1



Photo 3 - Area 2



Photo 4 - Area 2



Photo 5 - Area 3



Photo 6 - Area 3



Photo 7 - Area 4



Photo 8 - Area 4



Photo 9 - Managed Landscape



Photo 10 - Managed Landscape

7.0 TRAFFIC ANALYSIS

The Bear Mountain Triangle rezoning area (BMT) is located north of Old Crompond Road and bounded by the Taconic State Parkway to the east, the Bear Mountain Parkway to the west and US Route 202/35 to the south, in the Town of Yorktown, New York.

As requested by the Town of Yorktown in association with the potential rezoning of the properties located in BMT including the land herein referred to as Crompond Terraces, an overall assessment of traffic conditions in the area as a result of this potential rezoning has been completed. This evaluation also considers the effect of the potential traffic generation from other parcels located along Old Crompond Road based on information compiled which identified potential levels of development under both existing and proposed zoning scenarios including for the Bauso property and the Antenaros property. In addition, traffic from other developments in the area, which are either proposed and/or potential developments which are likely to take place regardless of the rezoning, were also considered to provide an overall summary of expected future traffic volumes and operating conditions.

Mandalay Builders will be proposing a mixed use development, known as Crompond Terraces, consisting of up to 80 market rate townhouse condominiums plus up to 16 rental apartments, up to 32,000 square feet of small scale retail and up to 45,000 square feet of retail space north of Old Crompond Road. A complete *Traffic Impact Study* which assesses existing and future traffic operating conditions is included in Appendix C.

The area of the proposed rezoning will be accessed from NYS Route 35/U.S. Route 202 as well as from Stony Street and Old Crompond Road. There will be five driveways from Old Crompond Road to provide access to the internal road circulation system for the future Crompond Terraces development. The internal roads will be private roads maintained by a management company. Frontage along Old Crompond Road will be pedestrian oriented with a system of sidewalks, crosswalks and bicycle accommodations. As shown in Figure 1-4, parking will be located behind the retail and commercial buildings, between the commercial and residential project components. The project's mixed use would put residents near, retail uses, office space, medical services, government services, and other uses in within the Crompond hamlet.

A *Traffic Impact Study* for the proposed Bear Mountain Triangle Rezoning and Crompond Terraces project was conducted by Maser Consulting P.A., which assessed the effects associated with the potential rezoning in combination with other identified development projects, including Costco, along the NYS Route 35/U.S. 202 corridor in the Town of Yorktown. This study, most recently updated dated April 7, 2015 is included as Appendix C.

The following intersections were studied, as shown in Figure 7-1;

1. NYS Route 35/U.S. Route 202 and Bear Mountain Parkway Extension
2. Bear Mountain Extension and Stony Street
3. Stony Street and Old Crompond Road
4. NYS Route 35/U.S. Route 202 and Stony Street/BJ's-Staples Plaza Driveway
5. NYS Route 35/U.S. Route 202 and Old Crompond Road
6. NYS Route 35/U.S. Route 202 and Mohansic Avenue
7. NYS Route 35/U.S. Route 202 and Taconic State Parkway SB On/Off Ramp
8. NYS Route 35/U.S. Route 202 and Taconic State Parkway NB On/Off Ramp

Development from the proposed rezoning is expected to generate 80 new a.m. peak hour trips, 200 new p.m. peak hour trips and 171 new Saturday peak hour trips. New trips include 5% internal trip credit to account for trips between uses internal to the site as well as a 25% pass-by credit applied to the retail use to account for trips that are already occurring in the existing traffic along US Route 202/35.

Results of Analysis

Capacity analyses which take into consideration appropriate truck percentages, pedestrian activity, roadway grades and other factors were performed at the study area intersections to determine traffic operating Levels of Service and average vehicle delays. A summary of existing and future traffic operating Levels of Service as well as any recommended improvements is listed below. Additional detail is contained in the full Traffic Impact Analysis contained in Appendix C, including the data results of the capacity analysis for the Existing, No-Build and Build Conditions.

1. NYS Route 35/U.S. Route 202 and Bear Mountain Parkway Extension

The Bear Mountain Parkway Extension (BMP) intersects NYS Route 35/U.S. Route 202 at an unsignalized, “T” shaped intersection.

This intersection is currently operating at a Level of Service “F” on the southbound approach during each of the peak hours, while a Level of Service “B” or better is experienced for the eastbound left turn movement. This intersection was reanalyzed using the No-Build and Build Traffic Volumes and existing geometry. The results indicate that similar Levels of Service and operating conditions will be experienced during peak hours under future conditions.

The NYSDOT improvements in this area upgraded this intersection to improve operating conditions. The NYSDOT improvement of the BMP connection to NYS Route 35/U.S. Route 202 eliminated the extensive queues which occurred during peak hours especially during the Weekday PM Peak Hour. This increase in capacity should make the direct movement from the TSP northbound to the BMP to NYS Route 35/U.S. Route 202 westbound more efficient and a more desirable path which has diverted some of the traffic which previously used the TSP northbound off ramp at NYS Route 35/U.S. Route 202.

2. Bear Mountain Parkway Extension and Stony Street

The Bear Mountain Parkway Extension (BMP) and Stony Street intersect at a signalized full movement intersection. As part of improvements recently constructed by New York State Department of Transportation the geometry of the intersection has been modified such that the northbound and southbound approaches now consist of one lane in each direction with separate left turn lanes. The eastbound approach consists of a shared left turn/through lane and a separate right turn lane while the westbound approach remains a single lane approach. The intersection operates at an overall Level of Service “C” or better during the AM, PM and Saturday Peak Hours under No-Build and Build conditions.

3. Stony Street and Old Crompond Road

This intersection is currently a “T” intersection with all approaches consisting of one lane. It is controlled by “Stop” signs on the eastbound Stony Street approach and the westbound Old Crompond Road approach.

The intersection currently operates at a Level of Service “A” during peak periods. The analysis indicates that under future No-Build and Build conditions, the intersection can be expected to operate at Levels of Service “C” or better.

In order to accommodate future development along on Old Crompond Road, it is anticipated that the sidewalk system would have to be extended from the CVs site and several portions of the existing roadway would have to be widened to provide increased pavement width and to address existing geometric constraints. Other improvements would include provision of turning lanes at individual access driveways along Old Crompond Road.

4. NYS Route 35/U.S. Route 202 and Stony Street/BJ’S - Staples Plaza

Stony Street intersects with NYS Route 35/U.S. Route 202 opposite the driveway to BJ’s/Staples Plaza to form a full movement, signalized intersection.

As part of the New York State Department of Transportation Improvements, this intersection was upgraded with geometric improvements to eliminate the capacity constraint at the Pine Grove Court intersection, which currently impacts this intersection. An additional right turn lane was added to the eastbound approach. Also the westbound approach now has one through lane and a shared through/right turn lane.

Capacity analysis conducted utilizing the Existing and No-Build and Volumes indicates an overall Level of Service "B" will continue to be experienced during the AM Peak Hour, while an overall Level of Service "D" will be experienced during the PM and an overall Level of Service "E" will be experienced during the Saturday Peak Hour without any improvements.

Associated with the Staples Plaza/BJ's application, they will be improving the operation by restriping and modifying the traffic signal phasing. However, as other development continues to occur it appears that a widening of the Stony Street approach will also be needed to provide three lanes southbound. In addition, the preliminary site plans for the CVS indicate the inclusion of sidewalks along Stony Street and extending along their frontage on Old Crompond Road, however, Old Crompond Road should also be widened to provide an additional lane.

5. NYS Route 35/U.S. Route 202 and Old Crompond Road

Old Crompond Road and NYS Route 35/U.S. Route 202 intersect at an unsignalized "T" shaped intersection. The eastbound approach consists of two through lanes while the westbound approach is a single lane approach. The southbound Old Crompond Road approach consists of a single lane and is controlled by a "Stop" sign.

Capacity analysis indicates that the left turn exiting Old Crompond Road at this intersection currently operates at a Level of Service "E" during the AM Peak Hour, while a Level of Service "F" is experienced during the PM and Saturday Peak Hours. It is expected that the left turn exiting Old Crompond Road at this intersection will experience a Level of Service "F" during each of the Peak Hours under future conditions both with and without the proposed project. It should be noted that these Levels of Service are only experienced for the southbound left turn movement, which also has the ability to be more easily completed via the signalized intersection of Stony Street and NYS Route 35/US Route 202.

As part of the improvements associated with the proposed Costco project an additional westbound through lane will be provided at this intersection. This lane will match with the westbound through lane extension from the BJ's/Stony Street intersection which was constructed as part of the NYSDOT improvement project. With these improvements the left turn exiting Old Crompond Road at this intersection is expected to operate at a Level of Service "D" during the AM Peak Hour while it is expected to experience a Level of Service "F" during the PM and Saturday Peak Hours. The entering and exiting radius to/from NYS Route 35/US Route 202 should be improved. The potential signalization of the westerly leg of Old Crompond Road and Route 202/35 to accommodate left turns exiting from Old Crompond Road was also considered. This improvement would allow traffic from the Old Crompond Road corridor, which is destined to the east on Route 202/35 to be handled as a left turn exiting movement directly onto Route 202/35 so they would not have to traverse through the Stony Street and Old Crompond Road intersection onto Route 202/35. This improvement would require approval from NYSDOT, but would function as a simple two-phase traffic signal operation and would be co-ordinated with the other traffic signals along Route 202/35. No left turns would be allowed from Route 202/35 onto Old Crompond Road because of the lack of a separate left turn lane. The eastbound left turn movements from Route 202/35 destined to the Old Crompond Road corridor would continue to be accommodated at the Stony Street intersection. In addition to this new signal, the geometry at Route 202/35 and Old Crompond Road would also have to be upgraded to provide an improved radius for the entering and exiting right turn movements as well as a potential separate right turn lane on Route 202 onto Old Crompond Road.

6. NYS Route 35/U.S. Route 202 and Mohansic Avenue

Mohansic Avenue intersects with NYS Route 35/U.S. Route 202 at a signalized, “T” shaped intersection. The NYS Route 35/U.S. Route 202 eastbound approach consists of one through lane and a separate right turn lane. This right turn lane also accommodates vehicles travelling through the intersection and continuing as a right turn lane onto the Taconic State Parkway Southbound entry ramp. The NYS Route 35/U.S. Route 202 westbound approach consists of two lanes in the form of a separate left turn lane and a separate through lane. The Mohansic Avenue northbound approach consists of a single lane for left and right turn movements.

Capacity analysis conducted utilizing the Existing Traffic Volumes indicates that the intersection should be operating at an overall Level of Service “A” during the Weekday Peak AM Hour, however traffic is typically impeded during this time period due to the queuing at the adjacent southbound Taconic State Parkway ramp intersection. An overall Level of Service “D” is currently experienced during the Weekday Peak PM and an overall Level of Service “C” is currently experienced during the Saturday Peak Hour, but the operation is occasionally impacted by queuing from the adjacent southbound Taconic State Parkway Ramp intersection.

The intersection was reanalyzed utilizing the No-Build Traffic Volumes. The results of these capacity analyses indicate delays will increase and the impact of queuing from the southbound Taconic State Parkway ramp intersection will worsen until the improvements proposed by the Applicant for Costco are completed.

The Applicant for Costco has proposed that a separate eastbound left turn lane for traffic entering the site will be constructed and the driveway approach (southbound approach) will be constructed to consist of two lanes in the form of a

separate left turn lane and a shared left/through/right turn lane. In addition, the Mohansic Avenue northbound approach will be widened to two lanes in the form of a shared through/left turn lane and a separate right turn lane. The westbound approach

would also be widened to provide an additional through/right turn lane and the eastbound approach would be widened to be co-ordinated with improvements at the Taconic State Parkway Interchange as described below. Corresponding signal improvements will be made to accommodate the new intersection geometrics and interconnected with the adjacent Taconic State Parkway Ramp intersections. New pedestrian signals and crosswalks will be provided on all approaches as required by NYSDOT.

Capacity analysis conducted utilizing the No-Build and Build Traffic Volumes, assuming completion of the Costco funded improvements, indicates an overall Level of Service "A" will be experienced during the Weekday Peak AM Hour, an overall Level of Service "B" will be experienced during the Weekday Peak PM Hour and an overall Level of Service "D" will be maintained during the Saturday Peak Hour under the Build Conditions with or without the rezoning.

7. NYS Route 35/U.S. Route 202 and Taconic State Parkway Southbound Ramps

The Taconic State Parkway southbound off ramp intersects with NYS Route 35/U.S. Route 202 at a signalized intersection. The NYS Route 35/U.S. Route 202 eastbound approach consists of two lanes in the form of a separate through lane and a separate channelized right turn lane and the NYS Route 35/U.S. Route 202 westbound approach consists of two lanes in the form of a separate left turn lane and a separate through lane. The Taconic State Parkway southbound ramp consists of two lanes in the form of a separate left turn lane and a separate right turn lane.

Capacity analysis conducted utilizing the Existing Traffic Volumes indicates that an overall Level of Service "C" is currently experienced during the Weekday Peak AM and Saturday Peak Hours while overall Level of Service "E" is experienced during the Weekday Peak PM Hour. It should be noted however that under existing conditions during peak hours, this intersection is affected by vehicle queues in the eastbound direction at the Northbound Ramp intersection.

The intersection was reanalyzed utilizing the No-Build Traffic Volumes. The results of these capacity analyses indicate that the construction, of the added westbound lane by the applicant for Costco as described above, which will also continue through this intersection and through the Mohansic Avenue intersection, will improve this condition. In addition, the Costco proposed improvements will provide a new eastbound left turn storage lane for left turn movements at the northbound ramp. This lane will begin prior to the southbound ramp intersection resulting in a total storage area in excess of 360 ft. which is a significant increase over the existing approximately 100 ft. eastbound left turn storage lane. This new lane will allow for vehicles destined to the Taconic State Parkway northbound to queue without impeding the eastbound traffic continuing past the interchange area. This will also result in the length of the westbound left turn lane increasing from approximately 100 ft. to 330 ft. A pedestrian crosswalk will also be provided on the north side of NYS Route 35/U.S. Route 202 across the exit ramp approach.

Capacity Analyses conducted utilizing the No-Build and Build Traffic Volumes with/or without the proposed rezoning with the addition of the above improvements as proposed by Costco indicate that the intersection will operate at an overall Level of Service "B" or better during each of the peak hours.

8. NYS Route 35/U.S. Route 202 and Taconic Parkway Northbound Ramps

The Taconic Parkway northbound ramps intersect with NYS Route 35/U.S. Route 202 at a signalized intersection. The NYS Route 35/U.S. Route 202 eastbound approach consists of two lanes in the form of a separate left turn lane and separate through lane and the NYS Route 35/U.S. Route 202 westbound approach consists of one lane in the form of a shared through/right turn lane. The Taconic State Parkway northbound ramp consists of two lanes in the form of a separate left turn lane and a separate right turn lane.

Capacity analysis conducted utilizing the Existing Traffic Volumes indicates that an overall Level of Service "D" is currently experienced during the Weekday Peak AM Hour, an overall Level of Service "F" is currently experienced during the Weekday Peak PM and Saturday Peak Hours. During the PM Peak Hour, westbound traffic on NYS Route 35/U.S. Route 202 sometimes extends past the NYS Route 132 intersection.

The Applicant for Costco identified certain improvements which would be funded and constructed in association with that proposed store. These include the reconstruction of the area between Strang Boulevard and Old Crompond Road to provide an additional westbound through lane. A new eastbound left turn storage lane will be constructed to provide additional storage area for vehicles entering the Taconic State Parkway northbound, increasing the existing storage lane length from approximately 100' to 360', which will reduce delays to through vehicles in the eastbound direction. Note that these improvements will also result in the lengthening of the westbound left turn lane at the southbound ramp as described above. Also, a pedestrian crosswalk will be provided on the north side of NYS Route 35/U.S. Route 202 crossing the entry ramp approach. The existing traffic signal will have to be upgraded to reflect the improved geometry. These improvements will also allow a reallocation of the signal green time to help alleviate existing queuing problems at this intersection. With these improvements and

included signal co-ordination, improved Levels of Service will be experienced along this section of NYS Route 35/U.S. Route 202 during the peak hours under No-Build and Build Conditions.

With respect to implementation of the recommended roadway and pedestrian improvements summarized in this report for the area as shown on Figure 7-3 entitled "Conceptual Traffic and Pedestrian Improvement Plan" including those along Old Crompond Road and Stony Street, the Town could require individual projects to undertake or contribute financially towards these improvements to ensure that they are implemented as needed and are not the sole responsibility of one particular project.

Mass Transit

Bus Service in the area is provided by the Westchester County Bee-Line Bus System operated by the Westchester County Department of Transportation. The locations of existing bus stops within the study area are shown on Figure 7-2. Local service is provided along NYS Route 35/U.S. Route 202 via the Route 15 Bus with the nearest bus stop to the project located at the intersection of NYS Route 35/U.S. Route 202 and Stony Street. The bus stops at this location are positioned on both sides of NYS Route 35/U.S. Route 202 and service is included for both directions of travel.

The Route 15 Bus provides service from Downtown Peekskill continuing along Route 6 to Lexington Avenue and then continuing south to NYS Route 35/U.S. Route 202. The bus service continues to the east through the Town of Yorktown and continues south along Route 118 to Route 100 in Somers. It then connects with Route 9A further south. It terminates at the White Plains station (Metro-North Harlem Line). The Route 15 Bus Service is provided regularly during the AM and PM Hours and limited service is provided on Saturday. The Route 15 Bus Schedule and Map are included in Appendix F of this report.

Two other Westchester County Bee-Line busses provide service in the study area. These include the Route 10 Bus and the Route 77 Express Bus, however these busses do not serve the immediate area of the site. The Route 10 Bus provides commuter service between the Cortlandt Town Center and the Croton Harmon Train Station. Within the study area it has scheduled stops at the intersection of NYS Route 132 and NYS Route 35/U.S. Route 202 as well as along Commerce Street near the intersection with Downing Drive in Yorktown Heights. The Route 77 Express Bus is also a commuter bus, which runs between Carmel in Putnam County and White Plains. In the Town of Yorktown the bus stops at several locations including FDR State Park and at the intersection of NYS Route 132 and U.S. Route 6 in Shrub Oak.

Pedestrian Amenities

Figure 1-4 illustrates how internal pathways, sidewalks along Old Crompond Road and crosswalks provide internal pedestrian circulation. Figure 7-2 illustrates the external sidewalk system, and demonstrates the connections to the existing businesses and recreational facilities in the area. Bicycle parking locations shall be included in the future design of the Crompond Terraces project.

Shared Parking

As part of the rezoning, the Town may wish to consider allowing Planning Board discretion which permits up to 20 percent shared parking among uses. The reduction in parking reduces stormwater runoff by reducing impermeable surfaces, encourages alternative transportation, and reduces costs.

Summary

Based on the analysis contained herein, in addition to the traffic and roadway improvements that are already planned to be completed by the proposed Costco development, certain other improvements will be required to accommodate other planned or potential developments in the area even without the implementation of the proposed rezoning referenced herein. Based upon the information as presented in the *Traffic Impact Analysis*, no significant impact to Transportation operations is anticipated as a result of the BMT rezoning.

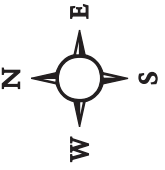
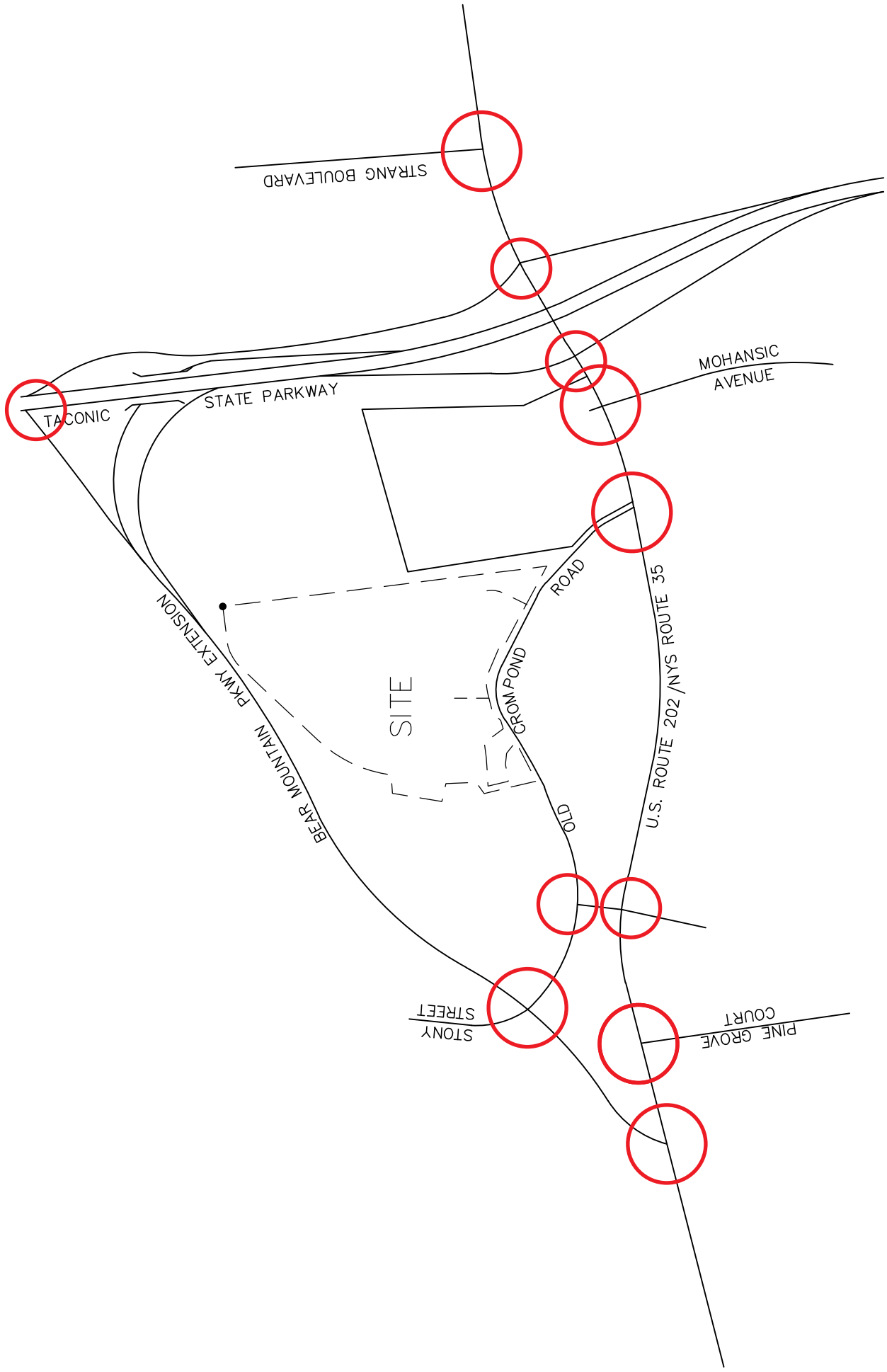


Figure 7-1: Traffic Network
 Old Crompond Road, Town of Yorktown
 Westchester County, New York
 Scale: Not to Scale



Legend

- Site Boundary
- Sidewalk
- Crosswalk
- Trail
- Bus Stop

0 0.125 0.25 0.5 Miles

Figure 7-2: Pedestrian Access

Bear Mountain Triangle Rezoning
Town of Yorktown, NY

Base Map: Westchester County 2013 Orthological Photo

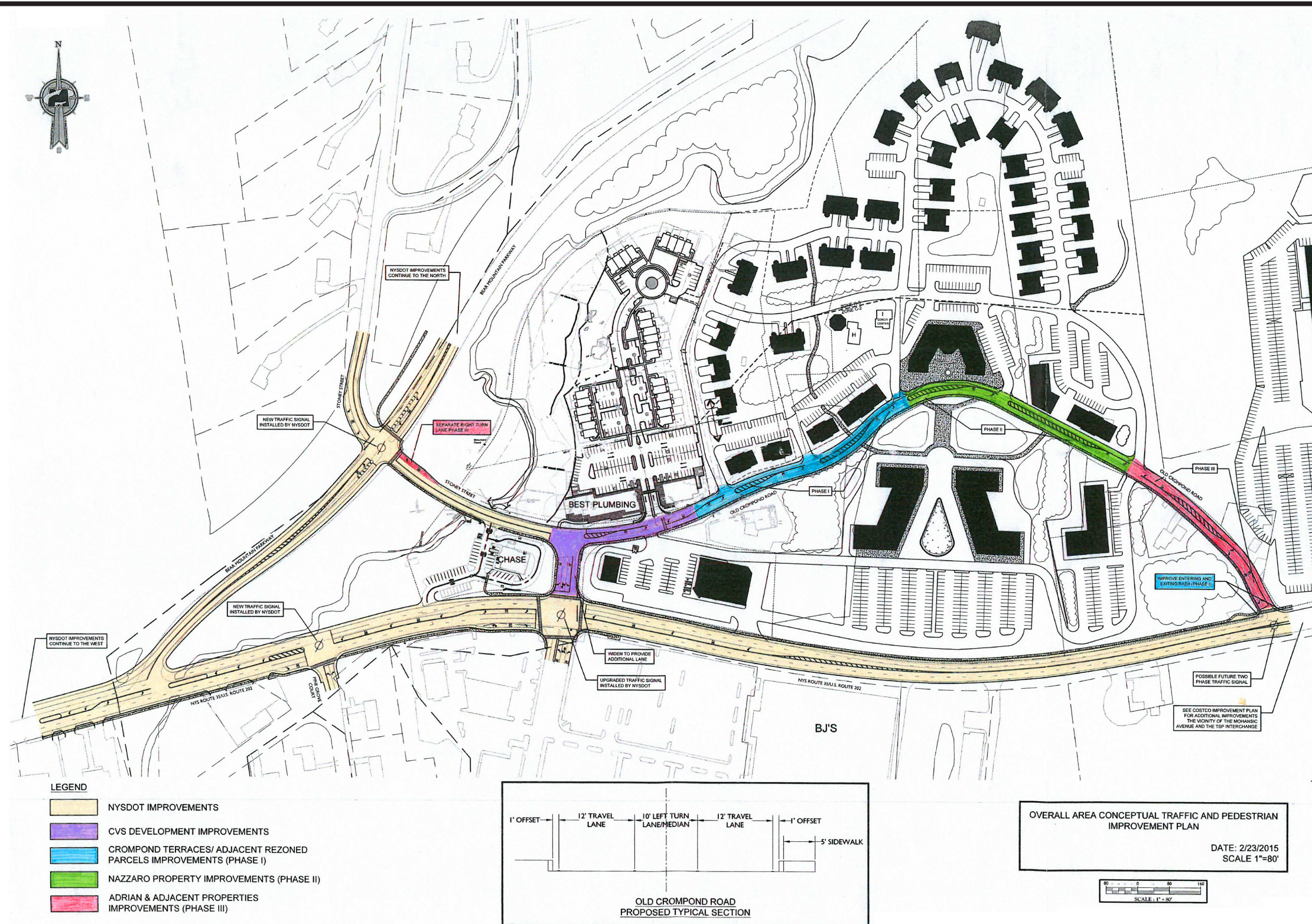


Figure 7-3: Conceptual Traffic and Pedestrian Improvement Plan

Bear Mountain Triangle Rezoning
Town of Yorktown, NY

Source: Traffic Impact Study, Maser Consulting, April 7, 2015

8.0 CONSTRUCTION-RELATED EFFECTS

This section discusses the short term impacts related to construction. Construction is expected to last approximately 18 to 36 months. It is anticipated that the project sponsor would initially build some or all of the residential development first and then focus on the office/retail space. However, construction will be driven by market conditions and it is possible that there may be overlap between construction of the commercial and residential portions of the project. Mitigation measures are described below to mitigate short term construction impacts to the extent practicable.

The following construction sequence describes in general terms the process of project construction;

1. Protect areas beyond the limit of disturbance by installing temporary silt fencing.
2. Construct stabilized construction entrances, including stone tracking pads.
3. Perform clearing and grubbing activities.
4. Install erosion control measures appropriate to each phase of work, including silt fencing, inlet protection, temporary berms, swales, and temporary sediment traps.
5. Perform grading, excavation and related operations, stockpile soil in approved areas.
6. Construct drainage system improvements, roadway improvements and street utilities.
7. Construct residential buildings and driveways.
8. Construct retail buildings and driveways.
9. During construction, all areas being disturbed will either be paved, seeded, sodded, or planted as specified in a timely manner to prevent unnecessary erosion.
10. Remove all temporary control measures.
11. Remove accumulated sediments from permanent storm water management facilities.

Steps 1 through 6 involve construction of the roads and stormwater management facilities and would be completed prior to construction of the individual buildings. Construction of the buildings would then follow a similar sequence of construction: install erosion controls, strip and store topsoil, grading, construction of utilities and buildings, and permanent stabilization. The project will be constructed in phases to limit disturbance on the site. Phase one will consist of building the infrastructure for the roads and drainage facilities - these areas will be stabilized as per the identified erosion control measures in advance of constructing the buildings. Phase two will consist primarily of construction of the multi-family units plus the multi-use recreational building and will also include some of the office/retail buildings to accommodate the affordable housing units. Phase three will consist of construction of the remaining office/retail buildings.

A list of the New York State Department of Environmental Conservation Best Management Practices ("BMPs") to be employed in project construction are included in Section 4.0. A site specific Erosion Control Plan shall be included as part of the Site Plan Application, and will depict the various measures proposed to provide temporary and permanent stabilization of disturbed areas. The project will generally follow the existing topographic contours in order to reduce the amount of earth work as much as possible.

Mitigation measures are described below that would minimize or avoid potential short term construction impacts to the extent practicable.

8.1 Noise

Noise can be defined as undesirable or "unwanted sound." Even though noise is somewhat subjective, it affects the full range of human activities and must be considered in local and regional planning. Most of the sounds heard in the environment are not composed of a single frequency, but are a band of frequencies, each with a different intensity or level. Levels of noise are measured in units called decibels. Since the human ear cannot perceive all pitches or frequencies equally well, these measures are adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dB(A).

It should be noted that a one decibel change in noise is the smallest change detectable by the human ear under suitable laboratory conditions. However, under normal conditions, a change in noise levels of two or three decibels is required for the average person to notice a difference. Table 8-1 shows community perception of noise change and response to increased levels. The level of a noise is measured and expressed in decibels (dB). Commonly, a standardized A-weighting is applied to sound levels to correct for certain characteristics of human hearing. The A-weighted sound level (dBA) is useful for gauging and comparing the subjective loudness of sounds.

Table 8-1 Perception of Changes in Noise Levels	
Change (dBA)	Average Ability to Perceive Changes in Noise Levels Human Perception of Change
2-3	Barely perceptible
5	Readily Noticeable
10	A doubling or halving of the loudness of sound
20	A dramatic change
40	Difference between a faintly audible sound and a very loud sound

Source: Bolt Baranek and Neuman, Inc. Fundamentals and Abatement of Highway Traffic Noise, Report No. PB-222-703. Prepared for Federal Highway Administration, June 1973.

To the average person, a noise level increase of 2 to 3 dBA is barely perceptible, an increase of 5 dBA is noticeable, and an increase of 20 dBA is perceived as a dramatic change. Annoyance frequently results from increases of 10 dBA or more, depending on the frequency and duration of the noise events.

The level of impacts of these noise sources depends on the type and number of pieces of construction equipment being operated, as well as the distance from the construction site. The noisiest period of construction will occur during site clearing and rough grading activities.

Avoidance or Minimization of Noise During Construction

It is anticipated that nearby properties would experience temporary elevated noise levels at occasional periods during the construction period. This is a temporary, construction-related, unavoidable impact.

Local daytime ambient noise levels will increase both on and off of the project site during construction. Construction activities are an expected and necessary consequence of any new development and cannot be avoided. Noise resulting from construction activities, however, is temporary, typically of short duration, and will cease entirely upon completion of the project.

Noise levels due to construction activities will vary widely, depending on the phase of construction activities. Noise levels at the site property line are projected to temporarily range between 65 dBA and 80 dBA during construction, depending on the type and location of construction activity at a given time, which may represent an increase of 10 to 15 dBA. The following Table 8-2, shows representative maximum sound levels for diesel powered equipment and activities at a range of receptor distances.

Table 8-2 Typical Construction Noise Levels (dBA)				
Equipment/Activity	Maximum Sound Level			
	50 feet	200 feet	500 feet	1000 feet
Backhoe	82-84	70-72	62-64	56-58
Blasting	93-94	81-82	73-74	67-68
Concrete Pump	74-84	62-72	54-64	48-58
Generator	71-87	59-75	51-67	45-61
Hauler	83-86	71-74	63-66	57-60
Loader	86-90	74-78	66-70	60-64
Rock Drill	83-99	71-87	63-79	57-73
Trucks	81-87	69-75	61-67	55-61

Source: Tim Miller Associates, Inc.

Construction activities will be conducted generally on Monday through Friday from 7:00 a.m. to 6:00 p.m., and on Saturday from 8:00 a.m. to 6:00 p.m., thus remaining within the reasonable hours for noise disturbance from construction activities as stipulated in Town Code Section 216-2.

8.2 Construction Traffic

Avoidance or Minimization of Potential Impacts

It is expected that construction-related traffic would access the site during the construction period which is anticipated to be approximately 18 to 36 months in duration. The heaviest volume of construction traffic would occur at the beginning of the construction as site clearing and rough grading is conducted, and when asphalt and building materials are transported to the site. Once construction machinery reaches the site, it is likely to remain on site until the completion of grading and excavation. Construction material storage, equipment staging and soil stockpiling will occur on graded stabilized areas of the site.

Construction traffic would primarily access the site via a stabilized construction entrance at one or more of the existing driveway locations on Old Crompond Road.

Although individual contractors have not yet been selected, it is anticipated that construction-related traffic would originate primarily within Westchester County and neighboring communities. Some workers could also be expected to travel from the lower Hudson River Valley region, including Putnam and Rockland counties.

Construction workers residing locally would be expected to use local roads to access Old Crompond Road and the site. Workers in the larger region, construction vehicles, and material deliveries would be expected to travel NYS Route 100, US Route 9, NYS Route 202/35 and the Bear Mountain Extension, to access the site via Old Crompond Road. Construction workers utilizing passenger vehicles would also likely use the Taconic State Parkway to NYS Route 202/35 to access Old Crompond Road.

An increase in construction-related vehicular traffic will occur and is a short-term, unavoidable impact. However, development of the Bear Mountain Triangle is not anticipated to have a significant impact on the local road network. The applicant will be required to adhere to NY State and local restriction on vehicle weights, traveling speeds, and parking within the Town which would limit potential impacts to local roads from the operation and delivery of construction vehicles. If necessary, a flag man will be provided to insure smooth

traffic flow on Old Crompond Road during the arrival and departure of heavy vehicle equipment. Excess material will be transported off site during non-peak hours when additional traffic capacity is available.

8.3 Demolition of Existing Structures

As part of the necessary permitting for demolition, buildings are inspected and building materials are sampled for asbestos. The samples are laboratory tested to determine if asbestos is present in the building materials. If asbestos is found, all building materials which contain asbestos are required to be removed, before the building with asbestos is demolished. The process of removing asbestos-containing materials (Asbestos Abatement) is conducted in accordance with OSHA guidelines that require that the contaminated material be disposed in an approved manner to specified locations separate from all other construction debris. This will leave the building or buildings free of asbestos-containing materials so that when demolition occurs, no hazardous material will be dispersed into the air or deposited into the soil. It is estimated that an average of two truckloads per structure may be required to handle the disposal of demolition materials. Demolition is expected to take approximately one month. Flag men will be provided as necessary to ensure a smooth flow of traffic while construction activities are taking place.

8.4 Construction Mitigation Measures

The site contractor will employ Best Management Practices as outlined in the Ten States Standards including but not limited to:

1. Protect areas beyond the limit of disturbance by installing temporary silt fencing.
2. Construct stabilized construction entrances, including stone tracking pads.
3. Install erosion control measures appropriate to each phase of work, including silt fencing, inlet protection, temporary berms, swales, and temporary sediment traps.
4. stockpile soil in approved areas.
5. Construct drainage system improvements, roadway improvements and street utilities.

Construction-Related Effects

September 25, 2015

6. During construction, all areas being disturbed will either be paved, seeded, sodded, or planted as specified in a timely manner to prevent unnecessary erosion.
7. Periodically remove accumulated sediments from storm water management facilities as necessary.
8. Construction activities will be conducted Monday through Friday from 7:00 a.m. to 6:00 p.m., and on Saturday from 8:00 a.m. to 6:00 p.m., and will comply with all aspects of the Town of Yorktown Code Section 216-2 Peace and Good Order.
9. It is not known if Blasting will be necessary, however if necessary a Blasting Protocol will be submitted to the Town for review and approval.
10. Once construction machinery reaches the site, it is likely to remain on site until the completion of grading and excavation. Construction material storage, equipment staging and soil stockpiling will occur on graded stabilized areas of the site.
11. Construction traffic would access the site via a stabilized construction entrance at one or more of the existing access locations on Old Crompond Road.
12. As part of the necessary permitting for demolition, buildings are inspected and building materials are sampled for asbestos. Any building materials which contain asbestos are required to be removed prior to demolition in accordance with OSHA guidelines. This will leave the buildings free of asbestos-containing materials so that when demolition occurs, no hazardous material will be dispersed into the air or deposited into the soil.

As a result of implementation of the mitigation measures listed above, short term construction impacts shall be mitigated to the maximum extent practicable and shall not result in a significant negative environmental impact.

9.0 ALTERNATIVES

No Action Alternative

The proposed action, one of rezoning some 24 acres of land, will not in and of itself result in any direct change to existing conditions in the project area. Any change in use would only be accomplished through the site plan approval process. The current zoning, R1-20 Single-family Residence District, presently supports eight single-family homes on individual lots, which in the No Action scenario, could remain occupied for the foreseeable future. If this remains the case, no change would be expected to the developed areas of the site, to natural resources in the area, to traffic in the area, or to other human resources. However, as the land is underdeveloped, there would continue to be the prospect that one or more property owners could make application in the future to change a land use or zoning designation within the BMT.

As explained previously, the current zoning designation of the subject site differs from all of the surrounding zoning districts -- R3, C2, C3 and R1-40 -- the first three which exist on adjacent parcels within the BMT. The No Action scenario would continue this incongruity into the foreseeable future.

C-2 vs. C-2R Zoning Alternative

The project applicant previously considered a zone change for the southerly portion of the subject properties from R1-20 to C-2 Commercial Hamlet Center District, and a change from R1-20 to R-3 on the northerly portion of the site. Such plan would establish commercial uses as allowed in the C-2 district, in accordance with zoning:

[1] Stores or shops for the conduct of retail business, bank, post office, restaurant and other places serving food and beverages, professional and business offices, and personal service establishments, including the grooming of house pets, except that no use shall be permitted where any part of the service is conducted outside the premises unless a special use permit has been issued....

[§300-21.C(8)(a)[1], as permitted by §300-21.C(9)(a)[1].]

Based on discussions with the Town during early review of the Bear Mountain Triangle Rezoning, the applicant revised its petition from C-2 to C-2R Commercial Hamlet Center District, which would continue to permit small scale retail and office development but would also provide more flexibility by allowing residential rental apartments above the retail or office space as stipulated in the text of the Zoning Code shown below:

[1] The same main uses as specified for the C-2 District

[2] Residential apartments, provided that each apartment is limited to two bedrooms per unit and no more than 1,000 square feet per unit and is located above a first-floor use. [§300-21.C(10)(a)[1] & [2]]

While the applicant's original concept plan included an 80-unit residential component, it did not consider mixing that use in the same buildings as commercial uses. However, the New Urbanist design model often incorporates residential uses on floors above the first floor as was common in the traditional hamlets in New York and New England. These units are typically rental units and would provide a component of the project suitable for lower cost housing, which the Town has voiced a desire to provide.

In the C-2R plan, the number of residential units would be increased by 16 dwelling units compared to the C-2 plan. These 16 additional units are proposed as affordable rental apartments. In providing this additional housing choice, the increased number of residential units would result in a potential additional population of 32 persons, including 5 school aged children attributable to the C-2R district zoning, as compared to the prior proposal for a C-2 district. The additional housing would not be expected to substantially increase the coverage of buildings on the site. The increased population could result in modest increases in parking, off-site traffic, sewer and water usage, and demand for community services including the schools. Since taxes on the apartments would be paid by the landlord or property owner and would be based upon the income value of the rental properties, the taxes generated by the space used for residential apartments would be substantially the same as for the commercial use of the same space.

RSP-1 vs. R-3 Zoning Alternative

The project applicant considered a zone change for the northerly portion of the subject properties from R1-20 to RSP-1 Age-oriented Community District, and change from R1-20 to C-2R on the southerly portion of the site. Such plan would establish an age restriction (55 years of age or older) in the community as allowed in the RSP-1 district, in accordance with zoning:

[1] Age-oriented communities ... in accordance with ... §300-123 through 300-151.
[§300-21.C(4)(a)[1]]

- A. One-family dwellings.
 - B. Two-family dwellings.
 - C. Row houses and multifamily dwellings.
- [§300-124, as permitted by §300-21.C(4)(a)[1].]

Based on discussions with the Town during early review, the applicant revised its petition from RSP-1 to R-3 Multifamily Residential District, so as to not limit occupancy of the project by age but allow for any demographic to live in the hamlet, as allowed:

[2] Two-family dwellings.
[300-21.C(2)(a)[2], as permitted by §300-21.C(3)(a)[1].]
[2] Multifamily dwelling
[§300-21.C(3)(a)[2]]

In providing this additional housing choice, there would be no change in the number of residential units being considered for development in the hamlet. The proposed R-3 zoning would potentially result in a slightly greater population than the RSP-1 as it could attract young couples and families as opposed to a restricted adult population. Demographic multipliers for age-restricted housing indicate there are 1.8 persons per two bedroom unit. Age-restricted housing does not typically include three bedroom units and there are no published multipliers for this size of housing unit so a direct comparison to the current proposed plan is not available. The RSP-1 alternative could thus be expected to house 144 seniors. The most notable difference in the population would be the absence of school age

children. This alternative would not fill the need identified in the Comprehensive Plan for diversity of housing for the general population.

Two bedroom age-restricted units would have a lower assessed valuation than the larger A and C units in the R-3 zoning proposal. For the purpose of this analysis, it was assumed that all the senior units would have assessment values comparable to the B units of the proposed zoning. It was also assumed that this alternative would include the affordable apartments proposed as part of the C-2R hamlet development. The combined population would total 176 persons including 5 students that live in the C-2R apartments.

The cost of municipal services for this population is \$91,850 compared to an anticipated Town tax revenue of \$234,004, resulting in a net benefit of \$142,154 from this alternative, compared to a net benefit of \$105,811 for the proposed R-3 plan.

The cost to the School District would be limited to the students in the C-2R apartments and would total \$44,555 compared to an anticipated school tax revenue of \$928,595, resulting in a net benefit of \$884,040 from this alternative, compared to a net benefit of \$504,779 from the proposed R-3 plan.

The RSP-1 alternative would not result in any reduction of impervious surfaces on the site, and would result in only very modest decreases in off-site traffic generation, sewer and water usage, and demand for community services than the R-3 plan. More to the point it would not address the need for housing stock available to all age groups.

Single Family Housing Development Alternative

Population

It is unlikely the subject property will remain as single-family, over-sized lots or underdeveloped indefinitely. The subject site is currently zoned R1-20 for single family residential development on one-half acre lots. Infrastructure demands (roads and stormwater management) and environmental limitations (slopes and wetlands) typically limit development potential to about 65 percent of a site. The project site totals 23.61 acres. Based upon the constraints listed above the yield of this site is estimated to be 30 single family homes.

Demographic multipliers published by the Rutgers University Center for Urban Policy Research (CUPR) were used to project the future population of Single Family development of the Bear Mountain Triangle Rezoning area. As shown in Table 9-1, a thirty unit subdivision of four bedroom single family homes can be expected to house 3.67 persons per unit including an average of 1.05 students per unit. The projected population would be 110 persons including 32 school age children.

Table 9-1 Population Projections Single Family Residential Development					
Unit Type	Number of Units	Population Multiplier	Population	School Age Children Multiplier	School Age Population
4 Bedroom Single Family House	30	3.67	110	1.05	32
TOTAL	30		110		32

Source: Rutgers University Center for Urban Policy Research, June 2006. Table prepared by TMA, 2015.

Based upon a projected market price of \$525,000 per house, the market value of this development would be \$15,750,000. Using the current 2015 equalization rate of 2.56 percent, the total future Assessed Value for this single family analysis is estimated to be \$403,200.

Current and Projected Revenues

Table 9-2 compares the revenues which could be generated by the property in a single family development to the revenues to be generated after the Bear Mountain Triangle proposed rezoning were to take place and be developed. Revenues are based on 2015 tax rates (2014-2015 tax rate for the Yorktown Central School District).

As presented in Table 9-2, annual revenues to the Town of Yorktown as a result of Single Family development of this site are projected to be approximately \$98,533. The tax revenues to Westchester County would be approximately \$56,819 annually, thus the total municipal revenue is estimated to be \$155,352. Once the sewer district is extended to include this area, the properties would pay additional taxes to the Sewer district, in addition to usage fees.

Table 9-2 Projected Taxes Generated by the Bear Mountain Triangle Single Family Development compared to Proposed Rezoning R-3 and C-2R			
Taxing Authority	Single Family (SF) Development Projected Taxes (\$)	Bear Mountain Triangle Proposed Rezoning Projected Taxes (\$)	Net Increase Between SF & Rezoning Projected Taxes (\$)
Westchester County	\$56,819	\$140,180	\$83,362
Town of Yorktown	\$62,333	\$153,785	\$91,452
Mohegan Fire District	\$24,531	\$60,522	\$35,991
Yorktown Consolidated Water District	\$4,780	\$11,792	\$7,013
Emergency Medical Services	\$1,585	\$3,911	\$2,326
Westchester County Refuse	\$5,304	\$13,087	\$7,782
Town of Yorktown Refuse	\$12,170	\$38,943	\$26,773
Total Town of Yorktown	\$98,533	\$243,097	\$144,564
Total Municipal	\$155,352	\$383,277	\$227,926
Yorktown Central School District	\$391,008	\$964,679	\$573,671
TOTAL	\$546,360	\$1,347,957	\$801,597
Notes:			
Municipal taxes are based upon Town of Yorktown 2015 Tax Rates.			
Yorktown Central School Tax Rates are for the 2014-2015 school year.			

Annual revenues to the Yorktown Central School District would be approximately \$391,008. The difference between the school tax revenues generated by single family development and those that can be expected from the proposed rezoning annually is \$573,671

Table 9-2 also indicates the net increase in revenues over single family development as a result of the proposed rezoning which in total is projected to be more than \$800,000 annually.

As described in Section 3.0, the Town municipal expenditure for Town services is estimated to be \$522 per person. A single family development on this site would add approximately 110 persons to the population of the Town. Based on a per capita cost of \$522, the additional costs to the Town of Yorktown are projected to be up to approximately \$57,420. As presented in Table 9-2, the municipal tax revenues to the Town from a single family development on this site would amount to a total of \$98,533 thus, **after** covering the cost of municipal services, the project will result in a modest annual net benefit to the Town of \$41,113.

Yorktown Central School District

It is estimated that a single family development may add up to 32 students to the Yorktown Central School District. For purposes of this analysis, the instructional and transportation costs associated with the addition of 32 students to the Yorktown School District were examined. Costs were compared with anticipated tax revenue increases to the District, to determine the fiscal impact which would result.

As detailed in Section 3.0, the per student programming and transportation costs to be raised by property taxes is estimated at \$10,250. Thus, School District costs to be paid by tax revenue to educate the additional 32 students from a single family development at Bear Mountain Triangle is estimated to be \$328,000.

The proposed Bear Mountain Triangle Rezoning would generate a total of \$391,008 in annual property revenues to the Yorktown School District. Costs to the School District are estimated to total \$328,000, thus after covering costs the Yorktown School District would realize a net benefit of \$63,008 annually.

Other Considerations

The single-family alternative would likely result in less impervious surfaces on the site than the proposed plan, and would result in lower traffic generation, sewer and water usage, and demand for community services than the proposed plan. Thirty single family dwellings would generate 35 P.M. peak hour trips.

Industrial Zoning Alternative

In past decades the Town considered directing commercial or light industrial land use to the Bear Mountain Triangle. The 1970 Town Development Plan identified the BMT site as a candidate for laboratory-office or general light industry, although the Plan recognized that identifying this land for non-residential development could have a detrimental effect on neighboring residences and it would be difficult to attract developers. In spite of the Plan recommendations, there was no interest in the 1970's for industrial development at the BMT. Again in the 1980's the Town gave serious consideration to rezoning of the BMT area to light industrial and highway interchange uses. However up until the present day, there was no sewer infrastructure that would be necessary to support increased development of this area, and significant road improvements would also be necessary.

In response to interest and consideration of a previous light industrial rezoning proposal for this property, the potential environmental effects of a light industrial zoning alternative has been evaluated. A conceptual design of an Industrial Alternative is shown in Figure 9-1. This alternative has been prepared consistent with the bulk regulations of the M-1A zone where the minimum lot size is 5 acres and the lot coverage is restricted to 30 percent. Parking as shown would accommodate 2 spaces for every three employees consistent with the M-1A zone requirements. Figure 9-1 illustrates the wholesale disturbance to the rolling hillsides of this site and shows the environmental implications of a large scale building on the site.

A fiscal analysis of the Industrial alternative indicates that Town Tax revenue would be \$188,926 compared to \$243,097 for the proposed Commercial/Residential rezoning. Tax revenues to the Yorktown Central School District would be \$749,714 compared to \$964,679 from the proposed Commercial /Residential rezoning.

Other Considerations

The alternative with 308,250 square feet of industrial space would likely result in greater impervious surfaces on the site than the proposed plan, in greater traffic generation, and lower demand for community services than the proposed plan. This plan would generate 299 P.M. peak hour trips. Potential sewer and water usage would be dependent on the type of uses present.

Comprehensive Plan Recommendations

Preparation of the 2010 Comprehensive Plan took more than a decade and involved hundreds of hours of public comment and municipal review. Many elements of the Plan were considered, revised, extensively vetted and modified. As part of these discussions, and as a result of many voices being heard, the 2010 Comprehensive Plan specifically identified the Bear Mountain Triangle as an area where mixed use, hamlet development would be desirable. The 2010 Comprehensive Plan affirmed the Town's priority for residential development in general. The subject area remained zoned as an R1-20 district pending infrastructure improvements to support hamlet development and pending development of a master design plan for such hamlet development. Specifically, Section 2.0 of the 2010 Comprehensive Plan identifies detailed recommendations for development of this area as a higher density, mixed use hamlet.

The hamlet concept has been solidified through the recent development of the Town's master plan layout for this area as shown in Figure 1-3. The required infrastructure in terms of road improvements and sewer infrastructure as a result of the pending Costco project set the stage for the recommended hamlet development thus eliminating any further consideration of an industrial use of this site.

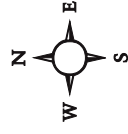
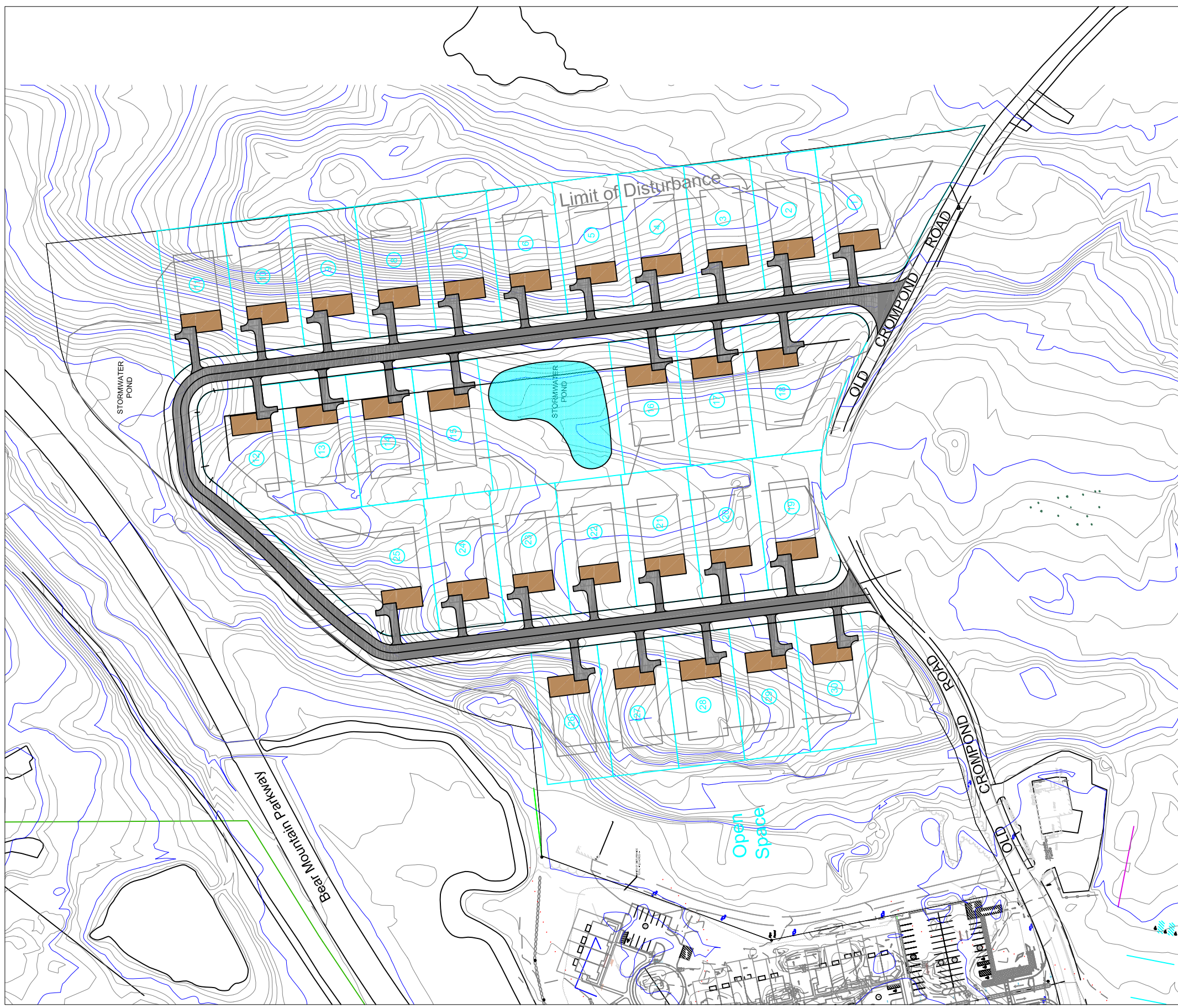


Figure 9-1: Single Family Alternative
 Bear Mountain Triangle Rezoning
 Town of Yorktown, NY
 Source: Tim Miller Associates
 Scale: 1" = 160'

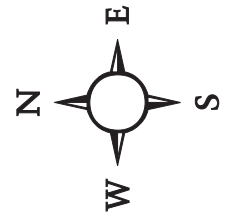
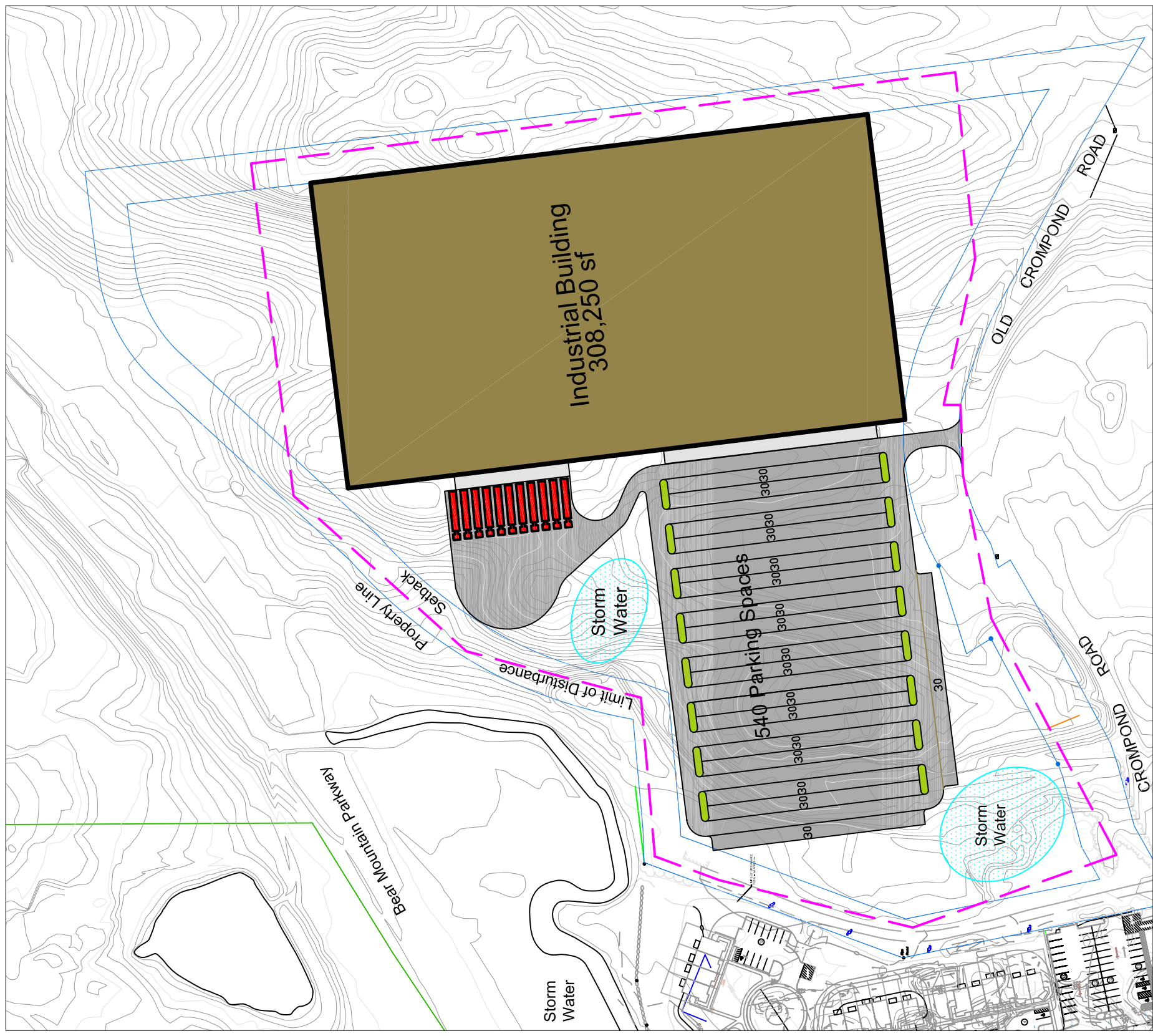


Figure 9-2: Industrial Alternative
 Bear Mountain Triangle Rezoning
 Town of Yorktown, New York
 Source: Tim Miller Associates, Inc
 Approx. Scale: 1" = 160'

APPENDIX A
Zoning Petitions

Town Board: Town of Yorktown
County of Westchester: State of New York

_____X

In the Matter of the Application of
Mandalay Builders, LLC

For amendments to the Zoning Map of the Town of Yorktown changing the Zoning Designation of Properties Zoned R1-20 to C-2 and RSP-1 affecting real property located at 3258, 3290, 3302, 3314 and 3326 Old Crompond Road, also known and designated on the Tax Assessment Map of the Town as Section 28.18 - Block 1 - Lots 11, 12, 14, 15 and 16.

PETITION

_____X

Mandalay Builders, LLC (the "Petitioner") hereby petitions the Town Board of Yorktown pursuant to New York State Town Law Sections 264 and 265 as follows:

The Petitioner

1. The Petitioner is a limited liability company duly organized and existing under the laws of the State of New York, having a principal place of business located at 500 Old Post Road East, Port Jefferson, New York, 11777. The Petitioner was formed in 2009 for the development and construction of residential and commercial projects, and ROSARIO BAIATTA, is its managing director. Pursuant to the Petitioner's charter the president has been authorized to petition the Town Board of the Town of Yorktown to amend its zoning map for the property hereinafter described as R1-20 to C-2 and RSP-1 districts.

The Property

2. The Petitioner is the contract vendee of the property located at 3258, 3290, 3302, 3314 and 3326 Old Crompond Road, also known and designated on the Tax Assessment Map of the Town as Section 26.18, Block 1, Lots 11,12,14,15 and 16 (the "Property"). The property is comprised of approximately 20.1 acres and has approximately 980 feet of frontage along the north side of Old Crompond Road. The property is presently within the R1-20 zoning district. The property is bordered on the west by a single family residence and on the east by a commercially zoned property. The property is bordered on the north by the Bear Mountain Parkway Extension and has vacant commercial land to the south.
3. The property is uniquely separated from other residential uses and has been known as the "Bear Mountain Triangle."

The Proposed Project

4. The petitioner proposes to demolish existing structures on the property and to develop the property with 96 high quality residential units on 72 fee simple parcels utilizing 15.1 acres of the property. The remaining 5.0 acres will be used to construct 7 commercial buildings adjacent to Old Crompond Road with a total area of 47,500 square feet of office and retail space, including a 3,500 square foot senior center and pool to be donated for Town use as senior citizen recreation center.
5. The applicant intend to build the project in a manner that embraces the architectural and aesthetic values of the Town of Yorktown, working in concert with the Planning Board and the Advisory Board on Architecture and Community Appearance. As currently proposed, the project will consist of the development of two-story buildings with ample open landscaped areas and ample parking for commercial buildings and related infrastructure. A conceptual site plan is attached hereto as exhibit A.

6. As shown on the conceptual site plan, the project will be accessed from two entrances from Old Crompond Road. As part of the project, a new stormwater management plan consisting of a detention pond with fountains is proposed. A new sanitary sewer and new water supply system will be constructed to serve the project.
7. The entire residential area will be a gated 55+ community with its own Home Owners Association (HOA) which will be responsible for the maintenance of the roads buildings and landscaping therein. The buildings will be designed to be aesthetically appealing and attractively landscaped with a variety of trees, shrubs, and plants, and with a priority to conserve open land and existing flora.

The Proposed Zoning Change

8. The Comprehensive Plan considered the future of the Crompond hamlet, and recommended that the Town develop unique economic development strategies for each of the two parts of the Crompond hamlet business center.”
9. The applicant is seeking to rezone the property from the current designation of R1-20 to RSP-3 and C-2.

10. The petitioner respectfully submits that the project is an appropriate use in this area which is uniquely separated where such uses are feasible. The project and the proposed changes to the zoning map are consistent with and will advance the objectives of the 2010 Yorktown Comprehensive Plan. The project desires to promote self-sufficient residential and commercial project which will not burden the municipal services of the Town and at the same time create jobs and business opportunities that will increase tax revenues thereby contributing to the fiscal well-being of the Town. If the Town Board grants this petition and the proposed changes to the zoning code, the project will require site plan and subdivision approval from the Planning Board.

WHEREFORE, the Petitioner respectfully requests that the Town Board grant this Petition and amend the zoning map as set forth herein.

Respectfully Submitted,
Mandalay Builders, LLC

By: Rosario Baiatta Date: 6/24/14
Rosario Baiatta, Managing Director



Ann Kutter
Partner

Rose Mazzola
Partner

The Hon. Alice Roker, Town Clerk
Town of Yorktown
363 Underhill Avenue
Yorktown Heights, NY 10598

May 15, 2015

Re: Mandalay Builders/Crompond Terraces
Application for Rezoning

Dear Ms. Roker:

Enclosed please find six (6) copies each of Petitions to Rezone from Americo Realty LLC of 3332 Old Crompond Rd, Yorktown Heights, NY and Alfio DellaVecchia, 3328 Old Crompond Rd., Yorktown Heights, NY.

These materials are submitted at the Town Board's request and as part of the Crompond Terraces Rezoning Application that is currently before the Town Board.

Please do not hesitate to contact me at 914 930-0316 if you have any questions.

Sincerely,

Ann Kutter
Partner

Cc: Roy Baiata, Managing Partner
Mandalay Builders, LLC

Enclosures

Town Board: Town of Yorktown
County of Westchester: State of New York

X

In the Matter of the Application of
Alfio Della Vecchia

For amendments to the Zoning Map of the Town of Yorktown changing the Zoning Designation of Properties Zoned R1-20 to C-2R and R-3 affecting real property located at 3328 Old Crompond Road, also known and designated on the Tax Assessment Map of the Town as Section 26.18 - Block 1 - Lot 10.

PETITION

X

Alfio Della Vecchia (the "Petitioner") hereby petitions the Town Board of Yorktown pursuant to New York State Town Law Sections 264 and 265 as follows:

The Petitioner

1. The Petitioner is an individual residing at 99 Cox Ave, Armonk NY 10504. The Petitioner hereby petitions the Town Board of the Town of Yorktown to amend its zoning map for the property hereinafter described as R1-20 to C-2R and R-3 districts.

The Property

2. The Petitioner is the owner of the property located at 3328 Old Crompond Road, also known and designated on the Tax Assessment Map of the Town as Section 26.18, Block 1, Lot 10 (the "Property"). The property is comprised of approximately 0.73 acres and has approximately 28 feet of frontage along the north side of Old Crompond Road. The property is presently within the R1-20 zoning district. The property is bordered on the west by a single family residence and on the east by property which is the subject of a petition submitted by Mandalay Builders to amend

the zoning map from R1-20 to C-2R and R-3 districts/. The property is bordered on the north by the Bear Mountain Parkway Extension and has vacant commercial land to the south.

3. The property is uniquely separated from other residential uses and is situated in what is known as the "Bear Mountain Triangle."

The Proposed Project

4. The Mandalay project concept, covering a total of 23.61 acres and which would include this property, if bought by Mandalay Builders, and the adjacent property located at 3332 Old Crompond Road, proposes to demolish existing structures on the property and to develop the property with 80 high quality residential units utilizing 16.9 acres of the property. The remaining 6.71 acres will be used to construct 7 commercial buildings adjacent to Old Crompond Road with a total area of 77,000 square feet of office and retail space, including a 12,000 square foot multi-purpose building and pool to be donated for Town use as recreation center.
5. Mandalay intend to build the project in a manner that embraces the architectural and aesthetic values of the Town of Yorktown, working in concert with the Planning Board and the Advisory Board on Architecture and Community Appearance. As currently proposed, the project will consist of the development of two- and three-story buildings with ample open landscaped areas and ample parking for commercial buildings and related infrastructure. A conceptual site plan is attached hereto as exhibit A.
6. As shown on the conceptual site plan, the project will be accessed from two entrances from Old Crompond Road. As part of the project, a new stormwater management plan consisting of at least one detention pond with fountains is

proposed. A new sanitary sewer and new water supply system will be constructed to serve the project.

7. The entire residential area will be a gated community with its own Home Owners Association (HOA) and responsible for the maintenance of the roads, buildings and landscaping therein. The buildings will be designed to be aesthetically appealing and attractively landscaped with a variety of trees, shrubs, and plants, and with a priority to conserve open land and existing flora.

The Proposed Zoning Change

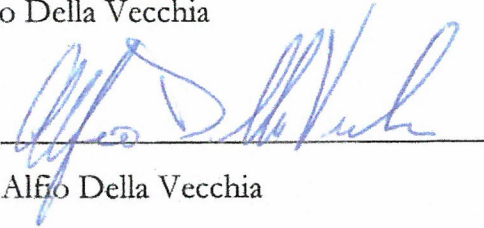
8. The Comprehensive Plan considered the future of the Crompond hamlet, and recommended that the site "...should have a mix of housing, office, retail uses..." It goes on to say that mixing the two (residential and office districts) "creates a district that is vital and busy everyday, all week long." The Plan also looks for the following characteristics in a "Main Street of Village Center" development: "sidewalk connections throughout and connecting to surrounding areas, s Main Street or village green accessible to the general public, Parks and abundant landscaping", and finally "High quality architectural design."
9. The applicant is seeking to rezone the property from the current designation of R1-20 to R-3 and C-2R.
10. The petitioner respectfully submits that the project is an appropriate use in this area which is uniquely separated where such uses are feasible. The project and the proposed changes to the zoning map are consistent with and will advance the objectives of the 2010 Yorktown Comprehensive Plan. The project desires to promote self-sufficient residential and commercial project which will not burden the municipal services of the Town and at the same time create jobs and business

opportunities that will increase tax revenues thereby contributing to the fiscal well-being of the Town. If the Town Board grants this petition and the proposed changes to the zoning code, the project will require site plan and subdivision approval from the Planning Board.

WHEREFORE, the Petitioner respectfully requests that the Town Board grant this Petition and amend the zoning map as set forth herein.

Respectfully Submitted,

Alfio Della Vecchia

By: 
Alfio Della Vecchia

Date: 5/14/15

Town Board: Town of Yorktown
County of Westchester: State of New York

X

In the Matter of the Application of
Americo Reality, LLC

For amendments to the Zoning Map of the Town of
Yorktown changing the Zoning Designation of
Properties Zoned R1-20 to C-2R and R-3 affecting real
property located at 3328 Old Crompond Road,
also known and designated on
the Tax Assessment Map of the Town as
Section 26.18 - Block 1 - Lot 9.

PETITION

X

Americo Reality, LLC (the "Petitioner") hereby petitions the Town Board of Yorktown pursuant to New York State Town Law Sections 264 and 265 as follows:

The Petitioner

1. The Petitioner is a limited liability company duly organized and existing under the laws of the State of New York having a principal place of business located at 3332 Old Crompond Rd, Yorktown Heights, New York. The Petitioner was formed in 2000 as a realty company and John Bauso is its sole owner. The owner is authorized to petition the Town Board of the Town of Yorktown to amend its zoning map for the property hereinafter described as R1-20 to C-2R and R-3 districts.

The Property

2. The Petitioner is the owner of the property located at 3332 Old Crompond Road, also known and designated on the Tax Assessment Map of the Town as Section 26.18, Block 1, Lot 9 (the "Property"). The property is comprised of approximately 2.59 acres and has approximately 210 feet of frontage along the north side of Old

Crompond Road. The property is presently within the R1-20 zoning district. The property is bordered on the west by Crompond Crossing, a mixed use development zoned R-3 and C-2, and on the east by residential property currently zoned R1-20, which is the subject of a petition submitted by Alfio Della Vecchia to amend the zoning map from R1-20 to C-2R and R-3 districts. The property is bordered on the north by the Bear Mountain Parkway Extension and has vacant commercial land to the south.

3. The property is uniquely separated from other residential uses and is situated in what is known as the "Bear Mountain Triangle."

The Proposed Project

4. The Mandalay project concept, covering a total of 23.61 acres and which includes this property and the adjacent property located at 3328 Old Crompond Road, proposes to demolish existing structures on the property and to develop the property with 80 high quality residential units utilizing 16.9 acres of the property. The remaining 6.71 acres will be used to construct 7 commercial buildings adjacent to Old Crompond Road with a total area of 77,000 square feet of office and retail space, including a 12,000 square foot multi-purpose building and pool to be donated for Town use as recreation center.
5. Mandalay intend to build the project in a manner that embraces the architectural and aesthetic values of the Town of Yorktown, working in concert with the Planning Board and the Advisory Board on Architecture and Community Appearance. As currently proposed, the project will consist of the development of two- and three-story buildings with ample open landscaped areas and ample parking for commercial buildings and related infrastructure. A conceptual site plan is attached hereto as exhibit A.

6. As shown on the conceptual site plan, the project will be accessed from two entrances from Old Crompond Road. As part of the project, a new stormwater management plan consisting of at least one detention pond with fountains is proposed. A new sanitary sewer and new water supply system will be constructed to serve the project.
7. The entire residential area will be a gated community with its own Home Owners Association (HOA) and responsible for the maintenance of the roads, buildings and landscaping therein. The buildings will be designed to be aesthetically appealing and attractively landscaped with a variety of trees, shrubs, and plants, and with a priority to conserve open land and existing flora.

The Proposed Zoning Change

8. The Comprehensive Plan considered the future of the Crompond hamlet, and recommended that the site "...should have a mix of housing, office, retail uses..." It goes on to say that mixing the two (residential and office districts) "creates a district that is vital and busy everyday, all week long." The Plan also looks for the following characteristics in a "Main Street of Village Center" development: "sidewalk connections throughout and connecting to surrounding areas, s Main Street or village green accessible to the general public, Parks and abundant landscaping", and finally "High quality architectural design."
9. The applicant is seeking to rezone the property from the current designation of R1-20 to R-3 and C-2R.
10. The petitioner respectfully submits that the project is an appropriate use in this area which is uniquely separated where such uses are feasible. The project and the

10. The petitioner respectfully submits that the project is an appropriate use in this area which is uniquely separated where such uses are feasible. The project and the proposed changes to the zoning map are consistent with and will advance the objectives of the 2010 Yorktown Comprehensive Plan. The project desires to promote self-sufficient residential and commercial project which will not burden the municipal services of the Town and at the same time create jobs and business opportunities that will increase tax revenues thereby contributing to the fiscal well-being of the Town. If the Town Board grants this petition and the proposed changes to the zoning code, the project will require site plan and subdivision approval from the Planning Board.

WHEREFORE, the Petitioner respectfully requests that the Town Board grant this Petition and amend the zoning map as set forth herein.

Respectfully Submitted,

John Bauso

By: John A Bauso Date: 4/24/15

John Bauso

APPENDIX B

Correspondence

TOWN OF YORKTOWN PLANNING BOARD

Yorktown Community and Cultural Center, 1974 Commerce Street, Yorktown Heights, New York 10598, Phone (914) 962-6565, Fax (914) 962-3986

MEMORANDUM

To: Town Board
From: Planning Board
Date: February 24, 2015
Subject: Crompond Terraces aka Mandalay Proposed Rezone

The Planning Board, at its meeting on February 11, 2015 discussed the subject application for a rezone from R1-20 to a split of R-3 and C-2 or C-2R zoning districts. The Board had the following comments:

Comments on the rezone and submitted plan:

1. Historically Yorktown's master plans recommended light industrial zoning for the BMP Triangle. During the review and planning for the 2010 Comprehensive Plan, significant community input resulted in the policy recommendation that this area was better suited to be developed as a mixed-use village center. The Town Board should evaluate how the proposed multi-family residential and commercial development works in relation to this Plan. 2010 Comprehensive Plan Policy 4-24, reproduced below for your convenience, outlines the community's vision for the BMP Triangle.

Policy 4-24: At the eastern end of the hamlet business center, promote retail, office, and country inn uses with a regional draw in a high-quality master-planned format, with compatible residential uses as well.

- With the completion of the BMP, the Bear Mountain Triangle will become even more accessible and visible, making it the Town's best opportunity for economic development in a hamlet, mixed-use design.
- On the north side of Route 202, adjoining the Taconic State Parkway, there should be areas for retail, retail/mixed use, housing, and office/country inn.
 - At the bottom of the hill, the "village center" should have a mix of uses, including a "Main Street" shopping spine, with limits on floor area and an emphasis on small stores, possible second-floor apartments, and professional offices, in a pedestrian-oriented format.
 - At the top of the hill, leave as C-3 zoning and adopt an overlay for office and/or hotel or country inn uses, building off the location next to the Taconic-Route 202 interchange and highway visibility.
 - In between, plan for a mix of senior and small-scale professional offices, with conservation of open space and protection of wetlands and steep slopes.
 - Set aside space that can be converted into a village green.
 - These three areas should be integrated, rather than having each element feed only Route 202. There would be pedestrian amenities, with parkland and public spaces.

- Landscaping would be abundant, and except for the area in front of the "village center" there would be significant buffering along the Route 202 frontage.
 - Parking lots would be shared and interconnected, forming a parking network.
 - The area should retain low-density zoning until such time as the Town prepares a Planned Design District for the Triangle, indicating the amenities and infrastructure improvements that must be provided before or concurrent with more significant development.
2. The Town Board should require the applicant to demonstrate that this comprehensive plan vision will be adhered to with the proposed rezoning and conceptual layout requested by the applicant. This will require conceptual design plans of the entire BMP Triangle, as stated in the comprehensive plan.
 3. The Town Board should require development of maximum pedestrian connectivity within and between the residential and commercial developments in the BMP Triangle. Pedestrian, auto, and trails/recreation connections should all be considered.
 4. The plans should show onsite wetlands and wetland buffers.
 5. The Town Board should consider the appropriateness of expanding commercial zoning up Old Crompond Road. The orientation and visibility of commercial structures may affect the health and viability of the potential businesses. This may also include considering the future development of the land south of Old Crompond Road.
 6. There may be additional visitor parking spaces needed in addition to the driveways for the residential units.
 7. Trash enclosures will need to be included in a site plan. The number and location of these enclosures will be reviewed in further detail by the Refuse & Recycling Department and the Planning Board during a site plan review.
 8. The R-3 zone requires the following recreational amenities:

Section 300-21(3)(a)[f]: At least 400 square feet of usable open space be provided on the site for each dwelling unit for play area and other outdoor living uses. The developer shall provide a suitable improved playground/play area shall have a minimum area of 1,200 square feet and a maximum distance of 1,000 feet from the units to be served.

Section 300-21(3)(a)[g]: In addition to the above, the developer shall also set aside 10% of the site for the provision of park and /or recreational facilities. If the provision of such facilities is impractical because of the particular layout of the development or for other reasons, a recreation fee of \$4,000 per unit shall be submitted prior to approval of the application.

Comments on the Expanded EAF Scope:

1. The Town Board should require the applicant to demonstrate that this comprehensive plan vision will be adhered to with the proposed rezoning and conceptual layout requested by the applicant. This will require conceptual design plans of the entire BMP Triangle, as stated in the comprehensive plan.

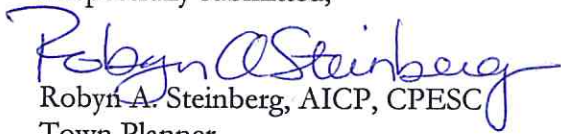
2. A no action alternative should be included in the scope.
3. The applicant must explain how the proposed action complies with and realizes the 2010 Comprehensive Plan's vision for this area to become a village-style hamlet.
4. Include a map/figure of proposed pedestrian connections throughout the new hamlet, including how the hamlet will be connected to the Costco site.
5. Include the possibility of a shuttle bus/jitney service around the BMP Triangle area.

Comments on Procedure:

1. If the Town Board is to include properties in the rezoning action that are not under control by the subject petitioner, should not the Town Board then be the sponsor of the rezoning? Even if the other several property owners submit their own petitions requesting similar rezoning, those owners would not be beholden to the hamlet style plan developed by the applicant without conditions within the rezoning approval requiring them to do so.
2. Should the Town Board go one step further and create a planned design district, with specific standards and recommendations for the development within it, to ensure that the parcels not under the control of the subject petitioner are also developed in accordance with the vision for the hamlet in order to create a cohesive development between the existing residential and commercial uses located in the BMP Triangle.

The Planning Board feels the proposed multi-family and commercial zoning along Old Crompond Road would play a valuable role in creating a village-style hamlet in the BMP Triangle. The Board however is concerned with the potential impacts of the development on what is currently a mostly wooded area somewhat hidden from the Route 202 corridor. The Board looks forward to reviewing the more detailed information submitted as part of the Expanded EAF in order to make a final recommendation to the Town Board for the proposed rezone.

Respectfully submitted,


Robyn A. Steinberg, AICP, CPESC
Town Planner

cc: Town Clerk, Town Attorney, Town Engineer, Building Inspector, Recreation Commission, Conservation Board, Applicant

MEMORANDUM

January 20, 2015

TO: Planning Department
FROM: Conservation Board
SUBJECT: Crompond Road Development – Petition for Rezoning

At the Conservation Board meeting held on Wednesday December 3, 2014, Dan Ciarcia, PE and Ann Kutter presented a petition for rezoning for Crompond Road Development.

The Conservation Board while in favor of the rezoning in order that all the parcels along Old Crompond Rd show a mix of retail and residential use, do have concerns.

1. The reduction of units from 96 to 80 is a step in the right direction although a further reduction should be investigated due to the amount steep slopes on portions of the property and the proximity to the Bear Mountain Parkway extension.
2. The buffer strip between the housing units and the Bear Mountain Parkway should be increased to provide the homes with more screening and protect the wildlife corridor.
3. A fully realized plan has not been presented due to the hold-out resident that is retaining ownership of one parcel within the scope of the potentially rezoned parcel.

Respectfully submitted:

Phyllis Bock

For the Conservation Board

CC: Town Board
Mary Capoccia, Supervisor's Assistant
Planning Board
Bruce Barber, Environmental Consultant
Sharon Robinson, Town Engineer
Alice Roker, Town Clerk



Ann Kutter
Partner

Rose Mazzola
Partner

Wm. Gorton, P.E.
Regional Director
NYS DOT
Region 8
4 Burnett Blvd
Poughkeepsie, NY 12603

Re: Hunter Brook Picnic Woods

Dear Director Gorton:

On behalf of my client, Mandalay Builders LLC, I am writing to enquire how to open discussions with the NYS DOT to restore and enhance the Hunter Brook Picnic Woods located in Yorktown Heights, NY.

Hunter Brook Picnic Woods is an abandoned state owned park along the Taconic State Parkway and the Bear Mountain Parkway Extension in the Town of Yorktown. I believe it was built in the 1930's and has been abandoned for at least 50 years.

My client is in the process of obtaining Town approvals to construct a mixed use multi-family development in the Bear Mountain Triangle in Yorktown on land which borders the Picnic Woods.

He is interested in restoring the picnic areas and creating trails within and along the periphery of the park area.

Can you please advise us who we should speak with to explore obtaining approval to proceed with this restoration?

If you would like to discuss this in person, I can be reached at 914 434-4206. I look forward to hearing from you.

Sincerely,

Ann Kutter

APPENDIX C
Traffic Impact Study



Traffic Impact Study

Proposed Bear Mountain Triangle Rezoning and Crompond Terraces

Old Crompond Road and NYS Route 35/U.S. Route 202
Town of Yorktown, Westchester County, New York

April 7, 2015

Prepared For

Mandalay Builders, LLC
5507-10 Nesconset Highway, Suite 168
Mount Sinai, NY 11766

Prepared By

Maser Consulting P.A.
11 Bradhurst Avenue
Hawthorne, NY 10532
914.347.7500

A handwritten signature in black ink, appearing to read 'Phillip J. Grealy', written over a horizontal line.

Phillip J. Grealy, Ph.D., P.E., Principal
License No. 59858

A handwritten signature in blue ink, appearing to read 'Richard G. D'Andrea', written over a horizontal line.

Richard G. D'Andrea, P.E. PTOE, Project Engineer
License No. 090241

MC Project No. 13001463A





TABLE OF CONTENTS **PAGE NO.**

I. INTRODUCTION..... 1

A. PROJECT DESCRIPTION AND LOCATION (FIGURE NO. 1)..... 1

B. SCOPE OF STUDY 1

II. EXISTING ROADWAY AND TRAFFIC DESCRIPTIONS 3

A. DESCRIPTION OF EXISTING ROADWAY NETWORK (FIGURES NO. 1 AND 1A)..... 3

B. EXISTING TRAFFIC VOLUMES (FIGURES NO. 2, 3, AND 4)..... 6

C. EXISTING PUBLIC TRANSPORTATION SERVICES (APPENDIX E) 7

III. EVALUATION OF FUTURE TRAFFIC CONDITIONS..... 9

A. NO-BUILD TRAFFIC VOLUMES (FIGURE NO. 5 THROUGH 13 AND TABLE 1-O) 9

B. SITE GENERATED TRAFFIC VOLUMES (TABLES NO. 1E, 1 AND 1R) 10

C. ARRIVAL/DEPARTURE DISTRIBUTION (FIGURES NO. 14 AND 15) 10

D. BUILD TRAFFIC VOLUMES WITHOUT REZONING (FIGURES NO. 17 THROUGH 22 AND TABLE NO. 1E)..... 10

E. BUILD TRAFFIC VOLUMES WITH REZONING (FIGURES NO. 22 THROUGH 30)..... 11

F. DESCRIPTION OF ANALYSIS PROCEDURES 11

G. RESULTS OF ANALYSIS (TABLE NO. 2) 12

H. OTHER POTENTIAL TRANSPORTATION IMPROVMENTS 19

I. OTHER CONSIDERATIONS..... 20

IV. SUMMARY AND CONCLUSION 23

APPENDICES

APPENDIX A..... FIGURES

APPENDIX B..... TABLES

APPENDIX C..... LEVEL OF SERVICE STANDARDS

APPENDIX D CAPACITY ANALYSIS

APPENDIX E..... EXISTING PUBLIC TRANSPORTATION SERVICES

APPENDIX F POTENTIAL IMPROVEMENT PLANS

APPENDIX G CONSIDERATION OF POTENTIAL STATE LAND DEVELOPMENT



I. INTRODUCTION

A. PROJECT DESCRIPTION AND LOCATION (Figure No. 1)

As requested by the Town of Yorktown in association with the potential rezoning of the properties located in the “Bear Mountain Triangle” (See Figure No. 1) including the land herein referred to as Crompond Terraces, an overall assessment of traffic conditions in the area as a result of this potential rezoning has been completed. This evaluation also considers the effect of the potential traffic generation from other parcels located along Old Crompond Road based on information compiled which identified potential levels of development under both existing and proposed zoning scenarios including for the Bauso property and the Antenaros property. In addition, traffic from other developments in the area, which are either proposed and/or potential developments which are likely to take place regardless of the rezoning, were also considered to provide an overall summary of expected future traffic volumes and operating conditions. The rezoning of the Crompond Terraces property would allow the potential for approximately 86 residential dwelling units and approximately 45,000± square feet of commercial space including office and neighborhood retail as well as some community space totaling approximately 12,000 square feet. The following sections describe the procedures completed in evaluating the potential traffic impacts for the area with or without the rezoning.

B. SCOPE OF STUDY

This study has been prepared to identify current and future traffic operating conditions on the surrounding roadway network and to assess the potential traffic impacts of the proposed rezoning of the various parcel located in what is referred to as the Bear Mountain Triangle and to identify improvements to accommodate the future traffic generation with and without the rezoning.

Available traffic count data were obtained for the NYS Route 35/U.S. Route 202 Corridor from previous reports prepared by Jacobs-Edwards and Kelcey as part of the Route 202/35/6 and Bear Mountain Parkway Sustainable Development Study as well as data contained in the Traffic Studies prepared for the proposed Costco development. These data were supplemented with new traffic counts collected by representatives of Maser Consulting, P.A. in December 2014. These data were also compared to other count data obtained from the New York State Department of Transportation (NYSDOT)



and count data contained in previous traffic studies conducted in the area. Together these data were utilized to establish the Existing Traffic Volumes representing existing traffic conditions in the vicinity of the site. Note that the new counts were collected to also confirm any effects of the recently completed NYSDOT Route 35/202 corridor improvements.

The Existing Traffic Volumes were then projected to the Design Year to take into account background traffic growth. In addition, traffic for other specific potential approved developments in the area as were estimated and then added to the Projected Traffic Volumes to obtain the No-Build Traffic Volumes.

Estimates were then made of the potential traffic that the various parcels included in the proposed rezoning area would generate (see Section III-C for further discussion). These site generated traffic volumes, which were developed based on both the existing and proposed zoning were then added to the roadway system and combined with the No-Build Traffic Volumes resulting in the Build Traffic Volumes for conditions both with and without the rezoning.

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 identified as necessary to serve the existing and/or future traffic volumes.

II. EXISTING ROADWAY AND TRAFFIC DESCRIPTIONS

A. DESCRIPTION OF EXISTING ROADWAY NETWORK (Figures No. 1 and 1A)

As shown on Figure No. 1, the area of the proposed rezoning will be accessed from NYS Route 35/U.S. Route 202 as well as from Stony Street and Old Crompond Road. The following is a brief description of the roadways located within the study area including the Taconic State Parkway. Figure No. 1A summarizes the lane geometry, lane widths, posted speed limits, traffic control, etc. for each of the studied 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. Taconic State Parkway

The Taconic State Parkway is a major regional highway, which traverses throughout Westchester, Putnam, Dutchess and Columbia Counties running in a north/south direction. The Taconic State Parkway (TSP), in the immediate vicinity of the site, is a six lane divided highway with paved shoulders and has a full diamond type interchange with NYS Route 35/U.S. Route 202 and a limited access interchange with the Bear Mountain Parkway Extension to the north. It has a posted speed limit of 55 mph.

2. Bear Mountain Parkway Extension

The Bear Mountain Parkway Extension intersects with NYS Route 35/U.S. Route 202 to form an unsignalized “T” shaped intersection. The Bear Mountain Parkway Extension serves as a connector road to and from the Taconic State Parkway northbound and southbound exit movements as well as Taconic State Parkway southbound entry movements. It also has a signalized full movement intersection with Stony Street, which has recently been upgraded as part of the NYSDOT improvements in this area. The roadway consists of two lanes in each direction and has a posted speed limit of 40 MPH. In addition, the New York State Department of Transportation has longer term plans for the extension of this roadway and/or upgrades to Routes 35/202 from this location west to the portion of the Bear Mountain Parkway located in the Town of Cortlandt. There is currently no specific time frame for the completion of this work. No parking is permitted along this roadway.

3. NYS Route 35/U.S. Route 202

NYS Route 35/U.S. Route 202 is a major east/west roadway, under the jurisdiction of the NYSDOT, which in Westchester County extends from Peekskill to the west, through the Town of Cortlandt, the Town of Yorktown and then the Town of Somers to the east. In the vicinity of the study area, this roadway intersects with the Bear Mountain Parkway, Stony Street and the BJ's/Staples Plaza, Old Crompond Road, Mohansic Avenue and the Taconic State Parkway Northbound and Southbound Ramps. The roadway has unsignalized intersections with the Bear Mountain Parkway Extension and Old Crompond Road. The posted speed limit, in the vicinity of the site, is 45 mph. On-street parking is not permitted along NYS Route 35/U.S. Route 202. Existing sidewalks along NYS Route 35/U.S. Route 202 are shown on Figure CP-1.

The NYSDOT has recently constructed improvements on NYS Route 35/U.S. Route 202 from Old Crompond Road and continuing to the west past the Parkside Corner Shopping Center including at the intersections of NYS Route 35/U.S. Route 202 at BJ's/Staples Shopping Center, NYS Route 35/U.S. Route 202 at Pine Grove Court, NYS Route 35/U.S. Route 202 at Bear Mountain Parkway Extension, and Bear Mountain Parkway Extension at Stony Street. These improvements were completed to address major safety and capacity related conditions at these intersections.

The NYS Route 202/35 improvements, which were completed in the Summer of 2014 at a cost of approximately \$11.5 Million, now provides two through lanes in each direction beginning in the area of the existing Parkside Corner Shopping Center continuing to the west to the Old Crompond Road intersection. (Note that the work in the section from Stony Street to Old Crompond road was subsequently added to match the improvements which are proposed by the Applicant for the Costco development). The area between the BMP and Parkside Corner also now has a center turn lane providing a dedicated lane for left turns into the businesses located along the south side of NYS Route 35/U.S. Route 202. At the BMP intersection with, NYS Route 35/U.S. Route 202, there is a separate left turn lane on the eastbound approach. The southbound approach has been modified from a two lane approach to a single lane and left turns are prohibited. The southbound right turn movement is channelized with striping and an acceleration lane will be provided for vehicles entering the traffic stream along NYS Route 35/U.S. Route 202 westbound. This modification has enhanced the ease of access for the BMP traffic destined to the west and has eliminated the extensive queues, which



previously existed at this location. The intersection of NYS Route 35/U.S. Route 202 and Pine Grove Court now has two through lanes in each direction and a separate left turn lane westbound and a separate right turn lane eastbound and the intersection has also been signalized.

The intersection of NYS Route 35/U.S. Route 202 and the BJ's/Staples Plaza and Stony Street was modified to have separate right turn lane and two through lanes in the eastbound direction. In the westbound direction an additional lane was extended to a point just west of Old Crompond Road and now operates a shared through/right turn lane in the westbound direction. The traffic signal at this intersection was also upgraded and coordinated with the new signal at the Pine Grove Court intersection.

The Stony Street and Bear Mountain Parkway was improved by providing one lane in each direction along the BMP as well as a dedicated left turn lane at the intersection. The center median along the BMP was eliminated to reduce conflicts at this intersection. The eastbound Stony Street approach was widened to provide a separate right turn lane and the intersection has been signalized. It should also be noted that some new sidewalks have been provided with the improvements.

Finally, long term plans have been identified by NYSDOT to possibly connect the two ends of the Bear Mountain Parkway with a limited access roadway to alleviate congestion and safety issues through the NYS Route 35/U.S. Route 202 and Route 6 Corridors. No specific timetable for this work is scheduled.

There are several Bee-Line bus stops located along the NYS Route 35/U.S. Route 202 corridor. The Route 15 Bus has stop locations near the existing Curry Honda between the Bear Mountain Parkway Extension and Lexington Avenue. There are also stops at the BJ's-Staples Plaza intersection, the Strang Boulevard intersection, the NYS Route 132 intersection, near the Yorktown Police station and between Baldwin Road and NYS Route 118. The Route 15 Bus also stops along NYS Route 35/U.S. Route 202 at the intersection with NYS Route 132. The closest bus stops for the Bee-Line Bus System are located near the Chase Bank and Staples Plaza. (See Section II-C below for more details on Existing Public Transportation services.)

4. Stony Street

Stony Street intersects with NYS Route 35/U.S. Route 202 opposite the BJ's/Staples Plaza driveway at a full movement, signalized intersection. Stony Street is generally a north/south road and also intersects with Old Crompond Road and then with the Bear Mountain Parkway Extension at a full movement signalized intersection. It also intersects with several other local roadways before terminating at East Main Street in the Shrub Oak area of Yorktown. The posted speed limit is 30 mph. No parking is permitted along this section of Stony Street.

5. Old Crompond Road

Old Crompond Road is a town roadway which intersects NYS Route 35/U.S. Route 202 at an unsignalized "T" shaped intersection. It runs west from here, generally parallel to NYS Route 35/U.S. Route 202 to its terminus at an unsignalized "T" intersection with Stony Street. The roadway currently serves several residential homes, the Adrian Auto body Property and the Crompond Corners Development. The roadway, which consists of a single lane in each direction, has a speed limit of 30 MPH. The existing roadway has an inconsistent width and some severe changes in horizontal and vertical alignment.

B. EXISTING TRAFFIC VOLUMES (Figures No. 2, 3, and 4)

Historical traffic count data for the NYS Route 35/U.S. Route 202 Corridor were obtained from the Jacobs-Edwards and Kelcey *Route 202/35/6 and Bear Mountain Parkway Sustainable Development Study* as well as other previous traffic studies for other developments in the area including the recent Costco traffic studies. These count data were supplemented with new peak hour traffic counts collected during December 2014 by representatives of Maser Consulting, P.A.

The Traffic Study analyzes three (3) peak periods including the Weekday AM and PM Peak Hours and the Saturday afternoon Peak Hour. The AM Peak Hour, which occurs between 7:00 - 9:00 AM represents the highest level of activity which coincides with the peak commuter traffic, school bus traffic. The PM Peak Hour, which generally occurs between 4:00 – 6:00 PM represents the time period of the highest commuter traffic along the corridor as well as the highest shopping generated traffic due to other existing facilities in the area including BJ's, etc. The Saturday Peak Hour, which occurs between 11:00 AM and 2:00 PM, includes the time period which reflects peak shopping related trips and also includes the time periods with peak trips for other weekend activities, i.e. children's sporting events, and other trips related to residential activities.



Based on the above information, the Existing Traffic Volumes were established for the Weekday Peak AM, Weekday Peak PM and Saturday Peak Hours at the following study area intersections.

Note that as anticipated in the Costco Traffic Studies and the New York State Department of Transportation (NYSDOT) studies, a portion of the traffic exiting the Taconic State Parkway at the Route 202 Northbound ramp has been diverted to the new Bear Mountain Parkway connection to Route 202, which is now accommodated via the new acceleration lane and elimination of the former stop control. This diversion is especially apparent during the Weekday PM Peak Hour when commuter traffic destined to Cortlandt and Peekskill has shifted to the reconstructed intersection.

1. Bear Mountain Extension and Stony Street
2. Stony Street and Old Crompond Road
3. NYS Route 35/U.S. Route 202 and Stony Street/BJ's-Staples Plaza Driveway
4. NYS Route 35/U.S. Route 202 and Old Crompond Road
5. NYS Route 35/U.S. Route 202 and Mohansic Avenue
6. NYS Route 35/U.S. Route 202 and Taconic State Parkway SB On/Off Ramp
7. NYS Route 35/U.S. Route 202 and Taconic State Parkway NB On/Off Ramp

Based upon a review of the traffic counts, the peak hours were generally identified as follows:

- | | |
|------------------------|--------------------|
| • Weekday Peak AM Hour | 7:15 AM – 8:15 AM |
| • Weekday Peak PM Hour | 5:00 PM – 6:00 PM |
| • Saturday Peak Hour | 12:00 PM – 1:00 PM |

The resulting Existing Traffic Volumes are shown on Figure No. 2 for the Weekday Peak AM Hour, Figure No. 3 for the Weekday Peak PM Hour and Figure No. 4 for the Saturday Peak Hour.

C. EXISTING PUBLIC TRANSPORTATION SERVICES (Appendix E)

Bus Service in the area is provided by the Westchester County Bee-Line Bus System operated by the Westchester County Department of Transportation. The locations of existing bus stops within the study area are shown on Figure No. 2. Local service is provided along NYS Route 35/U.S. Route 202 via the Route 15 Bus with the nearest bus



stop to the project located at the intersection of NYS Route 35/U.S. Route 202 and Stony Street. The bus stops at this location are positioned on both sides of NYS Route 35/U.S. Route 202 and service is included for both directions of travel.

The Route 15 Bus provides service from Downtown Peekskill continuing along Route 6 to Lexington Avenue and then continuing south to NYS Route 35/U.S. Route 202. The bus service continues to the east through the Town of Yorktown and continues south along Route 118 to Route 100 in Somers. It then connects with Route 9A further south. It terminates at the White Plains station (Metro-North Harlem Line). The Route 15 Bus Service is provided regularly during the AM and PM Hours and limited service is provided on Saturday. The Route 15 Bus Schedule and Map are included in Appendix E of this report.

Two other Westchester County Bee-Line busses provide service in the study area. These include the Route 10 Bus and the Route 77 Express Bus, however these busses do not serve the immediate area of the site. The Route 10 Bus provides commuter service between the Cortlandt Town Center and the Croton Harmon Train Station. Within the study area it has scheduled stops at the intersection of NYS Route 132 and NYS Route 35/U.S. Route 202 as well as along Commerce Street near the intersection with Downing Drive in Yorktown Heights. The Route 77 Express Bus is also a commuter bus, which runs between Carmel in Putnam County and White Plains. In the town of Yorktown the bus stops at several locations including FDR State Park and at the intersection of NYS Route 132 and U.S. Route 6 in Shrub Oak.

III. EVALUATION OF FUTURE TRAFFIC CONDITIONS

A. NO-BUILD TRAFFIC VOLUMES (Figure No. 5 through 13 and Table 1-O)

The Existing Traffic Volumes were increased by a growth factor of 2% per year to account for general background growth resulting in the Projected Traffic Volumes shown on Figures No. 5, 6 and 7. NYSDOT growth projections based on Average Annual Daily Traffic volume (AADT's) projections indicated a growth rate of less than 0.5% per year. However, in order to account for any miscellaneous additional background traffic growth and to account for any traffic from vacancies at area facilities as discussed in Section II.B above, a 2% per year growth rate was used for developing the background traffic projections.

In addition to the general background growth, traffic from other specific approved and/or potential developments in the area including the currently under construction and partly operating Crompond Crossings Development. The Crompond Crossing (partially occupied), a proposed CVS/Bank, the Staples Plaza/BJ's fueling and other expansion, the Costco Development, the Yorktown Temple and the Field Home Expansion. In addition, there are other parcels which are located within the Crompond Triangle, which are currently zoned as retail and could potentially be developed without any rezoning. These include the Nazzarro property and the Adrian/Mazzola/Mujaj properties. Table No. 1-O summarizes both the proposed and potential developments for the area. Note that for Costco, the higher trip generation estimates based on the sensitivity analysis as contained in the Costco FEIS were used in the evaluation contained herein. The Other Development Traffic Volumes are shown on Figures No. 8, 9 and 10. These volumes were added to the projected volumes to obtain the No-Build Traffic Volumes shown on Figures No. 11, 12 and 13.

Also, note that a separate analysis, as described in Section III-I.4, includes traffic from the potential development of the State Land property which has been rezoned to commercial and is located to the west on Route 202/35. Note that there is currently no site plan application for the development of this property.

B. SITE GENERATED TRAFFIC VOLUMES (Tables No. 1E, 1 and 1R)

Estimates of the amount of traffic to be generated by the various development parcels 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”, 9th Edition, 2012, based on the appropriate Land Use Categories. Table No. 1E summarizes the trip generation rates and corresponding total external site generated traffic volumes for the Weekday Peak AM, Peak PM and Saturday Peak Hours under existing zoning conditions. Table No. 1 and 1R show the traffic under the rezoned conditions for the Crompond Terraces and other parcels that are part of the rezoning action, respectively.

C. ARRIVAL/DEPARTURE DISTRIBUTION (Figures No. 14 and 15)

The traffic generated by the Crompond Terraces and the potential development on the other parcels affected by the rezoning were assigned to the roadway system based on a review of the existing traffic patterns and consideration of the development type and other access considerations. Figures No. 14 and 15 show the general anticipated Arrival and Departure Distributions. These were used to assign the traffic associated with the potential development traffic from Tables 1 and 1R to the roadway system.

D. BUILD TRAFFIC VOLUMES WITHOUT REZONING (Figures No. 17 through 22 and Table No. 1E)

The site generated traffic volumes for the existing zoning conditions for the various properties included as part of the rezoning application are shown in Table No. 1E, which indicates a total of approximately 30 single family dwelling units could be constructed on these properties. These volumes were assigned to the roadway network based on the arrival and departure distributions referenced above. The resulting site generated traffic volumes for each of the study area intersections are shown on Figures No. 16, 17 and 18 and for each of the peak hours, respectively. The site generated traffic volumes were then added to the No-Build Traffic Volumes to obtain the Build Traffic Volumes without rezoning. The resulting Build Traffic Volumes are shown on Figure No. 19 for the Weekday Peak AM Hour, Figures No. 20 for the Weekday Peak PM Hour and Figure No. 21 and for the Saturday Peak Hour.

E. BUILD TRAFFIC VOLUMES WITH REZONING (Figures No. 22 through 30)

The trip estimates for the parcels included in the rezoning petition were added to the roadway network based on the arrival and departure distributions. The volumes associated with the potential development on the other rezoned properties including Bauso and Antenaros properties (Figures 22, 23 and 24) and the proposed Crompond Terraces Development (Figures No. 25, 26 and 27) and the resulting “Build Traffic Volumes with Rezoning” are shown on Figures No. 28, 29 and 30.

F. DESCRIPTION OF ANALYSIS PROCEDURES

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

- **Signalized Intersection Capacity Analysis**

The capacity analysis for a signalized intersection was performed in accordance with the procedures described in the *2010 Highway Capacity Manual*, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service “A” represents the best condition and a Level of Service “F” represents the worst condition. A Level of Service “C” is generally used as a design standard while a Level of Service “D” is acceptable during peak periods. A Level of Service “E” represents an operation near capacity. In order to identify an intersection’s Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

- **Unsignalized Intersection Capacity Analysis**

The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the *2010 Highway Capacity Manual*. 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.

G. RESULTS OF ANALYSIS (Table No. 2)

Capacity analyses which take into consideration appropriate truck percentages, pedestrian activity and 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. The capacity analysis contained in Appendix D accounts for the most current lane geometry and traffic signal timings. All existing signal timings for the study area intersections were obtained from the New York State Department of Transportation. These were also verified by manually timing the signals in the field. The signal timings presented in the analysis are those obtained from NYSDOT.

Table No. 2 summarizes the results of the capacity analysis for the Existing, No-Build and Build Conditions. Appendix D contains copies of the capacity analysis conducted using the Synchro Version 8 analysis software, which also indicate the existing geometrics (including lane widths) and other characteristics for each of the individual intersections studied.

1. NYS Route 35/U.S. Route 202 and Bear Mountain Parkway Extension

The Bear Mountain Parkway Extension (BMP) intersects NYS Route 35/U.S. Route 202 at an unsignalized, “T” shaped intersection.

A capacity analysis was conducted for this intersection utilizing the Existing Traffic Volumes. The results of this analysis indicate that the intersection is currently operating at a Level of Service “F” on the southbound approach during each of the Peak Hours, while a Level of Service “B” or better is experienced for the eastbound left turn movement. It should be noted that due to the delays on the southbound approach during the PM Peak Hour the queues generally extend to the BMP intersection with Stony Street. This intersection was reanalyzed using the No-Build and Build Traffic Volumes and existing geometry. The results indicate that similar Levels of Service and operating conditions will be experienced during peak hours under future conditions.

The NYSDOT improvements in this area upgraded this intersection to improve operating conditions. The eastbound approach now consists of a separate left turn lane and two through lanes. The westbound approach consists of two through lanes with a shared right turn lane. The southbound BMP approach consists of a single lane, which allows right turn movements onto NYS Route 35/U.S. Route 202. This movement is striped as a channelized right turn movement with an acceleration lane in the westbound direction onto NYS Route 35/U.S. Route 202 for merging traffic. Left turns from the BMP to NYS Route 35/U.S. Route 202 were to be prohibited but only striping was used and it appears that additional “No Left Turn” signs should be posted. Also, the roadway traveling away from the intersection destined eastbound on the BMP toward Stony Street is now a single lane.

The NYSDOT improvement of the BMP connection to NYS Route 35/U.S. Route 202 eliminated the extensive queues which occurred during peak hours especially during the Weekday PM Peak Hour. This increase in capacity should make the direct movement from the TSP northbound to the BMP to NYS Route 35/U.S. Route 202 westbound more efficient and a more desirable path which has diverted some of the traffic which previously used the TSP northbound off ramp at NYS Route 35/U.S. Route 202.

2. Bear Mountain Parkway Extension and Stony Street

The Bear Mountain Parkway Extension (BMP) and Stony Street intersect at a signalized full movement intersection.

As part of the improvements recently constructed by the New York State Department of Transportation the geometry of the intersection has been modified so that the northbound and southbound approaches now consist of one lane in each direction with separate left turn lanes. The eastbound approach consists of a shared left turn/through lane and a separate right turn lane while the westbound approach remains as a single lane approach. The intersection operates at an overall Level of Service “C” or better during the AM, PM and Saturday Peak Hours under No-Build and Build conditions.

3. Stony Street and Old Crompond Road

This intersection is currently a “T” intersection with all approaches consisting of one lane. It is controlled by “Stop” signs on the eastbound Stony Street approach and the westbound Old Crompond Road approach. The intersection currently operates at a Level of Service “A” during peak periods. The analysis indicates that under future

No-Build and Build conditions, the intersection can be expected to operate at Levels of Service “C” or better. Restriping of the approaches at this location including new stop bars and centerline striping were identified in previous traffic studies completed for other area developments to improve existing conditions. It is expected that these will be coordinated with the improvements planned in association with the Crompond Crossing project which is currently under construction and whose access is located in this vicinity. In order to accommodate future development along on Old Crompond Road, it is anticipated that the sidewalk system would have to be extended from the CVS site and several portions of the existing roadway would have to be widened to provide increased pavement width and to address existing geometric constraints. Other improvements would include provision of turning lanes at individual access driveways along Old Crompond Road.

4. NYS Route 35/U.S. Route 202 and Stony Street/BJ’S - Staples Plaza

Stony Street intersects with NYS Route 35/U.S. Route 202 opposite the driveway to BJ’s/Staples Plaza to form a full movement, signalized intersection. As part of the New York State Department of Transportation Improvements, this intersection was upgraded with geometric improvements to eliminate the capacity constraint at the Pine Grove Court intersection, which currently impacts this intersection. An additional right turn lane was added to the eastbound approach. Also the westbound approach now has one through lane and a shared through/right turn lane.

Capacity analysis conducted utilizing the Existing and No-Build and Volumes indicates an overall Level of Service “B” will continue to be experienced during the AM Peak Hour, while an overall Level of Service “D” will be experienced during the PM and an overall Level of Service “E” will be experienced during the Saturday Peak Hour without any improvements. Associated with the Staples Plaza/BJ’s application, they will be improving the operation by restriping and modifying the traffic signal phasing. However, as other development continues to occur it appears that a widening of the Stony Street approach will also be needed to provide three lanes southbound. In addition, the preliminary site plans for the CVS indicate the inclusion of sidewalks along Stony Street and extending along their frontage on Old Crompond Road, however, Old Crompond Road should also be widened to provide an additional lane.

5. NYS Route 35/U.S. Route 202 and Old Crompond Road

Old Crompond Road and NYS Route 35/U.S. Route 202 intersect at an unsignalized “T” shaped intersection. The eastbound approach consists of two through lanes while the westbound approach is a single lane approach. The southbound Old Crompond Road approach consists of a single lane and is controlled by a “Stop” sign. Capacity analysis indicates that the left turn exiting Old Crompond Road at this intersection currently operates at a Level of Service “E” during the AM Peak Hour, while a Level of Service “F” is experienced during the PM and Saturday Peak Hours. It is expected that the left turn exiting Old Crompond Road at this intersection will experience a Level of Service “F” during each of the Peak Hours under future conditions both with and without the proposed project. It should be noted that these Levels of Service are only experienced for the southbound left turn movement, which also has the ability to be more easily completed via the signalized intersection of Stony Street and NYS Route 35/US Route 202.

As part of the improvements associated with the proposed Costco project an additional westbound through lane will be provided at this intersection. This lane will match with the westbound through lane extension from the BJ’s/Stony Street intersection which was constructed as part of the NYSDOT improvement project. With these improvements the left turn exiting Old Crompond Road at this intersection is expected to operate at a Level of Service “D” during the AM Peak Hour while it is expected to experience a Level of Service “F” during the PM and Saturday Peak Hours. The entering and exiting radius to/from NYS Route 35/US Route 202 should be improved. The potential signalization of the westerly leg of Old Crompond Road and Route 202/35 to accommodate left turns exiting from Old Crompond Road was also considered. This improvement would allow traffic from the Old Crompond Road corridor, which is destined to the east on Route 202/35 to be handled as a left turn exiting movement directly onto Route 202/3 so they would not have to traverse through the Stony Street and Old Crompond Road intersection onto Route 202/35. This improvement would require approval from NYSDOT, but would function as a simple two-phase traffic signal operation and would be coordinated with the other traffic signals along Route 202/35. No left turns would be allowed from Route 202/35 onto Old Crompond Road because of the lack of a separate left turn lane. The eastbound left turn movements from Route 202/35 destined to the Old Crompond Road corridor would continue to be accommodated at the Stony Street intersection. In addition to this new signal, the geometry at Route 202/35 and Old Crompond Road would also have to be upgraded to provide an improved radius for the entering and

exiting right turn movements as well as a potential separate right turn lane on Route 202 onto Old Crompond Road.

6. NYS Route 35/U.S. Route 202 and Mohansic Avenue

Mohansic Avenue intersects with NYS Route 35/U.S. Route 202 at a signalized, “T” shaped intersection. The NYS Route 35/U.S. Route 202 eastbound approach consists of one through lane and a separate right turn lane. This right turn lane also accommodates vehicles traveling through the intersection and continuing as a right turn lane onto the Taconic State Parkway Southbound entry ramp. The NYS Route 35/U.S. Route 202 westbound approach consists of two lanes in the form of a separate left turn lane and a separate through lane. The Mohansic Avenue northbound approach consists of a single lane for left and right turn movements. Capacity analysis conducted utilizing the Existing Traffic Volumes indicates that the intersection should be operating at an overall Level of Service “A” during the Weekday Peak AM Hour, however traffic is typically impeded during this time period due to the queuing at the adjacent southbound Taconic State Parkway ramp intersection. An overall Level of Service “D” is currently experienced during the Weekday Peak PM and an overall Level of Service “C” is currently experienced during the Saturday Peak Hour, but the operation is occasionally impacted by queuing from the adjacent southbound Taconic State Parkway Ramp intersection.

The intersection was reanalyzed utilizing the No-Build Traffic Volumes. The results of these capacity analyses indicate delays will increase and the impact of queuing from the southbound Taconic State Parkway ramp intersection will worsen until the improvements proposed by the Applicant for Costco are completed.

The Applicant for Costco has proposed that a separate eastbound left turn lane for traffic entering the site will be constructed and the driveway approach (southbound approach) will be constructed to consist of two lanes in the form of a separate left turn lane and a shared left/through/right turn lane. In addition, the Mohansic Avenue northbound approach will be widened to two lanes in the form of a shared through/left turn lane and a separate right turn lane. The westbound approach would also be widened to provide an additional through/right turn lane and the eastbound approach would be widened to be coordinated with improvements at the Taconic State Parkway Interchange as described below. Corresponding signal improvements will be made to accommodate the new intersection geometrics and interconnected with the adjacent Taconic State Parkway Ramp intersections. New pedestrian signals and crosswalks will be provided on all approaches as required by NYSDOT.

Capacity analysis conducted utilizing the No-Build and Build Traffic Volumes, assuming completion of the Costco funded improvements, indicates an overall Level of Service “A” will be experienced during the Weekday Peak AM Hour, an overall Level of Service “B” will be experienced during the Weekday Peak PM Hour and an overall Level of Service “D” will be maintained during the Saturday Peak Hour under the Build Conditions with or without the rezoning.

7. NYS Route 35/U.S. Route 202 and Taconic State Parkway Southbound Ramps

The Taconic State Parkway southbound off ramp intersects with NYS Route 35/U.S. Route 202 at a signalized intersection. The NYS Route 35/U.S. Route 202 eastbound approach consists of two lanes in the form of a separate through lane and a separate channelized right turn lane and the NYS Route 35/U.S. Route 202 westbound approach consists of two lanes in the form of a separate left turn lane and a separate through lane. The Taconic State Parkway southbound ramp consists of two lanes in the form of a separate left turn lane and a separate right turn lane. Capacity analysis conducted utilizing the Existing Traffic Volumes indicates that an overall Level of Service “C” is currently experienced during the Weekday Peak AM and Saturday Peak Hours while overall Level of Service “E” is experienced during the Weekday Peak PM Hour. It should be noted however that under existing conditions during peak hours, this intersection is affected by vehicle queues in the eastbound direction at the Northbound Ramp intersection.

The intersection was reanalyzed utilizing the No-Build Traffic Volumes. The results of these capacity analyses indicate that the construction, of the added westbound lane by the applicant for Costco as described above, which will also continue through this intersection and through the Mohansic Avenue intersection, will improve this condition. In addition, the Costco proposed improvements will provide a new eastbound left turn storage lane for left turn movements at the northbound ramp. This lane will begin prior to the southbound ramp intersection resulting in a total storage area in excess of 360 ft. which is a significant increase over the existing approximately 100 ft. eastbound left turn storage lane. This new lane will allow for vehicles destined to the Taconic State Parkway northbound to queue without impeding the eastbound traffic continuing past the interchange area. This will also result in the length of the westbound left turn lane increasing from approximately 100 ft. to 330 ft. A pedestrian crosswalk will also be provided on the north side of NYS Route 35/U.S. Route 202 across the exit ramp approach.

Capacity Analyses conducted utilizing the No-Build and Build Traffic Volumes with/or without the proposed rezoning with the addition of the above improvements as proposed by Costco indicate that the intersection will operate at an overall Level of Service “B” or better during each of the peak hours. .

8. NYS Route 35/U.S. Route 202 and Taconic Parkway Northbound Ramps

The Taconic Parkway northbound ramps intersect with NYS Route 35/U.S. Route 202 at a signalized intersection. The NYS Route 35/U.S. Route 202 eastbound approach consists of two lanes in the form of a separate left turn lane and separate through lane and the NYS Route 35/U.S. Route 202 westbound approach consists of one lane in the form of a shared through/right turn lane. The Taconic State Parkway northbound ramp consists of two lanes in the form of a separate left turn lane and a separate right turn lane. Capacity analysis conducted utilizing the Existing Traffic Volumes indicates that an overall Level of Service “D” is currently experienced during the Weekday Peak AM Hour, an overall Level of Service “F” is currently experienced during the Weekday Peak PM and Saturday Peak Hours. During the PM Peak Hour, westbound traffic on NYS Route 35/U.S. Route 202 sometimes extends past the NYS Route 132 intersection.

The Applicant for Costco identified certain improvements which would be funded and constructed in association with that proposed store. These include the reconstruction of the area between Strang Boulevard and Old Crompond Road to provide an additional westbound through lane. A new eastbound left turn storage lane will be constructed to provide additional storage area for vehicles entering the Taconic State Parkway northbound, increasing the existing storage lane length from approximately 100’ to 360’, which will reduce delays to through vehicles in the eastbound direction. Note that these improvements will also result in the lengthening of the westbound left turn lane at the southbound ramp as described above. Also, a pedestrian crosswalk will be provided on the north side of NYS Route 35/U.S. Route 202 crossing the entry ramp approach. The existing traffic signal will have to be upgraded to reflect the improved geometry. These improvements will also allow a reallocation of the signal green time to help alleviate existing queuing problems at this intersection. With these improvements and included signal coordination, improved Levels of Service will be experienced along this section of NYS Route 35/U.S. Route 202 during the peak hours under No-Build and Build Conditions.

H. OTHER POTENTIAL TRANSPORTATION IMPROVEMENTS

1. ROUTE 202/35/6 AND BEAR MOUNTAIN PARKWAY SUSTAINABLE DEVELOPMENT STUDY IMPROVEMENTS

The *Route 202/35/6 and Bear Mountain Parkway Sustainable Development Study* had identified a series of recommended roadway upgrade improvements, which would be completed by NYSDOT in the future as well as signal timing improvements to accommodate existing and future traffic volumes in the area. Some of those specific to the NYS Route 35/U.S. Route 202 corridor and the intersections analyzed in this report include the following.

- **Taconic State Parkway Interchange Improvements**

When the Taconic State Parkway was reconstructed by NYSDOT, the bridge structure crossing NYS Route 35/U.S. Route 202 corridor was designed to accommodate up to six lanes crossing under the Taconic State Parkway on the NYS Route 35/U.S. Route 202 corridor. The typical section included in the original construction drawings included two through lanes per direction plus two turn lanes. (See section H.6, 7 and 8 for a description of the improvements which are proposed to be funded and constructed by the applicant for the proposed Costco) The *Route 202/35/6 and Bear Mountain Parkway Sustainable Development Study* had considered these improvements as well as other ramp improvements. It also identified the need for additional eastbound and westbound through lanes at the Mohansic Avenue intersection. There is currently no scheduled timetable for the completion of these improvements.

- **NYS Route 35/U.S. Route 202 Center Turn Lane**

The *Route 202/35/6 and Bear Mountain Parkway Sustainable Development Study* proposed the construction of a center turn lane or wide median that could contain left turn bays on NYS Route 35/U.S. Route 202 between the Bear Mountain Parkway in Cortlandt and the Taconic State Parkway Ramps in Yorktown. This turn lane would allow for access to the businesses and roadways along this section as well as improved through capacity by removing the left turn movements from the through lanes. As mentioned previously the NYSDOT Improvements currently under construction will include a center turn lane between Pine Grove Court and



the Parkside Corner shopping center to the west. There are currently no plans to extend this turn lane to the Bear Mountain Parkway in Cortlandt.

- Bear Mountain Parkway Connection

As a long term future improvement the *Route 202/35/6 and Bear Mountain Parkway Sustainable Development Study* identified the need to connect the eastern and western sections of the Bear Mountain Parkway with a limited access two lane roadway. This project (PIN 800404) is currently listed as a future development by the New York State Department of Transportation.

2. TOWN OF YORKTOWN COMPREHENSIVE PLAN

The Town of Yorktown adopted a new comprehensive plan in 2010 which defined policies to be used in the planning and improving of the Town to support future growth. The transportation portion of the Comprehensive Plan restated many improvements recommended in the *Route 202/35/6 and Bear Mountain Parkway Sustainable Development Study* many of which are described above or in previous sections of this report as well as making new recommendations for improvements throughout the Town.

I. OTHER CONSIDERATIONS

1. Potential Impacts on Bee-Line Bus Service

The closest existing bus stop to the site is located at the intersection of NYS Route 35/U.S. Route 202 and Stony Street and Staples Plaza. A bus stop is located on both sides of NYS Route 35/U.S. Route 202. The pedestrian/bicycle connection that was constructed as part of the NYS Route 35/U.S. Route 202 improvements together with those proposed by Costco will provide a sidewalk connection along Route 202/35 to the bus stops. The upgrading of Old Crompond Road including increased width and sidewalks as discussed in the section below would also provide the opportunity for the Beeline bus to also use this roadway as an alternate to stopping on Route 35/202.

2. Consideration of Bike and Pedestrian Traffic

According to information obtained from the Sustainable Development Study, the Town of Yorktown Comprehensive Plan and the Mid-Hudson South Region Bicycle and Pedestrian Master Plan there is a long term plan for a walking/bicycle path to connect Yorktown Heights with the Bear Mountain Parkway Annsville Circle. The western portion of the trail will be built on Bear Mountain Parkway and Bear Mountain Parkway Extension right-of-way land. Near the Taconic State Parkway it will utilize an existing pedestrian overpass to connect to Strang Boulevard. The path will continue along Strang Boulevard to the south to connect with FDR State Park. From here the path will join a Town spur that will connect with the North County Trailway via Downing Drive. Consistent with the recommendations of the Town of Yorktown Comprehensive Plan, the Sustainable Development Study and the NYSDOT's policy for the treatment of bicycle and pedestrian paths, associated with the proposed Costco funded road widening in the vicinity of the TSP interchange, the provision of a sidewalk on NYS Route 35/U.S. Route 202 connecting to Strang Boulevard with a pedestrian signal controlled crosswalk to the FDR State Park will be provided subject to review and approval by NYSDOT. This would provide a connection from the site to the proposed trail way through FDR Park and along Strang Boulevard.

3. Route 202/35/6 and Bear Mountain Parkway Sustainable Development Study Improvements

Several other intersections which had been identified for potential improvements as part of the Route 202/35/6 and Bear Mountain Parkway Sustainable Development Study and the Town of Yorktown Comprehensive Plan (see Section III.F of this report) should continue to be explored by the Town of Yorktown and NYSDOT to ensure that these improvements are completed in the future to accommodate additional traffic in the area. This includes the center turn lane that was constructed by NYSDOT between Pine Grove Court and the Parkside Corner shopping center. It should be noted that in association with other developments in the area of Garden Lane, conceptual plans for constructing turn lanes have been developed and it is expected that the Town will continue to coordinate these with NYSDOT (see Drawing CP-3 contained in Appendix F).



4. Consideration of State Land Development (Figures No. 31 through 39 and Appendix G)

A separate analysis was prepared to consider the potential traffic from the State Land property, which has been rezoned to accommodate commercial development. Although no site plan application is currently pending for this site, Appendix G contains the analysis of the development of an approximately 200,000 s.f. retail complex. Figures No. 31 through 39 show the volumes for this potential future condition.

Associated with this development, access and other related improvements would have to be completed to accommodate that additional traffic. This would possibly include the widening of the Taconic State Parkway northbound off ramp at Route 202 to provide a double left turn lane. It should be noted that as a result of the construction of the additional westbound through lane proposed by Costco NYS Route 35/U.S. Route 202 would be wide enough to accommodate a dual left turn exit from the ramp. In order to accomplish this, the ramp approach would have to be upgraded from a two lane to a three lane cross section. The capacity analysis results, which are included in Appendix "G", indicate that the intersection would experience shorter delays for vehicles exiting the Taconic State Parkway turning left onto NYS Route 35/U.S. Route 202 with the additional left turn lane.



IV. SUMMARY AND CONCLUSION

Based on the analysis contained herein, in addition to the traffic and roadway improvements that are already planned to be completed by the proposed Costco development, certain other improvements will be required to accommodate other planned or potential developments in the area even without the implementation of the proposed rezoning referenced herein.

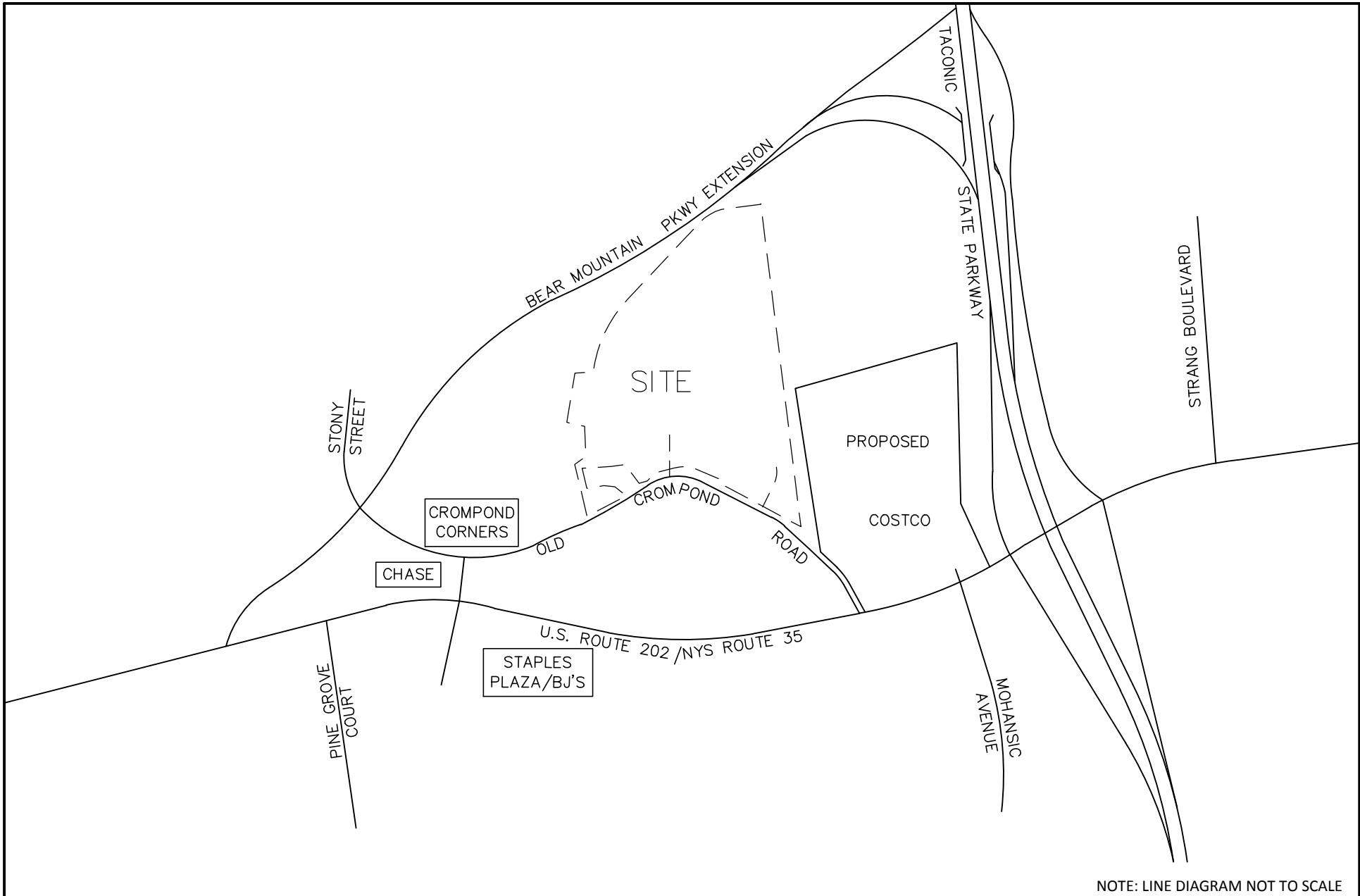
With respect to implementation of the recommended roadway and pedestrian improvements summarized in this report for the area as shown on the drawing entitled “Overall Area Conceptual Traffic and Pedestrian Improvement Plan” including those along Old Crompond Road and Stony Street, the Town could require individual projects to undertake or contribute financially towards these improvements to ensure that they are implemented as needed and are not the sole responsibility of one particular project.



***PROPOSED BEAR MOUNTAIN TRIANGLE
REZONING AND CROMPOND TERRACES***

APPENDIX A

FIGURES



NOTE: LINE DIAGRAM NOT TO SCALE



Consulting, Municipal & Environmental Engineers
 Planners ■ Surveyors ■ Landscape Architects
 State of N.Y. Certificate of Authorization: 0000172

New Jersey New York Pennsylvania Virginia
 Customer Loyalty through Client Satisfaction

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CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK

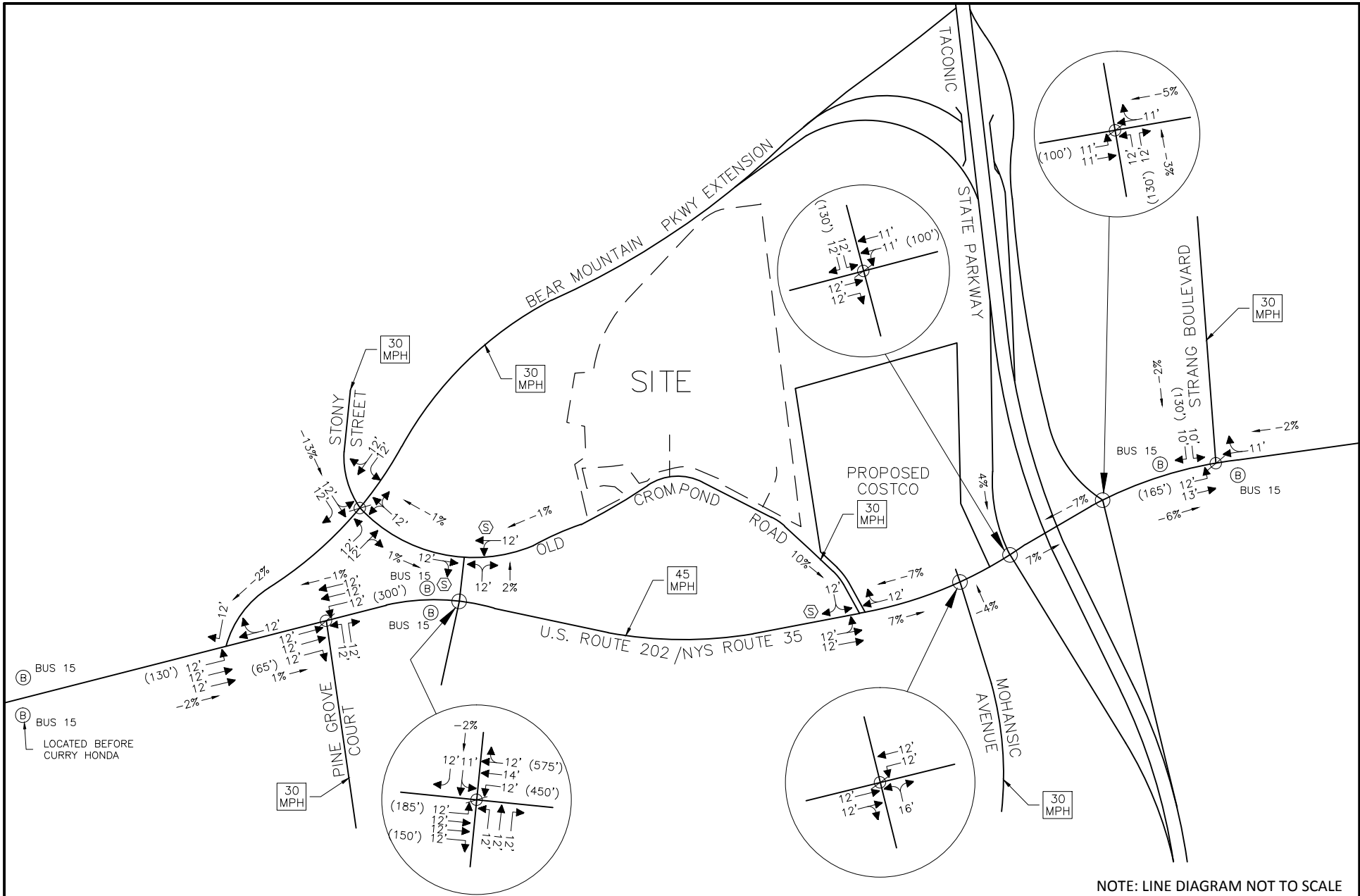
SITE LOCATION MAP



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

1



NOTE: LINE DIAGRAM NOT TO SCALE



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**CROMPTON TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

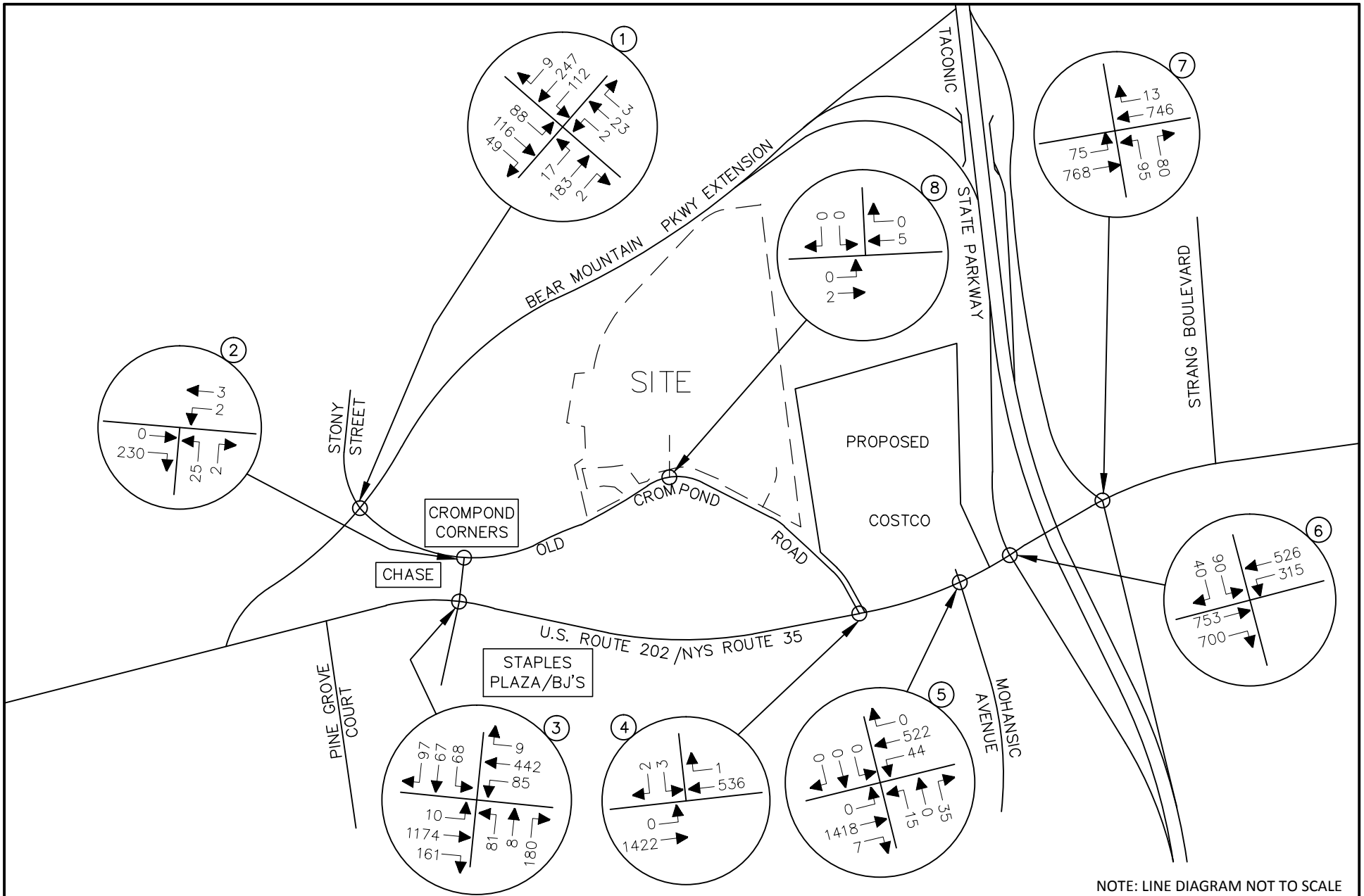
EXISTING GEOMETRY



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

1A



NOTE: LINE DIAGRAM NOT TO SCALE



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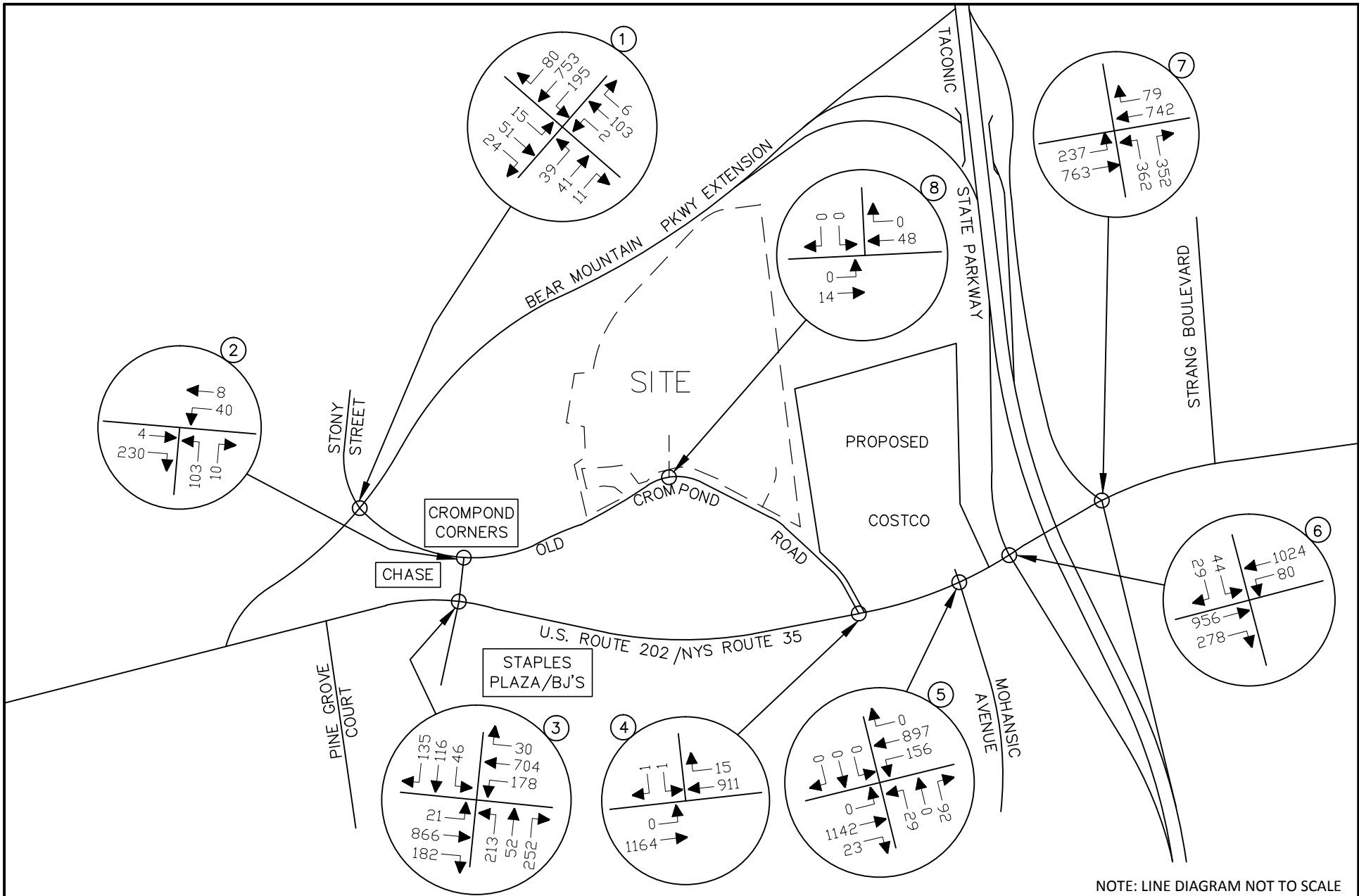
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**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**2014 EXISTING TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	
2	



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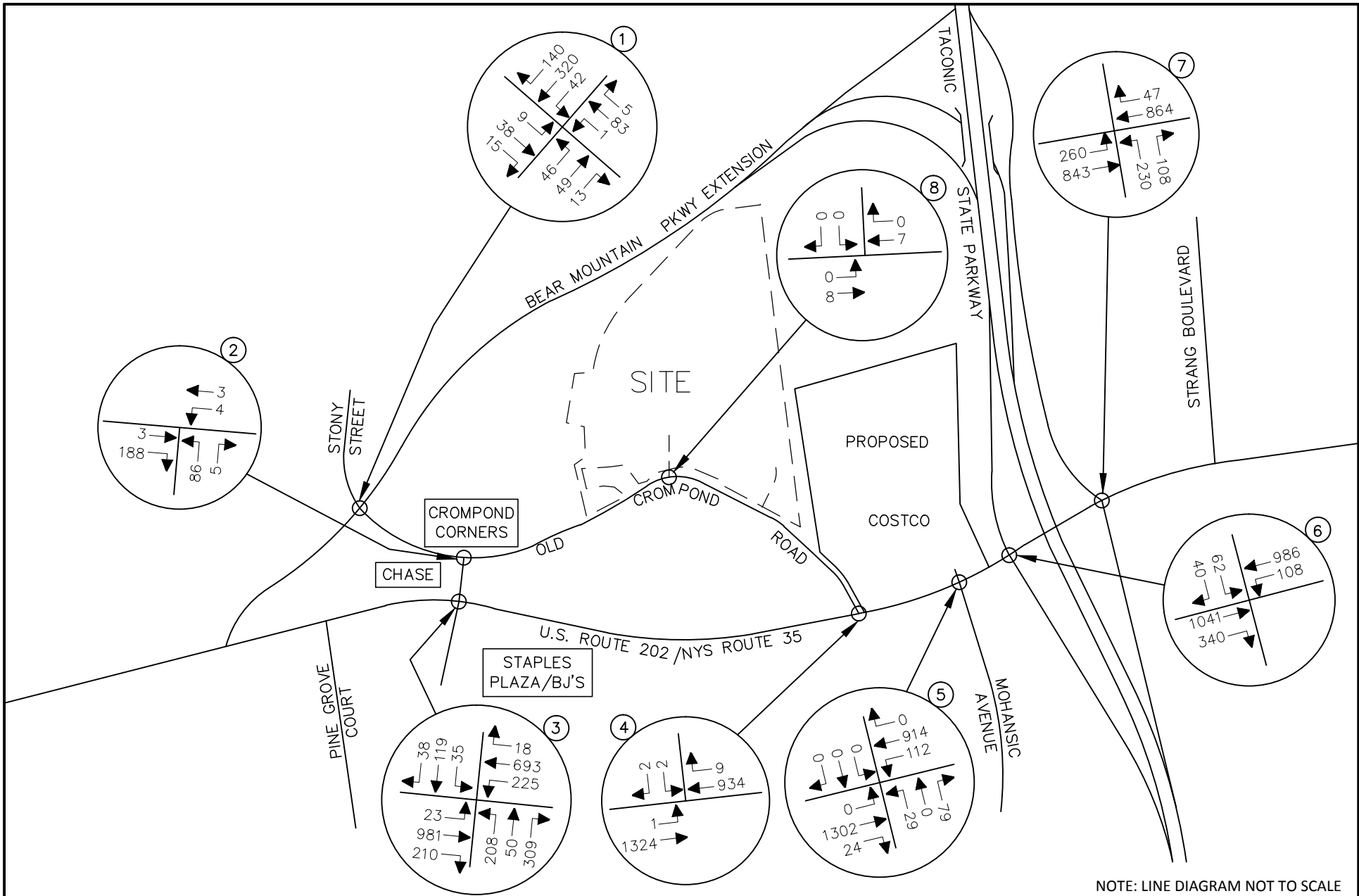
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**2014 EXISTING TRAFFIC VOLUMES
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
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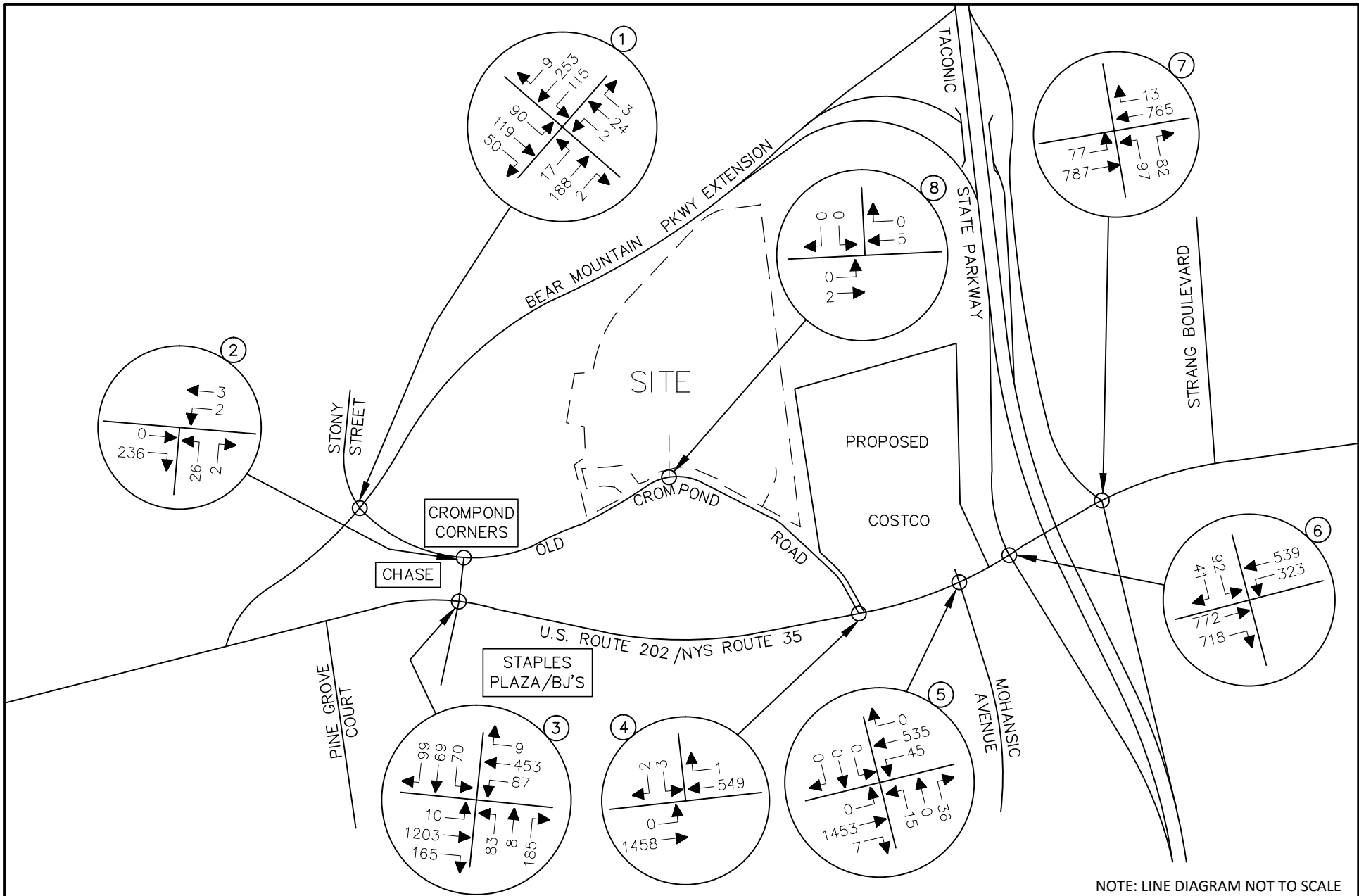
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**2014 EXISTING TRAFFIC VOLUMES
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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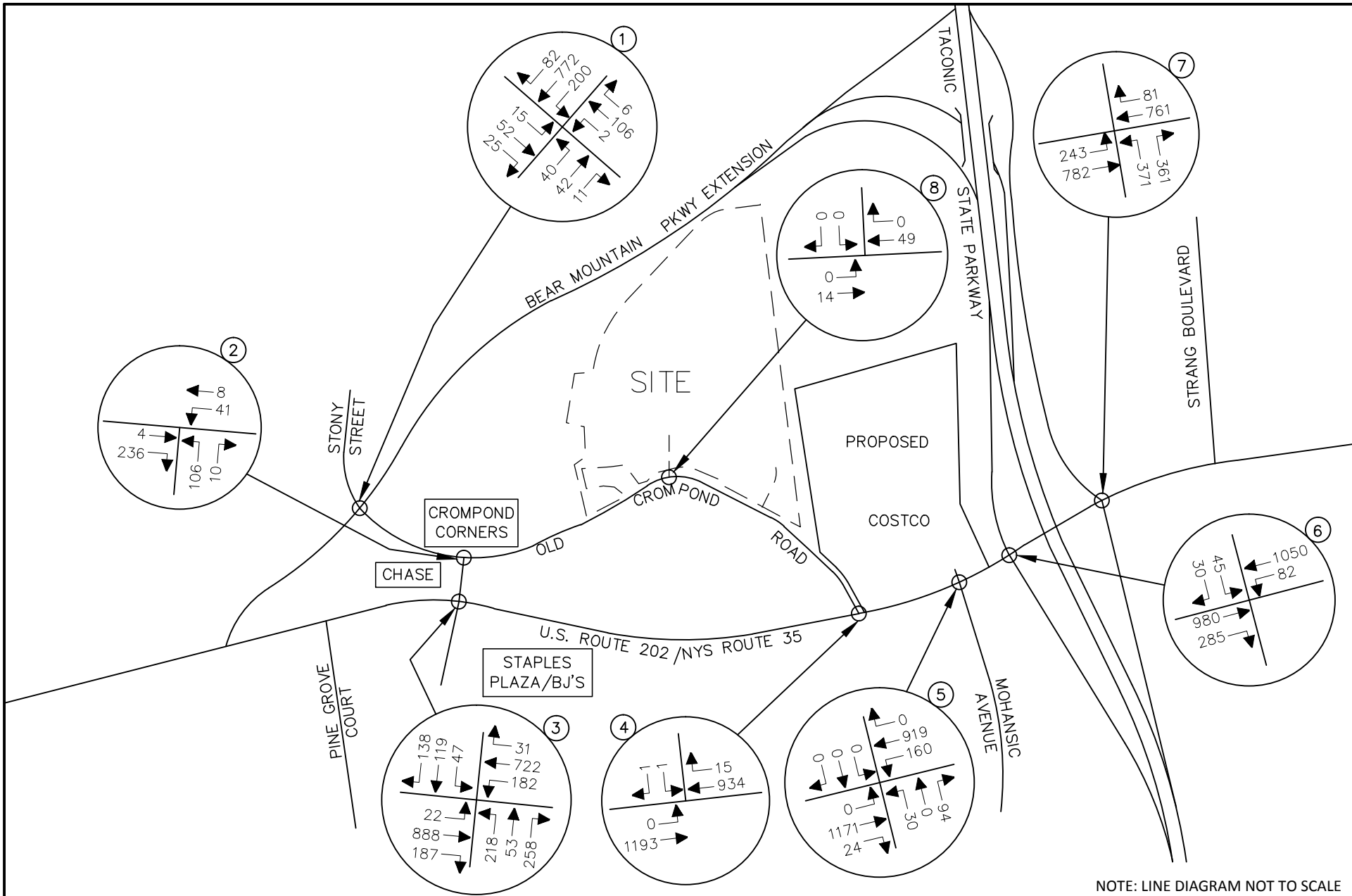
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 YORKTOWN, NEW YORK**

**2019 PROJECTED TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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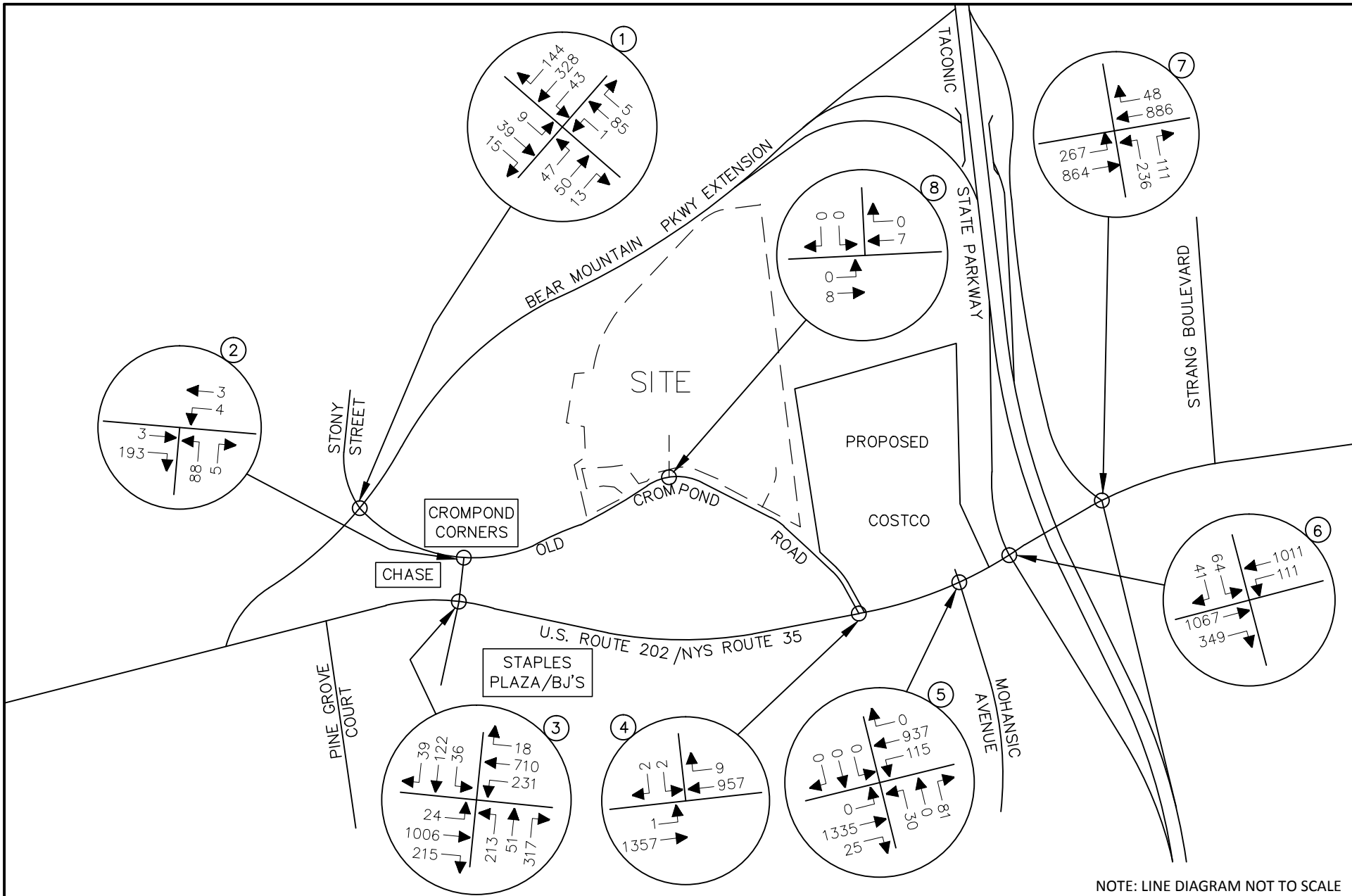
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**2019 PROJECTED TRAFFIC VOLUMES
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
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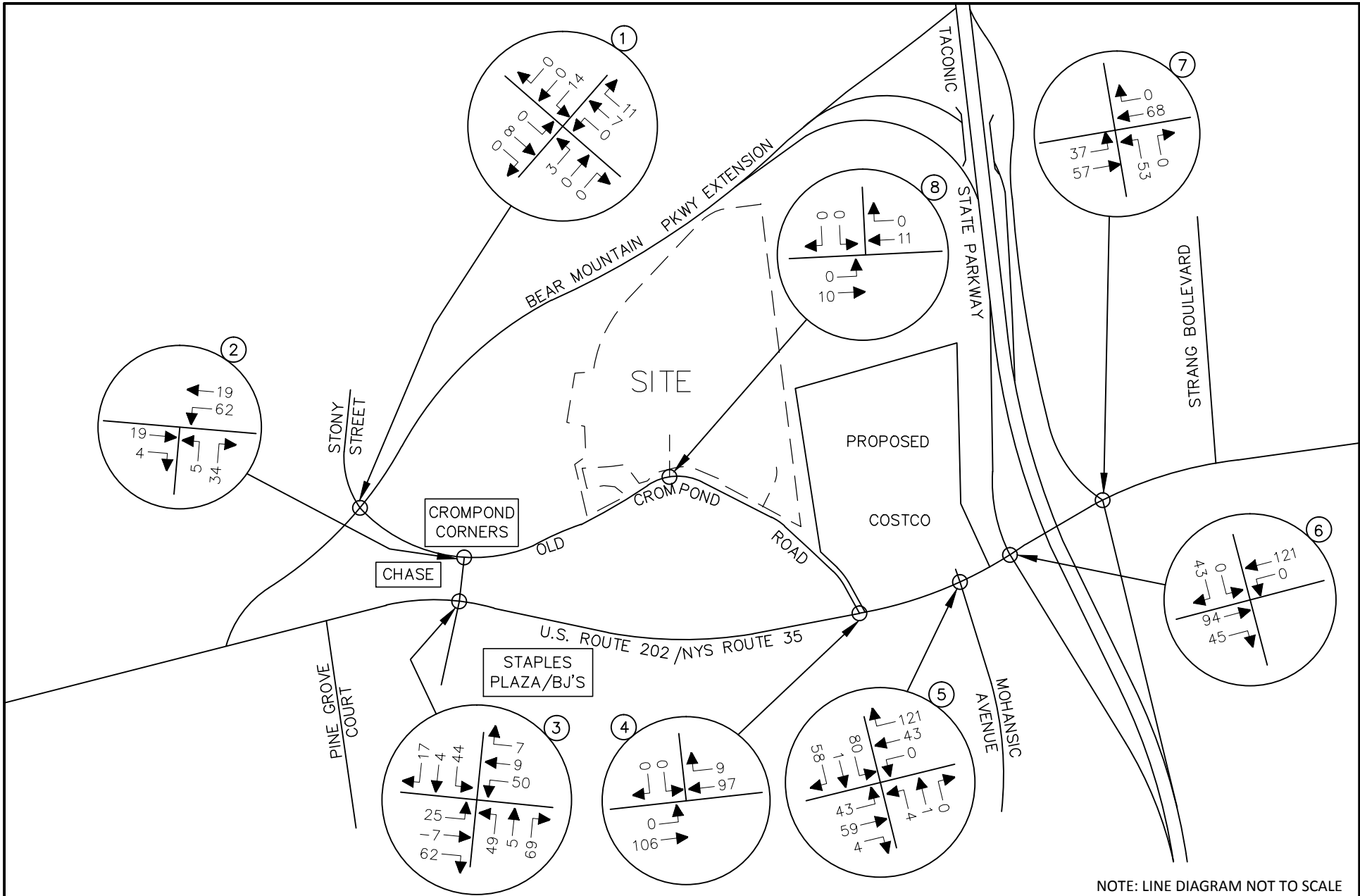
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**2019 PROJECTED TRAFFIC VOLUMES
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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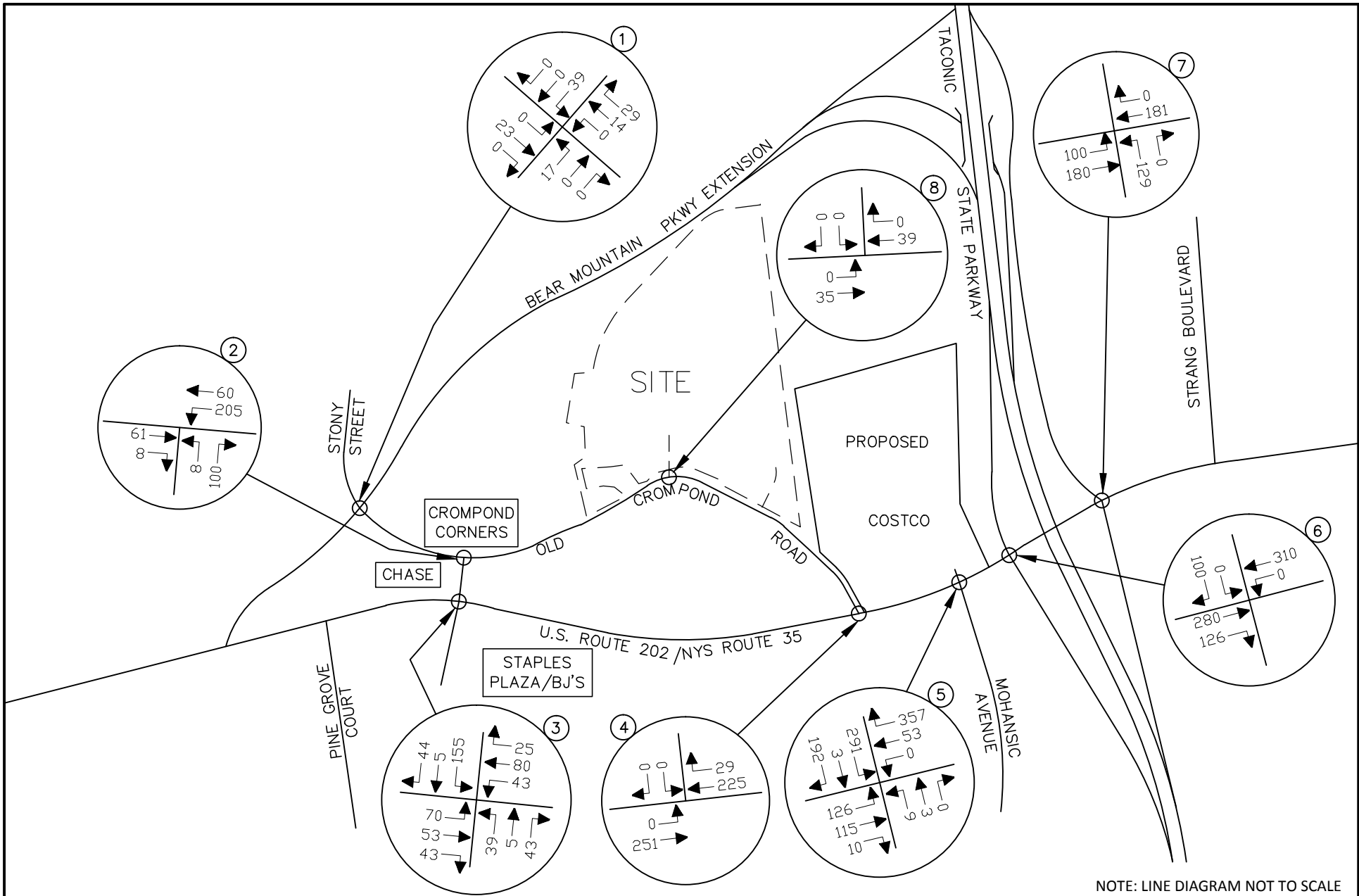
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 YORKTOWN, NEW YORK**

**OTHER DEVELOPMENT TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR**



JOB NUMBER: 13001463A DATE: 4/2/15

FIGURE NUMBER:



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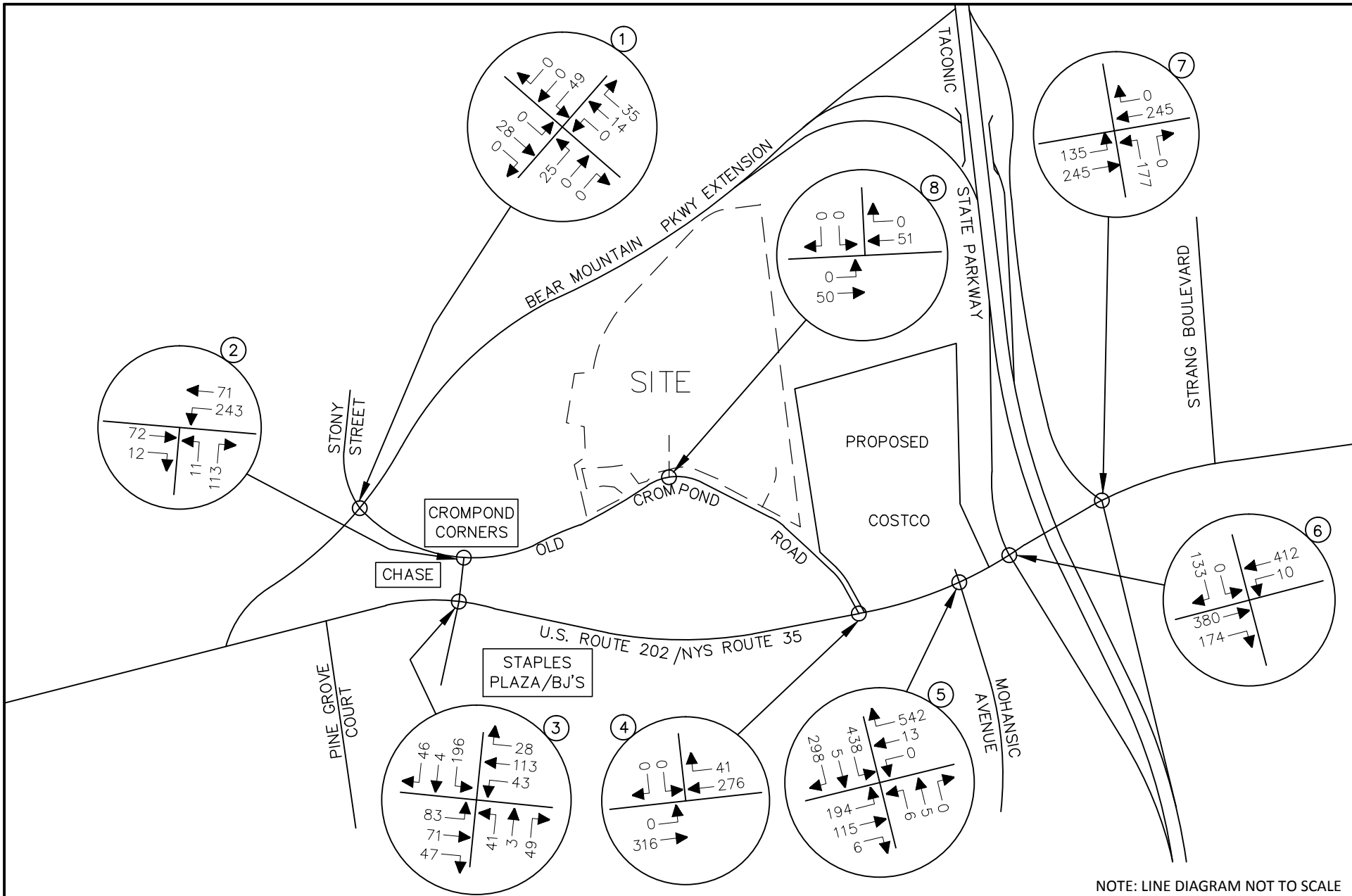
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**OTHER DEVELOPMENT TRAFFIC VOLUMES
 WEEKDAY PEAK PM HOUR**



JOB NUMBER: 13001463A DATE: 4/2/15

FIGURE NUMBER:



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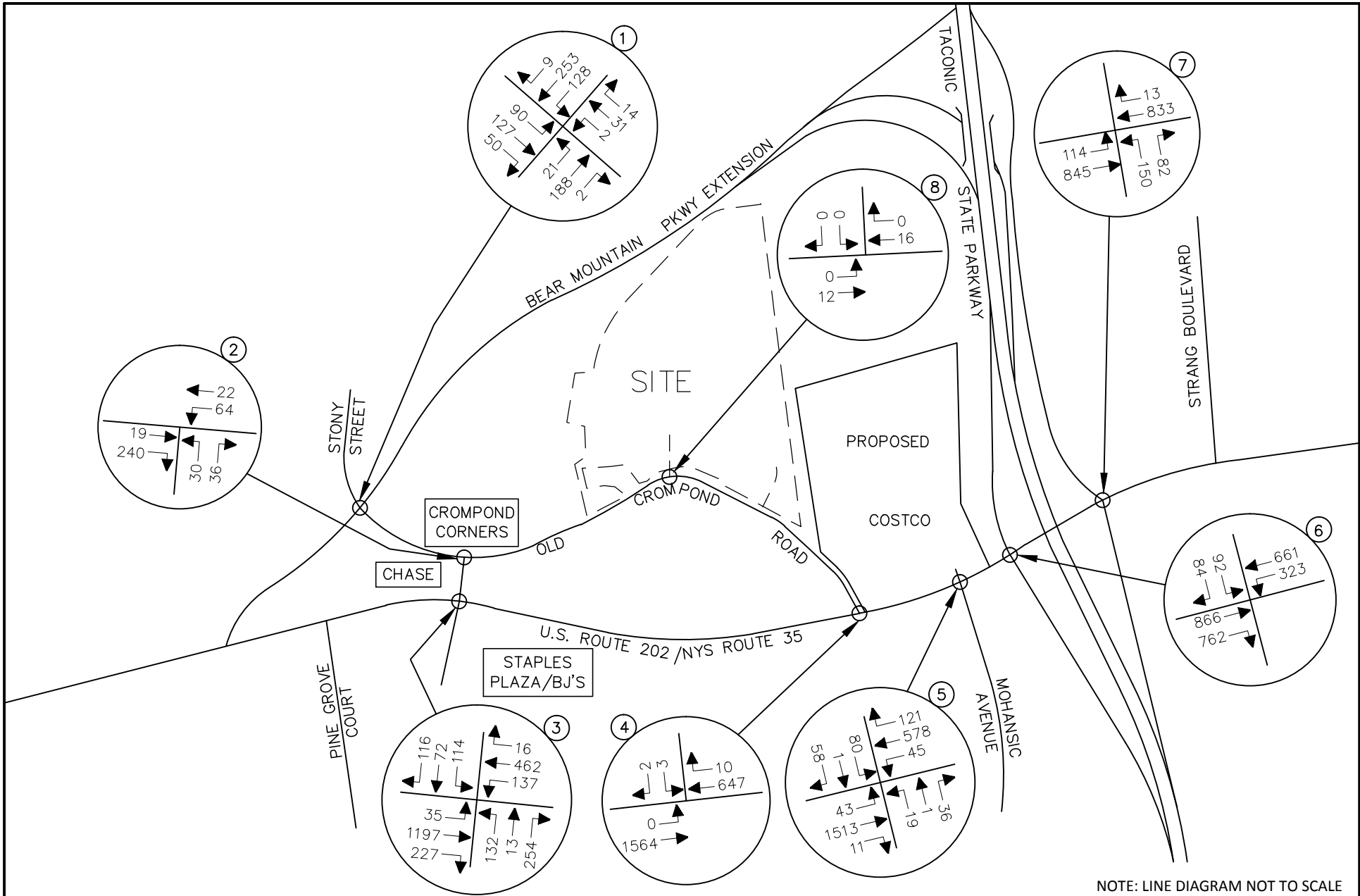
**OTHER DEVELOPMENT TRAFFIC VOLUMES
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

10



NOTE: LINE DIAGRAM NOT TO SCALE



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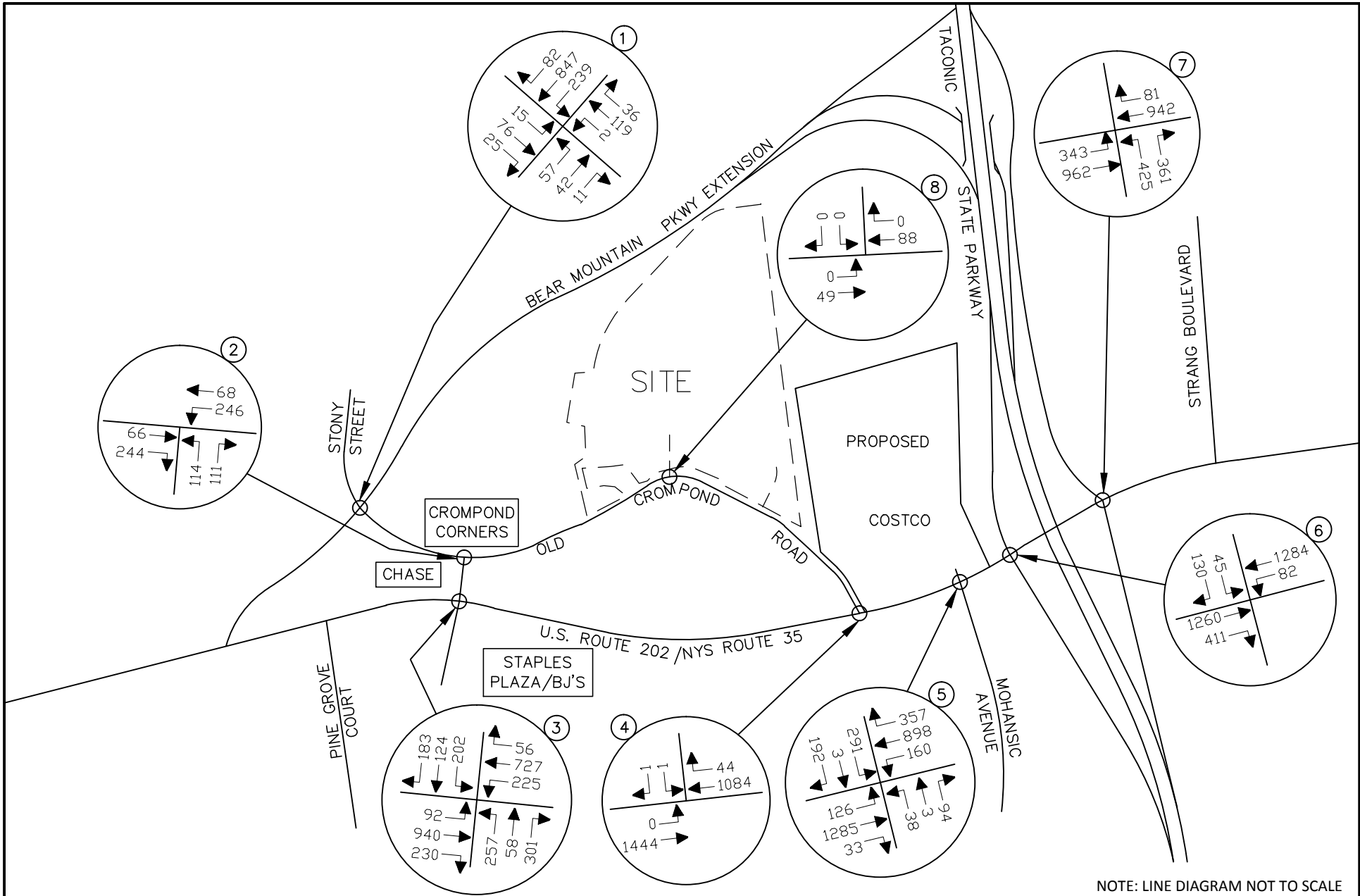
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**2019 NO-BUILD TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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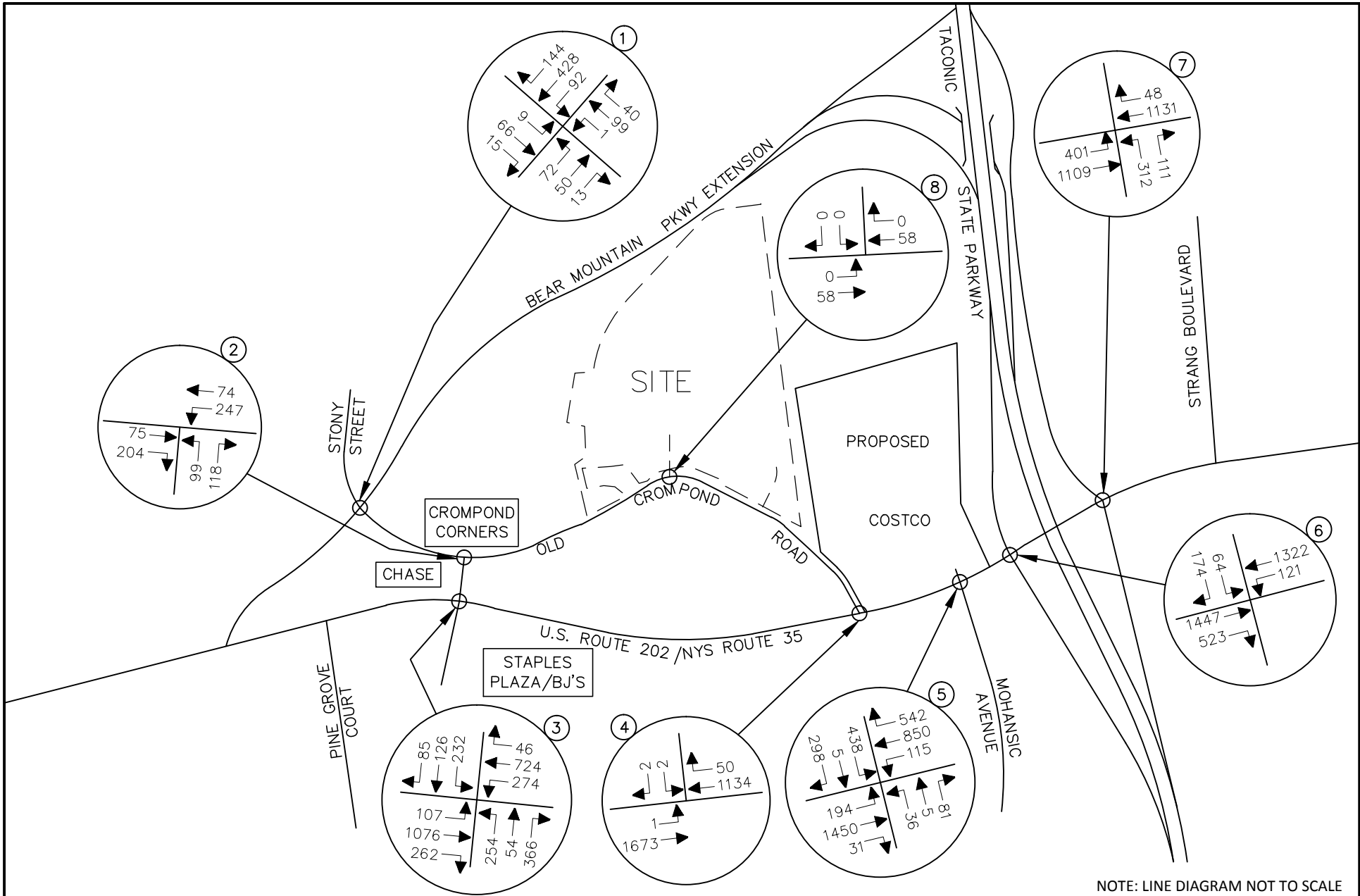
**2019 NO-BUILD TRAFFIC VOLUMES
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

12



NOTE: LINE DIAGRAM NOT TO SCALE



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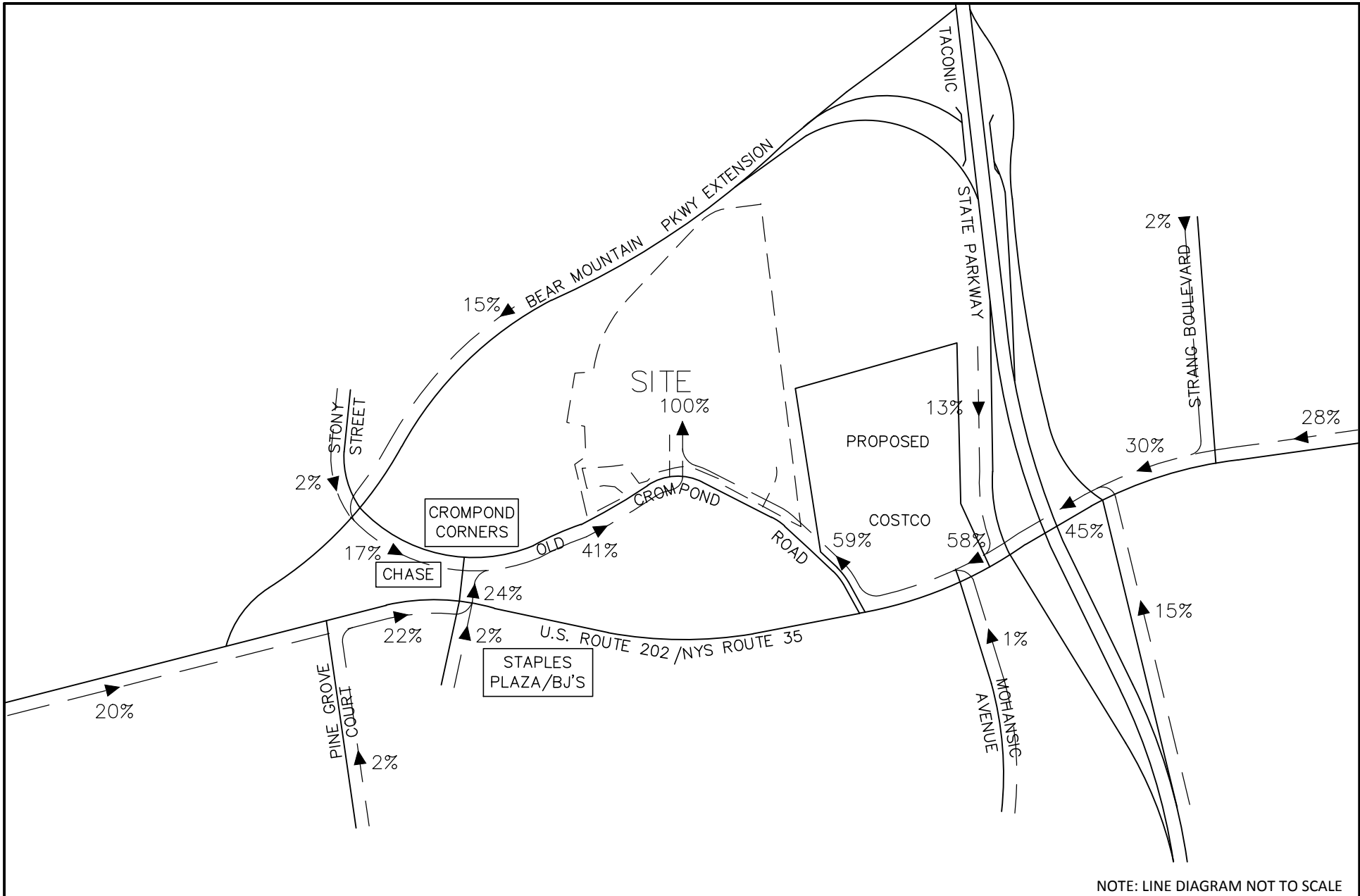
**2019 NO-BUILD TRAFFIC VOLUMES
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

13



NOTE: LINE DIAGRAM NOT TO SCALE



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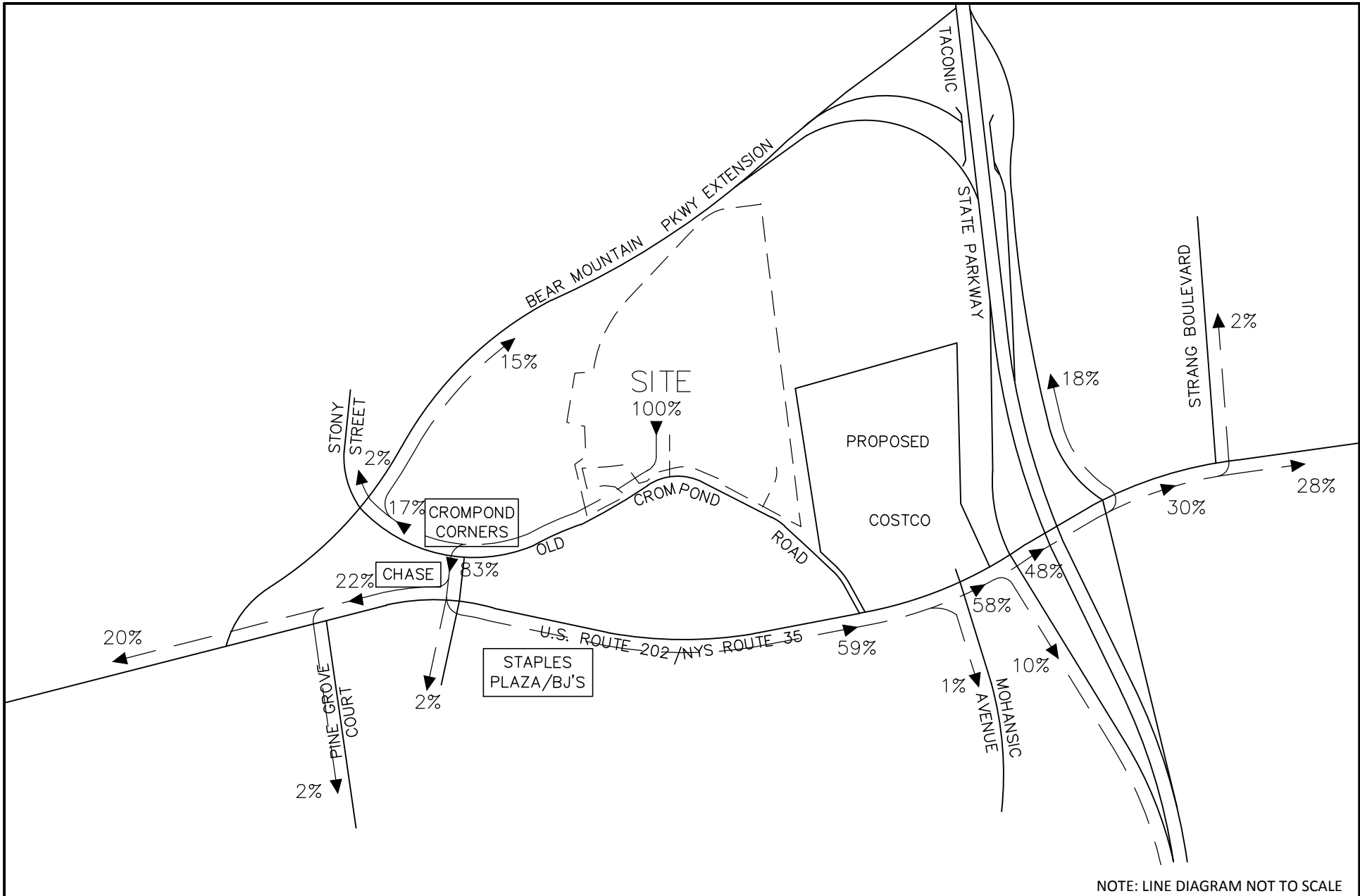
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JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

14



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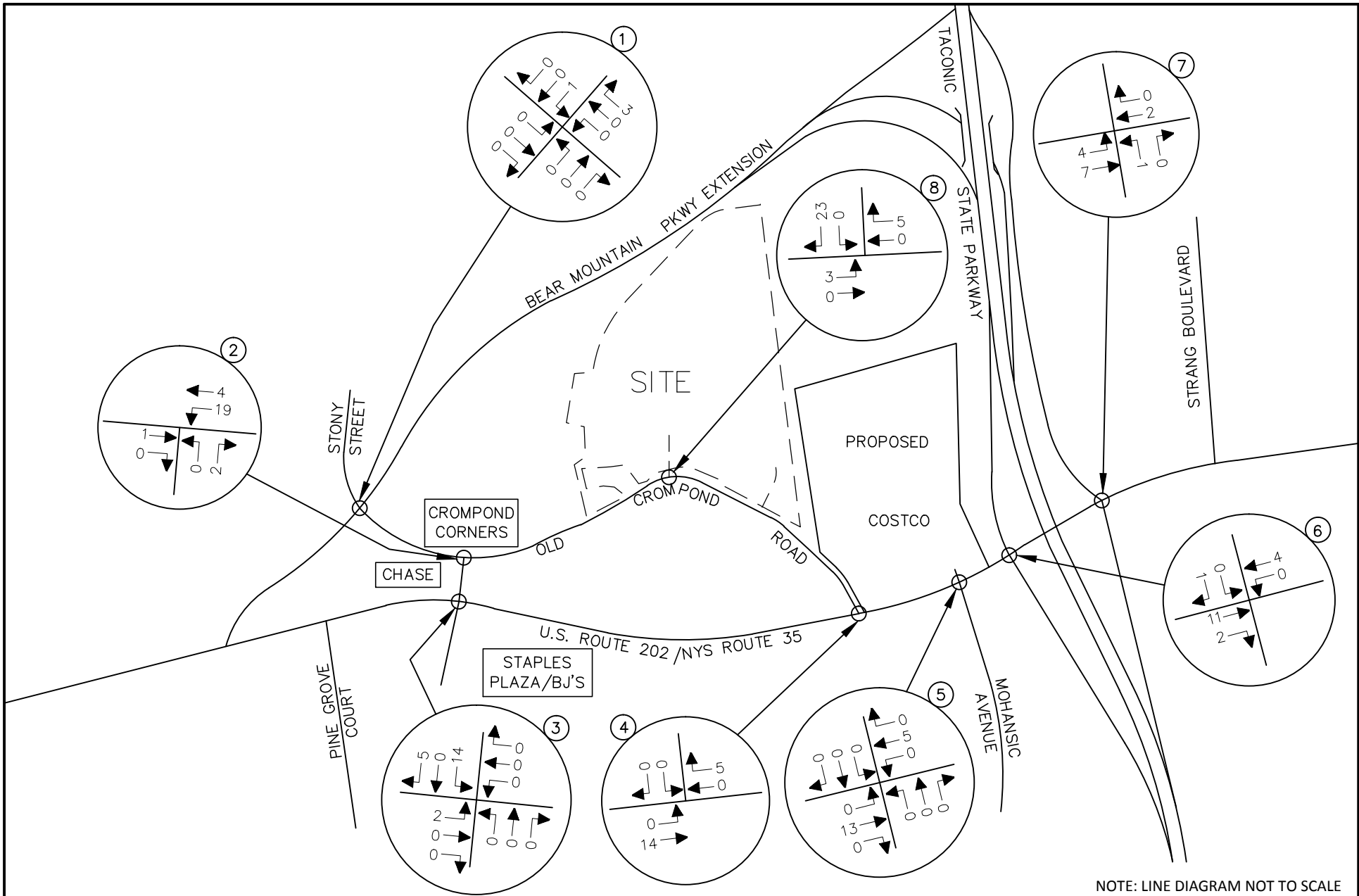
DEPARTURE DISTRIBUTION



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

15



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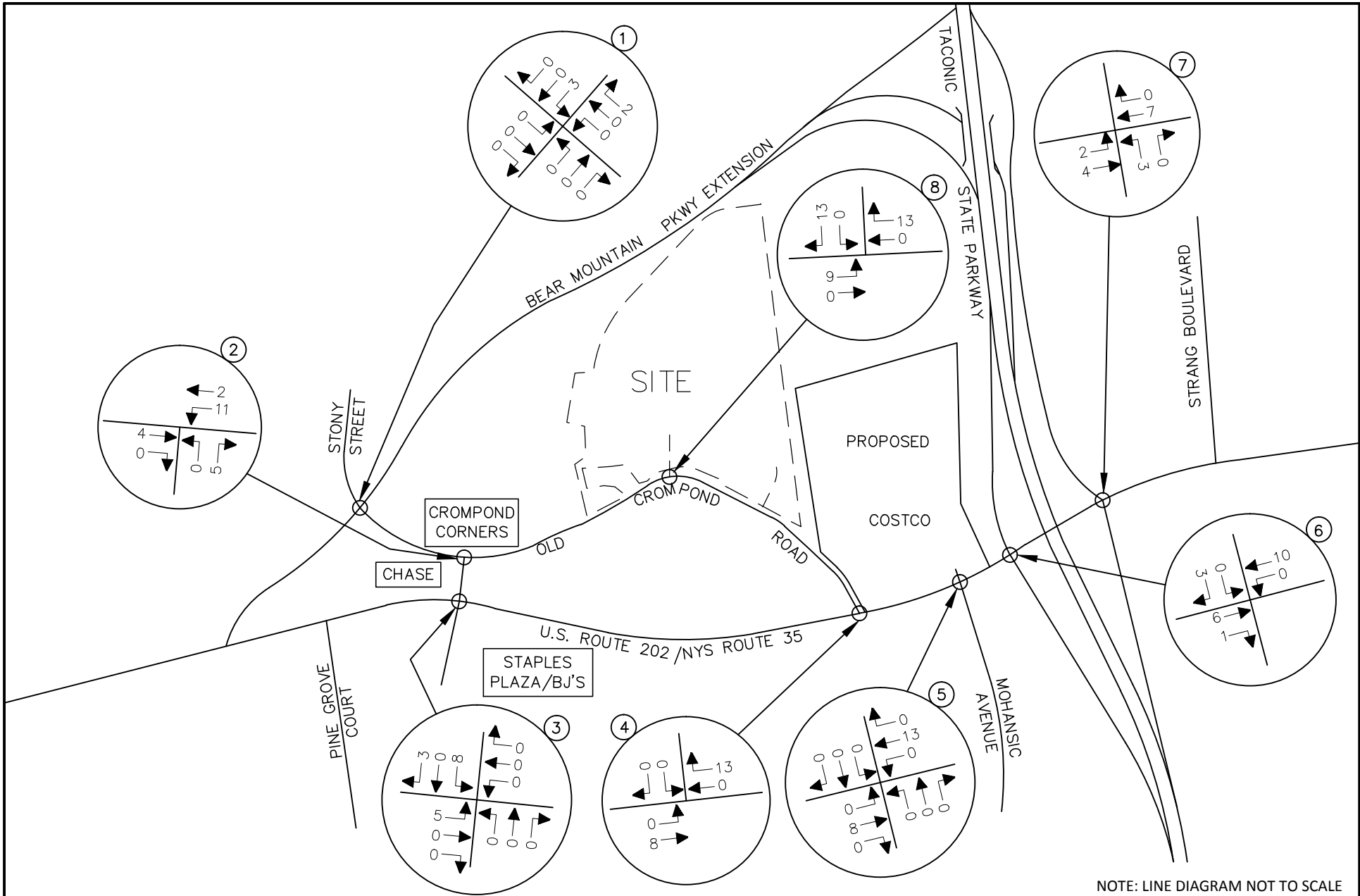
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**CROMPTON TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**SITE GENERATED TRAFFIC VOLUMES
 (EXISTING ZONING)
 WEEKDAY PEAK AM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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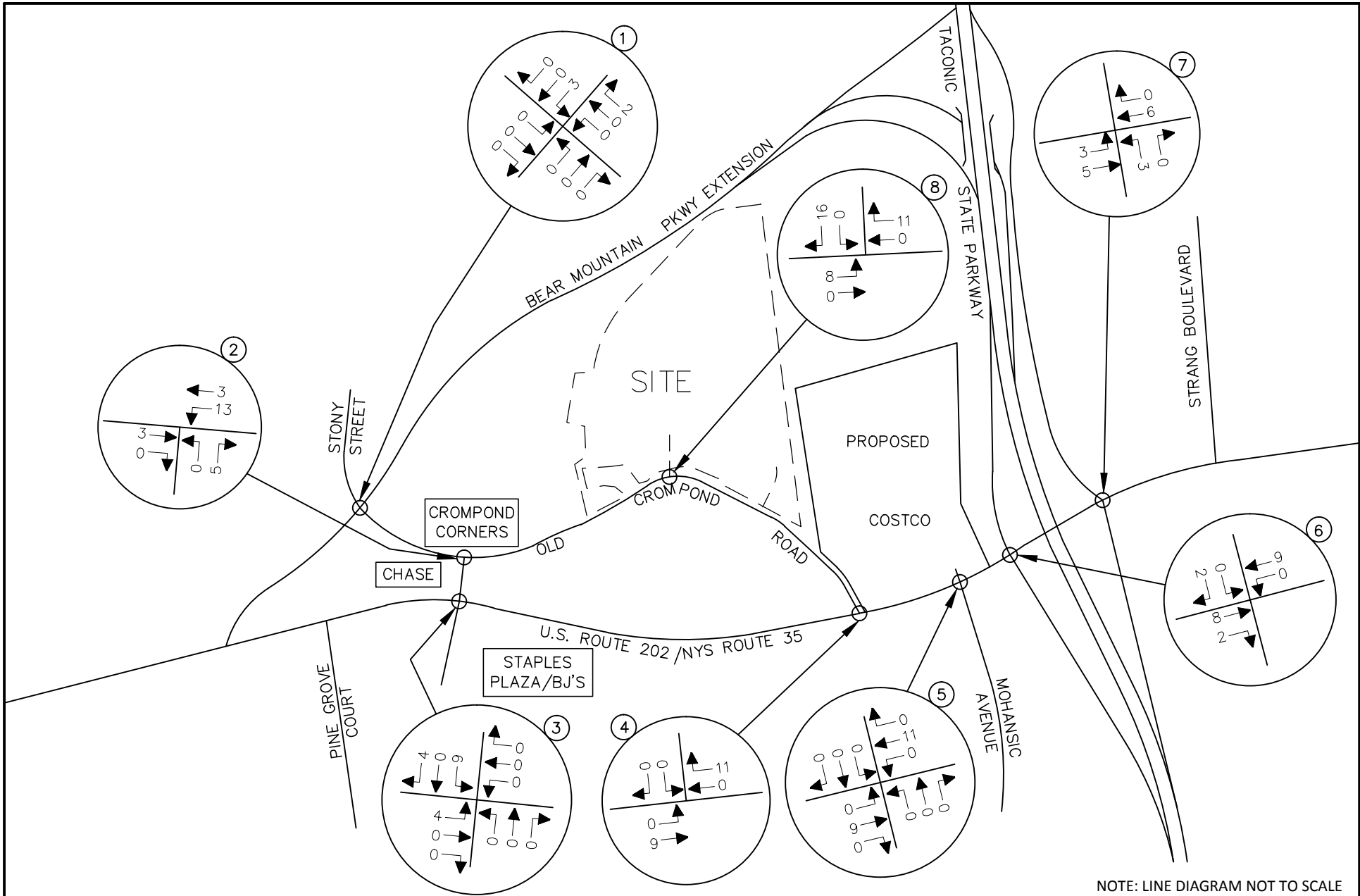
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**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**SITE GENERATED TRAFFIC VOLUMES
 (EXISTING ZONING)
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



NOTE: LINE DIAGRAM NOT TO SCALE



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 Customer Loyalty through Client Satisfaction

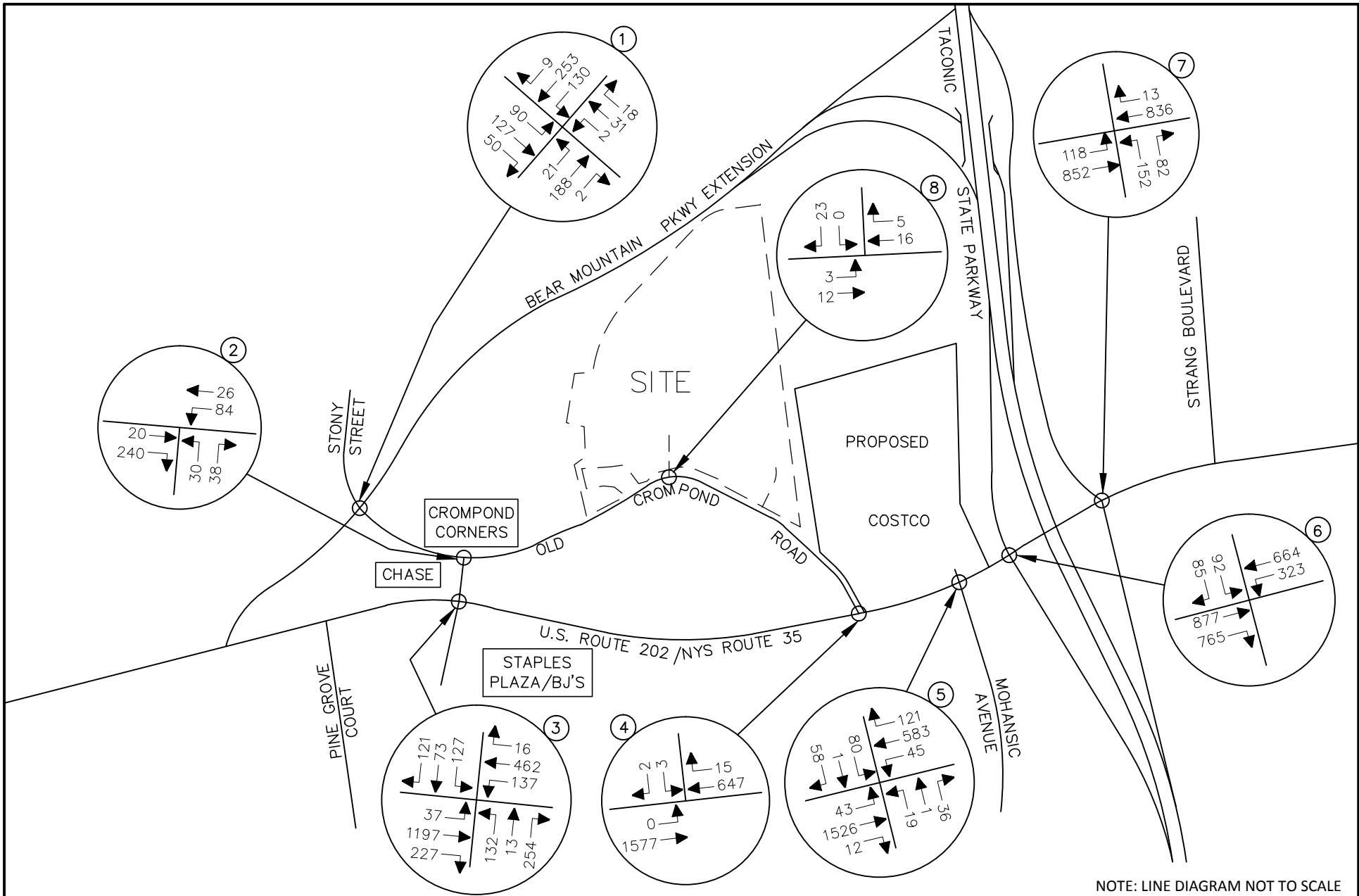
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**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**SITE GENERATED TRAFFIC VOLUMES
 (EXISTING ZONING)
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
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FIGURE NUMBER:	
18	



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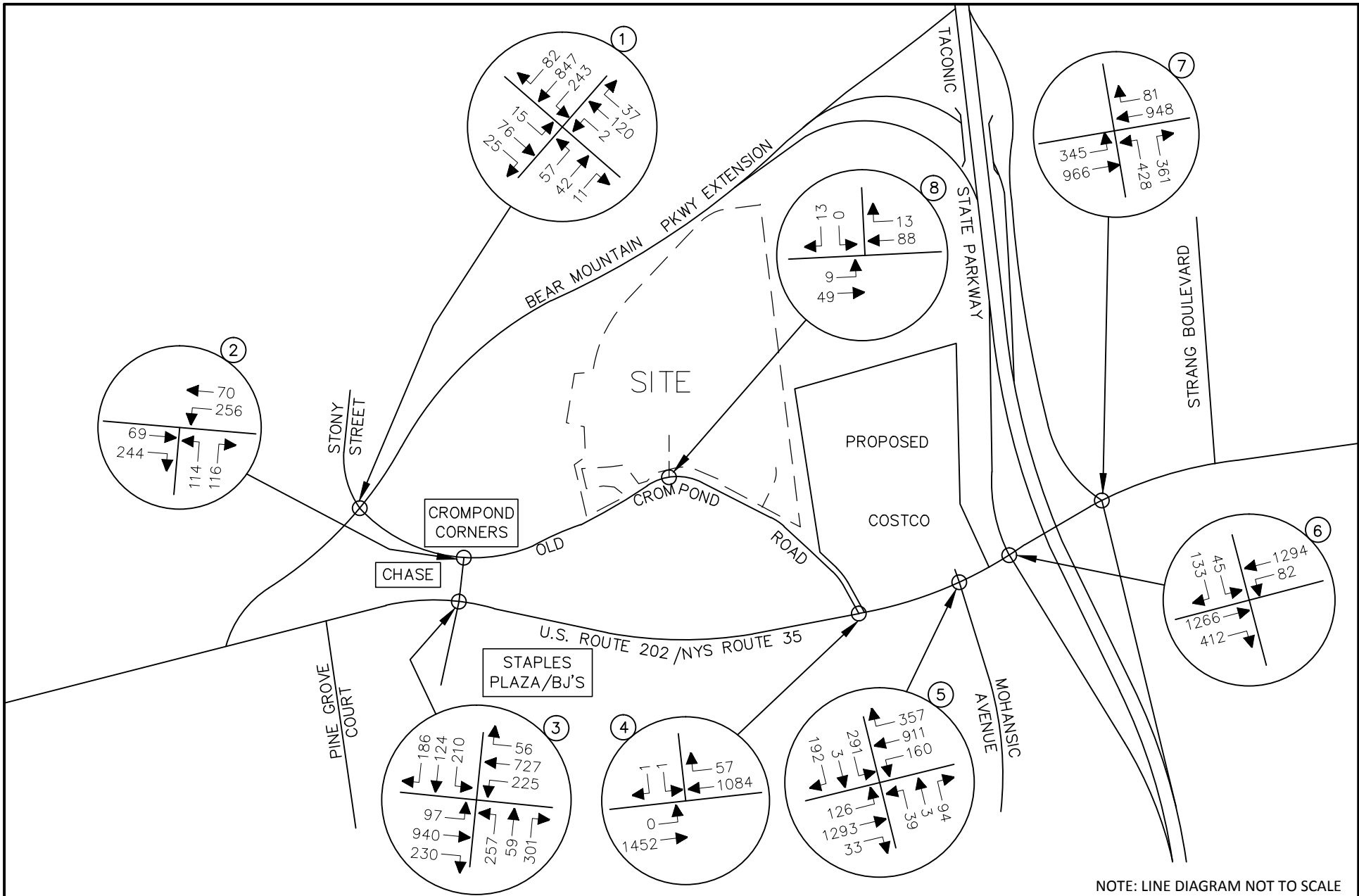
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**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**2019 BUILD TRAFFIC VOLUMES
 (EXISTING ZONING)
 WEEKDAY PEAK AM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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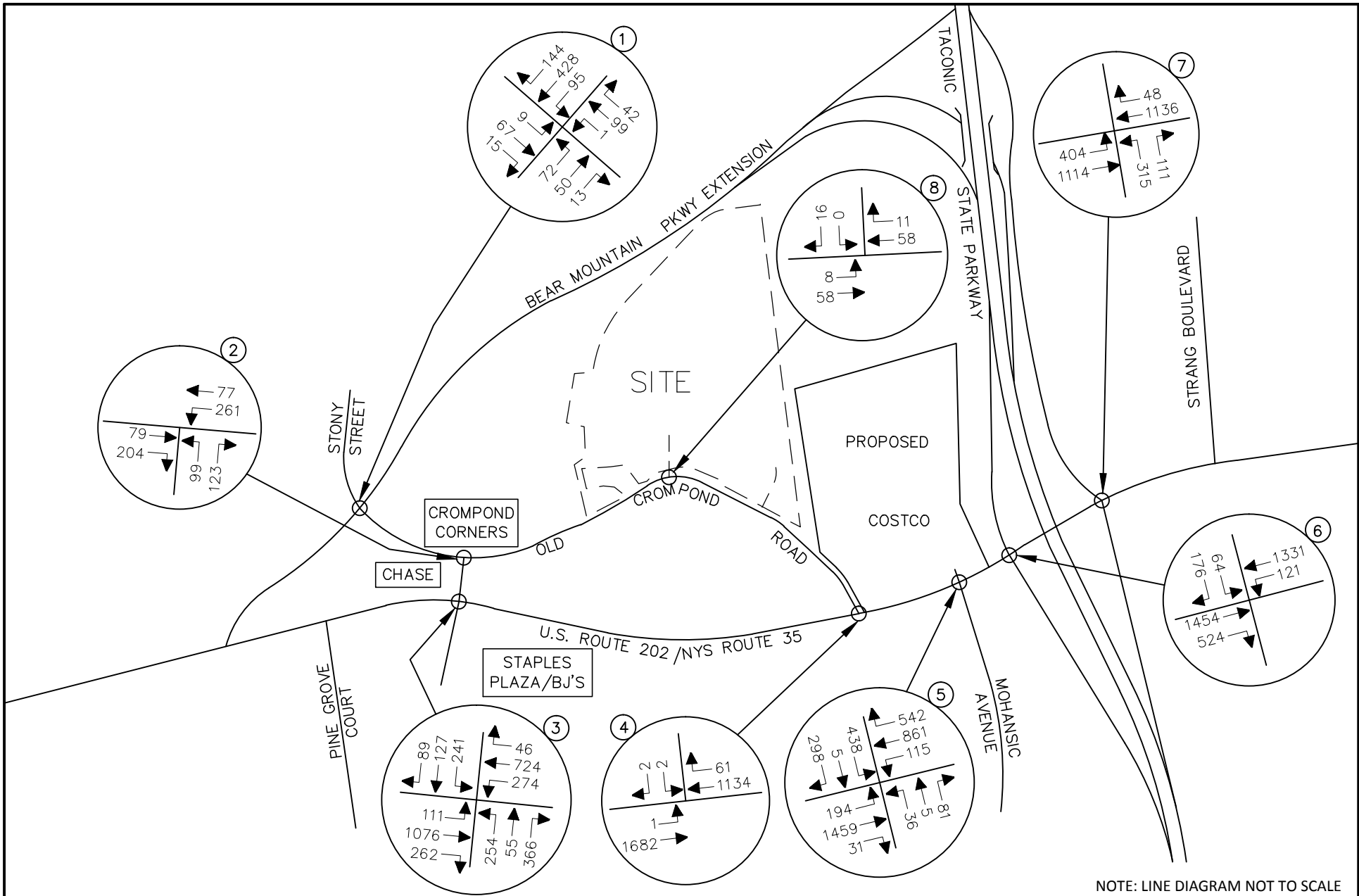
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 YORKTOWN, NEW YORK**

**2019 BUILD TRAFFIC VOLUMES
 (EXISTING ZONING)
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	
20	



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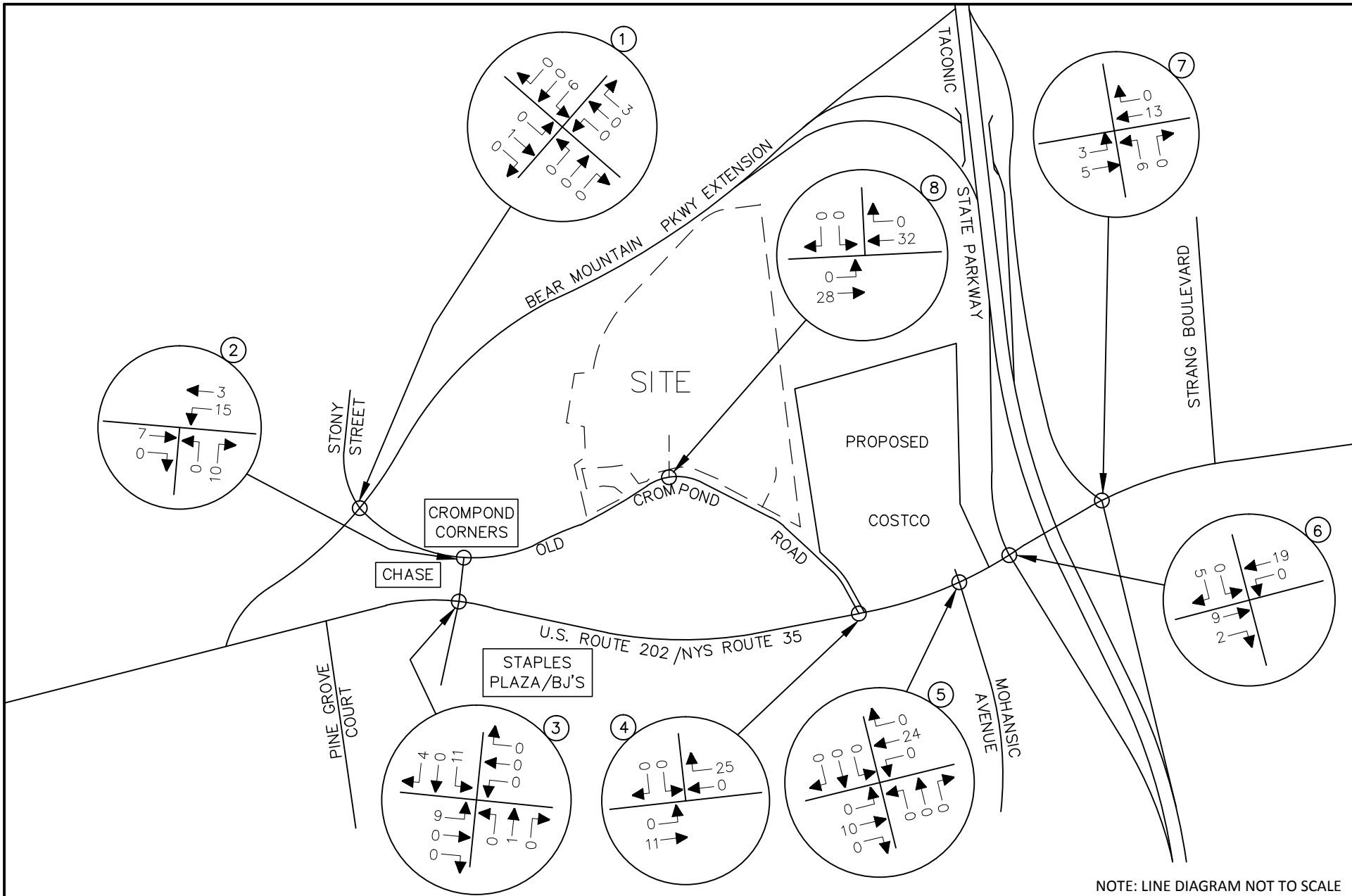
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 YORKTOWN, NEW YORK**

**2019 BUILD TRAFFIC VOLUMES
 (EXISTING ZONING)
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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 YORKTOWN, NEW YORK**

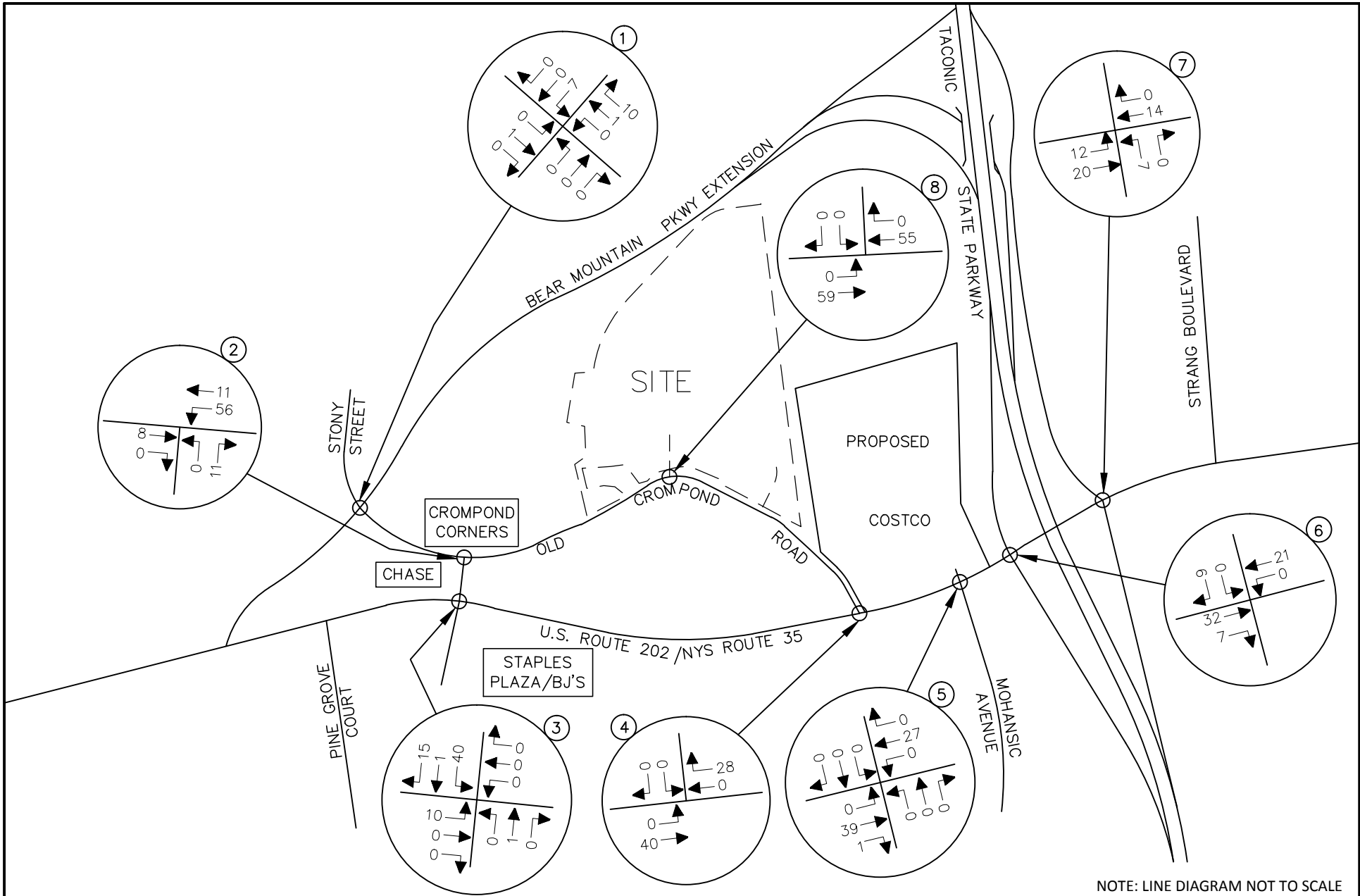
**OTHER REZONED PROPERTIES
 (BAUSO/DELVECCHIO/ANTENAROS PROPERTIES)
 SITE GENERATED TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR**



JOB NUMBER: 13001463A DATE: 4/2/15

FIGURE NUMBER:

22



NOTE: LINE DIAGRAM NOT TO SCALE



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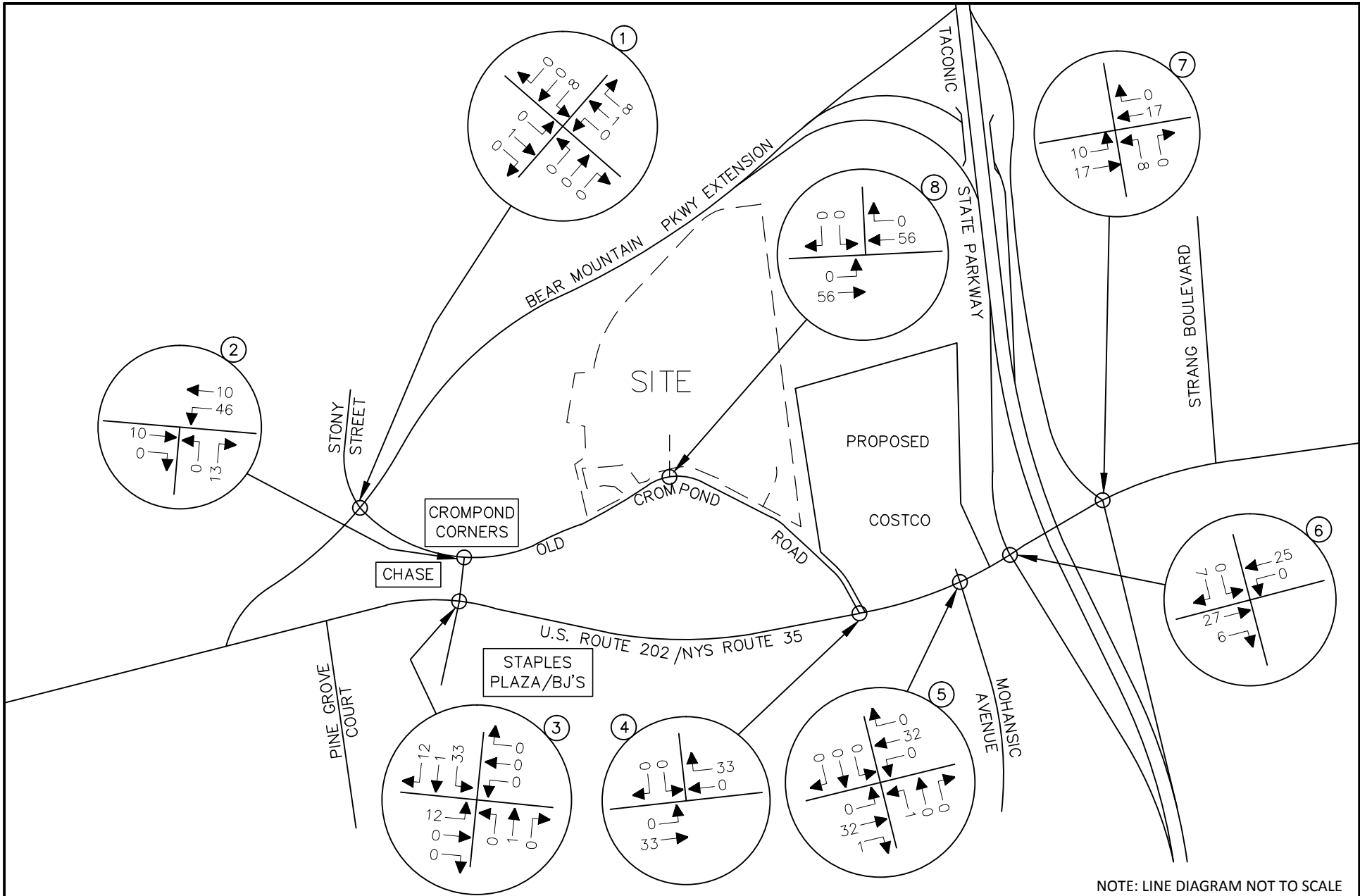
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**CROMPTON TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**OTHER REZONED PROPERTIES
 (BAUSO/DELVECCHIO/ANTENAROS PROPERTIES)
 SITE GENERATED TRAFFIC VOLUMES
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	
23	



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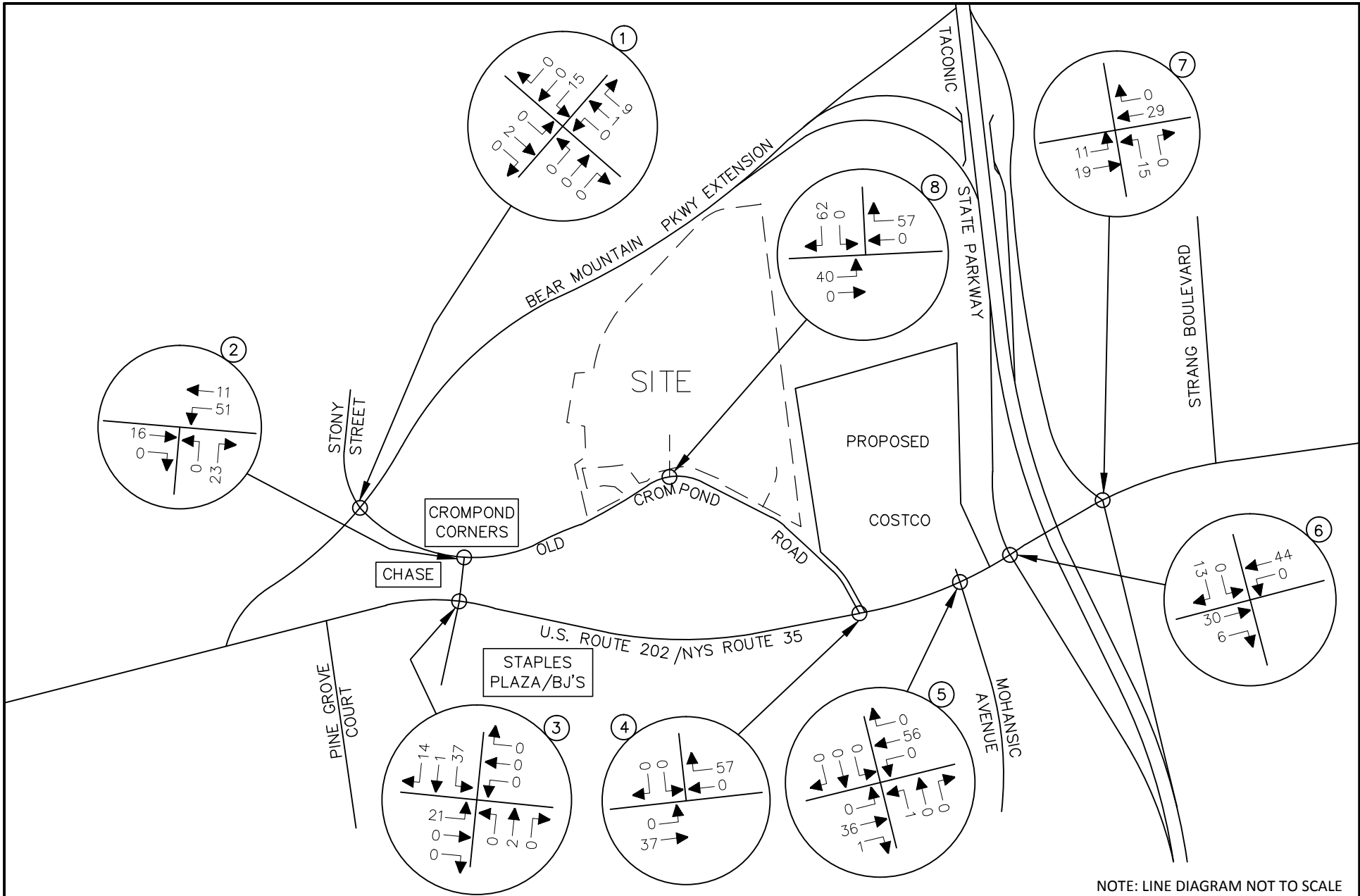
**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**OTHER REZONED PROPERTIES
 (BAUSO/DELVECCHIO/ANTENAROS PROPERTIES)
 SITE GENERATED TRAFFIC VOLUMES
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER: 13001463A DATE: 4/2/15

FIGURE NUMBER:



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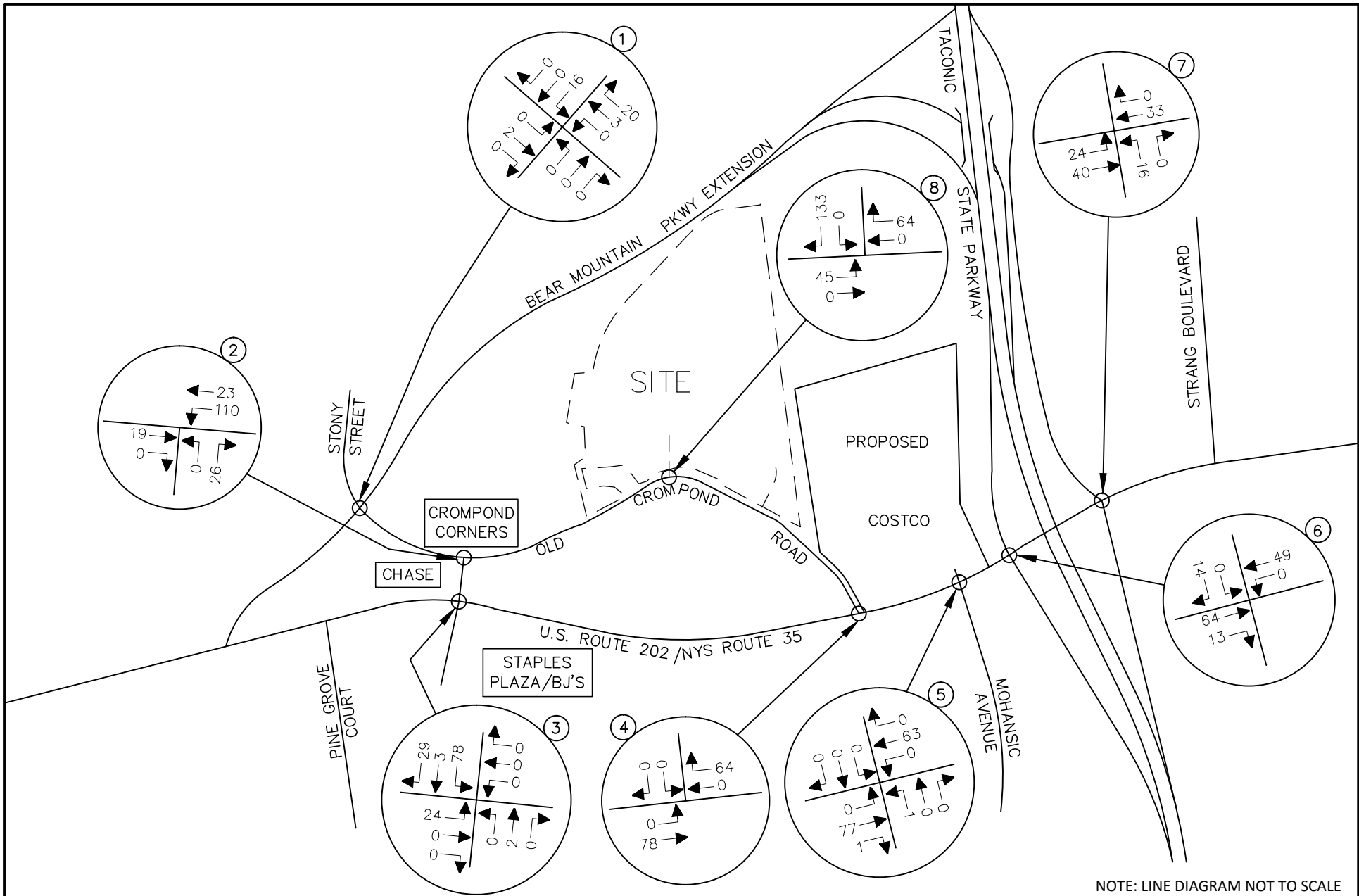
**CROMPOND TERRACES
 SITE GENERATED TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR**



JOB NUMBER: 13001463A DATE: 4/2/15

FIGURE NUMBER:

25



NOTE: LINE DIAGRAM NOT TO SCALE



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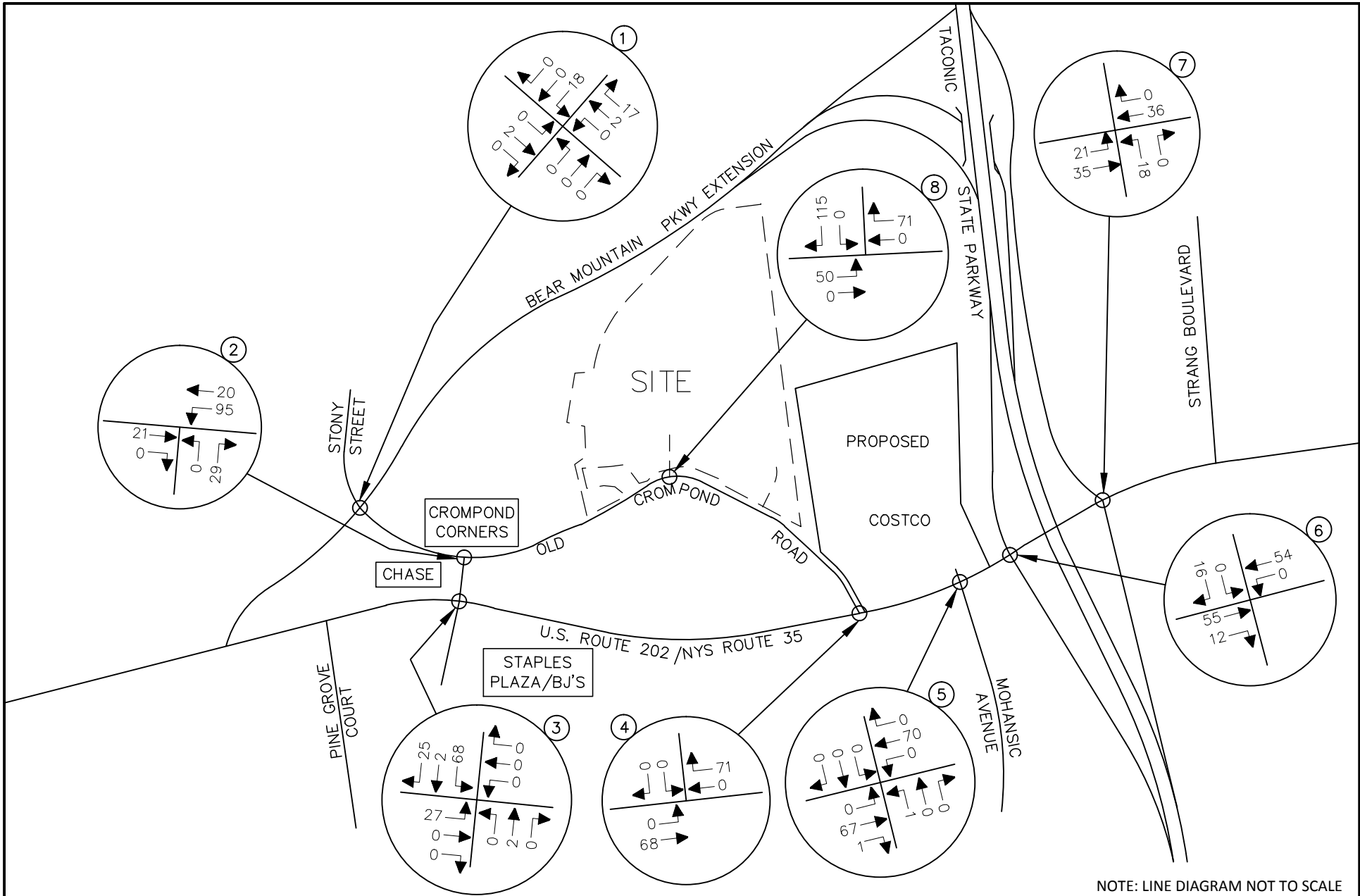
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**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**CROMPOND TERRACES
 SITE GENERATED TRAFFIC VOLUMES
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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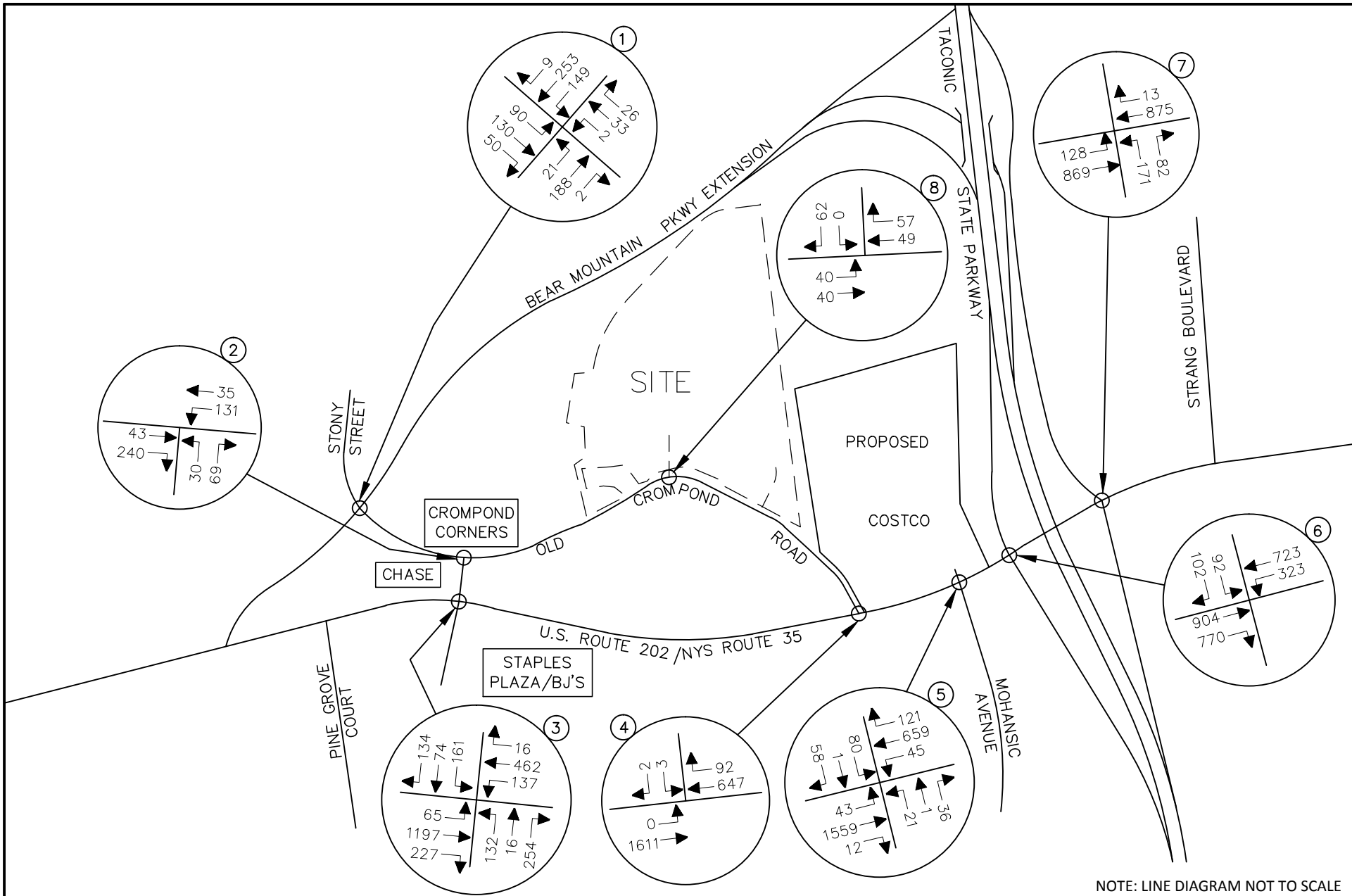
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**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**CROMPOND TERRACES
 SITE GENERATED TRAFFIC VOLUMES
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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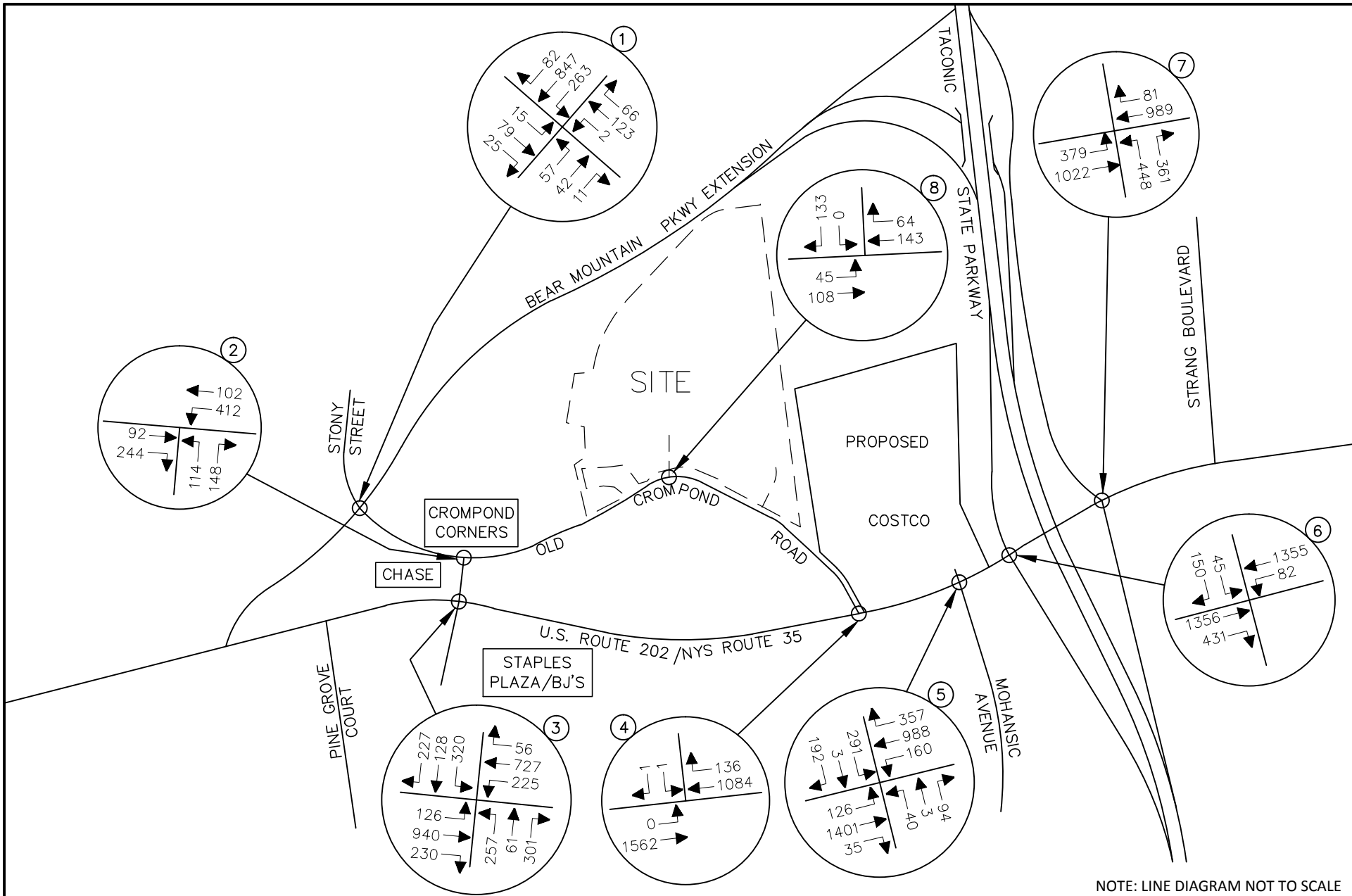
**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**2019 BUILD TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:
28



NOTE: LINE DIAGRAM NOT TO SCALE



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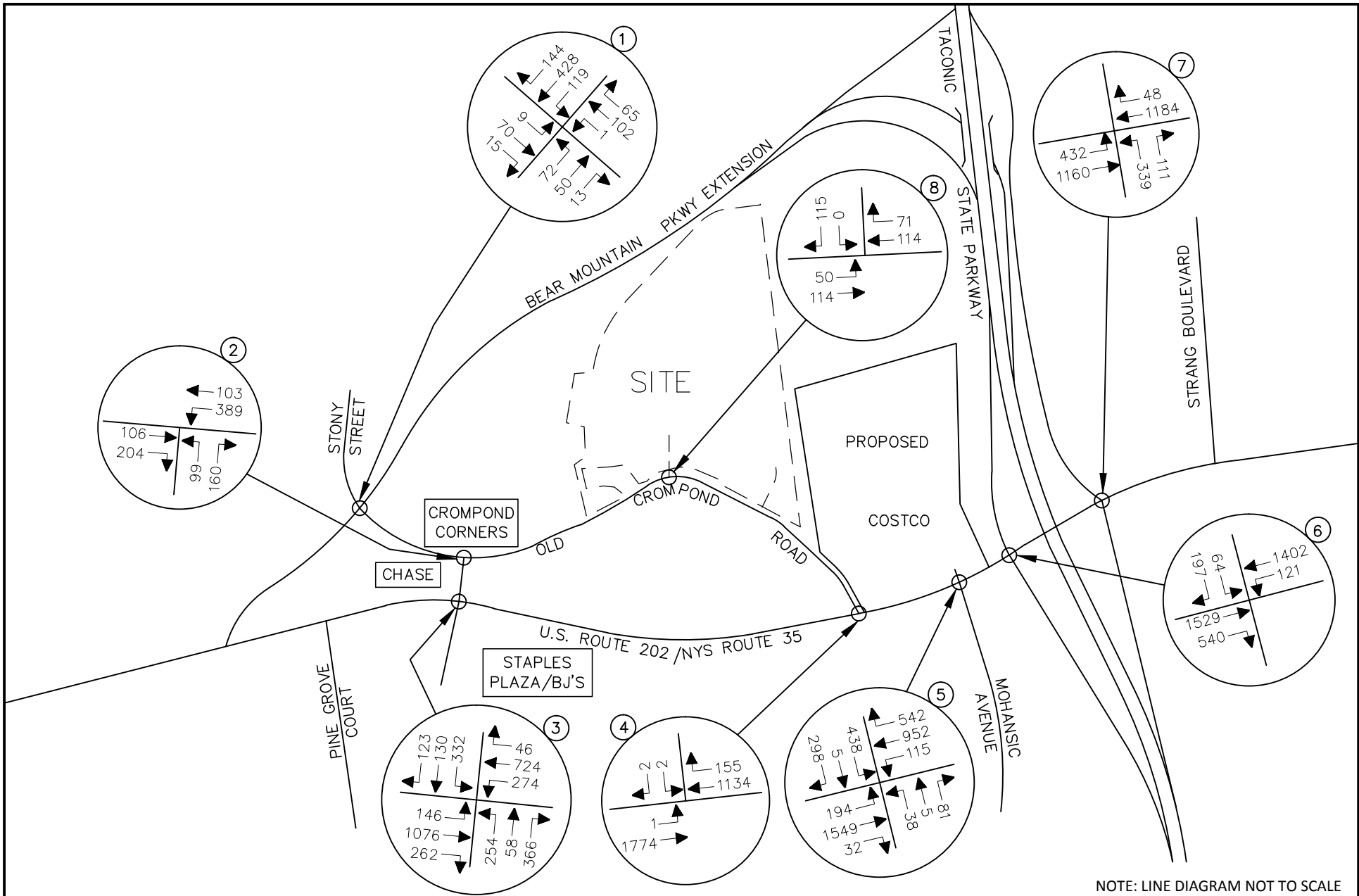
**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**2019 BUILD TRAFFIC VOLUMES
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:



NOTE: LINE DIAGRAM NOT TO SCALE



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 YORKTOWN, NEW YORK**

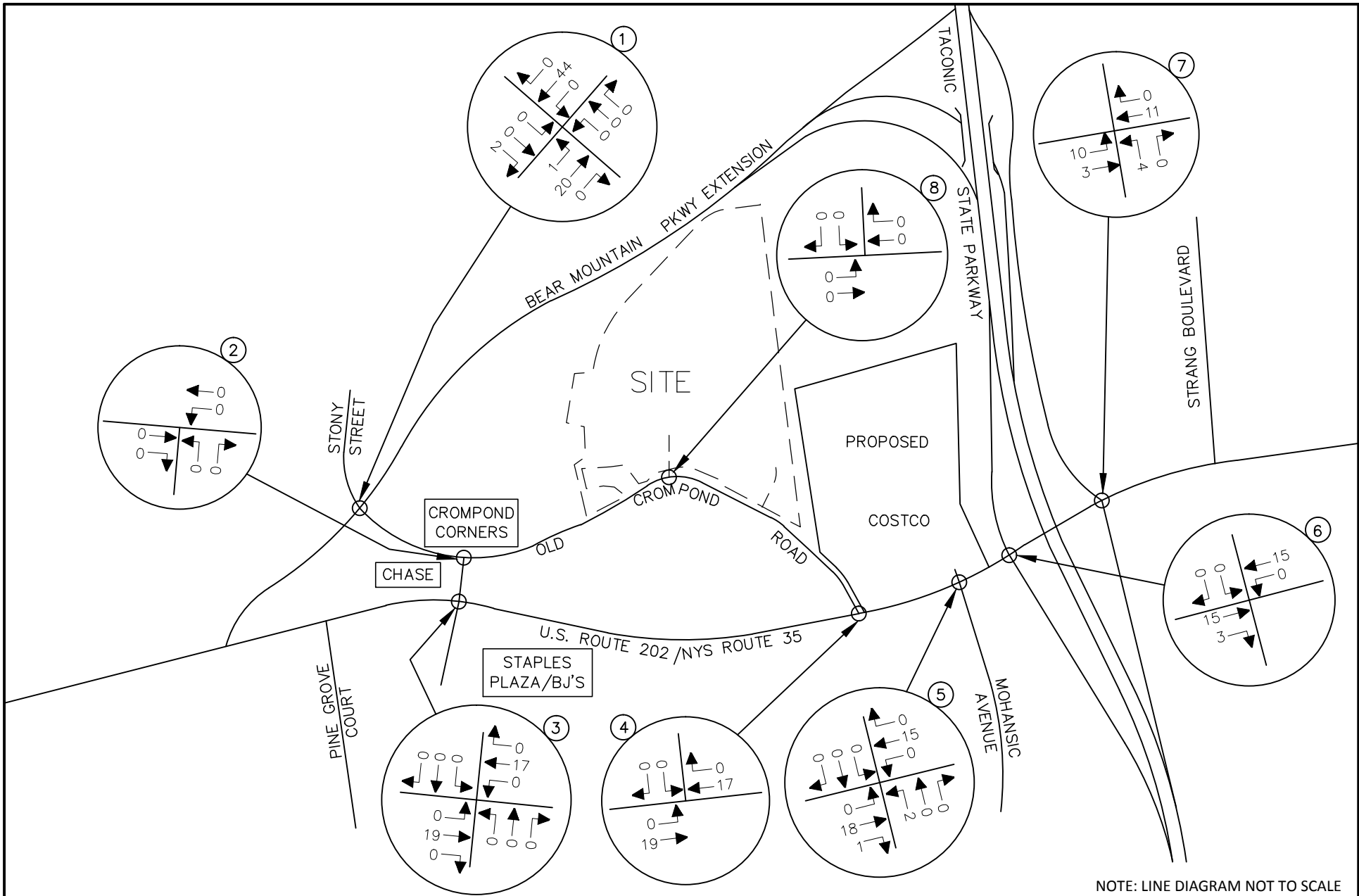
**2019 BUILD TRAFFIC VOLUMES
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

30



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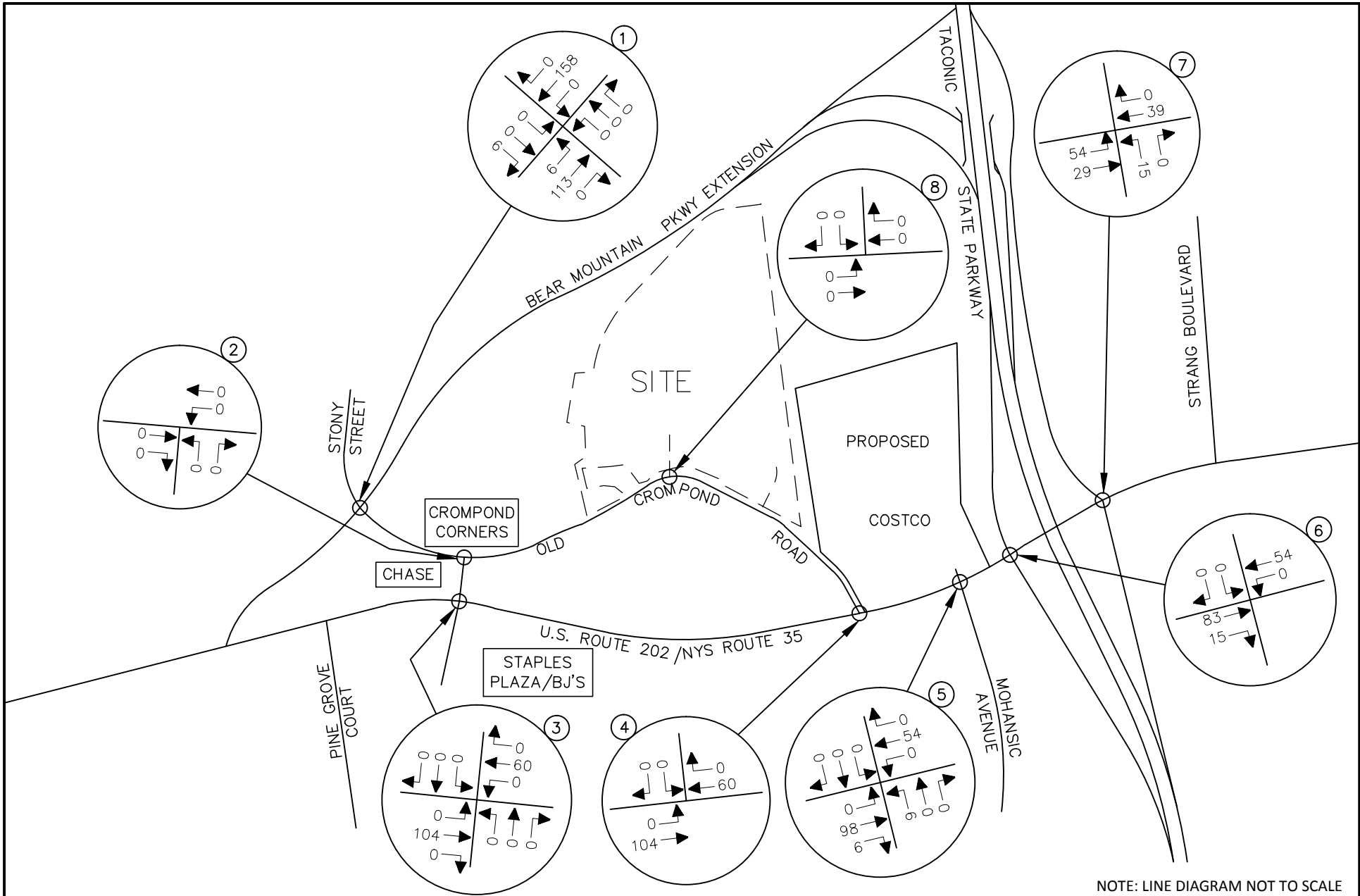
**STATE LAND DEVELOPMENT TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

31



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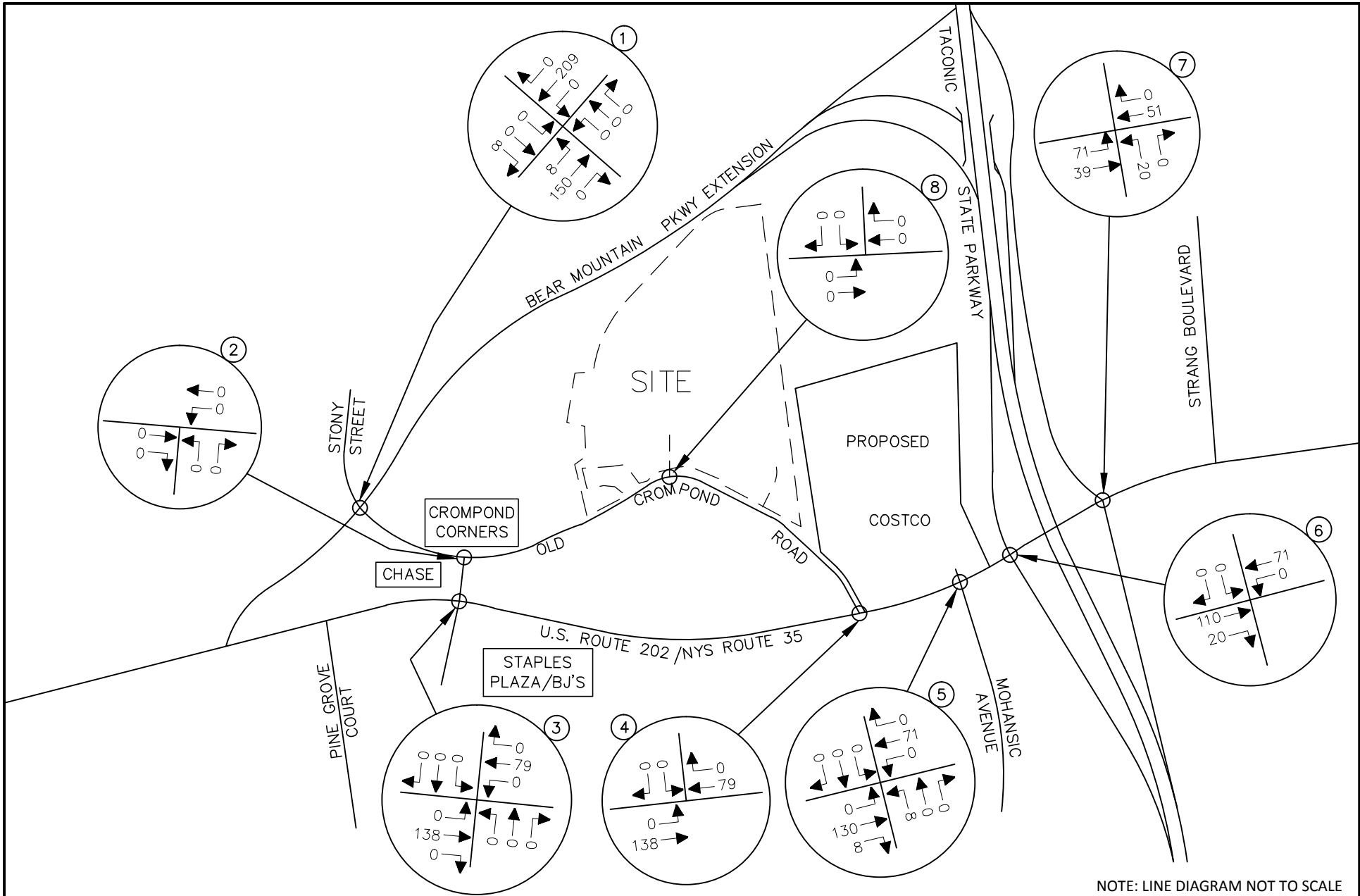
**STATE LAND DEVELOPMENT TRAFFIC VOLUMES
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

32



NOTE: LINE DIAGRAM NOT TO SCALE



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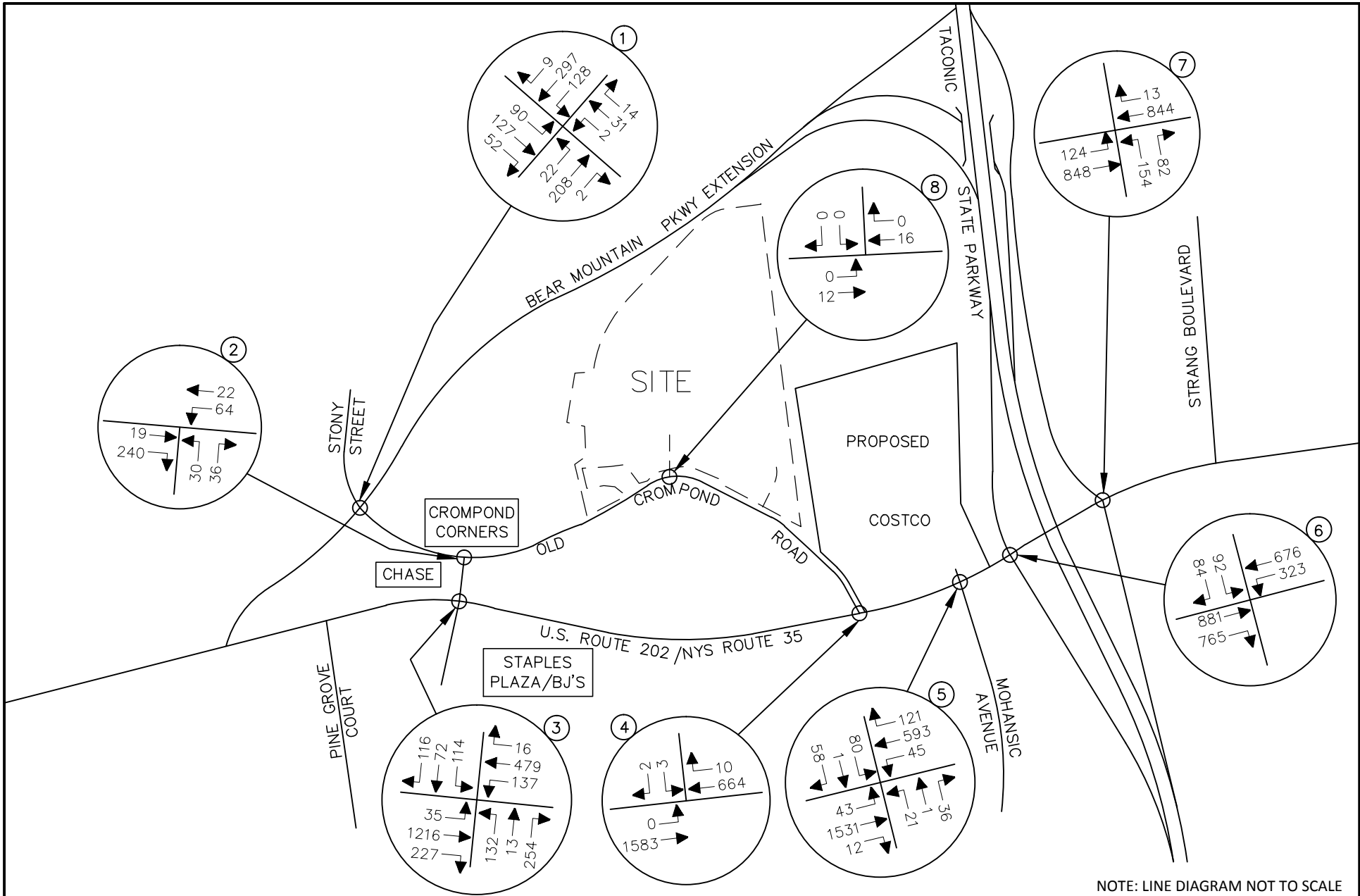
**STATE LAND DEVELOPMENT TRAFFIC VOLUMES
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

33



NOTE: LINE DIAGRAM NOT TO SCALE



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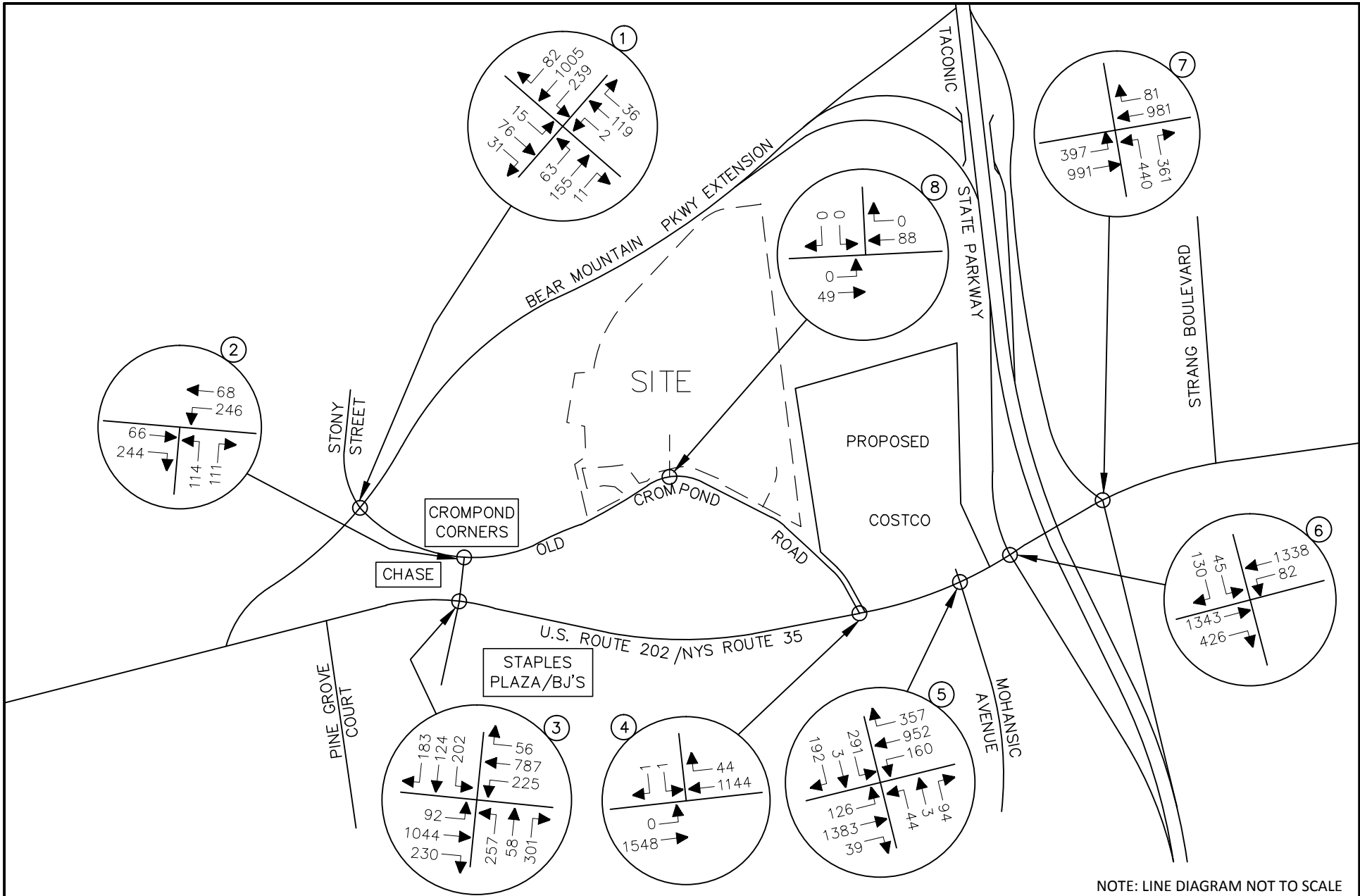
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**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**2019 NO-BUILD TRAFFIC VOLUMES
 WITH STATE LAND DEVELOPMENT
 WEEKDAY PEAK AM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



NOTE: LINE DIAGRAM NOT TO SCALE



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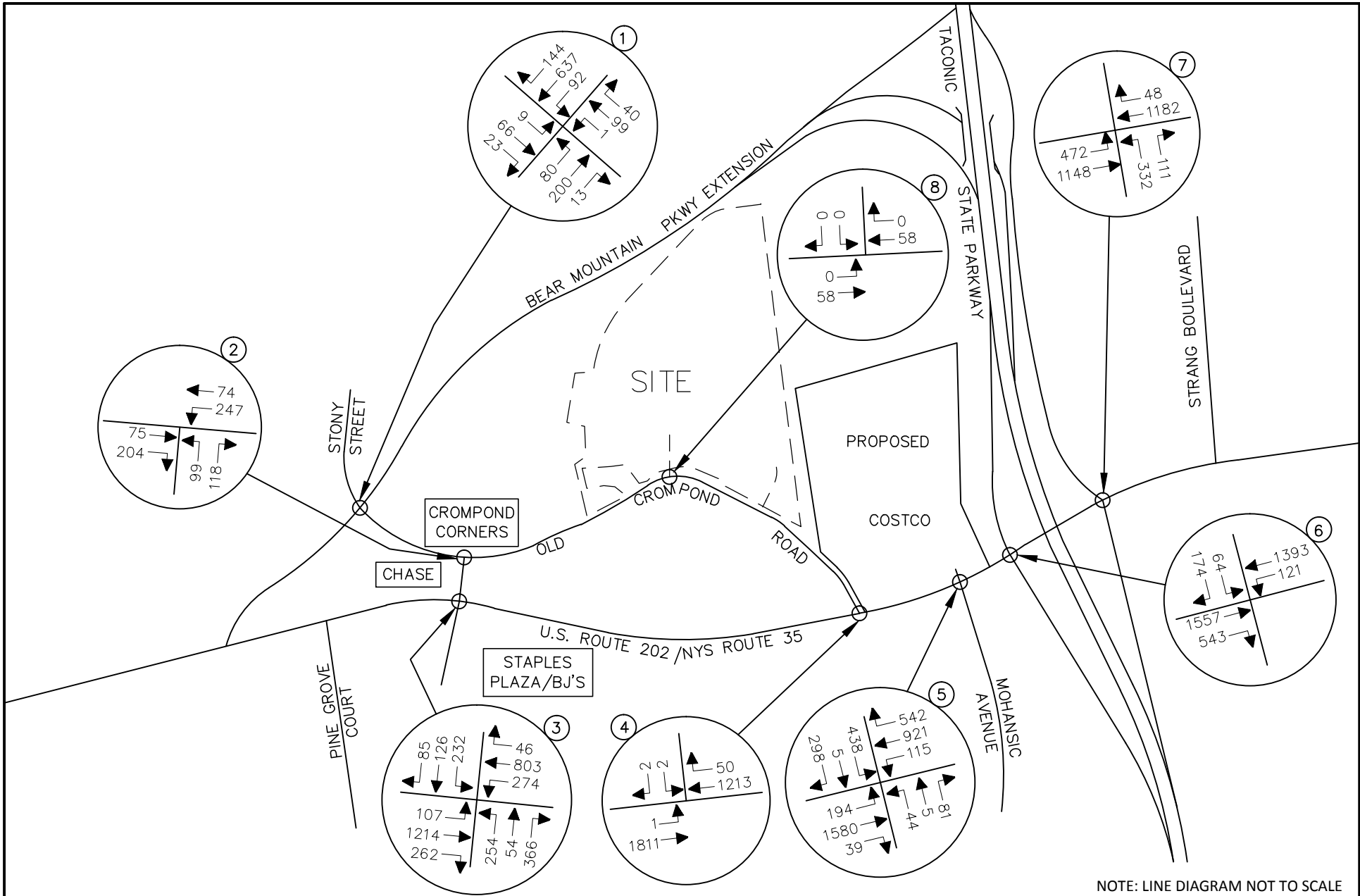
**2019 NO-BUILD TRAFFIC VOLUMES
 WITH STATE LAND DEVELOPMENT
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

35



NOTE: LINE DIAGRAM NOT TO SCALE



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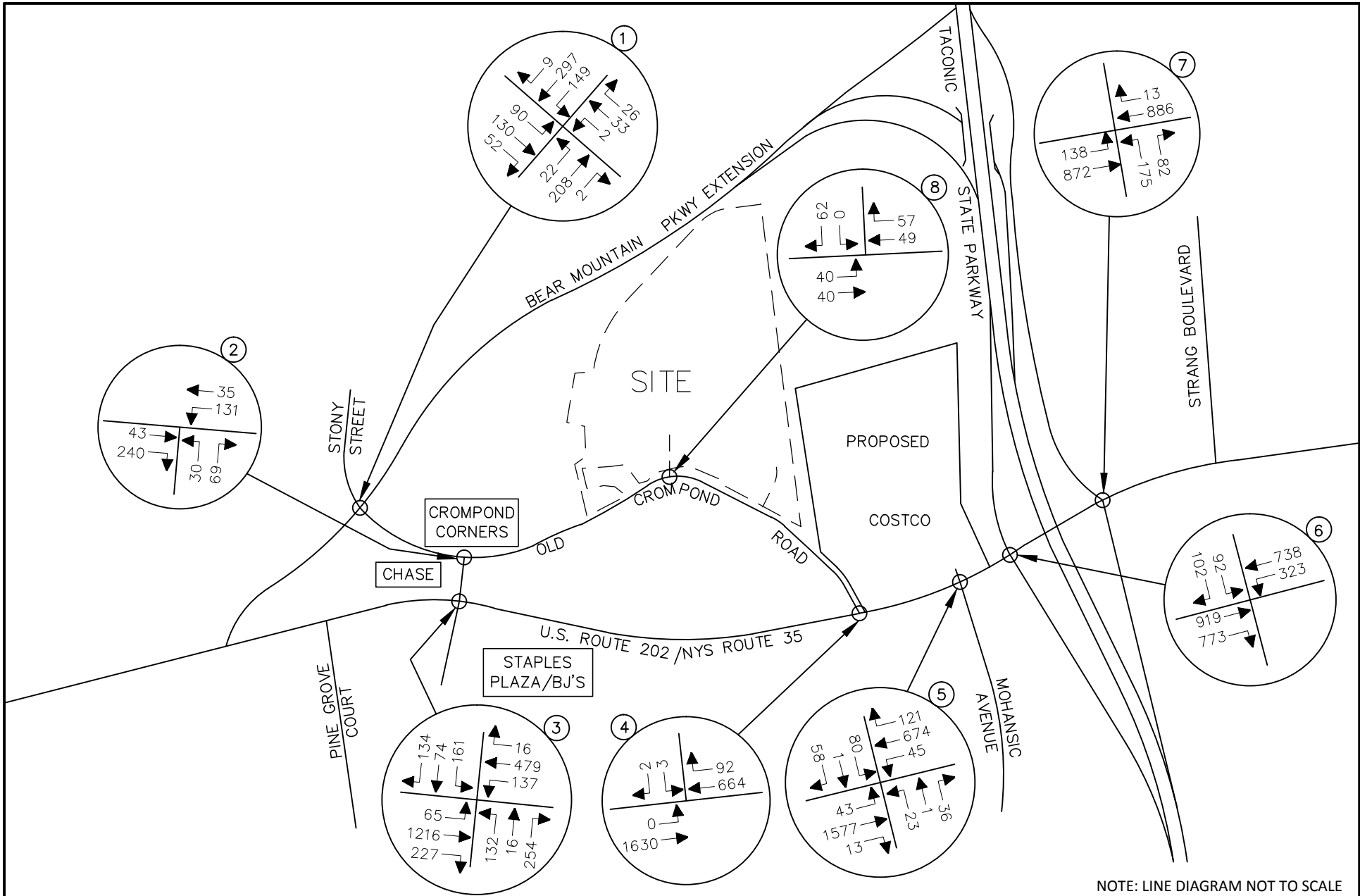
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**CROMPTON TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

2019 NO-BUILD TRAFFIC VOLUMES
 WITH STATE LAND DEVELOPMENT
 WEEKEND PEAK SATURDAY HOUR



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



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**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

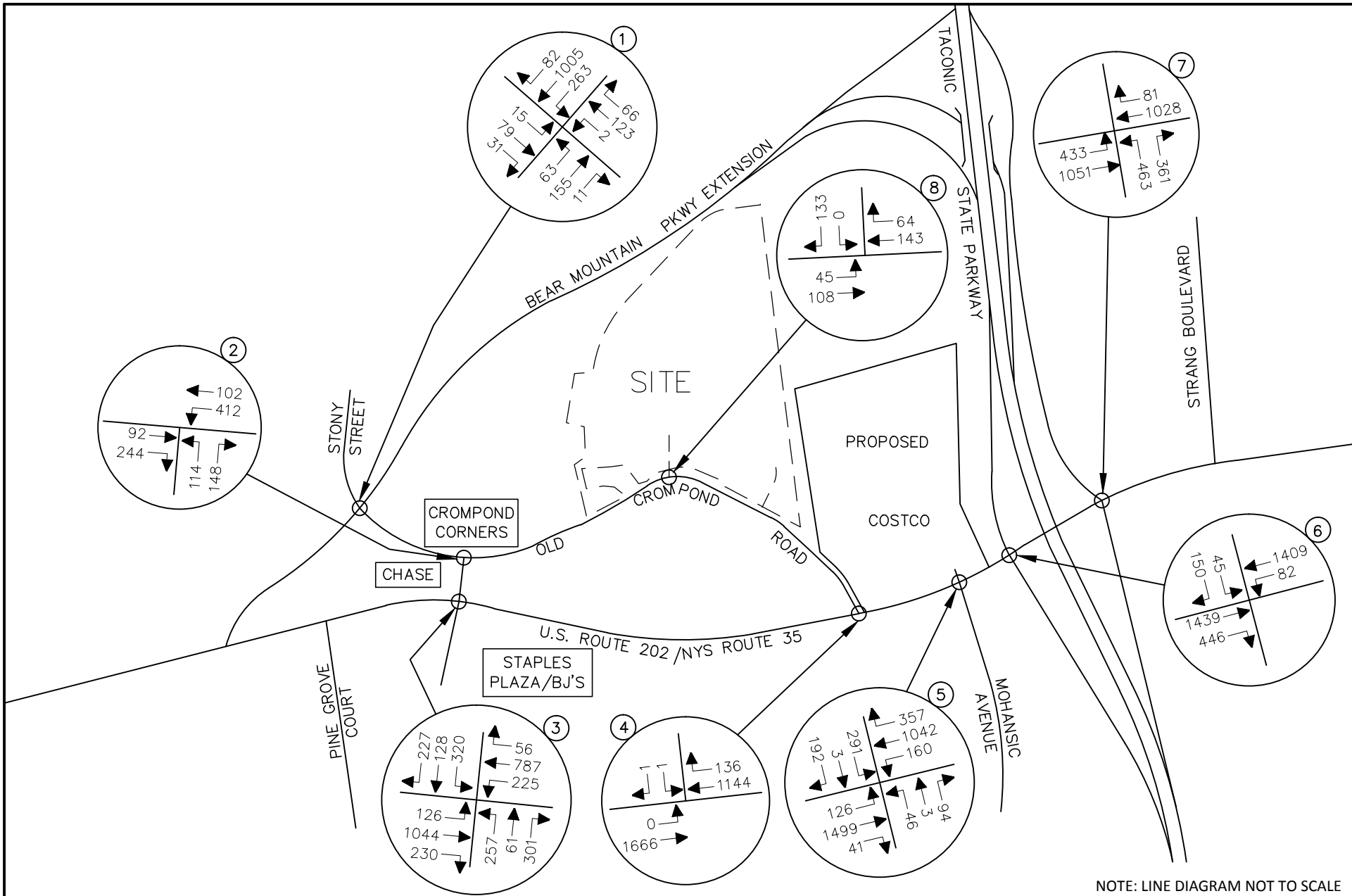
**2019 BUILD TRAFFIC VOLUMES
 WITH STATE LAND DEVELOPMENT
 WEEKDAY PEAK AM HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15

FIGURE NUMBER:

37



NOTE: LINE DIAGRAM NOT TO SCALE



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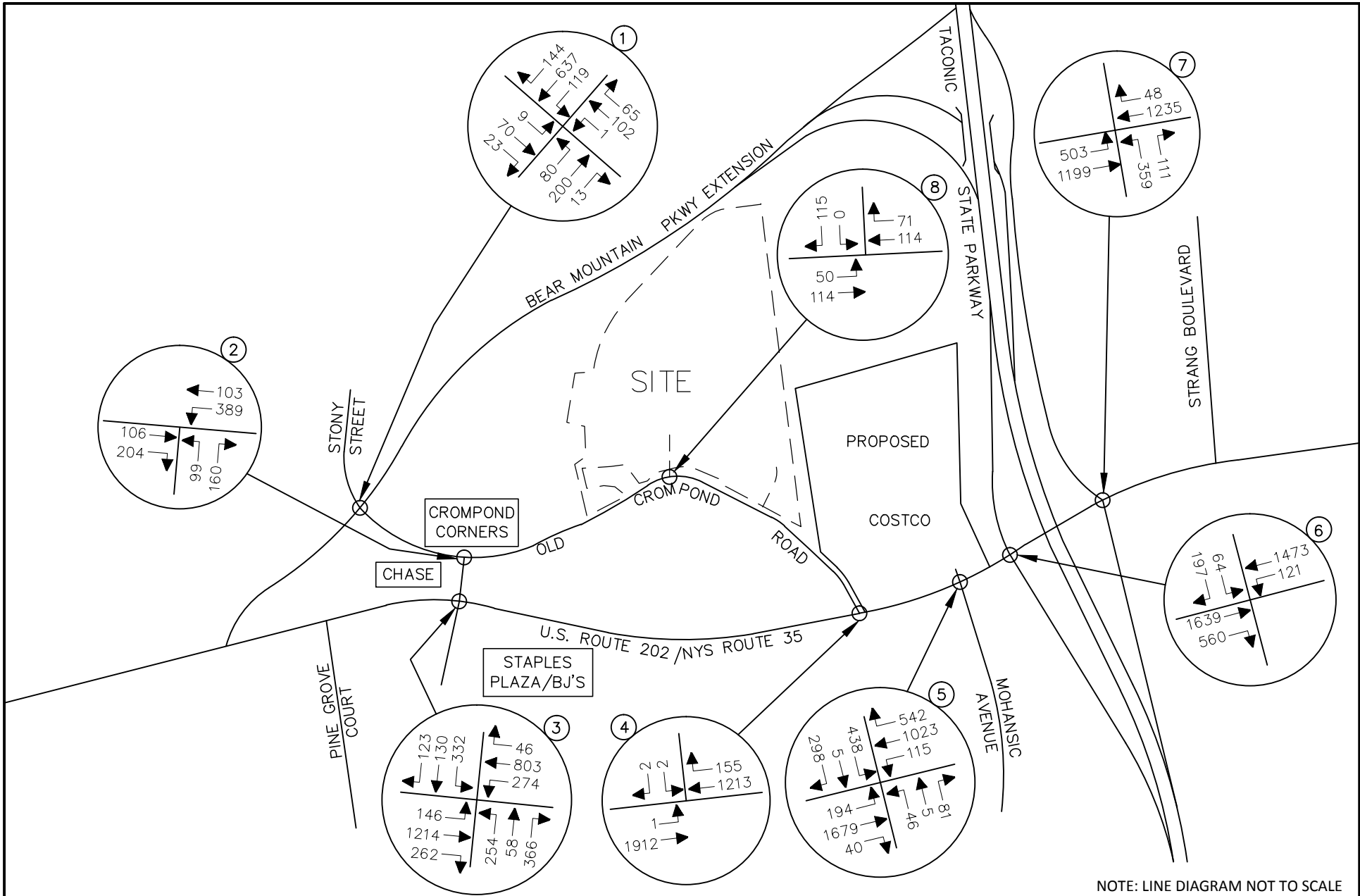
**CROMPOND TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**2019 BUILD TRAFFIC VOLUMES
 WITH STATE LAND DEVELOPMENT
 WEEKDAY PEAK PM HOUR**



JOB NUMBER:	DATE:
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**CROMPTON TERRACES (MANDALAY DEVELOPMENT)
 YORKTOWN, NEW YORK**

**2019 BUILD TRAFFIC VOLUMES
 WITH STATE LAND DEVELOPMENT
 WEEKEND PEAK SATURDAY HOUR**



JOB NUMBER:	DATE:
13001463A	4/2/15
FIGURE NUMBER:	



***PROPOSED BEAR MOUNTAIN TRIANGLE
REZONING AND CROMPOND TERRACES***

APPENDIX B

TABLES

TABLE NO. 1
HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED
SITE GENERATED TRAFFIC VOLUMES

CROMPOND TERRACES (MANDALAY DEVELOPMENT) TOWN OF YORKTOWN, NEW YORK	ENTRY			EXIT		
	HTGR ¹	VOLUME	NEW TRIPS ²	HTGR ¹	VOLUME	NEW TRIPS ²
TOWNHOUSE (70 DWELLING UNITS)						
PEAK AM HOUR	0.09	6	6	0.44	31	29
PEAK PM HOUR	0.41	29	27	0.20	14	13
SATURDAY PEAK HOUR	0.42	29	28	0.36	25	24
APARTMENTS (16 DWELLING UNITS)						
PEAK AM HOUR	0.09	1	1	0.44	7	7
PEAK PM HOUR	0.41	7	6	0.20	3	3
SATURDAY PEAK HOUR	0.42	7	6	0.36	6	5
RETAIL (15,800 SQ. FT.)						
PEAK AM HOUR	0.98	15	11	0.60	9	7
PEAK PM HOUR	3.03	48	34	3.03	48	34
SATURDAY PEAK HOUR	4.42	70	50	4.42	70	50
OFFICE (29,000 SQ. FT.)						
PEAK AM HOUR	1.98	57	55	0.27	8	7
PEAK PM HOUR	0.38	11	10	1.87	54	52
SATURDAY PEAK HOUR	0.23	7	6	0.20	6	6
COMMUNITY CENTER (12,000 SQ. FT.)						
PEAK AM HOUR	2.10	25	24	1.08	13	12
PEAK PM HOUR	2.69	32	31	2.69	32	31
SATURDAY PEAK HOUR ³	2.69	32	31	2.69	32	31
TOTAL						
PEAK AM HOUR	-	106	97	-	68	62
PEAK PM HOUR	-	126	109	-	152	133
SATURDAY PEAK HOUR	-	145	121	-	139	115

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, 9TH EDITION, 2012. ITE LAND USE CODE - 230 - TOWNHOUSE/CONDO, ITE LAND USE CODE - 495 - RECREATIONAL COMMUNITY CENTER, ITE LAND USE CODE - 710 - GENERAL OFFICE BUILDING AND ITE LAND USE CODE - 820 - RETAIL. OVERALL RETAIL AND OFFICE TRIP GENERATION RATES WERE DEVELOPED BASED ON THE TOTAL AREA RETAIL AND OFFICE DEVELOPMENTS AND THEN APPLIED TO EACH INDIVIDUAL DEVELOPMENT SIZE.
- 2) NEW TRIPS INCLUDE 5% INTERNAL TRIP CREDIT APPLIED TO EACH OF THE LAND USES TO ACCOUNT FOR TRIPS BETWEEN USES THAT WOULD BE INTERNAL TO THE SITE AS WELL AS A 25% PASS-BY/DIVERTED LINK TRIP CREDIT APPLIED TO THE RETAIL USE TO ACCOUNT FOR TRIPS ATTRACTED FROM THE EXISTING TRAFFIC STREAMS ALONG ROUTE 35/202.
- 3) RECREATIONAL COMMUNITY CENTER SATURDAY PEAK HOUR TRIP GENERATION RATES ARE BASED ON THE PM PEAK HOUR TRIP GENERATION RATES PROVIDED BY ITE TO PROVIDE A MORE CONSERVATIVE ANALYSIS, SINCE THE ITE DATA INDICATES LOWER THAN ANTICIPATED RATES FOR THE SATURDAY PEAK HOUR.

TABLE NO. 1-E

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

CROMPOND TRIANGLE AREA PARCELS AFFECTED BY REZONING TOWN OF YORKTOWN, NEW YORK	ENTRY		EXIT	
	HTGR ²	VOLUME	HTGR ²	VOLUME
TRIP GENERATION ESTIMATES FOR MANDALAY, BAUSO/DELVECCHIO & ANTONARUS PROPERTIES BASED ON EXISTING ZONING				
SINGLE FAMILY HOMES ¹ (30 DWELLING UNITS)				
PEAK AM HOUR	0.27	8	0.77	23
PEAK PM HOUR	0.73	22	0.43	13
SATURDAY PEAK HOUR	0.63	19	0.53	16

NOTES:

- 1) IT IS ESTIMATED THAT APPROXIMATELY 30 SINGLE FAMILY HOMES COULD BE DEVELOPED ON THE PARCELS AFFECTED BY THE REZONING IN THE CROMPOND TRIANGLE AREA.
- 2) 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, 9TH EDITION, 2012. ITE LAND USE CODE - 210 - SINGLE FAMILY HOUSING.

TABLE NO. 1-R
HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED
SITE GENERATED TRAFFIC VOLUMES

CROMPOND TRIANGLE AREA DEVELOPMENTS TOWN OF YORKTOWN, NEW YORK	ENTRY			EXIT		
	HTGR	VOLUME	NEW TRIPS ³	HTGR	VOLUME	NEW TRIPS ³
OTHER PROPERTIES FOR POTENTIAL REZONING						
BAUSO & DELVHECCIO PROPERTIES						
TOWNHOUSE ¹ (10 UNITS)						
PEAK AM HOUR	0.15	1	1	0.71	7	7
PEAK PM HOUR	0.63	6	6	0.31	3	3
SATURDAY PEAK HOUR	0.25	3	2	0.22	2	2
RETAIL ¹ (6,200 SQ. FT.)						
PEAK AM HOUR	0.98	6	4	0.60	4	3
PEAK PM HOUR	3.03	19	13	3.03	19	13
SATURDAY PEAK HOUR	4.42	27	20	4.42	27	20
OFFICE ¹ (10,500 SQ. FT.)						
PEAK AM HOUR	1.98	21	20	0.27	3	3
PEAK PM HOUR	0.38	4	4	1.87	20	19
SATURDAY PEAK HOUR	0.23	2	2	0.20	2	2
ANTENAROS PROPERTY						
RETAIL ¹ (10,000 SQ. FT.)						
PEAK AM HOUR	0.98	10	7	0.60	6	4
PEAK PM HOUR	3.03	30	22	3.03	30	22
SATURDAY PEAK HOUR	4.42	44	31	4.42	44	31
OFFICE ¹ (5,500 SQ. FT.)						
PEAK AM HOUR	1.98	11	10	0.27	1	1
PEAK PM HOUR	0.38	2	2	1.87	10	10
SATURDAY PEAK HOUR	0.23	1	1	0.20	1	1

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, 9TH EDITION, 2012. ITE LAND USE CODE - 230 - TOWNHOUSE/CONDO, ITE LAND USE CODE - 710 - GENERAL OFFICE BUILDING AND ITE LAND USE CODE - 820 - RETAIL. OVERALL RETAIL AND OFFICE TRIP GENERATION RATES WERE DEVELOPED BASED ON THE TOTAL AREA RETAIL AND OFFICE DEVELOPMENTS AND THEN APPLIED TO EACH INDIVIDUAL DEVELOPMENT SIZE.

2) NEW TRIPS INCLUDE 5% INTERNAL TRIP CREDIT APPLIED TO EACH OF THE LAND USES TO ACCOUNT FOR TRIPS BETWEEN USES THAT WOULD BE INTERNAL TO THE SITE AS WELL AS A 25% PASS-BY/DIVERTED LINK TRIP CREDIT APPLIED TO THE RETAIL USE TO ACCOUNT FOR TRIPS ATTRACTED FROM THE EXISTING TRAFFIC STREAMS ALONG ROUTE 35/202.

TABLE NO. 1-O
HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED
SITE GENERATED TRAFFIC VOLUMES

CROMPOND TRIANGLE AREA DEVELOPMENTS TOWN OF YORKTOWN, NEW YORK	ENTRY			EXIT		
	HTGR	VOLUME	NEW TRIPS	HTGR	VOLUME	NEW TRIPS
POTENTIAL OR APPROVED AREA DEVELOPMENTS						
COSTCO¹						
DISCOUNT CLUB (151,092 SQ. FT.)						
PEAK AM HOUR	0.40	60	45	0.17	25	19
PEAK PM HOUR	2.12	320	240	2.12	320	240
SATURDAY PEAK HOUR	3.42	517	388	3.42	517	388
GAS STATION (12 FUELING POSITIONS)						
PEAK AM HOUR	9.17	110	66	9.17	110	66
PEAK PM HOUR	17.50	210	82	17.50	210	82
SATURDAY PEAK HOUR	18.75	225	89	18.75	225	89
STAPLES PLAZA²						
GAS STATION (12 FUELING POSITIONS)						
PEAK AM HOUR	6.25	75	50	6.25	75	50
PEAK PM HOUR	10.25	123	58	10.25	123	58
SATURDAY PEAK HOUR	11.83	142	32	11.83	142	32
FAST FOOD WITH DRIVE THROUGH (3,000 SQ. FT.)						
PEAK AM HOUR	23.00	69	50	22.33	67	50
PEAK PM HOUR	17.00	51	58	15.67	47	58
SATURDAY PEAK HOUR	30.00	90	32	29.00	87	32
URGENT CARE (5,000 SQ. FT.)						
PEAK AM HOUR	2.60	13	13	2.60	13	13
PEAK PM HOUR	2.60	13	13	2.60	13	13
SATURDAY PEAK HOUR	1.20	6	6	1.20	6	6

NOTES:

- 2) TRIP GENERATION INFORMATION FOR THE COSTCO DEVELOPMENT ARE BASED ON INFORMATION CONTAINED IN THE COSTCO REVISED TRAFFIC IMPACT STUDY DATED OCTOBER 3, 2014 PREPARED BY MASER CONSULTING. THE TRIP GENERATION ESTIMATES REFLECT THOSE FOR THE SENSITIVITY ANALYSIS AS CONTAINED ON TABLE 1-S IN APPENDIX "E" OF THE COSTCO STUDY.
- 2) TRIP GENERATION INFORMATION FOR THE STAPLES PLAZA DEVELOPMENT ARE BASED ON INFORMATION CONTAINED IN THE STAPLES PLAZA TRAFFIC STUDY DATED OCTOBER 8, 2014 PREPARED BY JMC SITE DEVELOPMENT CONSULTANTS. THE TRIP GENERATION ESTIMATES ARE BASED ON THOSE CONTAINED IN TABLE NO. 1 IN APPENDIX "A" OF THE STAPLES PLAZA STUDY.

TABLE NO. 1-O (CONTINUED)
HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATEE
SITE GENERATED TRAFFIC VOLUMES

CROMPOND TRIANGLE AREA DEVELOPMENTS TOWN OF YORKTOWN, NEW YORK	ENTRY			EXIT		
	HTGR	VOLUME	NEW TRIPS	HTGR	VOLUME	NEW TRIPS
POTENTIAL OR APPROVED AREA DEVELOPMENTS						
CVS ^{1,2}						
PHARMACY (12,900 SQ. FT.)						
PEAK AM HOUR	1.78	23	16	1.63	21	15
PEAK PM HOUR	4.96	64	46	4.96	64	46
SATURDAY PEAK HOUR	4.03	52	37	4.19	54	38
BANK WITH DRIVE THROUGH (2,500 SQ. FT.)						
PEAK AM HOUR	6.80	17	12	5.20	13	9
PEAK PM HOUR	12.00	30	21	12.00	30	21
SATURDAY PEAK HOUR	13.60	34	24	12.80	32	23
NAZZARRO PROPERTY^{3,4}						
RETAIL ¹ (50,000 SQ. FT.)						
PEAK AM HOUR	0.98	49	37	0.60	30	23
PEAK PM HOUR	3.03	152	114	3.03	152	114
SATURDAY PEAK HOUR	4.42	221	166	4.42	221	166
ADRIAN/MAZZOLA/MUJAJ PROPERTIES^{3,4}						
RETAIL ¹ (15,000 SQ. FT.)						
PEAK AM HOUR	0.98	15	11	0.60	9	7
PEAK PM HOUR	3.03	45	34	3.03	45	34
SATURDAY PEAK HOUR	4.42	66	50	4.42	66	50

NOTES:

- 1) THE HOURLY TRIP GENERATION RATES (HTGR) FOR THE CVS DEVELOPMENT ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 9TH EDITION, 2012. ITE LAND USE CODE - 881 - PHARMACY WITH DRIVE-THROUGH WINDOW AND ITE LAND USE CODE - 912 - DRIVE IN BANK.
- 2) THE NEW TRIPS FOR THE CVS DEVELOPMENT INCLUDE A 5% INTERNAL TRIP CREDIT AND A 25% PASS-BY/DIVERTED LINK TRIP CREDIT APPLIED TO BOTH THE PHARMACY AND BANK USES TO ACCOUNT FOR TRIPS BETWEEN USES AND THOSE ATTRACTED FROM THE EXISTING TRAFFIC STREAMS ALONG NYS ROUTE 35/202.
- 3) THE HOURLY TRIP GENERATION RATES (HTGR) FOR THE NAZZARRO AND ADRIAN/MAZZOLA/MUJAJ PROPERTIES ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 9TH EDITION, 2012. ITE LAND USE CODE - 820 - RETAIL. OVERALL RETAIL TRIP GENERATION RATES WERE DEVELOPED BASED ON THE TOTAL AREA RETAIL DEVELOPMENTS AND THEN APPLIED TO EACH INDIVIDUAL DEVELOPMENT
- 4) NEW TRIPS INCLUDE A 25% PASS-BY/DIVERTED LINK TRIP CREDIT APPLIED TO THE RETAIL USE TO ACCOUNT FOR TRIPS ATTRACTED FROM THE EXISTING TRAFFIC STREAMS ALONG NYS ROUTE 35/202.

**TABLE 2
LEVEL OF SERVICE SUMMARY TABLE**

			2014 EXISTING			2019 NO-BUILD			2019 BUILD WITH REZONING			
			AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	
1	BEAR MOUNTAIN PARKWAY EXT. & STONY STREET	SIGNALIZED										
		EB	LT	B[15.9]	C[23.7]	C[23.0]	B[15.7]	D[36.2]	C[21.9]	B[15.3]	D[38.2]	C[21.8]
			R	B[15.2]	B[19.4]	B[19.5]	B[15.2]	C[34.3]	C[21.6]	B[14.7]	C[33.8]	C[21.9]
		WB	LTR	B[18.8]	D[36.2]	C[31.3]	B[18.0]	D[45.4]	C[28.9]	B[17.1]	D[49.9]	C[28.4]
			L	A[6.5]	A[8.4]	A[5.1]	A[7.5]	B[17.5]	A[5.9]	A[8.0]	B[17.9]	A[6.3]
			TR	B[15.8]	B[11.2]	A[8.3]	B[18.6]	A[9.8]	A[9.5]	B[19.9]	B[10.0]	B[10.1]
		SB	L	A[6.5]	A[6.7]	A[5.0]	A[7.8]	A[5.4]	A[5.3]	A[8.7]	A[5.7]	A[5.7]
			TR	A[9.6]	C[26.6]	B[11.2]	B[11.2]	D[37.5]	B[15.7]	B[12.0]	D[39.9]	B[16.5]
	OVERALL	B[12.5]	C[22.8]	B[13.4]	B[13.7]	C[31.4]	B[16.1]	B[14.1]	C[33.6]	B[16.6]		
2	STONY STREET & OLD CROMPOND ROAD	UNSIGNALIZED										
		EB	TR	A[7.5]	A[8.7]	A[7.6]	A[8.1]	C[16.2]	B[12.0]	A[8.9]	C[20.7]	B[14.3]
		WB	LT	A[7.3]	A[8.4]	A[7.6]	A[8.1]	E[37.6]	D[26.8]	A[9.1]	F[61.5]	F[58.7]
		NB	LR	A[7.7]	A[9.2]	A[8.2]	A[7.9]	C[16.0]	B[12.6]	A[8.4]	C[19.7]	B[14.8]
		OVERALL	A[7.5]	A[8.8]	A[7.8]	A[8.1]	D[25.6]	C[19.5]	A[8.9]	E[42.4]	E[39.8]	
	WITH REDISTRIBUTED TRAFFIC VOLUMES	EB	TR	-	-	-	A[8.1]	B[14.3]	B[10.8]	A[8.7]	C[20.5]	B[12.5]
		WB	LT	-	-	-	A[7.9]	C[17.7]	B[13.2]	A[8.4]	E[42.9]	C[18.2]
		NB	LR	-	-	-	A[7.8]	B[14.2]	B[11.2]	A[8.2]	C[19.4]	B[12.8]
			OVERALL	-	-	-	A[8.0]	C[15.5]	B[11.8]	A[8.5]	D[29.4]	B[15.0]
		3	NYS ROUTE 35/U.S. ROUTE 202 & STONY STREET/BJ'S	SIGNALIZED								
EB		L	B[10.5]	B[17.2]	B[17.8]	B[19.9]	C[27.0]	C[30.1]	C[20.8]	C[30.1]	C[34.9]	
	T	B[14.9]	C[21.7]	C[25.8]	C[32.1]	C[33.0]	D[49.7]	C[32.7]	D[35.1]	D[49.7]		
	R	A[3.2]	A[3.7]	A[5.0]	A[2.7]	A[2.4]	A[2.2]	A[2.5]	A[2.4]	A[2.2]		
WB	L	D[42.1]	C[30.0]	E[57.2]	D[45.7]	C[25.0]	C[31.6]	D[46.0]	C[26.7]	D[37.9]		
	TR	D[47.1]	C[20.8]	C[22.3]	D[47.5]	B[15.5]	B[20.0]	D[47.5]	B[16.0]	B[19.0]		
NB	L	E[64.0]	F[83.5]	F[84.2]	D[52.3]	D[52.9]	D[51.9]	D[52.3]	D[52.6]	D[52.0]		
	T	D[37.5]	C[31.0]	C[31.0]	D[52.6]	D[54.0]	D[53.1]	D[52.6]	D[54.8]	D[52.7]		
	R	B[17.9]	B[15.9]	B[18.4]	B[14.9]	B[13.4]	B[17.6]	B[14.9]	B[14.0]	B[19.4]		
SB	L	-	-	-	D[49.7]	D[40.4]	D[47.8]	D[54.6]	D[51.9]	D[53.0]		
	LT	E[56.9]	D[37.2]	D[36.5]	D[52.8]	D[46.2]	D[49.0]	D[54.1]	D[47.5]	D[51.6]		
	R	A[1.4]	A[5.7]	A[0.7]	A[1.4]	A[6.6]	A[1.7]	A[1.9]	A[8.2]	A[3.7]		
	OVERALL	C[25.0]	C[25.4]	C[29.8]	C[32.4]	C[26.2]	C[33.6]	C[32.9]	C[28.4]	C[34.8]		
4	NYS ROUTE 35/U.S. ROUTE 202 & OLD CROMPOND ROAD ²	UNSIGNALIZED										
		EB	LT	A[-]	A[-]	B[10.7]	A[-]	A[-]	A[-]	A[-]	A[-]	A[-]
		LR	E[40.1]	F[62.6]	F[86.4]	D[34.9]	F[56.1]	F[63.4]	E[40.5]	F[84.1]	F[95.8]	
	WITH SIGNALIZATION AND REDISTRIBUTED TRAFFIC VOLUMES ³	EB	LT	-	-	-	A[2.9]	A[3.9]	A[6.9]	A[6.5]	A[5.7]	B[10.1]
		WB	TR	-	-	-	A[3.6]	A[2.6]	A[2.7]	A[7.5]	A[4.4]	A[3.9]
		SB	LR	-	-	-	D[40.0]	D[45.4]	D[50.4]	D[44.3]	D[51.8]	D[50.4]
			OVERALL	-	-	-	A[3.5]	A[4.9]	A[7.0]	A[8.0]	A[8.9]	B[10.1]

NOTES:

- THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND AVERAGE VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH APPROACH AS WELL AS FOR THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS AND FOR THE KEY APPROACHES FOR THE UNSIGNALIZED LOCATIONS. SEE APPENDIX "D" FOR ADDITIONAL DETAILS.
- THE NO-BUILD AND BUILD ANALYSES FOR THE INTERSECTION OF NYS ROUTE 35/U.S. ROUTE 202 & OLD CROMPOND ROAD INCLUDES THE ADDITIONAL WESTBOUND THROUGH LANE TO BE CONSTRUCTED IN ASSOCIATION WITH THE COSTCO DEVELOPMENT.
- THE SIGNALIZATION OF THE NYS ROUTE 35/U.S. ROUTE 202 & OLD CROMPOND ROAD INTERSECTION WOULD ALLOW FOR LEFT TURNS OUT OF THIS LOCATION TO EASTBOUND NYS ROUTE 35/U.S. ROUTE 202 AND THEREFORE IS EXPECTED TO REDISTRIBUTE FUTURE TRAFFIC VOLUMES TO THIS INTERSECTION AND AWAY FROM THE STONEY STREET INTERSECTIONS (I.E. INTERSECTION 2 AND 3).

TABLE 2 (CONTINUED)
LEVEL OF SERVICE SUMMARY TABLE

			2014 EXISTING			2019 NO-BUILD			2019 BUILD WITH REZONING			
			AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	
5	NYS ROUTE 35/U.S. ROUTE 202 & MOHANSIC AVENUE/COSTCO DRIVEWAY	SIGNALIZED										
		EB	TR	A[8.3]	B[13.0]	B[12.3]	-	-	-	-	-	-
		WB	L	A[2.7]	A[7.6]	A[7.5]	-	-	-	-	-	-
			T	A[3.7]	C[33.8]	A[29.1]	-	-	-	-	-	-
		NB	LTR	B[17.0]	B[14.1]	B[15.5]	-	-	-	-	-	-
		OVERALL	A[7.2]	C[20.7]	B[18.3]	-	-	-	-	-	-	
	WITH COSTCO IMPROVEMENTS ²	EB	L	-	-	-	A[5.2]	C[29.4]	D[47.2]	A[5.3]	C[26.8]	D[47.4]
			TR	-	-	-	B[17.3]	B[17.9]	C[34.2]	B[18.2]	C[26.9]	E[64.4]
		WB	L	-	-	-	B[10.2]	C[33.7]	C[31.7]	A[9.4]	C[33.7]	C[31.7]
			T	-	-	-	A[2.8]	B[15.4]	C[20.5]	A[3.1]	C[23.6]	C[33.8]
		NB	LT	-	-	-	D[39.5]	D[49.0]	D[52.8]	D[39.6]	D[50.0]	D[53.4]
			R	-	-	-	A[1.5]	B[18.6]	B[14.6]	A[1.5]	B[18.7]	B[14.6]
		SB	L	-	-	-	D[44.4]	D[47.9]	D[54.8]	D[44.4]	D[47.9]	D[54.8]
			TR	-	-	-	C[20.4]	C[33.4]	D[40.4]	C[20.4]	C[33.4]	D[40.5]
		OVERALL	-	-	-	B[13.7]	C[21.6]	C[32.2]	B[14.1]	C[27.7]	D[47.8]	
6	NYS ROUTE 35/U.S. ROUTE 202 & TACONIC STATE PARKWAY SB RAMPS	SIGNALIZED										
		EB	T	E[72.1]	E[79.9]	E[72.9]	-	-	-	-	-	-
			R	A[1.1]	A[0.4]	A[0.3]	-	-	-	-	-	-
		WB	L	B[18.9]	A[7.5]	B[10.4]	-	-	-	-	-	-
			T	A[4.5]	C[20.3]	A[8.7]	-	-	-	-	-	-
		OVERALL	C[27.5]	D[41.5]	C[34.4]	-	-	-	-	-	-	
	WITH COSTCO IMPROVEMENTS ²	EB	T	-	-	-	A[3.6]	A[7.4]	B[11.6]	A[3.8]	B[10.7]	C[22.6]
			R	-	-	-	A[2.9]	A[0.4]	A[0.3]	A[3.1]	A[0.4]	A[0.2]
		WB	L	-	-	-	C[21.7]	B[10.1]	B[13.3]	C[22.8]	B[17.4]	B[19.1]
			T	-	-	-	A[0.5]	A[1.7]	A[1.0]	A[0.5]	A[2.8]	A[1.3]
		SB	L	-	-	-	D[44.5]	D[37.5]	D[40.5]	D[44.5]	D[35.2]	D[38.0]
			R	-	-	-	B[11.5]	C[29.2]	D[37.8]	B[11.3]	C[31.2]	D[39.5]
			OVERALL	-	-	-	A[6.4]	A[5.6]	A[8.1]	A[6.5]	A[7.6]	B[12.9]
		7	NYS ROUTE 35/U.S. ROUTE 202 & TACONIC STATE PARKWAY NB RAMPS	SIGNALIZED								
EB				L	C[21.1]	E[74.8]	E[73.7]	-	-	-	-	-
	T			C[32.3]	E[63.0]	C[21.5]	-	-	-	-	-	-
WB	TR			D[42.6]	F[116.1]	F[93.5]	-	-	-	-	-	-
NB	L			C[25.4]	C[30.6]	D[39.0]	-	-	-	-	-	-
	OVERALL		C[34.6]	E[69.5]	E[56.8]	-	-	-	-	-	-	
WITH COSTCO IMPROVEMENTS ²	EB		L	-	-	-	A[6.4]	D[35.8]	D[42.1]	A[7.6]	D[51.9]	D[54.8]
			T	-	-	-	B[17.4]	D[39.3]	C[22.7]	B[19.4]	D[51.1]	D[36.6]
	WB		TR	-	-	-	C[21.0]	C[31.6]	C[34.5]	C[21.6]	C[34.9]	D[40.2]
			L	-	-	-	C[28.1]	E[58.0]	D[52.4]	C[28.8]	E[62.8]	D[54.5]
	NB		R	-	-	-	A[6.6]	C[31.2]	A[8.5]	A[6.6]	C[32.5]	B[10.2]
			OVERALL	-	-	-	B[18.7]	D[38.2]	C[32.2]	B[19.9]	D[45.7]	D[41.4]

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND AVERAGE VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH APPROACH AS WELL AS FOR THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS AND FOR THE KEY APPROACHES FOR THE UNSIGNALIZED LOCATIONS. SEE APPENDIX "D" FOR ADDITIONAL DETAILS.
- 2) UNDER EXISTING CONDITIONS, DURING PEAK HOURS, THE OPERATION OF INTERSECTIONS 5 & 6 (MOHANSIC AVENUE & TACONIC STATE PARKWAY SB RAMPS) IS CURRENTLY IMPACTED BY QUEUEING IN THE EASTBOUND DIRECTION WHICH OCCASIONALLY EXTENDS FROM THE NORTHBOUND RAMP INTERSECTION. THE WIDENING OF NYS ROUTE 35/U.S. ROUTE 202 AND ASSOCIATED SIGNAL TIMING AND COORDINATION IMPROVEMENTS ARE BEING COMPLETED TO ADDRESS THESE EXISTING CONDITIONS IN THE VICINITY OF THE TACONIC STATE PARKWAY INTERCHANGE. THESE IMPROVEMENTS HAVE BEEN INCLUDED IN THE NO-BUILD AND BUILD ANALYSIS SCENARIOS FOR INTERSECTION 5, 6 & 7.



***PROPOSED BEAR MOUNTAIN TRIANGLE
REZONING AND CROMPOND TERRACES***

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 18-4 from the *2010 Highway Capacity Manual* published by the Transportation Research Board.

Exhibit 18-4

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

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



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

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

The Level of Service Criteria for TWSC unsignalized intersections are given in Exhibit 19-1 from the *2010 Highway Capacity Manual* published by the Transportation Research Board.

Exhibit 19-1

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

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

As Exhibit 19-1 notes, LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

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



LEVEL OF SERVICE CRITERIA

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

The Levels of Service (LOS) for all-way stop-controlled (AWSC) intersections are given in Exhibit 20-2. As the exhibit notes, LOS F is assigned if the volume-to-capacity (v/c) ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

The Level of Service Criteria for AWSC unsignalized intersections are given in Exhibit 20-2 from the *2010 Highway Capacity Manual* published by the Transportation Research Board.

Exhibit 20-2

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

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



***PROPOSED BEAR MOUNTAIN TRIANGLE
REZONING AND CROMPOND TERRACES***

APPENDIX D
CAPACITY ANALYSIS

2014 Existing Traffic Volumes
1: Bear Mountain Pkwy. Ext. & Stoney Street

AM Peak Hour
1/7/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	88	116	49	2	23	3	17	183	2	112	247	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.956			0.986			0.999			0.995	
Flt Protected	0.950				0.997		0.950			0.950		
Satd. Flow (prot)	1885	1897	0	0	1840	0	1805	1898	0	1805	1890	0
Flt Permitted	0.537				0.958		0.586			0.501		
Satd. Flow (perm)	1065	1897	0	0	1768	0	1113	1898	0	952	1890	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			3			1			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	96	126	53	2	25	3	19	203	2	124	274	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	179	0	0	30	0	19	205	0	124	284	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2		2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	40	40		50	40		40	40		40	40	
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)	43	43			43		43	43		43	43	
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												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	

2014 Existing Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM Peak Hour
 1/7/2015



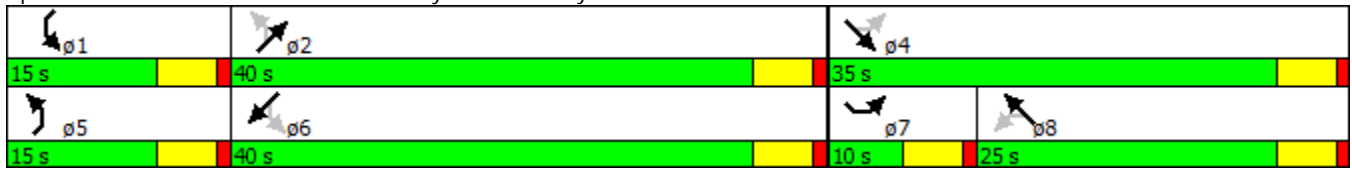
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		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	
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	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effct Green (s)	9.6	10.1			7.1		19.7	16.7		24.3	24.5	
Actuated g/C Ratio	0.23	0.24			0.17		0.47	0.40		0.58	0.59	
v/c Ratio	0.25	0.38			0.10		0.03	0.27		0.17	0.26	
Control Delay	15.9	15.2			18.8		6.5	15.8		6.5	9.6	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	15.9	15.2			18.8		6.5	15.8		6.5	9.6	
LOS	B	B			B		A	B		A	A	
Approach Delay		15.5			18.8			15.0			8.7	
Approach LOS		B			B			B			A	
Queue Length 50th (ft)	18	30			6		2	40		12	30	
Queue Length 95th (ft)	53	81			28		11	109		42	138	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	385	1408			902		780	1573		773	1566	
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	0.25	0.13			0.03		0.02	0.13		0.16	0.18	

Intersection Summary	
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	41.8
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.38
Intersection Signal Delay:	12.5
Intersection LOS:	B
Intersection Capacity Utilization:	40.9%
ICU Level of Service:	A
Analysis Period (min):	15

2014 Existing Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM Peak Hour
 1/7/2015

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes
2: Stoney Street & Old Crompond Road

AM Peak Hour
1/7/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	0	230	2	3	25	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865				0.991	
Flt Protected				0.980	0.955	
Satd. Flow (prot)	1603	0	0	1835	1745	0
Flt Permitted				0.980	0.955	
Satd. Flow (perm)	1603	0	0	1835	1745	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1448	190	
Travel Time (s)	12.3			32.9	4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	256	2	3	28	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	256	0	0	5	30	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.2%
Analysis Period (min)	15
	ICU Level of Service A

2014 Existing Traffic Volumes
2: Stoney Street & Old Crompond Road

AM Peak Hour
1/7/2015

Intersection									
Intersection Delay, s/veh	7.5								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	0	230	0	2	3	0	25	2
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	256	0	2	3	0	28	2
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	7.3	7.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	93%	0%	40%
Vol Thru, %	0%	0%	60%
Vol Right, %	7%	100%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	27	230	5
LT Vol	25	0	2
Through Vol	0	0	3
RT Vol	2	230	0
Lane Flow Rate	30	256	6
Geometry Grp	1	1	1
Degree of Util (X)	0.038	0.241	0.007
Departure Headway (Hd)	4.528	3.391	4.259
Convergence, Y/N	Yes	Yes	Yes
Cap	790	1058	838
Service Time	2.559	1.414	2.294
HCM Lane V/C Ratio	0.038	0.242	0.007
HCM Control Delay	7.7	7.5	7.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.9	0

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2014 Existing Traffic Volumes
3: BJ's Shopping Center/Stoney Street & Route 202/35

AM Peak Hour
1/7/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1174	161	85	442	9	81	8	180	68	67	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	11	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					0.98
Frt			0.850		0.997				0.850			0.850
Flt Protected	0.950			0.950			0.950				0.975	
Satd. Flow (prot)	1770	3471	1552	1770	3671	0	1770	1863	1583	0	1834	1546
Flt Permitted	0.473			0.385			0.518				0.836	
Satd. Flow (perm)	881	3471	1552	717	3671	0	957	1863	1583	0	1573	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151		3				89			108
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1517			289				190
Travel Time (s)		9.3			23.0			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	11	1276	175	92	480	10	90	9	200	76	74	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	1276	175	92	490	0	90	9	200	0	150	108
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	1.03	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				43			43	43	43		43	43
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

2014 Existing Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM Peak Hour
 1/7/2015



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	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	6	2		1	5			3	1		3	6
Permitted Phases	2		2	5			3		3	3		3
Detector Phase	6	2	2	1	5		3	3	1	3	3	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	36.0	11.0	36.0		16.0	16.0	11.0	16.0	16.0	11.0
Total Split (s)	15.0	65.0	65.0	15.0	65.0		30.0	30.0	15.0	30.0	30.0	15.0
Total Split (%)	13.6%	59.1%	59.1%	13.6%	59.1%		27.3%	27.3%	13.6%	27.3%	27.3%	13.6%
Maximum Green (s)	9.0	59.0	59.0	9.0	59.0		24.0	24.0	9.0	24.0	24.0	9.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead				Lead			Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	C-Max	None	None		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	68.5	68.5	67.5	20.7	20.7		16.2	16.2	31.5		16.2	74.3
Actuated g/C Ratio	0.62	0.62	0.61	0.19	0.19		0.15	0.15	0.29		0.15	0.68
v/c Ratio	0.01	0.59	0.17	0.39	0.71		0.64	0.03	0.39		0.65	0.10
Control Delay	10.5	14.9	3.2	42.1	47.1		64.0	37.5	17.9		56.9	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	10.5	14.9	3.2	42.1	47.1		64.0	37.5	17.9		56.9	1.4
LOS	B	B	A	D	D		E	D	B		E	A
Approach Delay		13.4			46.3			32.4			33.6	
Approach LOS		B			D			C			C	
Queue Length 50th (ft)	3	262	6	56	171		61	6	60		102	0
Queue Length 95th (ft)	12	401	40	98	214		110	19	111		160	17
Internal Link Dist (ft)		532			1437			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	1018	2161	1010	242	2003		217	423	528		357	1074
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.01	0.59	0.17	0.38	0.24		0.41	0.02	0.38		0.42	0.10

Intersection Summary






Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

2014 Existing Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM Peak Hour
 1/7/2015

Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 69.2%	ICU Level of Service C
Analysis Period (min) 15	

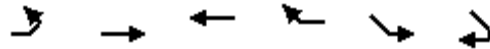
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35

 φ1	 φ2 (R)	 φ3
15 s	65 s	30 s
 φ5	 φ6	
65 s	15 s	

Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes
4: Route 202/35 & Old Crompond Road

AM Peak Hour
1/7/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	1422	536	1	3	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Flt					0.946	
Flt Protected					0.971	
Satd. Flow (prot)	0	3350	1891	0	1626	0
Flt Permitted					0.971	
Satd. Flow (perm)	0	3350	1891	0	1626	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		293	457		613	
Travel Time (s)		4.4	6.9		13.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.90	0.90
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1546	583	1	3	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1546	584	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.3%
Analysis Period (min)	15
	ICU Level of Service A

2014 Existing Traffic Volumes
4: Route 202/35 & Old Crompond Road

AM Peak Hour
1/7/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1422	536	1	3	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	92	92	92	92	90	90
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1546	583	1	3	2

Major/Minor	Major1	Major2	Minor2
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Conflicting Flow All	584	0	-	0	1356	583
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	773	-
Critical Hdwy	4.12	-	-	-	8.63	7.23
Critical Hdwy Stg 1	-	-	-	-	7.43	-
Critical Hdwy Stg 2	-	-	-	-	7.83	-
Follow-up Hdwy	2.218	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	991	-	-	-	72	435
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	271	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	991	-	-	-	72	435
Mov Cap-2 Maneuver	-	-	-	-	72	-
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	271	-

Approach	EB	WB	SE
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HCM Control Delay, s	0	0	40.1
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
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Capacity (veh/h)	991	-	-	-	108
HCM Lane V/C Ratio	-	-	-	-	0.051
HCM Control Delay (s)	0	-	-	-	40.1
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	0.2

2014 Existing Traffic Volumes
5: COSTCO Access & Route 202/35

AM Peak Hour
1/7/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑	↘	
Volume (vph)	1418	7	44	522	15	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12
Grade (%)	8%			-7%	-4%	
Storage Length (ft)		0	170		0	100
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.999				0.905	
Flt Protected			0.950		0.985	
Satd. Flow (prot)	3329	0	1832	1891	1920	0
Flt Permitted			0.113		0.985	
Satd. Flow (perm)	3329	0	218	1891	1920	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				38	
Link Speed (mph)	45			45	30	
Link Distance (ft)	457			251	624	
Travel Time (s)	6.9			3.8	14.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	2%	2%	4%	2%	2%
Adj. Flow (vph)	1541	8	48	567	16	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1549	0	48	567	54	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	0.82	0.97
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	1	
Detector Template						
Leading Detector (ft)	83		83	83	50	
Trailing Detector (ft)	-5		-5	-5	0	
Detector 1 Position(ft)	-5		-5	-5	0	
Detector 1 Size(ft)	40		40	40	50	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	43		43	43		
Detector 2 Size(ft)	40		40	40		
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0		0.0	0.0		
Turn Type	NA		pm+pt	NA	Prot	

2014 Existing Traffic Volumes
5: COSTCO Access & Route 202/35

AM Peak Hour
1/7/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	4.0		1.0	1.0	4.0	
Minimum Split (s)	10.0		7.0	9.0	10.0	
Total Split (s)	40.0		20.0	60.0	30.0	
Total Split (%)	44.4%		22.2%	66.7%	33.3%	
Maximum Green (s)	35.0		15.0	55.0	25.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	Max	None	
Act Effct Green (s)	54.3		59.1	60.8	7.4	
Actuated g/C Ratio	0.77		0.84	0.87	0.11	
v/c Ratio	0.60		0.14	0.35	0.23	
Control Delay	8.3		2.7	2.6	17.0	
Queue Delay	0.0		0.0	1.0	0.0	
Total Delay	8.3		2.7	3.7	17.0	
LOS	A		A	A	B	
Approach Delay	8.3			3.6	17.0	
Approach LOS	A			A	B	
Queue Length 50th (ft)	211		3	51	7	
Queue Length 95th (ft)	328		10	99	37	
Internal Link Dist (ft)	377			171	544	
Turn Bay Length (ft)			170			
Base Capacity (vph)	2574		553	1638	739	
Starvation Cap Reductn	0		0	779	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.60		0.09	0.66	0.07	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	70.2
Natural Cycle:	50
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	7.2
Intersection Capacity Utilization:	49.4%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Splits and Phases: 5: COSTCO Access & Route 202/35

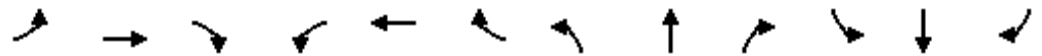


Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes

AM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑					↘		↗
Volume (vph)	0	753	700	315	526	0	0	0	0	90	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		0	200		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			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
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1763	1558	1877	1837	0	0	0	0	1769	0	1583
Flt Permitted				0.151						0.950		
Satd. Flow (perm)	0	1763	1558	298	1837	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			409									85
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		251			475			607			868	
Travel Time (s)		3.8			7.2			13.8			19.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	818	761	342	572	0	0	0	0	100	0	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	818	761	342	572	0	0	0	0	100	0	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	1	2					2		2
Detector Template												
Leading Detector (ft)		83	0	50	83					83		83
Trailing Detector (ft)		-5	0	0	-5					-5		-5
Detector 1 Position(ft)		-5	0	0	-5					-5		-5
Detector 1 Size(ft)		40	50	50	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43			43					43		43
Detector 2 Size(ft)		40			40					40		40
Detector 2 Type		Cl+Ex			Cl+Ex					Cl+Ex		Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0					0.0		0.0
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

2014 Existing Traffic Volumes

AM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		45.0		15.0	60.0					30.0		30.0
Total Split (%)		50.0%		16.7%	66.7%					33.3%		33.3%
Maximum Green (s)		40.0		10.0	55.0					25.0		25.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		Max		None	Max					None		None
Act Effct Green (s)		41.3	71.6	56.4	57.4					9.5		9.5
Actuated g/C Ratio		0.58	1.00	0.79	0.80					0.13		0.13
v/c Ratio		0.80	0.49	0.71	0.39					0.43		0.15
Control Delay		21.8	1.1	18.9	4.1					35.1		3.1
Queue Delay		50.3	0.0	0.0	0.4					0.0		0.0
Total Delay		72.1	1.1	18.9	4.5					35.1		3.1
LOS		E	A	B	A					D		A
Approach Delay		37.9			9.8							
Approach LOS		D			A							
Queue Length 50th (ft)		283	0	51	67					43		0
Queue Length 95th (ft)		#567	0	#188	136					86		9
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)				200								130
Base Capacity (vph)		1017	1558	479	1472					647		633
Starvation Cap Reductn		332	0	0	425					0		0
Spillback Cap Reductn		0	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		1.19	0.49	0.71	0.55					0.15		0.07

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	71.6
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	27.5
Intersection LOS:	C
Intersection Capacity Utilization:	72.1%
ICU Level of Service:	C
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

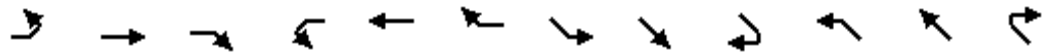


Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes

AM Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355

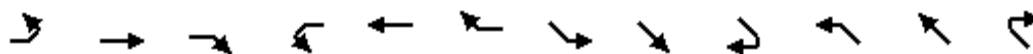


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	75	768	0	0	746	13	0	0	0	95	0	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%			-3%	
Storage Length (ft)	200		0	0		350	0		0	0		530
Storage Lanes	1		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			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
Frt					0.998							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1675	1695	0	0	1808	0	0	0	0	1832	0	1639
Flt Permitted	0.090									0.950		
Satd. Flow (perm)	159	1695	0	0	1808	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1							89
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1112
Travel Time (s)		7.2			8.2			17.8				25.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	82	835	0	0	811	14	0	0	0	106	0	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	835	0	0	825	0	0	0	0	106	0	89
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

2014 Existing Traffic Volumes

AM Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	15.0	60.0			45.0					30.0		30.0
Total Split (%)	16.7%	66.7%			50.0%					33.3%		33.3%
Maximum Green (s)	10.0	55.0			40.0					25.0		25.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0					-1.0		-1.0
Total Lost Time (s)	4.0	4.0			4.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	Max			None					Max		Max
Act Effct Green (s)	56.0	56.0			44.0					26.0		26.0
Actuated g/C Ratio	0.62	0.62			0.49					0.29		0.29
v/c Ratio	0.31	0.79			0.93					0.20		0.17
Control Delay	21.1	19.8			42.6					25.4		6.4
Queue Delay	0.0	12.5			0.0					0.0		0.0
Total Delay	21.1	32.3			42.6					25.4		6.4
LOS	C		C		D		D		C		A	
Approach Delay	31.3				42.6							
Approach LOS	C				D							
Queue Length 50th (ft)	17	320			-454					45		0
Queue Length 95th (ft)	34	501			#722					86		33
Internal Link Dist (ft)	395				460		701				1032	
Turn Bay Length (ft)	200										530	
Base Capacity (vph)	284	1054			884					529		536
Starvation Cap Reductn	0	209			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.29	0.99			0.93					0.20		0.17

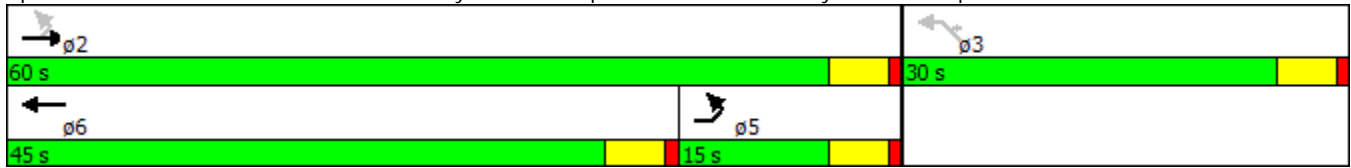
Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 34.6
 Intersection LOS: C
 Intersection Capacity Utilization 72.1%
 ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

Queue shown is maximum after two cycles.

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes
1: Bear Mountain Pkwy. Ext. & Stoney Street

PM Peak Hour
1/7/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	51	24	2	103	6	39	41	11	195	753	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.952			0.993			0.969			0.986	
Flt Protected	0.950				0.999		0.950			0.950		
Satd. Flow (prot)	1885	1889	0	0	1857	0	1805	1841	0	1805	1873	0
Flt Permitted	0.341				0.995		0.100			0.636		
Satd. Flow (perm)	676	1889	0	0	1850	0	190	1841	0	1208	1873	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			3			14			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.82	0.82	0.82	0.83	0.83	0.83	0.76	0.76	0.76	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	18	62	29	2	124	7	51	54	14	232	896	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	91	0	0	133	0	51	68	0	232	991	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
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	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	

2014 Existing Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

PM Peak Hour
 1/7/2015

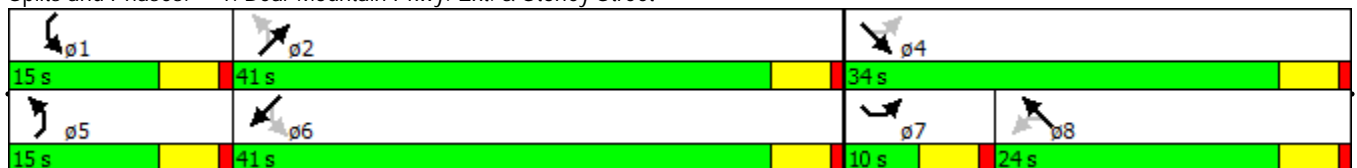


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (s)	10.0	34.0		24.0	24.0		15.0	41.0		15.0	41.0	
Total Split (%)	11.1%	37.8%		26.7%	26.7%		16.7%	45.6%		16.7%	45.6%	
Maximum Green (s)	5.0	29.0		19.0	19.0		10.0	36.0		10.0	36.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red 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	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effect Green (s)	13.6	13.7			10.6		44.0	37.6		49.9	46.1	
Actuated g/C Ratio	0.19	0.19			0.15		0.61	0.52		0.69	0.64	
v/c Ratio	0.08	0.24			0.49		0.20	0.07		0.26	0.83	
Control Delay	23.7	19.4			36.2		8.4	11.2		6.7	26.6	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	23.7	19.4			36.2		8.4	11.2		6.7	26.6	
LOS	C	B			D		A	B		A	C	
Approach Delay		20.1			36.2			10.0			22.8	
Approach LOS		C			D			A			C	
Queue Length 50th (ft)	7	24			52		5	11		26	368	
Queue Length 95th (ft)	20	53			106		21	34		83	#805	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	212	794			501		355	961		922	1194	
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	0.08	0.11			0.27		0.14	0.07		0.25	0.83	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 72.4
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 22.8
 Intersection LOS: C
 Intersection Capacity Utilization 60.3%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes
2: Stoney Street & Old Crompond Road

PM Peak Hour
1/7/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	4	230	40	8	103	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.867				0.988	
Flt Protected				0.960	0.957	
Satd. Flow (prot)	1607	0	0	1797	1744	0
Flt Permitted				0.960	0.957	
Satd. Flow (perm)	1607	0	0	1797	1744	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1448	190	
Travel Time (s)	12.3			32.9	4.3	
Peak Hour Factor	0.77	0.77	0.56	0.56	0.74	0.74
Adj. Flow (vph)	5	299	71	14	139	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	304	0	0	85	153	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	34.1%
Analysis Period (min)	15
	ICU Level of Service A

2014 Existing Traffic Volumes
2: Stoney Street & Old Crompond Road

PM Peak Hour
1/7/2015

Intersection									
Intersection Delay, s/veh	8.8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	4	230	0	40	8	0	103	10
Peak Hour Factor	0.92	0.77	0.77	0.92	0.56	0.56	0.92	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	299	0	71	14	0	139	14
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.7	8.4	9.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	91%	0%	83%
Vol Thru, %	0%	2%	17%
Vol Right, %	9%	98%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	113	234	48
LT Vol	103	0	40
Through Vol	0	4	8
RT Vol	10	230	0
Lane Flow Rate	153	304	86
Geometry Grp	1	1	1
Degree of Util (X)	0.206	0.324	0.114
Departure Headway (Hd)	4.861	3.837	4.781
Convergence, Y/N	Yes	Yes	Yes
Cap	738	939	750
Service Time	2.895	1.853	2.807
HCM Lane V/C Ratio	0.207	0.324	0.115
HCM Control Delay	9.2	8.7	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	1.4	0.4

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2014 Existing Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 1/7/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	866	182	178	704	30	213	52	252	46	116	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	11	12	11
Grade (%)		0%			0%			0%			-2%	
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					
Frt			0.850		0.994				0.850			0.850
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1770	3539	1552	1770	3730	0	1770	1863	1583	0	1855	1546
Flt Permitted	0.362			0.135			0.530				0.897	
Satd. Flow (perm)	674	3539	1552	251	3730	0	980	1863	1583	0	1688	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193		5				89			130
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1512			289				190
Travel Time (s)		9.3			22.9			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	23	952	200	185	733	31	239	58	283	55	138	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	952	200	185	764	0	239	58	283	0	193	161
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	1.03	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2014 Existing Traffic Volumes
3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
1/7/2015



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	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	6	2		1	5			3	1		3	6
Permitted Phases	2		2	5			3		3	3		3
Detector Phase	6	2	2	1	5		3	3	1	3	3	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	36.0	11.0	36.0		20.0	20.0	11.0	20.0	20.0	11.0
Total Split (s)	20.0	55.0	55.0	20.0	55.0		35.0	35.0	20.0	35.0	35.0	20.0
Total Split (%)	18.2%	50.0%	50.0%	18.2%	50.0%		31.8%	31.8%	18.2%	31.8%	31.8%	18.2%
Maximum Green (s)	14.0	49.0	49.0	14.0	49.0		29.0	29.0	14.0	29.0	29.0	14.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead				Lead			Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Max	C-Max	C-Max	None	C-Max		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	54.1	54.1	53.1	51.4	51.4		28.6	28.6	45.9		28.6	43.6
Actuated g/C Ratio	0.49	0.49	0.48	0.47	0.47		0.26	0.26	0.42		0.26	0.40
v/c Ratio	0.05	0.55	0.24	0.64	0.44		0.94	0.12	0.40		0.44	0.24
Control Delay	17.2	21.7	3.7	30.0	20.8		83.5	31.0	15.9		37.2	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	17.2	21.7	3.7	30.0	20.8		83.5	31.0	15.9		37.2	5.7
LOS	B	C	A	C	C		F	C	B		D	A
Approach Delay		18.5			22.6			45.3			22.9	
Approach LOS		B			C			D			C	
Queue Length 50th (ft)	8	245	3	78	188		163	31	88		112	12
Queue Length 95th (ft)	24	323	44	135	240		#307	64	146		167	42
Internal Link Dist (ft)		532			1432			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	480	1741	849	324	1746		267	508	749		460	681
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.05	0.55	0.24	0.57	0.44		0.90	0.11	0.38		0.42	0.24

Intersection Summary

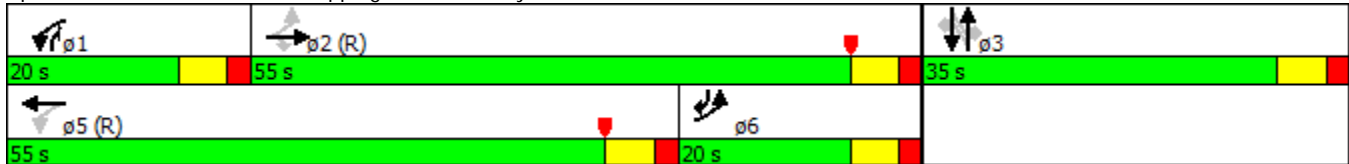
Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94

2014 Existing Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 1/7/2015

Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 65.3%	ICU Level of Service C
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

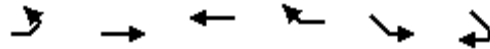
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes
4: Route 202/35 & Old Crompond Road

PM Peak Hour
1/7/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	1164	911	15	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.998		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3350	1888	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3350	1888	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		309	457		613	
Travel Time (s)		4.7	6.9		13.9	
Peak Hour Factor	0.85	0.85	0.93	0.93	0.80	0.80
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1369	980	16	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1369	996	0	2	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.9%
ICU Level of Service	B
Analysis Period (min)	15

2014 Existing Traffic Volumes
4: Route 202/35 & Old Crompond Road

PM Peak Hour
1/7/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1164	911	15	1	1
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, %	-	7	-7	-	10	-
Peak Hour Factor	85	85	93	93	80	80
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1369	980	16	1	1

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	996	0	1673
Stage 1	-	-	988
Stage 2	-	-	685
Critical Hdwy	4.12	-	8.63
Critical Hdwy Stg 1	-	-	7.43
Critical Hdwy Stg 2	-	-	7.83
Follow-up Hdwy	2.218	-	3.519
Pot Cap-1 Maneuver	695	-	38
Stage 1	-	-	208
Stage 2	-	-	316
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	695	-	38
Mov Cap-2 Maneuver	-	-	38
Stage 1	-	-	208
Stage 2	-	-	316

Approach	EB	WB	SE
HCM Control Delay, s	0	0	62.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	695	-	-	-	65
HCM Lane V/C Ratio	-	-	-	-	0.038
HCM Control Delay (s)	0	-	-	-	62.6
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.1

2014 Existing Traffic Volumes
5: Mohansic Avenue & Route 202/35

PM Peak Hour
1/7/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑	↵↵	
Volume (vph)	1142	23	156	897	29	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12
Grade (%)	8%			-7%	-4%	
Storage Length (ft)		0	170		0	150
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.997				0.897	
Flt Protected			0.950		0.988	
Satd. Flow (prot)	3387	0	1832	1928	1908	0
Flt Permitted			0.131		0.988	
Satd. Flow (perm)	3387	0	253	1928	1908	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				142	
Link Speed (mph)	45			45	30	
Link Distance (ft)	457			251	624	
Travel Time (s)	6.9			3.8	14.2	
Peak Hour Factor	0.92	0.92	0.88	0.88	0.65	0.65
Adj. Flow (vph)	1241	25	177	1019	45	142
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1266	0	177	1019	187	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	0.82	0.97
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	
Detector Template						
Leading Detector (ft)	83		83	83	83	
Trailing Detector (ft)	-5		-5	-5	5	
Detector 1 Position(ft)	-5		-5	-5	5	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	43		43	43	43	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	

2014 Existing Traffic Volumes
5: Mohansic Avenue & Route 202/35

PM Peak Hour
1/7/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	4.0		1.0	1.0	4.0	
Minimum Split (s)	10.0		7.0	9.0	10.0	
Total Split (s)	35.0		20.0	55.0	35.0	
Total Split (%)	38.9%		22.2%	61.1%	38.9%	
Maximum Green (s)	30.0		15.0	50.0	30.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	Max	None	
Walk Time (s)					5.0	
Flash Dont Walk (s)					11.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	38.4		51.1	51.1	8.5	
Actuated g/C Ratio	0.57		0.76	0.76	0.13	
v/c Ratio	0.66		0.45	0.70	0.51	
Control Delay	13.0		7.6	8.1	14.1	
Queue Delay	0.0		0.1	25.7	0.0	
Total Delay	13.0		7.6	33.8	14.1	
LOS	B		A	C	B	
Approach Delay	13.0			30.0	14.1	
Approach LOS	B			C	B	
Queue Length 50th (ft)	164		14	151	17	
Queue Length 95th (ft)	303		47	337	32	
Internal Link Dist (ft)	377			171	544	
Turn Bay Length (ft)			170			
Base Capacity (vph)	1924		565	1456	953	
Starvation Cap Reductn	0		31	474	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.66		0.33	1.04	0.20	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	67.6
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	20.7
Intersection Capacity Utilization:	61.2%
Analysis Period (min):	15
Intersection LOS:	C
ICU Level of Service:	B

Splits and Phases: 5: Mohansic Avenue & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes

PM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑					↘		↗
Volume (vph)	0	956	278	80	1024	0	0	0	0	44	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		0	200		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			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
Fr _t			0.850									0.850
Fl _t Protected				0.950						0.950		
Satd. Flow (prot)	0	1798	1558	1877	1873	0	0	0	0	1769	0	1583
Fl _t Permitted				0.081						0.950		
Satd. Flow (perm)	0	1798	1558	160	1873	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145									85
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.92	0.92	0.92	0.79	0.79	0.79
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1258	366	103	1313	0	0	0	0	56	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1258	366	103	1313	0	0	0	0	56	0	37
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	1	2					2		2
Detector Template												
Leading Detector (ft)		83	0	50	83					83		83
Trailing Detector (ft)		-5	0	0	-5					-5		-5
Detector 1 Position(ft)		-5	0	0	-5					-5		-5
Detector 1 Size(ft)		40	50	50	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43			43					43		43
Detector 2 Size(ft)		40			40					40		40
Detector 2 Type		Cl+Ex			Cl+Ex					Cl+Ex		Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0					0.0		0.0
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

2014 Existing Traffic Volumes

PM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		35.0		20.0	55.0					35.0		35.0
Total Split (%)		38.9%		22.2%	61.1%					38.9%		38.9%
Maximum Green (s)		30.0		15.0	50.0					30.0		30.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		Max		None	Max					None		None
Act Effct Green (s)		46.2	67.8	54.0	54.7					7.8		7.8
Actuated g/C Ratio		0.68	1.00	0.80	0.81					0.12		0.12
v/c Ratio		1.03	0.23	0.36	0.87					0.28		0.14
Control Delay		51.6	0.4	7.5	15.5					30.4		2.2
Queue Delay		28.3	0.0	0.0	4.9					0.0		0.0
Total Delay		79.9	0.4	7.5	20.3					30.4		2.2
LOS		E	A	A	C					C		A
Approach Delay		62.0			19.4							
Approach LOS		E			B							
Queue Length 50th (ft)		-618	0	7	294					21		0
Queue Length 95th (ft)		#687	0	21	416					45		0
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)				200								130
Base Capacity (vph)		1224	1558	533	1512					809		770
Starvation Cap Reductn		183	0	0	148					0		0
Spillback Cap Reductn		0	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		1.21	0.23	0.19	0.96					0.07		0.05

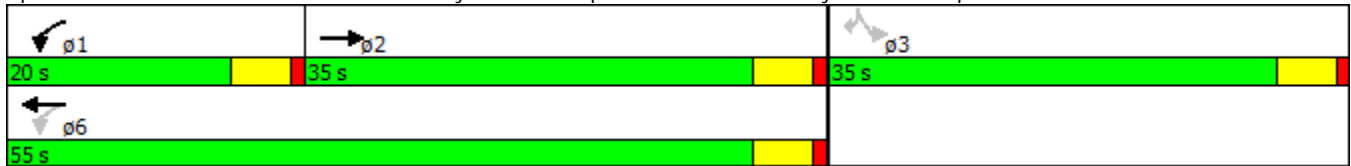
Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 67.8
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 41.5
 Intersection LOS: D
 Intersection Capacity Utilization 126.0%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Queue shown is maximum after two cycles.

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

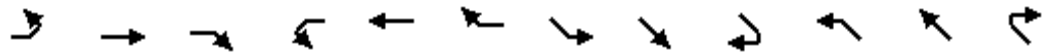


Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes

PM Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355

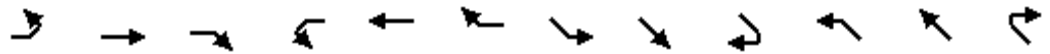


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	237	763	0	0	742	79	0	0	0	362	0	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	200		0	0		350	0		0	0		530
Storage Lanes	1		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			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
Fr _t					0.987							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	1825	0	0	0	0	1832	0	1639
Fl _t Permitted	0.100									0.950		
Satd. Flow (perm)	176	1729	0	0	1825	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					7							149
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1119
Travel Time (s)		7.2			8.2			17.8				25.4
Peak Hour Factor	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	266	857	0	0	773	82	0	0	0	407	0	396
Shared Lane Traffic (%)												
Lane Group Flow (vph)	266	857	0	0	855	0	0	0	0	407	0	396
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

2014 Existing Traffic Volumes

PM Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	15.0	55.0			40.0					35.0		35.0
Total Split (%)	16.7%	61.1%			44.4%					38.9%		38.9%
Maximum Green (s)	10.0	50.0			35.0					30.0		30.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0					-1.0		-1.0
Total Lost Time (s)	4.0	4.0			4.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	Max			None					Max		Max
Act Effct Green (s)	51.0	51.0			36.0					31.0		31.0
Actuated g/C Ratio	0.57	0.57			0.40					0.34		0.34
v/c Ratio	0.94	0.88			1.16					0.65		0.60
Control Delay	74.8	29.0			116.1					30.6		19.1
Queue Delay	0.0	34.0			0.0					0.0		0.0
Total Delay	74.8	63.0			116.1					30.6		19.1
LOS	E	E			F					C		B
Approach Delay		65.8			116.1							
Approach LOS		E			F							
Queue Length 50th (ft)	102	390			-584					193		112
Queue Length 95th (ft)	#249	#650			#814					289		203
Internal Link Dist (ft)		395			460			701			1039	
Turn Bay Length (ft)	200											530
Base Capacity (vph)	282	979			734					631		662
Starvation Cap Reductn	0	174			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.94	1.06			1.16					0.65		0.60

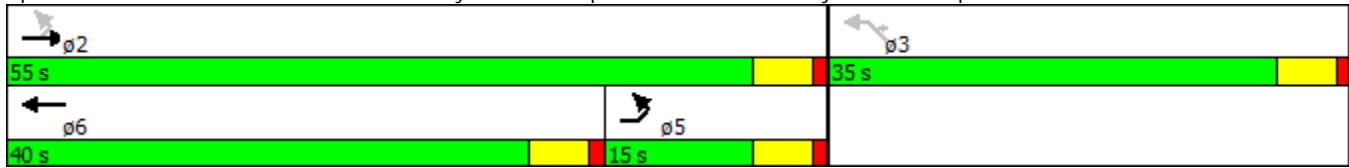
Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 69.5
 Intersection LOS: E
 Intersection Capacity Utilization 126.0%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

Queue shown is maximum after two cycles.

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes
1: Bear Mountain Pkwy. Ext. & Stoney Street

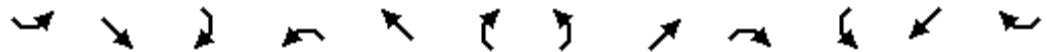
SAT Peak Hour
1/7/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	9	38	15	1	83	5	46	49	13	42	320	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.957			0.993			0.969			0.954	
Flt Protected	0.950				0.999		0.950			0.950		
Satd. Flow (prot)	1885	1899	0	0	1857	0	1805	1841	0	1805	1813	0
Flt Permitted	0.446				0.996		0.407			0.713		
Satd. Flow (perm)	885	1899	0	0	1852	0	773	1841	0	1355	1813	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			3			14			29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.90	0.90	0.90	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	43	17	1	91	5	51	54	14	44	337	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	60	0	0	97	0	51	68	0	44	484	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2		2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	40	40		50	40		40	40		40	40	
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)	43	43			43		43	43		43	43	
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												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	

2014 Existing Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

SAT Peak Hour
 1/7/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		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	
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	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effct Green (s)	10.2	10.4			8.8		44.5	41.9		44.3	41.8	
Actuated g/C Ratio	0.16	0.16			0.13		0.68	0.64		0.68	0.64	
v/c Ratio	0.05	0.19			0.38		0.08	0.06		0.05	0.41	
Control Delay	23.0	19.5			31.3		5.1	8.3		5.0	11.2	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	23.0	19.5			31.3		5.1	8.3		5.0	11.2	
LOS	C	B			C		A	A		A	B	
Approach Delay		20.0			31.3			7.0			10.7	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)	4	15			35		5	9		4	101	
Queue Length 95th (ft)	15	42			86		23	38		21	267	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	216	897			579		709	1188		1030	1172	
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	0.05	0.07			0.17		0.07	0.06		0.04	0.41	

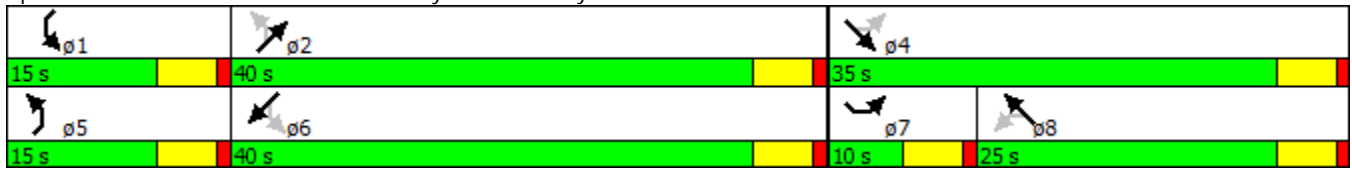
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	65.2
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.41
Intersection Signal Delay:	13.4
Intersection Capacity Utilization:	47.6%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	A

2014 Existing Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

SAT Peak Hour
 1/7/2015

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes
2: Stoney Street & Old Crompond Road

SAT Peak Hour
1/7/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	3	188	4	3	86	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.867				0.993	
Flt Protected				0.972	0.955	
Satd. Flow (prot)	1607	0	0	1820	1749	0
Flt Permitted				0.972	0.955	
Satd. Flow (perm)	1607	0	0	1820	1749	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1448	190	
Travel Time (s)	12.3			32.9	4.3	
Peak Hour Factor	0.88	0.88	0.58	0.58	0.91	0.91
Adj. Flow (vph)	3	214	7	5	95	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	217	0	0	12	100	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.5%
Analysis Period (min)	15
	ICU Level of Service A

2014 Existing Traffic Volumes
2: Stoney Street & Old Crompond Road

SAT Peak Hour
1/7/2015

Intersection									
Intersection Delay, s/veh	7.8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	3	188	0	4	3	0	86	5
Peak Hour Factor	0.92	0.88	0.88	0.92	0.58	0.58	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	214	0	7	5	0	95	5
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.6	7.6	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	95%	0%	57%
Vol Thru, %	0%	2%	43%
Vol Right, %	5%	98%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	91	191	7
LT Vol	86	0	4
Through Vol	0	3	3
RT Vol	5	188	0
Lane Flow Rate	100	217	12
Geometry Grp	1	1	1
Degree of Util (X)	0.125	0.213	0.015
Departure Headway (Hd)	4.488	3.528	4.392
Convergence, Y/N	Yes	Yes	Yes
Cap	796	1003	803
Service Time	2.534	1.602	2.484
HCM Lane V/C Ratio	0.126	0.216	0.015
HCM Control Delay	8.2	7.6	7.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.8	0

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2014 Existing Traffic Volumes
3: BJ's Shopping Center/Stoney Street & Route 202/35

SAT Peak Hour
1/7/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	981	210	225	693	18	208	50	309	35	119	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	11	12	11
Grade (%)		0%			0%			0%			-2%	
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					
Frt			0.850		0.996				0.850			0.850
Flt Protected	0.950			0.950			0.950				0.989	
Satd. Flow (prot)	1770	3539	1552	1770	3738	0	1770	1863	1583	0	1861	1546
Flt Permitted	0.337			0.108			0.539				0.921	
Satd. Flow (perm)	628	3539	1552	201	3738	0	996	1863	1583	0	1733	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			197		3				89			89
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1502			289				190
Travel Time (s)		9.3			22.8			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.85	0.85	0.85	0.85	0.85	0.85	0.82	0.82	0.82
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	25	1078	231	265	815	21	245	59	364	43	145	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	1078	231	265	836	0	245	59	364	0	188	46
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	1.03	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2014 Existing Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

SAT Peak Hour
 1/7/2015



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	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	6	2		1	5			3	1		3	6
Permitted Phases	2		2	5			3		3	3		3
Detector Phase	6	2	2	1	5		3	3	1	3	3	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	15.0	36.0	36.0	11.0	36.0		20.0	20.0	11.0	20.0	20.0	15.0
Total Split (s)	20.0	55.0	55.0	20.0	55.0		35.0	35.0	20.0	35.0	35.0	20.0
Total Split (%)	18.2%	50.0%	50.0%	18.2%	50.0%		31.8%	31.8%	18.2%	31.8%	31.8%	18.2%
Maximum Green (s)	14.0	49.0	49.0	14.0	49.0		29.0	29.0	14.0	29.0	29.0	14.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	0.0	0.0	-1.0	0.0		-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	5.0	6.0	6.0	5.0	6.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead				Lead			Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Max	C-Max	C-Max	None	C-Max		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	51.9	50.9	50.9	51.3	50.3		28.7	28.7	48.1		28.7	43.7
Actuated g/C Ratio	0.47	0.46	0.46	0.47	0.46		0.26	0.26	0.44		0.26	0.40
v/c Ratio	0.06	0.66	0.28	0.89	0.49		0.95	0.12	0.49		0.42	0.07
Control Delay	17.8	25.8	5.0	57.2	22.3		84.2	31.0	18.4		36.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	17.8	25.8	5.0	57.2	22.3		84.2	31.0	18.4		36.5	0.7
LOS	B	C	A	E	C		F	C	B		D	A
Approach Delay		22.0			30.7			43.6			29.5	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	10	312	13	135	215		167	31	129		108	0
Queue Length 95th (ft)	25	387	59	#251	252		#290	61	192		157	0
Internal Link Dist (ft)		532			1422			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	452	1636	823	307	1710		271	508	750		472	658
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.06	0.66	0.28	0.86	0.49		0.90	0.12	0.49		0.40	0.07

Intersection Summary

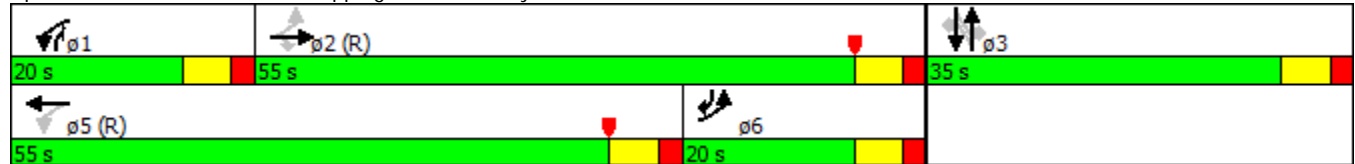
Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95

2014 Existing Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

SAT Peak Hour
 1/7/2015

Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 72.6%	ICU Level of Service C
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

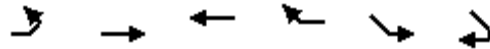
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes
4: Route 202/35 & Old Crompond Road

SAT Peak Hour
1/7/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↕↕	↑		↕↕	
Volume (vph)	1	1324	934	9	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.999		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3415	1926	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3415	1926	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		316	457		613	
Travel Time (s)		4.8	6.9		13.9	
Peak Hour Factor	0.97	0.97	0.85	0.85	0.50	0.50
Adj. Flow (vph)	1	1365	1099	11	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1366	1110	0	8	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.7%
Analysis Period (min)	15
	ICU Level of Service B

2014 Existing Traffic Volumes
4: Route 202/35 & Old Crompond Road

SAT Peak Hour
1/7/2015

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	1	1324	934	9	2	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	97	97	85	85	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1365	1099	11	4	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1109	0	1789
Stage 1	-	-	1104
Stage 2	-	-	685
Critical Hdwy	4.12	-	8.63
Critical Hdwy Stg 1	-	-	7.43
Critical Hdwy Stg 2	-	-	7.83
Follow-up Hdwy	2.218	-	3.519
Pot Cap-1 Maneuver	630	-	30
Stage 1	-	-	171
Stage 2	-	-	316
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	630	-	30
Mov Cap-2 Maneuver	-	-	30
Stage 1	-	-	171
Stage 2	-	-	314

Approach	EB	WB	SE
HCM Control Delay, s	0	0	86.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	630	-	-	-	52
HCM Lane V/C Ratio	0.002	-	-	-	0.154
HCM Control Delay (s)	10.7	0	-	-	86.4
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.5

2014 Existing Traffic Volumes
5: Mohansic Avenue & Route 202/35

SAT Peak Hour
1/7/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑	↵↵	
Volume (vph)	1302	24	112	914	29	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12
Grade (%)	8%			-7%	-4%	
Storage Length (ft)		0	170		0	150
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.997				0.901	
Flt Protected			0.950		0.987	
Satd. Flow (prot)	3387	0	1832	1928	1915	0
Flt Permitted			0.096		0.987	
Satd. Flow (perm)	3387	0	185	1928	1915	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				103	
Link Speed (mph)	45			45	30	
Link Distance (ft)	457			251	624	
Travel Time (s)	6.9			3.8	14.2	
Peak Hour Factor	0.87	0.87	0.91	0.91	0.77	0.77
Adj. Flow (vph)	1497	28	123	1004	38	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1525	0	123	1004	141	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	0.82	0.97
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		2	2	2	
Detector Template						
Leading Detector (ft)	83		83	83	83	
Trailing Detector (ft)	-5		-5	-5	-5	
Detector 1 Position(ft)	-5		-5	-5	-5	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	43		43	43	43	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	

2014 Existing Traffic Volumes
5: Mohansic Avenue & Route 202/35

SAT Peak Hour
1/7/2015

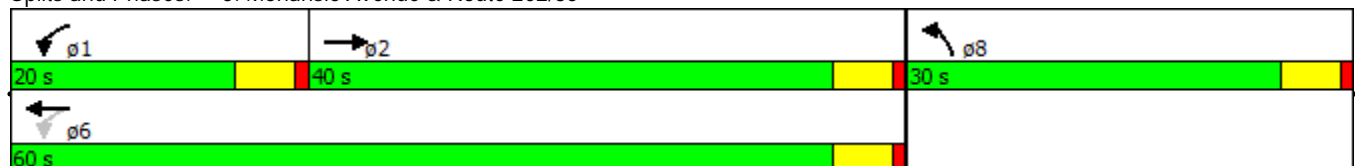


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	4.0		1.0	1.0	4.0	
Minimum Split (s)	10.0		7.0	9.0	10.0	
Total Split (s)	40.0		20.0	60.0	30.0	
Total Split (%)	44.4%		22.2%	66.7%	33.3%	
Maximum Green (s)	35.0		15.0	55.0	25.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	Max	None	
Act Effect Green (s)	46.4		56.0	56.0	8.5	
Actuated g/C Ratio	0.64		0.77	0.77	0.12	
v/c Ratio	0.70		0.38	0.67	0.45	
Control Delay	12.3		7.5	7.1	15.5	
Queue Delay	0.0		0.0	22.0	0.0	
Total Delay	12.3		7.5	29.1	15.5	
LOS	B		A		C	
Approach Delay	12.3			26.7	15.5	
Approach LOS	B				C	
Queue Length 50th (ft)	218		9	146	16	
Queue Length 95th (ft)	348		39	327	47	
Internal Link Dist (ft)	377			171	544	
Turn Bay Length (ft)			170			
Base Capacity (vph)	2167		506	1489	753	
Starvation Cap Reductn	0		25	510	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.70		0.26	1.03	0.19	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 72.5
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 18.3
 Intersection Capacity Utilization 61.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 5: Mohansic Avenue & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes

SAT Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑					↘		↗
Volume (vph)	0	1041	340	108	986	0	0	0	0	62	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		0	200		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			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
Fr _t			0.850									0.850
Fl _t Protected				0.950						0.950		
Satd. Flow (prot)	0	1798	1558	1877	1873	0	0	0	0	1769	0	1583
Fl _t Permitted				0.074						0.950		
Satd. Flow (perm)	0	1798	1558	146	1873	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145									85
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.94	0.94	0.94	0.97	0.97	0.97	0.92	0.92	0.92	0.72	0.72	0.72
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1107	362	111	1016	0	0	0	0	86	0	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1107	362	111	1016	0	0	0	0	86	0	56
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Right	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	1	2					2		2
Detector Template												
Leading Detector (ft)		83	0	50	83					83		83
Trailing Detector (ft)		-5	0	0	-5					-5		-5
Detector 1 Position(ft)		-5	0	0	-5					-5		-5
Detector 1 Size(ft)		40	50	50	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43			43					43		43
Detector 2 Size(ft)		40			40					40		40
Detector 2 Type		Cl+Ex			Cl+Ex					Cl+Ex		Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0					0.0		0.0
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

2014 Existing Traffic Volumes

SAT Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		40.0		20.0	60.0					30.0		30.0
Total Split (%)		44.4%		22.2%	66.7%					33.3%		33.3%
Maximum Green (s)		35.0		15.0	55.0					25.0		25.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		Max		None	Max					None		None
Act Effct Green (s)		50.6	73.3	58.3	59.2					9.0		9.0
Actuated g/C Ratio		0.69	1.00	0.80	0.81					0.12		0.12
v/c Ratio		0.89	0.23	0.41	0.67					0.40		0.21
Control Delay		25.9	0.3	10.4	7.4					34.9		5.3
Queue Delay		47.1	0.0	0.0	1.3					0.0		0.0
Total Delay		72.9	0.3	10.4	8.7					34.9		5.3
LOS		E	A	B	A					C		A
Approach Delay		55.1			8.8							
Approach LOS		E			A							
Queue Length 50th (ft)		430	0	9	170					36		0
Queue Length 95th (ft)		#818	0	46	363					60		7
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)				200								130
Base Capacity (vph)		1240	1558	494	1511					628		617
Starvation Cap Reductn		267	0	0	281					0		0
Spillback Cap Reductn		0	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		1.14	0.23	0.22	0.83					0.14		0.09

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	73.3
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	34.4
Intersection LOS:	C
Intersection Capacity Utilization:	87.1%
ICU Level of Service:	E
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

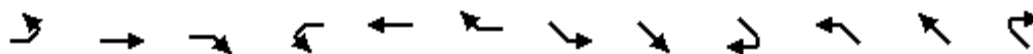


Two Way Analysis cannot be performed on Signalized Intersection.

2014 Existing Traffic Volumes

SAT Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355

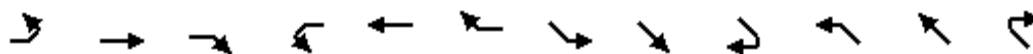


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	260	843	0	0	864	47	0	0	0	230	0	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	200		0	0		350	0		0	0		530
Storage Lanes	1		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			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
Fr _t					0.993							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	1835	0	0	0	0	1832	0	1639
Fl _t Permitted	0.089									0.950		
Satd. Flow (perm)	157	1729	0	0	1835	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					4							115
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		475			540			781			1112	
Travel Time (s)		7.2			8.2			17.8			25.3	
Peak Hour Factor	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	286	926	0	0	982	53	0	0	0	245	0	115
Shared Lane Traffic (%)												
Lane Group Flow (vph)	286	926	0	0	1035	0	0	0	0	245	0	115
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

2014 Existing Traffic Volumes

SAT Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	15.0	60.0			45.0					30.0		30.0
Total Split (%)	16.7%	66.7%			50.0%					33.3%		33.3%
Maximum Green (s)	10.0	55.0			40.0					25.0		25.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	0.0	0.0			0.0					-1.0		-1.0
Total Lost Time (s)	5.0	5.0			5.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	Max			None					None		None
Act Effct Green (s)	55.2	55.2			40.1					16.0		16.0
Actuated g/C Ratio	0.69	0.69			0.50					0.20		0.20
v/c Ratio	0.96	0.78			1.13					0.67		0.27
Control Delay	73.7	15.8			93.5					39.0		7.2
Queue Delay	0.0	5.7			0.0					0.0		0.0
Total Delay	73.7	21.5			93.5					39.0		7.2
LOS	E	C			F					D		A
Approach Delay		33.8			93.5							
Approach LOS		C			F							
Queue Length 50th (ft)	94	263			-610					114		0
Queue Length 95th (ft)	#279	#662			#913					187		39
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)	200											530
Base Capacity (vph)	297	1189			919					595		610
Starvation Cap Reductn	0	209			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.96	0.94			1.13					0.41		0.19

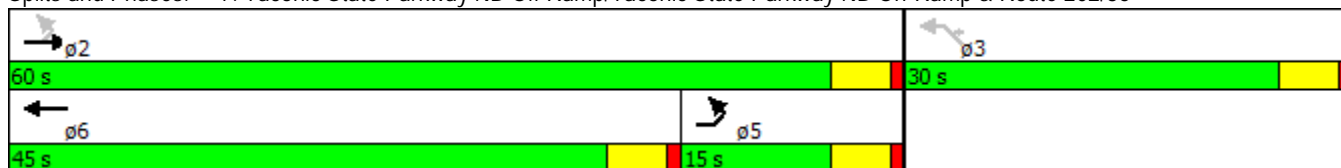
Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 80.2
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 56.8
 Intersection LOS: E
 Intersection Capacity Utilization 87.1%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

Queue shown is maximum after two cycles.

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes
1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	90	127	50	2	31	14	21	188	2	128	253	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%			0%	
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.958			0.960			0.999			0.995	
Flt Protected	0.950				0.998		0.950			0.950		
Satd. Flow (prot)	1885	1901	0	0	1794	0	1805	1898	0	1805	1890	0
Flt Permitted	0.587				0.975		0.582			0.478		
Satd. Flow (perm)	1165	1901	0	0	1752	0	1106	1898	0	908	1890	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			15			1			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	98	138	54	2	34	15	23	209	2	142	281	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	192	0	0	51	0	23	211	0	142	291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2		2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	40	40		50	40		40	40		40	40	
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)	43	43			43		43	43		43	43	
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												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	

2019 No-Build Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
 4/2/2015



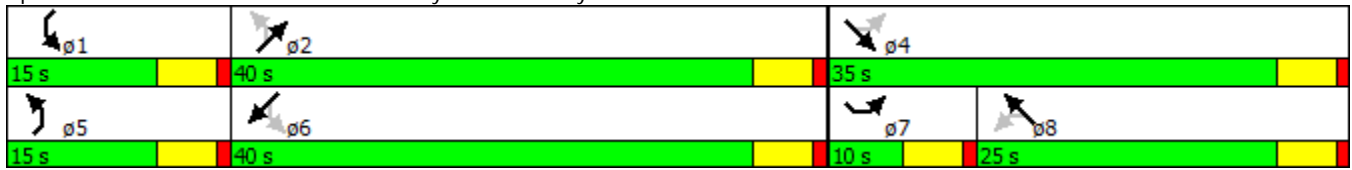
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		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	
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			0.5		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.5		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effect Green (s)	11.6	11.6			7.3		17.7	13.1		22.8	21.3	
Actuated g/C Ratio	0.26	0.26			0.16		0.39	0.29		0.50	0.47	
v/c Ratio	0.25	0.38			0.17		0.04	0.39		0.23	0.33	
Control Delay	15.7	15.2			18.0		7.5	18.6		7.8	11.2	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	15.7	15.2			18.0		7.5	18.6		7.8	11.2	
LOS	B	B			B		A	B		A	B	
Approach Delay		15.4			18.0			17.5			10.1	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	20	36			8		2	43		14	32	
Queue Length 95th (ft)	54	88			38		13	115		49	145	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	396	1337			805		669	1502		667	1496	
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	0.25	0.14			0.06		0.03	0.14		0.21	0.19	

Intersection Summary	
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	45.2
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.39
Intersection Signal Delay:	13.7
Intersection LOS:	B
Intersection Capacity Utilization:	41.3%
ICU Level of Service:	A
Analysis Period (min):	15

2019 No-Build Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
 4/2/2015

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes
2: Stoney Street & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	19	240	67	22	30	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.875				0.926	
Flt Protected				0.964	0.978	
Satd. Flow (prot)	1622	0	0	1805	1670	0
Flt Permitted				0.964	0.978	
Satd. Flow (perm)	1622	0	0	1805	1670	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1020	190	
Travel Time (s)	12.3			23.2	4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	267	74	24	33	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	288	0	0	98	73	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	34.6%
Analysis Period (min)	15
	ICU Level of Service A

2019 No-Build Traffic Volumes
2: Stoney Street & Old Crompond Road

AM PEAK HOUR
4/2/2015

Intersection									
Intersection Delay, s/veh	8.1								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	19	240	0	67	22	0	30	36
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	267	0	74	24	0	33	40
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.1	8.1	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	45%	0%	75%
Vol Thru, %	0%	7%	25%
Vol Right, %	55%	93%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	66	259	89
LT Vol	30	0	67
Through Vol	0	19	22
RT Vol	36	240	0
Lane Flow Rate	73	288	99
Geometry Grp	1	1	1
Degree of Util (X)	0.091	0.286	0.122
Departure Headway (Hd)	4.469	3.581	4.434
Convergence, Y/N	Yes	Yes	Yes
Cap	807	987	799
Service Time	2.469	1.662	2.514
HCM Lane V/C Ratio	0.09	0.292	0.124
HCM Control Delay	7.9	8.1	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	1.2	0.4

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 No-Build Traffic Volumes
3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
4/2/2015

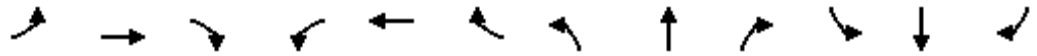


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	1197	227	137	462	16	132	13	254	114	72	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.960		0.950	0.985	
Satd. Flow (prot)	1770	3471	1552	1770	3664	0	1681	1699	1583	1698	1760	1546
Flt Permitted	0.488			0.488			0.950	0.960		0.950	0.985	
Satd. Flow (perm)	909	3471	1552	909	3664	0	1665	1686	1583	1698	1760	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			222		4				149			149
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1517			289				190
Travel Time (s)		9.3			23.0			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	38	1301	247	149	502	17	147	14	282	127	80	129
Shared Lane Traffic (%)							46%			28%		
Lane Group Flow (vph)	38	1301	247	149	519	0	79	82	282	91	116	129
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		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	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				43			43	43	43	43	43	43
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

2019 No-Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015



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	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	16.0	11.0	36.0		16.0	16.0	11.0	16.0	16.0	11.0
Total Split (s)	19.0	49.0	19.0	19.0	49.0		19.0	19.0	19.0	23.0	23.0	19.0
Total Split (%)	17.3%	44.5%	17.3%	17.3%	44.5%		17.3%	17.3%	17.3%	20.9%	20.9%	17.3%
Maximum Green (s)	13.0	43.0	13.0	13.0	43.0		13.0	13.0	13.0	17.0	17.0	13.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	Max	C-Max	None	None	None		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	50.7	50.7	67.0	21.2	21.2		12.3	12.3	25.4	14.0	14.0	56.4
Actuated g/C Ratio	0.46	0.46	0.61	0.19	0.19		0.11	0.11	0.23	0.13	0.13	0.51
v/c Ratio	0.05	0.81	0.24	0.54	0.73		0.42	0.43	0.59	0.42	0.52	0.15
Control Delay	19.9	32.1	2.7	45.7	47.5		52.3	52.6	14.9	49.7	52.8	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	32.1	2.7	45.7	47.5		52.3	52.6	14.9	49.7	52.8	1.4
LOS	B	C	A	D	D		D	D	B	D	D	A
Approach Delay		27.3			47.1			28.5				32.2
Approach LOS		C			D			C				C
Queue Length 50th (ft)	14	406	7	93	181		55	57	55	63	82	0
Queue Length 95th (ft)	38	#606	43	148	226		106	108	102	113	137	14
Internal Link Dist (ft)		532			1437			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	750	1598	1052	288	1468		213	216	498	277	288	861
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.81	0.23	0.52	0.35		0.37	0.38	0.57	0.33	0.40	0.15

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

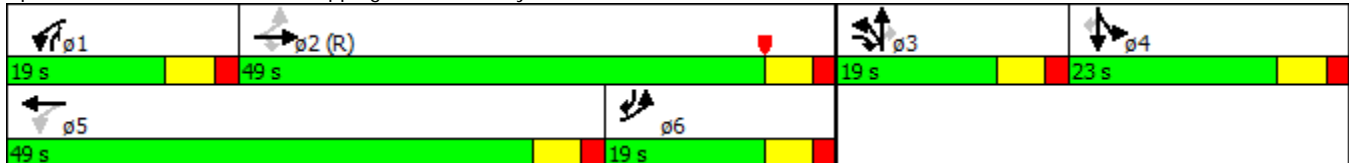
2019 No-Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015

Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 32.4 Intersection LOS: C
 Intersection Capacity Utilization 74.4% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

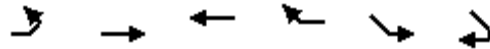
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1564	647	10	3	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.946	
Flt Protected					0.971	
Satd. Flow (prot)	0	3350	3587	0	1626	0
Flt Permitted					0.971	
Satd. Flow (perm)	0	3350	3587	0	1626	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		293	457		1070	
Travel Time (s)		4.4	6.9		24.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.90
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1700	703	11	3	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1700	714	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.2%
Analysis Period (min)	15
	ICU Level of Service A

2019 No-Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1564	647	10	3	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	92	92	92	92	92	90
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1700	703	11	3	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	714	0	1559
Stage 1	-	-	709
Stage 2	-	-	850
Critical Hdwy	4.14	-	8.84
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuver	1207	-	80
Stage 1	-	-	741
Stage 2	-	-	237
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	1207	-	80
Mov Cap-2 Maneuver	-	-	80
Stage 1	-	-	741
Stage 2	-	-	237

Approach	EB	WB	SE
HCM Control Delay, s	0	0	34.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	1207	-	-	-	126
HCM Lane V/C Ratio	-	-	-	-	0.044
HCM Control Delay (s)	0	-	-	-	34.9
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 No-Build Traffic Volumes
 5: Mohansic Avenue/COSTCO Access & Route 202/35

AM PEAK HOUR

4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	1513	11	45	578	121	19	1	36	80	1	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%			0%	
Storage Length (ft)	150		0	170		0	0		100	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t		0.999			0.974				0.850		0.876	
Fl _t Protected	0.950			0.950				0.954		0.950	0.992	
Satd. Flow (prot)	1699	3329	0	1832	3511	0	0	1813	1615	1681	1538	0
Fl _t Permitted	0.333			0.071				0.954		0.950	0.992	
Satd. Flow (perm)	595	3329	0	137	3511	0	0	1813	1615	1681	1538	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			36				85		63	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		457			251			624			252	
Travel Time (s)		6.9			3.8			14.2			5.7	
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%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	47	1645	12	49	628	132	21	1	39	87	1	63
Shared Lane Traffic (%)										14%		
Lane Group Flow (vph)	47	1657	0	49	760	0	0	22	39	75	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2	2	2	2	
Detector Template												
Leading Detector (ft)	83	83		83	83		50	83	83	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Size(ft)	40	40		40	40		50	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)	43	43		43	43			43	43	43	43	
Detector 2 Size(ft)	40	40		40	40			40	40	40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	

2019 No-Build Traffic Volumes
 5: Mohansic Avenue/COSTCO Access & Route 202/35

AM PEAK HOUR
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases	2			6					8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		1.0	1.0		4.0	4.0	1.0	4.0	4.0	
Minimum Split (s)	9.0	10.0		7.0	9.0		10.0	10.0	7.0	10.0	10.0	
Total Split (s)	15.0	45.0		15.0	45.0		15.0	15.0	15.0	15.0	15.0	
Total Split (%)	16.7%	50.0%		16.7%	50.0%		16.7%	16.7%	16.7%	16.7%	16.7%	
Maximum Green (s)	10.0	40.0		10.0	40.0		10.0	10.0	10.0	10.0	10.0	
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)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effct Green (s)	66.1	60.9		67.0	63.1			7.8	12.5	9.6	7.6	
Actuated g/C Ratio	0.73	0.68		0.74	0.70			0.09	0.14	0.11	0.08	
v/c Ratio	0.09	0.74		0.20	0.31			0.14	0.13	0.42	0.41	
Control Delay	5.2	17.3		10.0	2.6			39.5	1.5	44.4	20.4	
Queue Delay	0.0	0.0		0.0	0.2			0.0	0.0	0.0	0.0	
Total Delay	5.2	17.3		10.0	2.8			39.5	1.5	44.4	20.4	
LOS	A	B		B	A			D	A	D	C	
Approach Delay		17.0			3.3			15.2			32.3	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	4	283		1	6			12	0	42	7	
Queue Length 95th (ft)	21	#656		21	63			34	4	87	50	
Internal Link Dist (ft)		377			171			544			172	
Turn Bay Length (ft)	150			170					100			
Base Capacity (vph)	590	2254		312	2473			221	359	205	210	
Starvation Cap Reductn	0	0		0	831			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.08	0.74		0.16	0.46			0.10	0.11	0.37	0.36	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 9 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 13.7 Intersection LOS: B

Intersection Capacity Utilization 61.2% ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 ø1	 ø2 (R)	 ø4	 ø8
15 s	45 s	15 s	15 s
 ø5	 ø6 (R)		
15 s	45 s		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes

AM PEAK HOUR

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	866	762	323	661	0	0	0	0	92	0	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%			4%	
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3350	1558	1877	3490	0	0	0	0	1769	0	1583
Flt Permitted				0.240						0.950		
Satd. Flow (perm)	0	3350	1558	474	3490	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			468									93
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	941	828	351	718	0	0	0	0	102	0	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	941	828	351	718	0	0	0	0	102	0	93
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	2	2					2		2
Detector Template												
Leading Detector (ft)		83	0	83	83					83		83
Trailing Detector (ft)		-5	0	-5	-5					-5		-5
Detector 1 Position(ft)		-5	0	-5	-5					-5		-5
Detector 1 Size(ft)		40	50	40	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43		43	43					43		43
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
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

2019 No-Build Traffic Volumes

AM PEAK HOUR

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		50.0		20.0	70.0					20.0		20.0
Total Split (%)		55.6%		22.2%	77.8%					22.2%		22.2%
Maximum Green (s)		45.0		15.0	65.0					15.0		15.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effct Green (s)		56.5	90.0	71.4	71.4					10.6		10.6
Actuated g/C Ratio		0.63	1.00	0.79	0.79					0.12		0.12
v/c Ratio		0.45	0.53	0.64	0.26					0.49		0.35
Control Delay		3.1	2.9	21.6	0.4					44.5		11.5
Queue Delay		0.6	0.0	0.0	0.0					0.0		0.0
Total Delay		3.6	2.9	21.6	0.4					44.5		11.5
LOS		A	A	C	A					D		B
Approach Delay		3.3			7.4							
Approach LOS		A			A							
Queue Length 50th (ft)		18	2	81	0					55		0
Queue Length 95th (ft)		27	288	150	7					100		41
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2103	1558	629	2768					314		357
Starvation Cap Reductn		703	0	0	0					0		0
Spillback Cap Reductn		124	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.67	0.53	0.56	0.26					0.32		0.26

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	12 (13%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	6.4
Intersection LOS:	A
Intersection Capacity Utilization:	59.5%
ICU Level of Service:	B
Analysis Period (min):	15

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

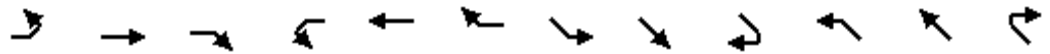


Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes

AM PEAK HOUR

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355

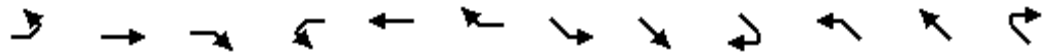


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	114	845	0	0	833	13	0	0	0	150	0	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	0		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt					0.998							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1675	1695	0	0	3434	0	0	0	0	1832	0	1639
Flt Permitted	0.218									0.950		
Satd. Flow (perm)	384	1695	0	0	3434	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2							91
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1112
Travel Time (s)		7.2			8.2			17.8				25.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	124	918	0	0	905	14	0	0	0	167	0	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	124	918	0	0	919	0	0	0	0	167	0	91
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)		23			23			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

2019 No-Build Traffic Volumes

AM PEAK HOUR

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



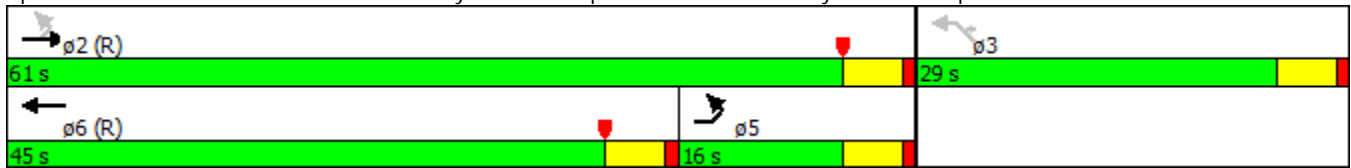
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	16.0	61.0			45.0					29.0		29.0
Total Split (%)	17.8%	67.8%			50.0%					32.2%		32.2%
Maximum Green (s)	11.0	56.0			40.0					24.0		24.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-0.7	-1.0			0.0					-1.0		-1.0
Total Lost Time (s)	4.3	4.0			5.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					Max		Max
Act Effct Green (s)	56.7	57.0			40.0					25.0		25.0
Actuated g/C Ratio	0.63	0.63			0.44					0.28		0.28
v/c Ratio	0.30	0.86			0.60					0.33		0.17
Control Delay	6.4	17.4			21.0					28.1		6.6
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	6.4	17.4			21.0					28.1		6.6
LOS	A	B			C					C		A
Approach Delay		16.1			21.0							
Approach LOS		B			C							
Queue Length 50th (ft)	10	428			201					75		0
Queue Length 95th (ft)	22	#605			263					130		34
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)												530
Base Capacity (vph)	409	1073			1527					508		521
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	0.30	0.86			0.60					0.33		0.17

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 18.7
 Intersection LOS: B
 Intersection Capacity Utilization 59.5%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35




















Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes
1: Bear Mountain Parkway Ext. & Stoney Street

PM Peak Hour
4/2/2015

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	76	25	2	119	36	57	42	11	239	847	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.963			0.969			0.970			0.987	
Flt Protected	0.950				0.999		0.950			0.950		
Satd. Flow (prot)	1885	1910	0	0	1812	0	1805	1843	0	1805	1875	0
Flt Permitted	0.381				0.997		0.087			0.629		
Satd. Flow (perm)	756	1910	0	0	1809	0	165	1843	0	1195	1875	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			14			14			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.82	0.82	0.82	0.83	0.83	0.83	0.76	0.76	0.76	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	18	93	30	2	143	43	75	55	14	285	1008	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	123	0	0	188	0	75	69	0	285	1106	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
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	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		12.0	30.0		12.0	22.0	

2019 No-Build Traffic Volumes
 1: Bear Mountain Parkway Ext. & Stoney Street

PM Peak Hour
 4/2/2015

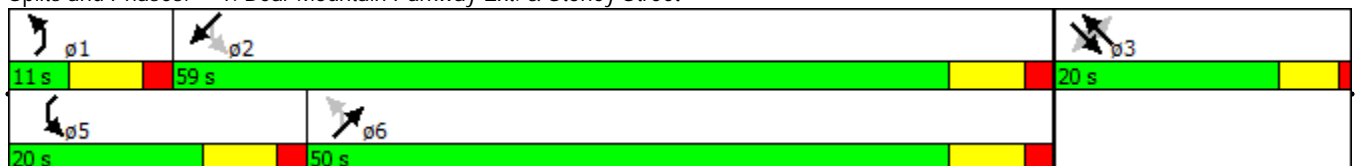


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (s)	20.0	20.0		20.0	20.0		11.0	50.0		20.0	59.0	
Total Split (%)	22.2%	22.2%		22.2%	22.2%		12.2%	55.6%		22.2%	65.6%	
Maximum Green (s)	15.0	15.0		15.0	15.0		4.0	43.0		13.0	52.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
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		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	8.0	8.0		8.0	8.0			7.0				
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			10.0				
Pedestrian Calls (#/hr)	0	0		0	0			0				
Act Effct Green (s)	12.6	12.6			12.6		48.5	44.5		59.7	52.3	
Actuated g/C Ratio	0.15	0.15			0.15		0.57	0.52		0.70	0.61	
v/c Ratio	0.16	0.42			0.68		0.44	0.07		0.32	0.96	
Control Delay	36.2	34.3			45.4		17.5	9.8		5.4	37.5	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	36.2	34.3			45.4		17.5	9.8		5.4	37.5	
LOS	D	C			D		B	A		A	D	
Approach Delay		34.5			45.4			13.8			31.0	
Approach LOS		C			D			B			C	
Queue Length 50th (ft)	9	55			92		10	14		44	553	
Queue Length 95th (ft)	26	95			147		21	31		72	#810	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	133	349			330		170	988		943	1151	
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	0.14	0.35			0.57		0.44	0.07		0.30	0.96	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 85.4
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 31.4
 Intersection LOS: C
 Intersection Capacity Utilization 70.0%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Bear Mountain Parkway Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes
2: Stoney Street & Old Crompond Road

PM Peak Hour
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	66	244	246	68	114	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.894				0.933	
Flt Protected				0.962	0.976	
Satd. Flow (prot)	1657	0	0	1801	1679	0
Flt Permitted				0.962	0.976	
Satd. Flow (perm)	1657	0	0	1801	1679	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1014	190	
Travel Time (s)	12.3			23.0	4.3	
Peak Hour Factor	0.77	0.77	0.56	0.56	0.74	0.74
Adj. Flow (vph)	86	317	439	121	154	153
Shared Lane Traffic (%)						
Lane Group Flow (vph)	403	0	0	560	307	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.9%
Analysis Period (min)	15
	ICU Level of Service B

2019 No-Build Traffic Volumes
2: Stoney Street & Old Crompond Road

PM Peak Hour
4/2/2015

Intersection									
Intersection Delay, s/veh	25.6								
Intersection LOS	D								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	66	244	0	246	68	0	114	113
Peak Hour Factor	0.92	0.77	0.77	0.92	0.56	0.56	0.92	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	86	317	0	439	121	0	154	153
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	16.2	37.6	16
HCM LOS	C	E	C

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	78%
Vol Thru, %	0%	21%	22%
Vol Right, %	50%	79%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	227	310	314
LT Vol	114	0	246
Through Vol	0	66	68
RT Vol	113	244	0
Lane Flow Rate	307	403	561
Geometry Grp	1	1	1
Degree of Util (X)	0.527	0.599	0.887
Departure Headway (Hd)	6.189	5.353	5.698
Convergence, Y/N	Yes	Yes	Yes
Cap	580	668	634
Service Time	4.271	3.43	3.767
HCM Lane V/C Ratio	0.529	0.603	0.885
HCM Control Delay	16	16.2	37.6
HCM Lane LOS	C	C	E
HCM 95th-tile Q	3.1	4	10.7

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 No-Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	940	230	225	727	56	257	58	301	202	124	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.989				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.969		0.950	0.984	
Satd. Flow (prot)	1770	3539	1552	1770	3711	0	1681	1715	1583	1698	1759	1546
Flt Permitted	0.344			0.185			0.950	0.969		0.950	0.984	
Satd. Flow (perm)	641	3539	1552	345	3711	0	1670	1707	1583	1698	1759	1514
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253		9				145			145
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1512			289				190
Travel Time (s)		9.3			22.9			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	101	1033	253	234	757	58	289	65	338	240	148	218
Shared Lane Traffic (%)							40%			29%		
Lane Group Flow (vph)	101	1033	253	234	815	0	173	181	338	170	218	218
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2019 No-Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



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	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	10.0	20.0	15.0	10.0	20.0		15.0	15.0	10.0	15.0	15.0	10.0
Total Split (s)	15.0	33.0	18.0	15.0	33.0		18.0	18.0	15.0	24.0	24.0	15.0
Total Split (%)	16.7%	36.7%	20.0%	16.7%	36.7%		20.0%	20.0%	16.7%	26.7%	26.7%	16.7%
Maximum Green (s)	10.0	28.0	13.0	10.0	28.0		13.0	13.0	10.0	19.0	19.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	32.8	32.8	48.9	33.7	33.7		13.2	13.2	25.1	16.1	16.1	27.1
Actuated g/C Ratio	0.36	0.36	0.54	0.37	0.37		0.15	0.15	0.28	0.18	0.18	0.30
v/c Ratio	0.27	0.80	0.26	0.74	0.58		0.70	0.72	0.62	0.56	0.69	0.39
Control Delay	27.0	33.0	2.4	25.0	15.5		52.9	54.0	13.4	40.4	46.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	33.0	2.4	25.0	15.5		52.9	54.0	13.4	40.4	46.2	6.6
LOS	C	C	A	C	B		D	D	B	D	D	A
Approach Delay		27.0			17.6			33.9			30.3	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	41	293	0	68	164		98	103	47	92	123	18
Queue Length 95th (ft)	79	#415	35	m#140	251		#183	#191	92	141	176	40
Internal Link Dist (ft)		532			1432			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	371	1288	970	323	1395		261	266	551	377	390	561
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.80	0.26	0.72	0.58		0.66	0.68	0.61	0.45	0.56	0.39

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80

2019 No-Build Traffic Volumes
3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
4/2/2015

Intersection Signal Delay: 26.2 Intersection LOS: C

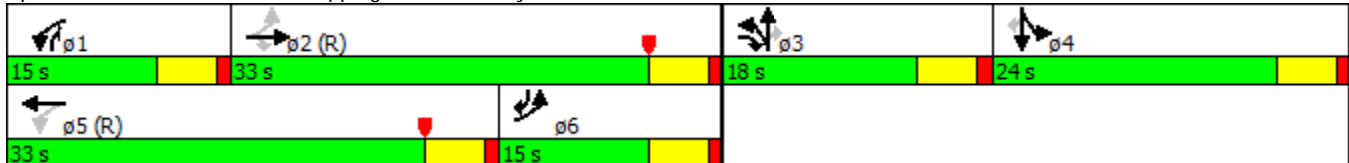
Intersection Capacity Utilization 73.9% ICU Level of Service D

Analysis Period (min) 15

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.

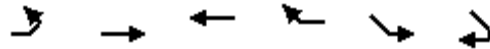
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1444	1084	44	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.994		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3350	3574	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3350	3574	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		309	457		1058	
Travel Time (s)		4.7	6.9		24.0	
Peak Hour Factor	0.85	0.85	0.93	0.93	0.80	0.80
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1699	1166	47	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1699	1213	0	2	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.9%
Analysis Period (min)	15
	ICU Level of Service A

2019 No-Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

PM Peak Hour
4/2/2015

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1444	1084	44	1	1
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, %	-	7	-7	-	10	-
Peak Hour Factor	85	85	93	93	80	80
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1699	1166	47	1	1

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1213	0	606
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	7.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	*948	-	*633
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	*948	-	*633
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SE
HCM Control Delay, s	0	0	56.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	*948	-	-	-	73
HCM Lane V/C Ratio	-	-	-	-	0.034
HCM Control Delay (s)	0	-	-	-	56.1
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 No-Build Traffic Volumes
 5: Mohansic Avenue/COSTCO Access & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	1285	33	160	898	357	38	3	94	291	3	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		150	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t		0.996			0.959				0.850		0.894	
Fl _t Protected	0.950			0.950				0.955		0.950	0.986	
Satd. Flow (prot)	1699	3384	0	1832	3513	0	0	1814	1615	1681	1560	0
Fl _t Permitted	0.094			0.093				0.955		0.950	0.986	
Satd. Flow (perm)	168	3384	0	179	3513	0	0	1814	1615	1681	1560	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			79				85			120
Link Speed (mph)		45			45			30				30
Link Distance (ft)		457			251			624				331
Travel Time (s)		6.9			3.8			14.2				7.5
Peak Hour Factor	0.92	0.92	0.92	0.88	0.88	0.92	0.65	0.92	0.65	0.92	0.92	0.92
Adj. Flow (vph)	137	1397	36	182	1020	388	58	3	145	316	3	209
Shared Lane Traffic (%)										27%		
Lane Group Flow (vph)	137	1433	0	182	1408	0	0	61	145	231	297	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		2	2	1	2	2	
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83	50	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		5	-5	0	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		5	-5	0	-5	-5	
Detector 1 Size(ft)	40	40		40	40		40	40	50	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)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	

2019 No-Build Traffic Volumes
5: Mohansic Avenue/COSTCO Access & Route 202/35

PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6				8					
Detector Phase	5	2	1		6	8		8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	10.0	9.0		9.0	9.0		9.0	9.0	9.0	9.0	
Total Split (s)	12.0	44.0	12.0		44.0	11.0		11.0	12.0	23.0	23.0	
Total Split (%)	13.3%	48.9%	13.3%		48.9%	12.2%		12.2%	13.3%	25.6%	25.6%	
Maximum Green (s)	7.0	39.0	7.0		39.0	6.0		6.0	7.0	18.0	18.0	
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)	-1.0	-1.0	-1.0		-1.0	-1.0		0.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0		5.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lead		Lag	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None	None	None	
Walk Time (s)							5.0	5.0	5.0		5.0	
Flash Dont Walk (s)							11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)							0	0	0		0	
Act Effct Green (s)	51.5	43.6	52.3		44.0	7.2		16.4	17.0	17.0	17.0	
Actuated g/C Ratio	0.57	0.48	0.58		0.49	0.08		0.18	0.19	0.19	0.19	
v/c Ratio	0.59	0.87	0.71		0.80	0.42		0.40	0.73	0.76	0.76	
Control Delay	29.4	17.9	33.7		13.4	49.0		17.7	47.9	33.2	33.2	
Queue Delay	0.0	0.0	0.0		2.0	0.0		0.9	0.0	0.2	0.2	
Total Delay	29.4	17.9	33.7		15.4	49.0		18.6	47.9	33.4	33.4	
LOS	C	B	C		B	D		B	D	C	C	
Approach Delay	18.9		17.5		27.6		39.7					
Approach LOS	B		B		C		D					
Queue Length 50th (ft)	44	160	50		222	34		29	127	97	97	
Queue Length 95th (ft)	m75	#545	#142		308	74		44	210	#197	#197	
Internal Link Dist (ft)	377		171		544		251					
Turn Bay Length (ft)	150		170		150							
Base Capacity (vph)	234	1641	257		1757	146		364	354	424	424	
Starvation Cap Reductn	0	0	0		210	0		0	0	0	0	
Spillback Cap Reductn	0	0	0		0	0		75	0	7	7	
Storage Cap Reductn	0	0	0		0	0		0	0	0	0	
Reduced v/c Ratio	0.59	0.87	0.71		0.91	0.42		0.50	0.65	0.71	0.71	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	87 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	21.6
Intersection LOS:	C
Intersection Capacity Utilization:	76.1%
ICU Level of Service:	D
Analysis Period (min):	15





2019 No-Build Traffic Volumes
 5: Mohansic Avenue/COSTCO Access & Route 202/35

PM Peak Hour
 4/2/2015

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: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 ø1	 ø2 (R)	 ø4	 ø8
12 s	44 s	23 s	11 s
 ø5	 ø6 (R)		
12 s	44 s		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes

PM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	1260	411	82	1284	0	0	0	0	45	0	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3415	1558	1877	3558	0	0	0	0	1769	0	1583
Flt Permitted				0.087						0.950		
Satd. Flow (perm)	0	3415	1558	172	3558	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			174									85
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.92	0.92	0.92	0.79	0.79	0.79
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1658	541	105	1646	0	0	0	0	57	0	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1658	541	105	1646	0	0	0	0	57	0	165
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	1	2					2		2
Detector Template												
Leading Detector (ft)		83	0	50	83					83		83
Trailing Detector (ft)		-5	0	0	-5					-5		-5
Detector 1 Position(ft)		-5	0	0	-5					-5		-5
Detector 1 Size(ft)		40	50	50	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43			43					43		43
Detector 2 Size(ft)		40			40					40		40
Detector 2 Type		Cl+Ex			Cl+Ex					Cl+Ex		Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0					0.0		0.0
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

2019 No-Build Traffic Volumes

PM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



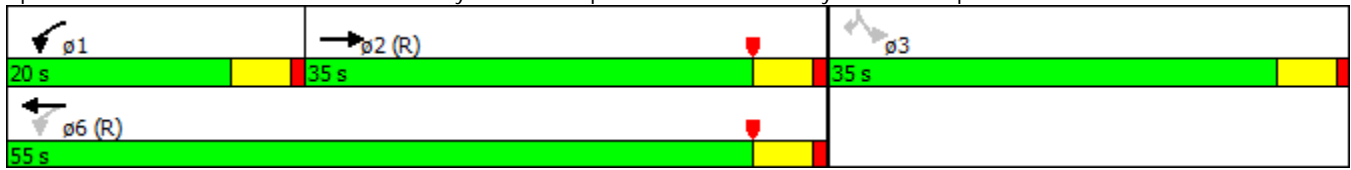
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		35.0		20.0	55.0					35.0		35.0
Total Split (%)		38.9%		22.2%	61.1%					38.9%		38.9%
Maximum Green (s)		30.0		15.0	50.0					30.0		30.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effct Green (s)		62.5	90.0	71.3	71.3					10.7		10.7
Actuated g/C Ratio		0.69	1.00	0.79	0.79					0.12		0.12
v/c Ratio		0.70	0.35	0.40	0.58					0.27		0.63
Control Delay		6.2	0.4	10.1	1.2					37.5		29.2
Queue Delay		1.3	0.0	0.0	0.5					0.0		0.0
Total Delay		7.4	0.4	10.1	1.7					37.5		29.2
LOS		A	A	B	A					D		C
Approach Delay		5.7			2.2							
Approach LOS		A			A							
Queue Length 50th (ft)		125	0	5	13					30		43
Queue Length 95th (ft)		143	0	m10	21					53		79
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2372	1558	439	2818					609		600
Starvation Cap Reductn		459	0	0	386					0		0
Spillback Cap Reductn		78	0	0	627					0		14
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.87	0.35	0.24	0.75					0.09		0.28

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	5.6
Intersection LOS:	A
Intersection Capacity Utilization:	81.2%
ICU Level of Service:	D
Analysis Period (min):	15
m Volume for 95th percentile queue is metered by upstream signal.	

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

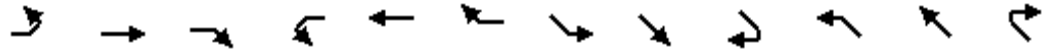


Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes

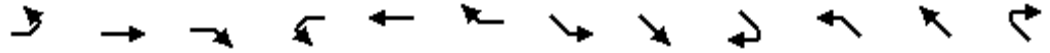
PM Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	343	962	0	0	942	81	0	0	0	425	0	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%			-3%	
Storage Length (ft)	0		0	0		350	0		0	0		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.988							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	3470	0	0	0	0	1832	0	1639
Fl _t Permitted	0.116									0.950		
Satd. Flow (perm)	205	1729	0	0	3470	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11							109
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1119
Travel Time (s)		7.2			8.2			17.8				25.4
Peak Hour Factor	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	385	1081	0	0	981	84	0	0	0	478	0	406
Shared Lane Traffic (%)												
Lane Group Flow (vph)	385	1081	0	0	1065	0	0	0	0	478	0	406
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)		23			23			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	23.0	60.0			37.0					30.0		30.0
Total Split (%)	25.6%	66.7%			41.1%					33.3%		33.3%
Maximum Green (s)	18.0	55.0			32.0					25.0		25.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0					-1.0		-1.0
Total Lost Time (s)	4.0	4.0			4.0					4.0		4.0
Lead/Lag		Lag			Lead							
Lead-Lag Optimize?		Yes			Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					None		None
Act Effct Green (s)	56.7	56.7			33.7					25.3		25.3
Actuated g/C Ratio	0.63	0.63			0.37					0.28		0.28
v/c Ratio	0.88	0.99			0.82					0.93		0.75
Control Delay	35.8	30.3			31.6					58.0		31.2
Queue Delay	0.0	9.0			0.0					0.0		0.0
Total Delay	35.8	39.3			31.6					58.0		31.2
LOS	D	D			C					E		C
Approach Delay		38.4			31.6							
Approach LOS		D			C							
Queue Length 50th (ft)	146	~200			283					260		153
Queue Length 95th (ft)	#316	#881			367					#433		259
Internal Link Dist (ft)		395			460			701			1039	
Turn Bay Length (ft)												530
Base Capacity (vph)	439	1088			1305					529		551
Starvation Cap Reductn	0	35			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.88	1.03			0.82					0.90		0.74

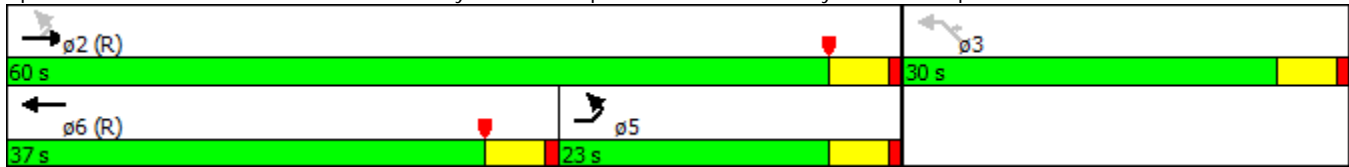
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	76 (84%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.99
Intersection Signal Delay:	38.2
Intersection LOS:	D
Intersection Capacity Utilization:	81.2%
ICU Level of Service:	D
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes
1: Bear Mountain Pkwy. Ext. & Stoney Street

Saturday Peak Hour
4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	9	66	15	1	99	40	72	50	13	92	428	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.972			0.961			0.970				0.962
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1885	1928	0	0	1799	0	1805	1843	0	1805	1828	0
Flt Permitted	0.363				0.998		0.282			0.708		
Satd. Flow (perm)	720	1928	0	0	1795	0	536	1843	0	1345	1828	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			21			14			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	73	17	1	109	44	80	56	14	97	451	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	90	0	0	154	0	80	70	0	97	603	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	88	88		50	88		88	88		88	88	
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	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	

2019 No-Build Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

Saturday Peak Hour
 4/2/2015

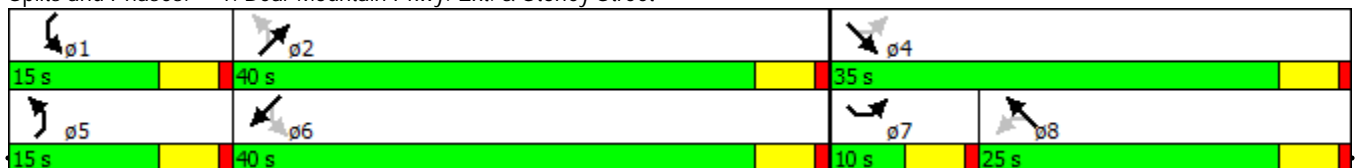


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-1.0	-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effect Green (s)	13.4	13.4			11.7		45.9	39.5		46.3	39.7	
Actuated g/C Ratio	0.19	0.19			0.17		0.65	0.56		0.65	0.56	
v/c Ratio	0.04	0.24			0.49		0.16	0.07		0.10	0.58	
Control Delay	21.9	21.6			28.9		5.9	9.5		5.3	15.7	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	21.9	21.6			28.9		5.9	9.5		5.3	15.7	
LOS	C	C			C		A	A		A	B	
Approach Delay		21.6			28.9			7.6			14.3	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)	4	27			50		8	10		10	149	
Queue Length 95th (ft)	15	63			118		36	42		41	396	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	235	860			552		564	1035		993	1035	
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	0.04	0.10			0.28		0.14	0.07		0.10	0.58	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 70.8
 Natural Cycle: 65
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 16.1
 Intersection LOS: B
 Intersection Capacity Utilization 53.8%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes
2: Stoney Street & Old Crompond Road

Saturday Peak Hour
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	75	204	247	74	99	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901				0.927	
Flt Protected				0.963	0.978	
Satd. Flow (prot)	1670	0	0	1803	1672	0
Flt Permitted				0.963	0.978	
Satd. Flow (perm)	1670	0	0	1803	1672	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			991	190	
Travel Time (s)	12.3			22.5	4.3	
Peak Hour Factor	0.88	0.88	0.58	0.58	0.91	0.91
Adj. Flow (vph)	85	232	426	128	109	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	317	0	0	554	239	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.8%
Analysis Period (min)	15
	ICU Level of Service B

2019 No-Build Traffic Volumes
2: Stoney Street & Old Crompond Road

Saturday Peak Hour
4/2/2015

Intersection									
Intersection Delay, s/veh	19.5								
Intersection LOS	C								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	75	204	0	247	74	0	99	118
Peak Hour Factor	0.92	0.88	0.88	0.92	0.58	0.58	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	85	232	0	426	128	0	109	130
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	12	26.8	12.6
HCM LOS	B	D	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	46%	0%	77%
Vol Thru, %	0%	27%	23%
Vol Right, %	54%	73%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	217	279	321
LT Vol	99	0	247
Through Vol	0	75	74
RT Vol	118	204	0
Lane Flow Rate	238	317	553
Geometry Grp	1	1	1
Degree of Util (X)	0.387	0.442	0.809
Departure Headway (Hd)	5.843	5.016	5.26
Convergence, Y/N	Yes	Yes	Yes
Cap	615	717	686
Service Time	3.894	3.059	3.294
HCM Lane V/C Ratio	0.387	0.442	0.806
HCM Control Delay	12.6	12	26.8
HCM Lane LOS	B	B	D
HCM 95th-tile Q	1.8	2.3	8.4

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 No-Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	1076	262	274	724	46	254	54	366	232	126	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.968		0.950	0.984	
Satd. Flow (prot)	1770	3539	1552	1770	3719	0	1681	1713	1583	1698	1759	1546
Flt Permitted	0.345			0.174			0.950	0.968		0.950	0.984	
Satd. Flow (perm)	643	3539	1552	324	3719	0	1669	1705	1583	1698	1759	1512
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			288		7				131			131
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1502			289				190
Travel Time (s)		9.3			22.8			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	118	1133	288	304	762	51	282	60	407	258	140	94
Shared Lane Traffic (%)							41%			26%		
Lane Group Flow (vph)	118	1133	288	304	813	0	166	176	407	191	207	94
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	88	0	0	88	0		88	88	88	50	88	88
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6

2019 No-Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



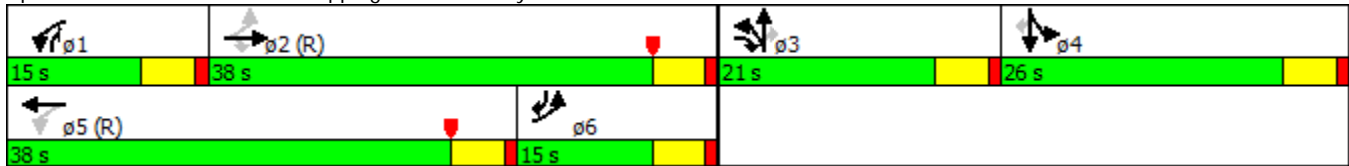
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	14.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	4.0
Minimum Split (s)	10.0	20.0	16.0	11.0	36.0		16.0	16.0	11.0	20.0	20.0	10.0
Total Split (s)	15.0	38.0	21.0	15.0	38.0		21.0	21.0	15.0	26.0	26.0	15.0
Total Split (%)	15.0%	38.0%	21.0%	15.0%	38.0%		21.0%	21.0%	15.0%	26.0%	26.0%	15.0%
Maximum Green (s)	10.0	33.0	16.0	10.0	33.0		16.0	16.0	10.0	21.0	21.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-0.7	-1.0	-1.0	0.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.3	4.0	4.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	34.0	33.7	53.2	40.2	39.2		15.2	15.2	32.4	17.6	17.6	28.6
Actuated g/C Ratio	0.34	0.34	0.53	0.40	0.39		0.15	0.15	0.32	0.18	0.18	0.29
v/c Ratio	0.35	0.95	0.30	0.80	0.56		0.65	0.67	0.68	0.64	0.67	0.18
Control Delay	31.0	49.7	2.2	31.6	20.0		51.9	53.1	17.6	47.8	49.0	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	49.7	2.2	31.6	20.0		51.9	53.1	17.6	47.8	49.0	1.7
LOS	C	D	A	C	B		D	D	B	D	D	A
Approach Delay		39.4			23.1			33.6				39.5
Approach LOS		D			C			C				D
Queue Length 50th (ft)	53	367	0	133	212		104	110	86	120	130	0
Queue Length 95th (ft)	96	#507	36	m#230	m283		175	185	#168	187	201	10
Internal Link Dist (ft)		532			1422			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	342	1192	983	378	1461		285	291	601	373	386	529
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.95	0.29	0.80	0.56		0.58	0.60	0.68	0.51	0.54	0.18

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 68 (68%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 33.6 Intersection LOS: C
 Intersection Capacity Utilization 81.0% ICU Level of Service D
 Analysis Period (min) 15
 # 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.

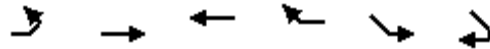
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1673	1134	50	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.993		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3415	3637	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3415	3637	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		316	457		1067	
Travel Time (s)		4.8	6.9		24.3	
Peak Hour Factor	0.97	0.97	0.95	0.85	0.90	0.90
Adj. Flow (vph)	0	1725	1194	59	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1725	1253	0	4	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.2%
Analysis Period (min)	15
	ICU Level of Service B

2019 No-Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

Saturday Peak Hour
4/2/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1673	1134	50	2	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	97	97	95	85	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1725	1194	59	2	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1253	0	2085
Stage 1	-	-	1223
Stage 2	-	-	862
Critical Hdwy	4.14	-	8.84
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuver	*924	-	*35
Stage 1	-	-	*582
Stage 2	-	-	*232
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	*924	-	*35
Mov Cap-2 Maneuver	-	-	*35
Stage 1	-	-	*582
Stage 2	-	-	*232

Approach	EB	WB	SE
HCM Control Delay, s	0	0	63.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	*924	-	-	-	66
HCM Lane V/C Ratio	-	-	-	-	0.067
HCM Control Delay (s)	0	-	-	-	63.4
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 No-Build Traffic Volumes
5: Mohansic Avenue/COSTCO Access & Route 202/35

Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	194	1450	31	115	850	542	36	5	81	438	5	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		150	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t		0.997			0.940				0.850		0.888	
Fl _t Protected	0.950			0.950				0.957		0.950	0.988	
Satd. Flow (prot)	1699	3387	0	1832	3443	0	0	1818	1615	1681	1553	0
Fl _t Permitted	0.086			0.094				0.957		0.950	0.988	
Satd. Flow (perm)	154	3387	0	181	3443	0	0	1818	1615	1681	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			181				76			145
Link Speed (mph)		45			45			30				30
Link Distance (ft)		457			251			624				173
Travel Time (s)		6.9			3.8			14.2				3.9
Peak Hour Factor	0.92	0.95	0.90	0.91	0.95	0.92	0.90	0.92	0.90	0.92	0.92	0.92
Adj. Flow (vph)	211	1526	34	126	895	589	40	5	90	476	5	324
Shared Lane Traffic (%)										22%		
Lane Group Flow (vph)	211	1560	0	126	1484	0	0	45	90	371	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83	50	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		-5	-5	0	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		-5	-5	0	-5	-5	
Detector 1 Size(ft)	88	88		88	88		88	88	50	88	88	
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	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases	2			6					8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		1.0	1.0		4.0	4.0	1.0	4.0	4.0	
Minimum Split (s)	9.0	10.0		7.0	9.0		9.0	9.0	7.0	9.0	9.0	

2019 No-Build Traffic Volumes
5: Mohansic Avenue/COSTCO Access & Route 202/35

Saturday Peak Hour
4/2/2015









Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	15.0	48.0		10.0	43.0		11.0	11.0	10.0	31.0	31.0	
Total Split (%)	15.0%	48.0%		10.0%	43.0%		11.0%	11.0%	10.0%	31.0%	31.0%	
Maximum Green (s)	10.0	43.0		5.0	38.0		6.0	6.0	5.0	26.0	26.0	
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)	-1.0	-1.0		-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)							5.0	5.0		5.0	5.0	
Flash Dont Walk (s)							11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effect Green (s)	59.0	48.7		51.4	44.6			6.9	13.4	25.9	25.9	
Actuated g/C Ratio	0.59	0.49		0.51	0.45			0.07	0.13	0.26	0.26	
v/c Ratio	0.81	0.95		0.61	0.91			0.36	0.32	0.85	0.85	
Control Delay	46.9	27.2		31.7	19.7			52.8	14.6	54.8	40.2	
Queue Delay	0.0	7.1		0.0	0.8			0.0	0.0	0.0	0.2	
Total Delay	46.9	34.3		31.7	20.5			52.8	14.6	54.8	40.4	
LOS	D	C		C	C			D	B	D	D	
Approach Delay		35.8			21.4			27.3			47.1	
Approach LOS		D			C			C			D	
Queue Length 50th (ft)	105	~550		31	~245			28	8	232	187	
Queue Length 95th (ft)	m#137	m#641		#111	#226			64	51	#390	#364	
Internal Link Dist (ft)		377			171			544			93	
Turn Bay Length (ft)	150			170					150			
Base Capacity (vph)	264	1650		205	1636			127	282	453	525	
Starvation Cap Reductn	0	0		0	35			0	0	0	0	
Spillback Cap Reductn	0	86		0	0			0	1	0	3	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.80	1.00		0.61	0.93			0.35	0.32	0.82	0.83	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 10 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 32.3
 Intersection LOS: C
 Intersection Capacity Utilization 89.7%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 φ1	 φ2 (R)	 φ4	 φ8
10 s	48 s	31 s	11 s
 φ5	 φ6 (R)		
15 s	43 s		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes

Saturday Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	1447	523	121	1322	0	0	0	0	64	0	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3415	1558	1877	3558	0	0	0	0	1769	0	1583
Flt Permitted				0.106						0.950		
Satd. Flow (perm)	0	3415	1558	209	3558	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			175									76
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.94	0.95	0.94	0.97	0.97	0.97	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1523	556	125	1363	0	0	0	0	71	0	193
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1523	556	125	1363	0	0	0	0	71	0	193
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1		1
Detector Template												
Leading Detector (ft)		83	0	83	83					83		83
Trailing Detector (ft)		-5	0	-5	-5					-5		-5
Detector 1 Position(ft)		-5	0	-5	-5					-5		-5
Detector 1 Size(ft)		88	0	88	88					88		88
Detector 1 Type		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
Detector 1 Queue (s)		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
Turn Type		NA	Free	pm+pt	NA					Perm		Perm
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

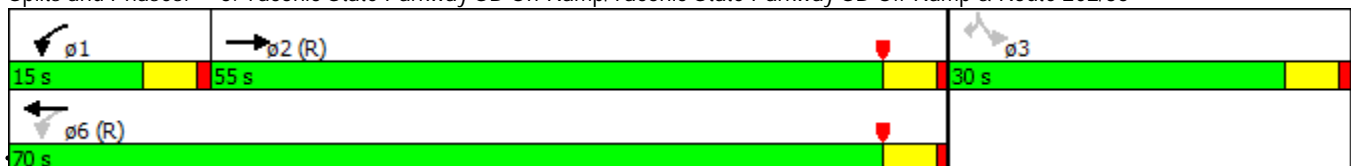


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		55.0		15.0	70.0					30.0		30.0
Total Split (%)		55.0%		15.0%	70.0%					30.0%		30.0%
Maximum Green (s)		50.0		10.0	65.0					25.0		25.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effect Green (s)		66.8	100.0	78.8	78.8					13.2		13.2
Actuated g/C Ratio		0.67	1.00	0.79	0.79					0.13		0.13
v/c Ratio		0.67	0.36	0.42	0.49					0.30		0.70
Control Delay		7.2	0.3	13.3	0.7					40.5		37.8
Queue Delay		4.4	0.0	0.0	0.3					0.0		0.0
Total Delay		11.6	0.3	13.3	1.0					40.5		37.8
LOS		B	A	B	A					D		D
Approach Delay		8.6			2.0							
Approach LOS		A			A							
Queue Length 50th (ft)		108	0	13	0					42		71
Queue Length 95th (ft)		m172	m0	m25	40					77		135
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2282	1558	350	2802					459		467
Starvation Cap Reductn		671	0	0	706					0		0
Spillback Cap Reductn		0	0	0	304					0		6
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.95	0.36	0.36	0.65					0.15		0.42

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 22 (22%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 8.1 Intersection LOS: A
 Intersection Capacity Utilization 82.3% ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

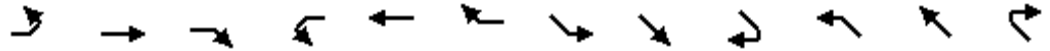


Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes

Saturday Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355

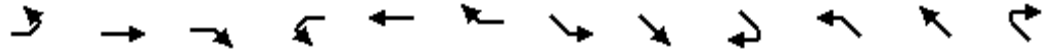


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	401	1109	0	0	1131	48	0	0	0	312	0	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	0		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt					0.994							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	3489	0	0	0	0	1832	0	1639
Flt Permitted	0.088									0.950		
Satd. Flow (perm)	155	1729	0	0	3489	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5							109
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1112
Travel Time (s)		7.2			8.2			17.8				25.3
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.90	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	441	1167	0	0	1191	53	0	0	0	332	0	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	441	1167	0	0	1244	0	0	0	0	332	0	118
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)		23			23			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1					1		1
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	88	88			88					88		88
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
Turn Type	pm+pt	NA			NA					Perm		Perm
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0

2019 No-Build Traffic Volumes

Saturday Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

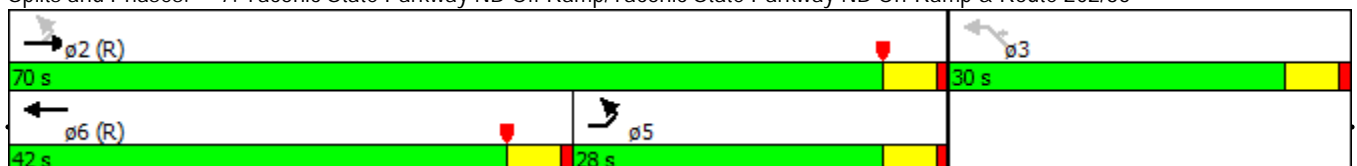


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	28.0	70.0			42.0					30.0		30.0
Total Split (%)	28.0%	70.0%			42.0%					30.0%		30.0%
Maximum Green (s)	23.0	65.0			37.0					25.0		25.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.5	-2.0			-1.0					-1.0		-1.0
Total Lost Time (s)	3.5	3.0			4.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					None		None
Act Effct Green (s)	70.1	70.6			41.6					22.4		22.4
Actuated g/C Ratio	0.70	0.71			0.42					0.22		0.22
v/c Ratio	0.92	0.96			0.85					0.81		0.26
Control Delay	42.0	22.7			34.5					52.4		8.5
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	42.0	22.7			34.5					52.4		8.5
LOS	D	C			C					D		A
Approach Delay		28.0			34.5							
Approach LOS		C			C							
Queue Length 50th (ft)	232	51			375					199		4
Queue Length 95th (ft)	#423	#1048			#540					291		47
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)												530
Base Capacity (vph)	481	1221			1455					476		506
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	0.92	0.96			0.85					0.70		0.23

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 32.2
 Intersection LOS: C
 Intersection Capacity Utilization 82.3%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

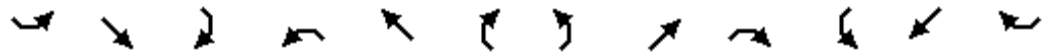
Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
 4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	90	130	50	2	33	26	21	188	2	149	253	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.958			0.943			0.999			0.995	
Flt Protected	0.950				0.998		0.950			0.950		
Satd. Flow (prot)	1885	1901	0	0	1762	0	1805	1898	0	1805	1890	0
Flt Permitted	0.577				0.980		0.582			0.477		
Satd. Flow (perm)	1145	1901	0	0	1730	0	1106	1898	0	906	1890	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			28			1			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	98	141	54	2	36	28	23	209	2	166	281	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	195	0	0	66	0	23	211	0	166	291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2		2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	40	40		50	40		40	40		40	40	
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)	43	43			43		43	43		43	43	
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												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	

2019 Build Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
 4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		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	
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			0.5		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.5		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effect Green (s)	13.1	13.1			6.9		17.6	13.0		22.9	21.3	
Actuated g/C Ratio	0.28	0.28			0.15		0.37	0.28		0.49	0.45	
v/c Ratio	0.24	0.36			0.24		0.05	0.40		0.28	0.34	
Control Delay	15.3	14.7			17.1		8.0	19.9		8.7	12.0	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	15.3	14.7			17.1		8.0	19.9		8.7	12.0	
LOS	B	B			B		A	B		A	B	
Approach Delay		14.9			17.1			18.7			10.8	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	20	37			11		3	56		26	49	
Queue Length 95th (ft)	54	90			42		13	116		57	146	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	415	1294			780		640	1435		645	1430	
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	0.24	0.15			0.08		0.04	0.15		0.26	0.20	

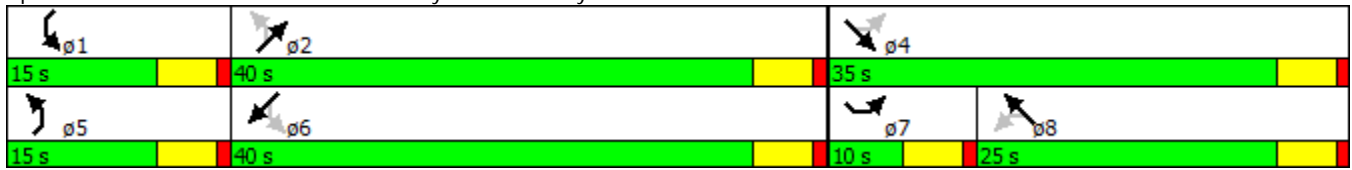
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	47
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.40
Intersection Signal Delay:	14.1
Intersection Capacity Utilization:	42.4%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	A

2019 Build Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
 4/2/2015

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
2: Stoney Street & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	43	240	131	35	30	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.886				0.905	
Flt Protected				0.962	0.985	
Satd. Flow (prot)	1642	0	0	1801	1644	0
Flt Permitted				0.962	0.985	
Satd. Flow (perm)	1642	0	0	1801	1644	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1020	190	
Travel Time (s)	12.3			23.2	4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	267	146	39	33	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	315	0	0	185	110	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.1% ICU Level of Service A
Analysis Period (min)	15

Intersection

Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	43	240	0	131	35	0	30	69
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	267	0	146	39	0	33	77
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach

	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.9	9.1	8.4
HCM LOS	A	A	A

Lane

	NBLn1	EBLn1	WBLn1
Vol Left, %	30%	0%	79%
Vol Thru, %	0%	15%	21%
Vol Right, %	70%	85%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	99	283	166
LT Vol	30	0	131
Through Vol	0	43	35
RT Vol	69	240	0
Lane Flow Rate	110	314	184
Geometry Grp	1	1	1
Degree of Util (X)	0.141	0.34	0.238
Departure Headway (Hd)	4.615	3.896	4.651
Convergence, Y/N	Yes	Yes	Yes
Cap	777	924	773
Service Time	2.647	1.913	2.675
HCM Lane V/C Ratio	0.142	0.34	0.238
HCM Control Delay	8.4	8.9	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	1.5	0.9

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	1197	227	137	462	16	132	13	254	161	74	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				
Frt			0.850		0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.960		0.950	0.981	
Satd. Flow (prot)	1770	3471	1552	1770	3664	0	1681	1699	1583	1698	1753	1546
Flt Permitted	0.471			0.471			0.950	0.960		0.950	0.981	
Satd. Flow (perm)	877	3471	1552	877	3664	0	1666	1686	1583	1698	1753	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			226		4				149			149
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1517			289				190
Travel Time (s)		9.3			23.0			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	71	1301	247	149	502	17	147	14	282	179	82	149
Shared Lane Traffic (%)							46%			28%		
Lane Group Flow (vph)	71	1301	247	149	519	0	79	82	282	129	132	149
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		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	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				43			43	43	43	43	43	43
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

2019 Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015



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	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	16.0	11.0	36.0		16.0	16.0	11.0	16.0	16.0	11.0
Total Split (s)	19.0	49.0	20.0	19.0	49.0		20.0	20.0	19.0	22.0	22.0	19.0
Total Split (%)	17.3%	44.5%	18.2%	17.3%	44.5%		18.2%	18.2%	17.3%	20.0%	20.0%	17.3%
Maximum Green (s)	13.0	43.0	14.0	13.0	43.0		14.0	14.0	13.0	16.0	16.0	13.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	Max	C-Max	None	None	None		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	50.3	50.3	66.9	21.2	21.2		12.6	12.6	25.3	14.4	14.4	56.1
Actuated g/C Ratio	0.46	0.46	0.61	0.19	0.19		0.11	0.11	0.23	0.13	0.13	0.51
v/c Ratio	0.10	0.82	0.24	0.55	0.73		0.41	0.42	0.59	0.58	0.58	0.17
Control Delay	20.8	32.7	2.5	46.1	47.5		51.5	51.8	14.8	55.4	54.8	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	32.7	2.5	46.1	47.5		51.5	51.8	14.8	55.4	54.8	2.0
LOS	C	C	A	D	D		D	D	B	E	D	A
Approach Delay		27.6			47.2			28.2				35.8
Approach LOS		C			D			C				D
Queue Length 50th (ft)	28	414	6	93	181		55	57	54	91	93	0
Queue Length 95th (ft)	61	#606	40	148	226		105	107	102	153	156	20
Internal Link Dist (ft)		532			1437			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	739	1585	1060	284	1468		229	231	498	262	270	857
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.82	0.23	0.52	0.35		0.34	0.35	0.57	0.49	0.49	0.17

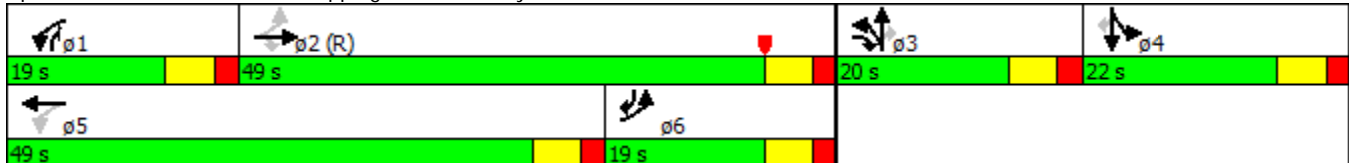
Intersection Summary
 Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

2019 Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015

Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 32.9 Intersection LOS: C
 Intersection Capacity Utilization 74.4% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

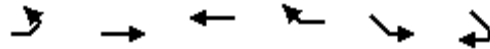
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1611	647	92	3	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.981		0.946	
Flt Protected					0.971	
Satd. Flow (prot)	0	3350	3533	0	1626	0
Flt Permitted					0.971	
Satd. Flow (perm)	0	3350	3533	0	1626	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		293	457		1070	
Travel Time (s)		4.4	6.9		24.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.90
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1751	703	100	3	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1751	803	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.5%
Analysis Period (min)	15
	ICU Level of Service A

2019 Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1611	647	92	3	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	92	92	92	92	92	90
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1751	703	100	3	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	803	0	1629
Stage 1	-	-	753
Stage 2	-	-	876
Critical Hdwy	4.14	-	8.84
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuver	1096	-	67
Stage 1	-	-	672
Stage 2	-	-	226
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	1096	-	67
Mov Cap-2 Maneuver	-	-	67
Stage 1	-	-	672
Stage 2	-	-	226

Approach	EB	WB	SE
HCM Control Delay, s	0	0	40.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	1096	-	-	-	107
HCM Lane V/C Ratio	-	-	-	-	0.051
HCM Control Delay (s)	0	-	-	-	40.5
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 Build Traffic Volumes
5: Mohansic Avenue/COSTCO Access & Route 202/35

AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	1559	12	45	659	121	21	1	36	80	1	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		100	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.999			0.977				0.850		0.876	
Flt Protected	0.950			0.950				0.954		0.950	0.992	
Satd. Flow (prot)	1699	3329	0	1832	3521	0	0	1813	1615	1681	1538	0
Flt Permitted	0.297			0.071				0.954		0.950	0.992	
Satd. Flow (perm)	531	3329	0	137	3521	0	0	1813	1615	1681	1538	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			31				85		63	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		457			251			624			252	
Travel Time (s)		6.9			3.8			14.2			5.7	
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%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	47	1695	13	49	716	132	23	1	39	87	1	63
Shared Lane Traffic (%)										14%		
Lane Group Flow (vph)	47	1708	0	49	848	0	0	24	39	75	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2	2	2	2	
Detector Template												
Leading Detector (ft)	83	83		83	83		50	83	83	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Size(ft)	40	40		40	40		50	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)	43	43		43	43			43	43	43	43	
Detector 2 Size(ft)	40	40		40	40			40	40	40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	

2019 Build Traffic Volumes
5: Mohansic Avenue/COSTCO Access & Route 202/35

AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases	2			6					8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		1.0	1.0		4.0	4.0	1.0	4.0	4.0	
Minimum Split (s)	9.0	10.0		7.0	9.0		10.0	10.0	7.0	10.0	10.0	
Total Split (s)	15.0	45.0		15.0	45.0		15.0	15.0	15.0	15.0	15.0	
Total Split (%)	16.7%	50.0%		16.7%	50.0%		16.7%	16.7%	16.7%	16.7%	16.7%	
Maximum Green (s)	10.0	40.0		10.0	40.0		10.0	10.0	10.0	10.0	10.0	
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)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effct Green (s)	66.1	60.9		66.9	63.0			7.9	12.6	9.6	7.6	
Actuated g/C Ratio	0.73	0.68		0.74	0.70			0.09	0.14	0.11	0.08	
v/c Ratio	0.10	0.76		0.20	0.34			0.15	0.13	0.42	0.41	
Control Delay	5.3	18.2		9.4	2.9			39.6	1.5	44.4	20.4	
Queue Delay	0.0	0.0		0.0	0.2			0.0	0.0	0.0	0.0	
Total Delay	5.3	18.2		9.4	3.1			39.6	1.5	44.4	20.4	
LOS	A	B		A	A			D	A	D	C	
Approach Delay		17.9			3.5			16.0			32.3	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	4	301		1	8			13	0	42	7	
Queue Length 95th (ft)	21	#692		21	76			37	4	87	50	
Internal Link Dist (ft)		377			171			544			172	
Turn Bay Length (ft)	150			170					100			
Base Capacity (vph)	548	2251		312	2475			221	361	205	210	
Starvation Cap Reductn	0	0		0	742			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.09	0.76		0.16	0.49			0.11	0.11	0.37	0.36	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 9 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 14.1
 Intersection LOS: B
 Intersection Capacity Utilization 62.5%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 ø1	 ø2 (R)	 ø4	 ø8
15 s	45 s	15 s	15 s
 ø5	 ø6 (R)		
15 s	45 s		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes

AM PEAK HOUR

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	904	770	323	723	0	0	0	0	92	0	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850									0.850
Fl _t Protected				0.950						0.950		
Satd. Flow (prot)	0	3350	1558	1877	3490	0	0	0	0	1769	0	1583
Fl _t Permitted				0.226						0.950		
Satd. Flow (perm)	0	3350	1558	447	3490	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			453									113
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	983	837	351	786	0	0	0	0	102	0	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	983	837	351	786	0	0	0	0	102	0	113
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	2	2					2		2
Detector Template												
Leading Detector (ft)		83	0	83	83					83		83
Trailing Detector (ft)		-5	0	-5	-5					-5		-5
Detector 1 Position(ft)		-5	0	-5	-5					-5		-5
Detector 1 Size(ft)		40	50	40	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43		43	43					43		43
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
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

2019 Build Traffic Volumes

AM PEAK HOUR

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		50.0		20.0	70.0					20.0		20.0
Total Split (%)		55.6%		22.2%	77.8%					22.2%		22.2%
Maximum Green (s)		45.0		15.0	65.0					15.0		15.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effct Green (s)		56.3	90.0	71.4	71.4					10.6		10.6
Actuated g/C Ratio		0.63	1.00	0.79	0.79					0.12		0.12
v/c Ratio		0.47	0.54	0.66	0.28					0.49		0.40
Control Delay		3.1	3.1	22.8	0.5					44.5		11.3
Queue Delay		0.7	0.0	0.0	0.0					0.0		0.0
Total Delay		3.8	3.1	22.8	0.5					44.5		11.3
LOS		A	A	C	A					D		B
Approach Delay		3.5			7.4							
Approach LOS		A			A							
Queue Length 50th (ft)		18	0	81	0					55		0
Queue Length 95th (ft)		27	303	159	12					100		45
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2094	1558	613	2768					314		374
Starvation Cap Reductn		692	0	0	0					0		0
Spillback Cap Reductn		137	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.70	0.54	0.57	0.28					0.32		0.30

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	12 (13%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	6.5
Intersection LOS:	A
Intersection Capacity Utilization:	61.9%
ICU Level of Service:	B
Analysis Period (min):	15

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

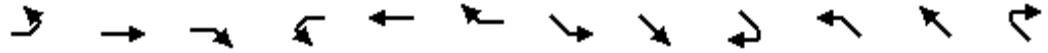


Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes

AM PEAK HOUR

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355

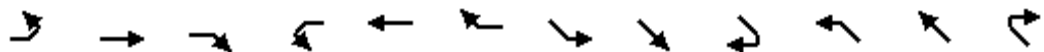


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	128	869	0	0	875	13	0	0	0	171	0	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	0		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.998							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1695	0	0	3434	0	0	0	0	1832	0	1639
Fl _t Permitted	0.200									0.950		
Satd. Flow (perm)	353	1695	0	0	3434	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2							91
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1112
Travel Time (s)		7.2			8.2			17.8				25.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	139	945	0	0	951	14	0	0	0	190	0	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	945	0	0	965	0	0	0	0	190	0	91
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)		23			23			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

2019 Build Traffic Volumes

AM PEAK HOUR

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



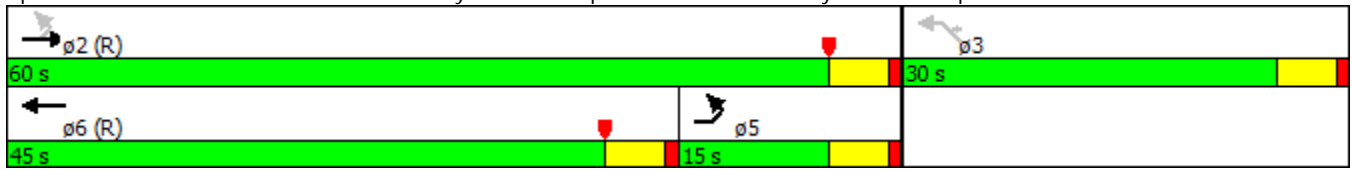
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	15.0	60.0			45.0					30.0		30.0
Total Split (%)	16.7%	66.7%			50.0%					33.3%		33.3%
Maximum Green (s)	10.0	55.0			40.0					25.0		25.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-0.7	-1.0			0.0					-1.0		-1.0
Total Lost Time (s)	4.3	4.0			5.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					Max		Max
Act Effct Green (s)	55.7	56.0			40.0					26.0		26.0
Actuated g/C Ratio	0.62	0.62			0.44					0.29		0.29
v/c Ratio	0.37	0.90			0.63					0.36		0.17
Control Delay	8.6	21.5			21.6					27.8		6.4
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	8.6	21.5			21.6					27.8		6.4
LOS	A	C			C					C		A
Approach Delay		19.8			21.6							
Approach LOS		B			C							
Queue Length 50th (ft)	12	462			215					85		0
Queue Length 95th (ft)	27	#712			281					145		34
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)												530
Base Capacity (vph)	375	1054			1527					529		538
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	0.37	0.90			0.63					0.36		0.17

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 20.7
 Intersection LOS: C
 Intersection Capacity Utilization 61.9%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
 8: Old Crompond Road & Site Access

AM PEAK HOUR
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	40	40	49	57	0	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.927		0.865	
Flt Protected		0.976				
Satd. Flow (prot)	0	1818	1727	0	1611	0
Flt Permitted		0.976				
Satd. Flow (perm)	0	1818	1727	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1020	1070		240	
Travel Time (s)		23.2	24.3		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	43	53	62	0	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	86	115	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.5%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	40	40	49	57	0	62
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, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	43	53	62	0	67

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	115	0	214
Stage 1	-	-	84
Stage 2	-	-	130
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1474	-	774
Stage 1	-	-	939
Stage 2	-	-	896
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1474	-	751
Mov Cap-2 Maneuver	-	-	751
Stage 1	-	-	939
Stage 2	-	-	869

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1474	-	-	-	975
HCM Lane V/C Ratio	0.029	-	-	-	0.069
HCM Control Delay (s)	7.5	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

2019 Build Traffic Volumes
1: Bear Mountain Parkway Ext. & Stoney Street

PM Peak Hour
4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	79	25	2	123	66	57	42	11	239	847	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.964			0.953			0.970			0.987	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1885	1912	0	0	1784	0	1805	1843	0	1805	1875	0
Flt Permitted	0.299				0.998		0.087			0.626		
Satd. Flow (perm)	593	1912	0	0	1781	0	165	1843	0	1189	1875	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			26			14			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.82	0.82	0.82	0.83	0.83	0.83	0.76	0.76	0.76	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	18	96	30	2	148	80	75	55	14	285	1008	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	126	0	0	230	0	75	69	0	285	1106	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
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	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		12.0	30.0		12.0	22.0	

2019 Build Traffic Volumes
 1: Bear Mountain Parkway Ext. & Stoney Street

PM Peak Hour
 4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (s)	20.0	20.0		20.0	20.0		11.0	50.0		20.0	59.0	
Total Split (%)	22.2%	22.2%		22.2%	22.2%		12.2%	55.6%		22.2%	65.6%	
Maximum Green (s)	15.0	15.0		15.0	15.0		4.0	43.0		13.0	52.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
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		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	8.0	8.0		8.0	8.0			7.0				
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			10.0				
Pedestrian Calls (#/hr)	0	0		0	0			0				
Act Effct Green (s)	13.4	13.4			13.4		48.4	44.4		59.9	52.3	
Actuated g/C Ratio	0.16	0.16			0.16		0.56	0.51		0.69	0.61	
v/c Ratio	0.20	0.41			0.77		0.44	0.07		0.32	0.97	
Control Delay	38.2	33.8			49.9		17.9	10.0		5.7	39.9	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	38.2	33.8			49.9		17.9	10.0		5.7	39.9	
LOS	D	C			D		B	B		A	D	
Approach Delay		34.3			49.9			14.1			32.9	
Approach LOS		C			D			B			C	
Queue Length 50th (ft)	9	56			111		11	15		49	~623	
Queue Length 95th (ft)	27	98			#175		21	31		72	#810	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	103	346			332		169	976		931	1140	
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	0.17	0.36			0.69		0.44	0.07		0.31	0.97	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 86.3
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 33.6
 Intersection LOS: C
 Intersection Capacity Utilization 71.7%
 ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Bear Mountain Parkway Ext. & Stoney Street

 ø1	 ø2	 ø3
11 s	59 s	20 s
 ø5	 ø6	
20 s	50 s	

Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
2: Stoney Street & Old Crompond Road

PM Peak Hour
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	92	244	412	102	114	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.902				0.924	
Flt Protected				0.961	0.979	
Satd. Flow (prot)	1672	0	0	1799	1668	0
Flt Permitted				0.961	0.979	
Satd. Flow (perm)	1672	0	0	1799	1668	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1014	190	
Travel Time (s)	12.3			23.0	4.3	
Peak Hour Factor	0.77	0.77	0.56	0.56	0.74	0.74
Adj. Flow (vph)	119	317	736	182	154	200
Shared Lane Traffic (%)						
Lane Group Flow (vph)	436	0	0	918	354	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.4%
Analysis Period (min)	15
	ICU Level of Service D

2019 Build Traffic Volumes
2: Stoney Street & Old Crompond Road

PM Peak Hour
4/2/2015

Intersection									
Intersection Delay, s/veh	42.4								
Intersection LOS	E								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	92	244	0	412	102	0	114	148
Peak Hour Factor	0.92	0.77	0.77	0.92	0.56	0.56	0.92	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	119	317	0	736	182	0	154	200
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	20.7	61.5	19.7
HCM LOS	C	F	C

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	44%	0%	80%
Vol Thru, %	0%	27%	20%
Vol Right, %	56%	73%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	262	336	514
LT Vol	114	0	412
Through Vol	0	92	102
RT Vol	148	244	0
Lane Flow Rate	354	436	918
Geometry Grp	1	1	1
Degree of Util (X)	0.629	0.694	1
Departure Headway (Hd)	6.396	5.726	6.066
Convergence, Y/N	Yes	Yes	Yes
Cap	566	633	606
Service Time	4.412	3.749	4.103
HCM Lane V/C Ratio	0.625	0.689	1.515
HCM Control Delay	19.7	20.7	61.5
HCM Lane LOS	C	C	F
HCM 95th-tile Q	4.4	5.5	14.9

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	940	230	225	727	56	257	61	301	320	128	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.989				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.970		0.950	0.979	
Satd. Flow (prot)	1770	3539	1552	1770	3711	0	1681	1717	1583	1698	1750	1546
Flt Permitted	0.344			0.194			0.950	0.970		0.950	0.979	
Satd. Flow (perm)	641	3539	1552	361	3711	0	1671	1710	1583	1698	1750	1514
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253		9				145			145
Link Speed (mph)		45		45			30			30		
Link Distance (ft)		612		1512			289			190		
Travel Time (s)		9.3		22.9			6.6			4.3		
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	138	1033	253	234	757	58	289	69	338	381	152	270
Shared Lane Traffic (%)							40%			29%		
Lane Group Flow (vph)	138	1033	253	234	815	0	173	185	338	271	262	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12		12			12			12		12
Link Offset(ft)		0		0			0			0		0
Crosswalk Width(ft)		16		16			16			16		16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2019 Build Traffic Volumes
3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
4/2/2015



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	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	10.0	20.0	15.0	10.0	20.0		15.0	15.0	10.0	15.0	15.0	10.0
Total Split (s)	15.0	33.0	18.0	15.0	33.0		18.0	18.0	15.0	24.0	24.0	15.0
Total Split (%)	16.7%	36.7%	20.0%	16.7%	36.7%		20.0%	20.0%	16.7%	26.7%	26.7%	16.7%
Maximum Green (s)	10.0	28.0	13.0	10.0	28.0		13.0	13.0	10.0	19.0	19.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	31.6	31.6	47.8	31.7	31.7		13.2	13.2	24.4	18.1	18.1	29.1
Actuated g/C Ratio	0.35	0.35	0.53	0.35	0.35		0.15	0.15	0.27	0.20	0.20	0.32
v/c Ratio	0.38	0.83	0.27	0.78	0.62		0.70	0.73	0.63	0.80	0.75	0.46
Control Delay	30.1	35.1	2.4	26.7	16.0		52.6	54.8	14.0	51.9	47.5	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	35.1	2.4	26.7	16.0		52.6	54.8	14.0	51.9	47.5	8.2
LOS	C	D	A	C	B		D	D	B	D	D	A
Approach Delay		28.8			18.4			34.5				35.8
Approach LOS		C			B			C				D
Queue Length 50th (ft)	57	293	0	78	182		98	106	47	150	144	29
Queue Length 95th (ft)	103	#415	35	m102	m229		#183	#197	92	222	212	57
Internal Link Dist (ft)		532			1432			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	362	1241	953	305	1313		261	267	538	377	388	590
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.83	0.27	0.77	0.62		0.66	0.69	0.63	0.72	0.68	0.46

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83

2019 Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015

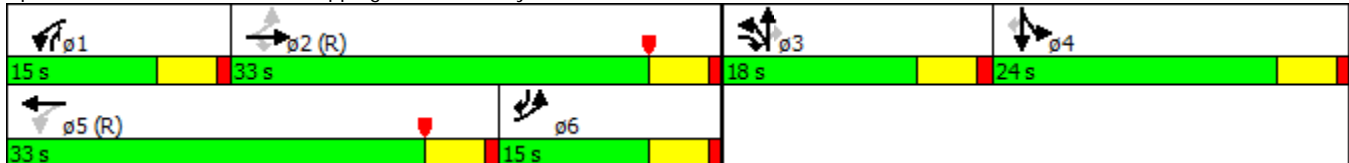
Intersection Signal Delay: 28.4 Intersection LOS: C
 Intersection Capacity Utilization 76.4% ICU Level of Service D
 Analysis Period (min) 15

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.

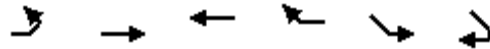
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1562	1084	136	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.983		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3350	3539	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3350	3539	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		309	457		1058	
Travel Time (s)		4.7	6.9		24.0	
Peak Hour Factor	0.85	0.85	0.93	0.93	0.80	0.80
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1838	1166	146	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1838	1312	0	2	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.2%
Analysis Period (min)	15
	ICU Level of Service A

2019 Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

PM Peak Hour
4/2/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1562	1084	136	1	1
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, %	-	7	-7	-	10	-
Peak Hour Factor	85	85	93	93	80	80
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1838	1166	146	1	1

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1312	0	656
Stage 1	-	-	1239
Stage 2	-	-	919
Critical Hdwy	4.14	-	7.94
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	861	-	*633
Stage 1	-	-	*597
Stage 2	-	-	*209
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	861	-	*633
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	*597
Stage 2	-	-	*209

Approach	EB	WB	SE
HCM Control Delay, s	0	0	84.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	861	-	-	-	48
HCM Lane V/C Ratio	-	-	-	-	0.052
HCM Control Delay (s)	0	-	-	-	84.1
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 Build Traffic Volumes
5: Mohansic Avenue/COSTCO Access & Route 202/35

PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	1401	35	160	988	357	40	3	94	291	3	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%			0%	
Storage Length (ft)	150		0	170		0	0		150	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.996			0.961				0.850		0.894	
Flt Protected	0.950			0.950				0.954		0.950	0.986	
Satd. Flow (prot)	1699	3384	0	1832	3520	0	0	1813	1615	1681	1560	0
Flt Permitted	0.094			0.093				0.954		0.950	0.986	
Satd. Flow (perm)	168	3384	0	179	3520	0	0	1813	1615	1681	1560	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			69				85			120
Link Speed (mph)		45			45			30				30
Link Distance (ft)		457			251			624				331
Travel Time (s)		6.9			3.8			14.2				7.5
Peak Hour Factor	0.92	0.92	0.92	0.88	0.88	0.92	0.65	0.92	0.65	0.92	0.92	0.92
Adj. Flow (vph)	137	1523	38	182	1123	388	62	3	145	316	3	209
Shared Lane Traffic (%)										27%		
Lane Group Flow (vph)	137	1561	0	182	1511	0	0	65	145	231	297	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		2	2	1	2	2	
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83	50	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		5	-5	0	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		5	-5	0	-5	-5	
Detector 1 Size(ft)	40	40		40	40		40	40	50	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)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	

2019 Build Traffic Volumes
5: Mohansic Avenue/COSTCO Access & Route 202/35

PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6				8					
Detector Phase	5	2	1		6	8		8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	10.0	9.0		9.0	9.0		9.0	9.0	9.0	9.0	
Total Split (s)	12.0	44.0	12.0		44.0	11.0		11.0	12.0	23.0	23.0	
Total Split (%)	13.3%	48.9%	13.3%		48.9%	12.2%		12.2%	13.3%	25.6%	25.6%	
Maximum Green (s)	7.0	39.0	7.0		39.0	6.0		6.0	7.0	18.0	18.0	
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)	-1.0	-1.0	-1.0		-1.0	-1.0		0.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0		5.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lead		Lag	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes				
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None	None	None	
Walk Time (s)							5.0	5.0			5.0	5.0
Flash Dont Walk (s)							11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)							0	0			0	0
Act Effct Green (s)	51.5	43.6	52.2		43.9	7.2		16.4	17.0	17.0		
Actuated g/C Ratio	0.57	0.48	0.58		0.49	0.08		0.18	0.19	0.19		
v/c Ratio	0.59	0.95	0.71		0.86	0.45		0.40	0.73	0.76		
Control Delay	26.8	26.3	33.7		17.6	50.0		17.7	47.9	33.2		
Queue Delay	0.0	0.6	0.0		6.1	0.0		1.0	0.0	0.2		
Total Delay	26.8	26.9	33.7		23.6	50.0		18.7	47.9	33.4		
LOS	C	C	C		C	D		B	D	C		
Approach Delay	26.9				24.7	28.4				39.7		
Approach LOS	C				C	C				D		
Queue Length 50th (ft)	43	~518	50		376	36		29	127	97		
Queue Length 95th (ft)	m67	#632	#141		#548	77		44	210	#197		
Internal Link Dist (ft)	377				171	544				251		
Turn Bay Length (ft)	150				170			150				
Base Capacity (vph)	234	1640	256		1753	147		364	354	424		
Starvation Cap Reductn	0	0	0		203	0		0	0	0		
Spillback Cap Reductn	0	12	0		0	0		81	0	8		
Storage Cap Reductn	0	0	0		0	0		0	0	0		
Reduced v/c Ratio	0.59	0.96	0.71		0.97	0.44		0.51	0.65	0.71		

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	87 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	27.7
Intersection LOS:	C
Intersection Capacity Utilization:	79.4%
ICU Level of Service:	D
Analysis Period (min):	15

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 ø1	 ø2 (R)	 ø4	 ø8
12 s	44 s	23 s	11 s
 ø5	 ø6 (R)		
12 s	44 s		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes

PM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	1356	431	82	1355	0	0	0	0	45	0	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850									0.850
Fl _t Protected				0.950						0.950		
Satd. Flow (prot)	0	3415	1558	1877	3558	0	0	0	0	1769	0	1583
Fl _t Permitted				0.064						0.950		
Satd. Flow (perm)	0	3415	1558	126	3558	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			169									85
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.92	0.92	0.92	0.79	0.79	0.79
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1784	567	105	1737	0	0	0	0	57	0	190
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1784	567	105	1737	0	0	0	0	57	0	190
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	1	2					2		2
Detector Template												
Leading Detector (ft)		83	0	50	83					83		83
Trailing Detector (ft)		-5	0	0	-5					-5		-5
Detector 1 Position(ft)		-5	0	0	-5					-5		-5
Detector 1 Size(ft)		40	50	50	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43			43					43		43
Detector 2 Size(ft)		40			40					40		40
Detector 2 Type		Cl+Ex			Cl+Ex					Cl+Ex		Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0					0.0		0.0
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

2019 Build Traffic Volumes

PM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		35.0		20.0	55.0					35.0		35.0
Total Split (%)		38.9%		22.2%	61.1%					38.9%		38.9%
Maximum Green (s)		30.0		15.0	50.0					30.0		30.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effct Green (s)		61.1	90.0	70.0	70.0					12.0		12.0
Actuated g/C Ratio		0.68	1.00	0.78	0.78					0.13		0.13
v/c Ratio		0.77	0.36	0.46	0.63					0.24		0.67
Control Delay		8.1	0.4	17.4	1.7					35.2		31.2
Queue Delay		2.6	0.0	0.0	1.0					0.0		0.0
Total Delay		10.7	0.4	17.4	2.8					35.2		31.2
LOS		B	A	B	A					D		C
Approach Delay		8.2			3.6							
Approach LOS		A			A							
Queue Length 50th (ft)		139	0	11	16					30		56
Queue Length 95th (ft)		151	m0	m20	79					52		93
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2317	1558	409	2765					609		600
Starvation Cap Reductn		397	0	0	398					0		0
Spillback Cap Reductn		24	0	0	699					0		16
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.93	0.36	0.26	0.84					0.09		0.33

Intersection Summary	
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	7.6
Intersection LOS:	A
Intersection Capacity Utilization:	85.7%
ICU Level of Service:	E
Analysis Period (min):	15
m Volume for 95th percentile queue is metered by upstream signal.	

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

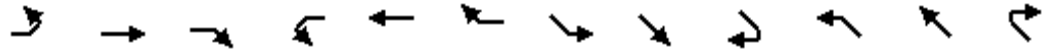
↙ ø1 20 s	→ ø2 (R) 35 s	↘ ø3 35 s
← ø6 (R) 55 s		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes

PM Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355

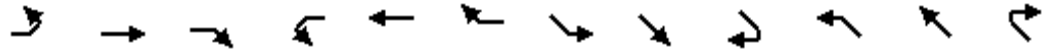


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	379	1022	0	0	989	81	0	0	0	448	0	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	0		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.989							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	3473	0	0	0	0	1832	0	1639
Fl _t Permitted	0.108									0.950		
Satd. Flow (perm)	190	1729	0	0	3473	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11							94
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1119
Travel Time (s)		7.2			8.2			17.8				25.4
Peak Hour Factor	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	426	1148	0	0	1030	84	0	0	0	503	0	406
Shared Lane Traffic (%)												
Lane Group Flow (vph)	426	1148	0	0	1114	0	0	0	0	503	0	406
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)		23			23			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

2019 Build Traffic Volumes

PM Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	23.0	60.0			37.0					30.0		30.0
Total Split (%)	25.6%	66.7%			41.1%					33.3%		33.3%
Maximum Green (s)	18.0	55.0			32.0					25.0		25.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0					-1.0		-1.0
Total Lost Time (s)	4.0	4.0			4.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					None		None
Act Effct Green (s)	56.1	56.1			33.1					25.9		25.9
Actuated g/C Ratio	0.62	0.62			0.37					0.29		0.29
v/c Ratio	0.99	1.07			0.87					0.95		0.75
Control Delay	51.9	51.1			34.9					62.8		32.5
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	51.9	51.1			34.9					62.8		32.5
LOS	D	D			C					E		C
Approach Delay		51.3			34.9							
Approach LOS		D			C							
Queue Length 50th (ft)	167	~713			302					280		162
Queue Length 95th (ft)	m#348	#935			#422					#467		#276
Internal Link Dist (ft)		395			460			701			1039	
Turn Bay Length (ft)												530
Base Capacity (vph)	431	1077			1285					529		540
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	0.99	1.07			0.87					0.95		0.75

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 74 (82%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 45.7
 Intersection LOS: D
 Intersection Capacity Utilization 85.7%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

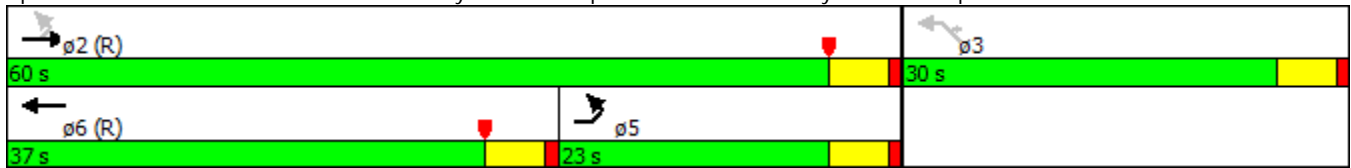
7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

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: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
 8: Old Crompond Road & Site Access

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	45	108	143	64	0	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.958		0.865	
Flt Protected		0.985				
Satd. Flow (prot)	0	1835	1785	0	1611	0
Flt Permitted		0.985				
Satd. Flow (perm)	0	1835	1785	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1014	1058		274	
Travel Time (s)		23.0	24.0		6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	117	155	70	0	145
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	166	225	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.8%
Analysis Period (min)	15
	ICU Level of Service A

2019 Build Traffic Volumes
8: Old Crompond Road & Site Access

PM Peak Hour
4/2/2015

Intersection

Int Delay, s/veh 3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	45	108	143	64	0	133
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, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	117	155	70	0	145

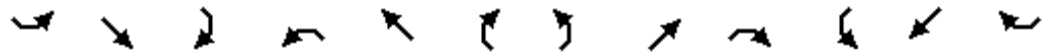
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	225	0	405
Stage 1	-	-	190
Stage 2	-	-	215
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1344	-	602
Stage 1	-	-	842
Stage 2	-	-	821
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1344	-	579
Mov Cap-2 Maneuver	-	-	579
Stage 1	-	-	842
Stage 2	-	-	789

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1344	-	-	-	852
HCM Lane V/C Ratio	0.036	-	-	-	0.17
HCM Control Delay (s)	7.8	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

2019 Build Traffic Volums
1: Bear Mountain Pkwy. Ext. & Stoney Street

Saturday Peak Hour
4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	9	70	15	1	102	65	72	50	13	119	428	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.973			0.948			0.970				0.962
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1885	1930	0	0	1775	0	1805	1843	0	1805	1828	0
Flt Permitted	0.320				0.999		0.276			0.704		
Satd. Flow (perm)	635	1930	0	0	1773	0	524	1843	0	1338	1828	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			33			14				22
Link Speed (mph)		30			30			30				30
Link Distance (ft)		353			539			433				768
Travel Time (s)		8.0			12.3			9.8				17.5
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	78	17	1	112	71	80	56	14	125	451	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	95	0	0	184	0	80	70	0	125	603	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	88	88		50	88		88	88		88	88	
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	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	

2019 Build Traffic Volums
 1: Bear Mountain Pkwy. Ext. & Stoney Street

Saturday Peak Hour
 4/2/2015

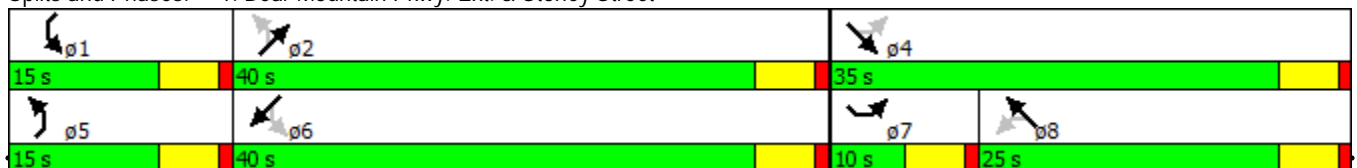


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-1.0	-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effect Green (s)	14.2	14.2			12.6		44.9	38.6		45.9	39.1	
Actuated g/C Ratio	0.20	0.20			0.18		0.63	0.54		0.65	0.55	
v/c Ratio	0.04	0.24			0.54		0.17	0.07		0.14	0.59	
Control Delay	21.8	21.9			28.4		6.3	10.1		5.7	16.5	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	21.8	21.9			28.4		6.3	10.1		5.7	16.5	
LOS	C	C			C		A	B		A	B	
Approach Delay		21.9			28.4			8.1			14.7	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)	4	30			57		8	11		13	155	
Queue Length 95th (ft)	15	66			135		37	44		54	410	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	234	864			556		550	1009		973	1017	
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	0.04	0.11			0.33		0.15	0.07		0.13	0.59	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 70.9
 Natural Cycle: 65
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 16.6
 Intersection LOS: B
 Intersection Capacity Utilization 55.5%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volums
2: Stoney Street & Old Crompond Road

Saturday Peak Hour
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	106	204	389	103	99	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.911				0.917	
Flt Protected				0.962	0.981	
Satd. Flow (prot)	1688	0	0	1801	1659	0
Flt Permitted				0.962	0.981	
Satd. Flow (perm)	1688	0	0	1801	1659	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			991	190	
Travel Time (s)	12.3			22.5	4.3	
Peak Hour Factor	0.88	0.88	0.58	0.58	0.91	0.91
Adj. Flow (vph)	120	232	671	178	109	176
Shared Lane Traffic (%)						
Lane Group Flow (vph)	352	0	0	849	285	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.4%
Analysis Period (min)	15
	ICU Level of Service C

Intersection									
Intersection Delay, s/veh	39.8								
Intersection LOS	E								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	106	204	0	389	103	0	99	160
Peak Hour Factor	0.92	0.88	0.88	0.92	0.58	0.58	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	120	232	0	671	178	0	109	176
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	14.3	58.7	14.8
HCM LOS	B	F	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	38%	0%	79%
Vol Thru, %	0%	34%	21%
Vol Right, %	62%	66%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	259	310	492
LT Vol	99	0	389
Through Vol	0	106	103
RT Vol	160	204	0
Lane Flow Rate	285	352	848
Geometry Grp	1	1	1
Degree of Util (X)	0.482	0.524	1
Departure Headway (Hd)	6.091	5.35	5.59
Convergence, Y/N	Yes	Yes	Yes
Cap	589	666	653
Service Time	4.164	3.449	3.59
HCM Lane V/C Ratio	0.484	0.529	1.299
HCM Control Delay	14.8	14.3	58.7
HCM Lane LOS	B	B	F
HCM 95th-tile Q	2.6	3.1	15.5

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 Build Traffic Volums
3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	1076	262	274	724	46	254	58	366	332	130	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.969		0.950	0.978	
Satd. Flow (prot)	1770	3539	1552	1770	3719	0	1681	1715	1583	1698	1748	1546
Flt Permitted	0.345			0.174			0.950	0.969		0.950	0.978	
Satd. Flow (perm)	643	3539	1552	324	3719	0	1669	1707	1583	1698	1748	1512
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			288		7				131			131
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1502			289				190
Travel Time (s)		9.3			22.8			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	160	1133	288	304	762	51	282	64	407	369	144	137
Shared Lane Traffic (%)							40%			31%		
Lane Group Flow (vph)	160	1133	288	304	813	0	169	177	407	255	258	137
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	88	0	0	88	0		88	88	88	50	88	88
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6

2019 Build Traffic Volums
3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	14.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	4.0
Minimum Split (s)	10.0	20.0	16.0	11.0	36.0		16.0	16.0	11.0	20.0	20.0	10.0
Total Split (s)	15.0	38.0	21.0	15.0	38.0		21.0	21.0	15.0	26.0	26.0	15.0
Total Split (%)	15.0%	38.0%	21.0%	15.0%	38.0%		21.0%	21.0%	15.0%	26.0%	26.0%	15.0%
Maximum Green (s)	10.0	33.0	16.0	10.0	33.0		16.0	16.0	10.0	21.0	21.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-0.7	-1.0	-1.0	0.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.3	4.0	4.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	34.0	33.7	53.4	37.9	36.9		15.4	15.4	30.3	19.7	19.7	30.7
Actuated g/C Ratio	0.34	0.34	0.53	0.38	0.37		0.15	0.15	0.30	0.20	0.20	0.31
v/c Ratio	0.47	0.95	0.30	0.90	0.59		0.66	0.67	0.71	0.76	0.75	0.25
Control Delay	34.9	49.7	2.2	37.9	19.0		52.0	52.7	19.4	53.0	51.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	49.7	2.2	37.9	19.0		52.0	52.7	19.4	53.0	51.6	3.7
LOS	C	D	A	D	B		D	D	B	D	D	A
Approach Delay		39.6			24.1			34.6				42.1
Approach LOS		D			C			C				D
Queue Length 50th (ft)	73	367	0	~169	205		105	111	86	157	160	2
Queue Length 95th (ft)	125	#507	36	m#199	m237		178	186	#168	250	251	26
Internal Link Dist (ft)		532			1422			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	342	1192	983	337	1375		285	291	570	373	384	558
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.95	0.29	0.90	0.59		0.59	0.61	0.71	0.68	0.67	0.25

Intersection Summary

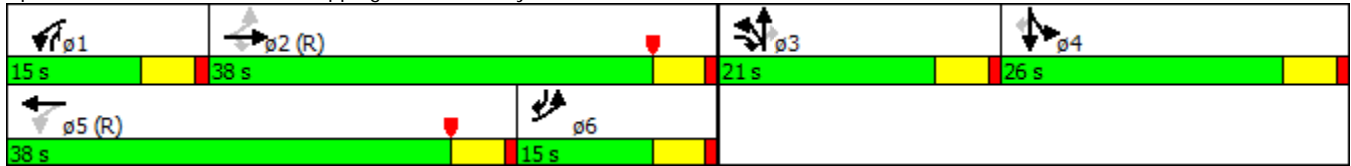
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 59 (59%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 34.8
 Intersection LOS: C
 Intersection Capacity Utilization 83.2%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

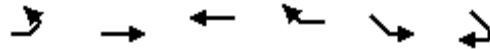
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volums
4: Route 202/35 & Old Crompond Road

Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1774	1134	155	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.981		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3415	3593	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3415	3593	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		316	457		1067	
Travel Time (s)		4.8	6.9		24.3	
Peak Hour Factor	0.97	0.97	0.95	0.90	0.90	0.90
Adj. Flow (vph)	0	1829	1194	172	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1829	1366	0	4	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.0%
Analysis Period (min)	15
	ICU Level of Service B

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1774	1134	155	2	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	97	97	95	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1829	1194	172	2	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1366	0	683
Stage 1	-	-	1280
Stage 2	-	-	914
Critical Hdwy	4.14	-	7.94
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	826	-	*617
Stage 1	-	-	*582
Stage 2	-	-	*211
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	826	-	*617
Mov Cap-2 Maneuver	-	-	*23
Stage 1	-	-	*582
Stage 2	-	-	*211

Approach	EB	WB	SE
HCM Control Delay, s	0	0	95.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	826	-	-	-	44
HCM Lane V/C Ratio	-	-	-	-	0.101
HCM Control Delay (s)	0	-	-	-	95.8
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 Build Traffic Volums
5: Mohansic Avenue/COSTCO Access & Route 202/35

Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	194	1549	32	115	952	542	38	5	81	438	5	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		150	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.997			0.944				0.850		0.888	
Flt Protected	0.950			0.950				0.957		0.950	0.988	
Satd. Flow (prot)	1699	3387	0	1832	3458	0	0	1818	1615	1681	1553	0
Flt Permitted	0.086			0.094				0.957		0.950	0.988	
Satd. Flow (perm)	154	3387	0	181	3458	0	0	1818	1615	1681	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			140				76		145	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		457			251			624			173	
Travel Time (s)		6.9			3.8			14.2			3.9	
Peak Hour Factor	0.92	0.95	0.87	0.91	0.95	0.92	0.90	0.92	0.90	0.92	0.92	0.92
Adj. Flow (vph)	211	1631	37	126	1002	589	42	5	90	476	5	324
Shared Lane Traffic (%)										22%		
Lane Group Flow (vph)	211	1668	0	126	1591	0	0	47	90	371	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83	50	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		-5	-5	0	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		-5	-5	0	-5	-5	
Detector 1 Size(ft)	88	88		88	88		88	88	50	88	88	
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	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases	2			6					8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		1.0	1.0		4.0	4.0	1.0	4.0	4.0	
Minimum Split (s)	9.0	10.0		7.0	9.0		9.0	9.0	7.0	9.0	9.0	

2019 Build Traffic Volums
5: Mohansic Avenue/COSTCO Access & Route 202/35

Saturday Peak Hour
4/2/2015









Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	15.0	48.0		10.0	43.0		11.0	11.0	10.0	31.0	31.0	
Total Split (%)	15.0%	48.0%		10.0%	43.0%		11.0%	11.0%	10.0%	31.0%	31.0%	
Maximum Green (s)	10.0	43.0		5.0	38.0		6.0	6.0	5.0	26.0	26.0	
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)	-1.0	-1.0		-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)							5.0	5.0		5.0	5.0	
Flash Dont Walk (s)							11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effect Green (s)	59.0	48.7		51.4	44.6			6.9	13.4	25.9	25.9	
Actuated g/C Ratio	0.59	0.49		0.51	0.45			0.07	0.13	0.26	0.26	
v/c Ratio	0.81	1.01		0.61	0.98			0.38	0.32	0.85	0.85	
Control Delay	47.3	39.5		31.7	32.1			53.4	14.6	54.8	40.2	
Queue Delay	0.0	24.3		0.0	1.7			0.0	0.0	0.0	0.3	
Total Delay	47.3	63.8		31.7	33.8			53.4	14.6	54.8	40.5	
LOS	D	E		C	C			D	B	D	D	
Approach Delay		61.9			33.7			27.9			47.1	
Approach LOS		E			C			C			D	
Queue Length 50th (ft)	97	-672		32	-595			29	8	232	187	
Queue Length 95th (ft)	m#130	m#769		#112	#320			67	51	#390	#364	
Internal Link Dist (ft)		377			171			544			93	
Turn Bay Length (ft)	150			170					150			
Base Capacity (vph)	264	1650		205	1620			127	282	453	525	
Starvation Cap Reductn	0	0		0	15			0	0	0	0	
Spillback Cap Reductn	0	102		0	0			0	2	0	5	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.80	1.08		0.61	0.99			0.37	0.32	0.82	0.83	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 12 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 47.6
 Intersection LOS: D
 Intersection Capacity Utilization 92.5%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 φ1	 φ2 (R)	 φ4	 φ8
10 s	48 s	31 s	11 s
 φ5	 φ6 (R)		
15 s	43 s		

Two Way Analysis cannot be performed on Signalized Intersection.

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	1529	540	121	1402	0	0	0	0	64	0	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3415	1558	1877	3558	0	0	0	0	1769	0	1583
Flt Permitted				0.085						0.950		
Satd. Flow (perm)	0	3415	1558	168	3558	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			171									76
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		251			475			607			868	
Travel Time (s)		3.8			7.2			13.8			19.7	
Peak Hour Factor	0.94	0.95	0.94	0.97	0.97	0.97	0.92	0.92	0.92	0.90	0.72	0.90
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1609	574	125	1445	0	0	0	0	71	0	219
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1609	574	125	1445	0	0	0	0	71	0	219
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1		1
Detector Template												
Leading Detector (ft)		83	0	83	83					83		83
Trailing Detector (ft)		-5	0	-5	-5					-5		-5
Detector 1 Position(ft)		-5	0	-5	-5					-5		-5
Detector 1 Size(ft)		88	0	88	88					88		88
Detector 1 Type		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
Detector 1 Queue (s)		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
Turn Type		NA	Free	pm+pt	NA					Perm		Perm
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

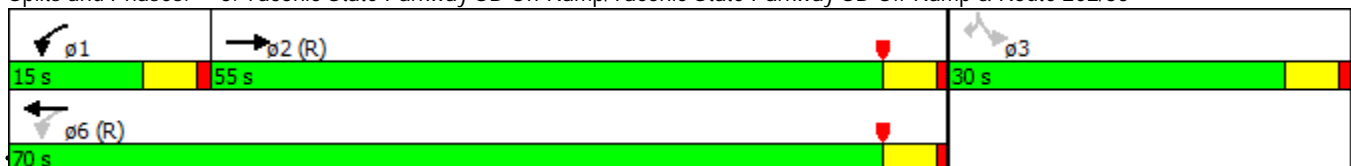


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		55.0		15.0	70.0					30.0		30.0
Total Split (%)		55.0%		15.0%	70.0%					30.0%		30.0%
Maximum Green (s)		50.0		10.0	65.0					25.0		25.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effect Green (s)		65.0	100.0	77.0	77.0					15.0		15.0
Actuated g/C Ratio		0.65	1.00	0.77	0.77					0.15		0.15
v/c Ratio		0.72	0.37	0.47	0.53					0.27		0.73
Control Delay		8.6	0.2	19.1	0.9					38.0		39.5
Queue Delay		14.1	0.0	0.0	0.4					0.1		0.0
Total Delay		22.6	0.2	19.1	1.3					38.0		39.5
LOS		C	A	B	A					D		D
Approach Delay		16.7			2.7							
Approach LOS		B			A							
Queue Length 50th (ft)		121	0	21	0					41		87
Queue Length 95th (ft)		m217	m0	m29	m61					75		155
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2221	1558	320	2741					459		467
Starvation Cap Reductn		627	0	0	689					0		0
Spillback Cap Reductn		11	0	0	371					60		7
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		1.01	0.37	0.39	0.70					0.18		0.48

Intersection Summary

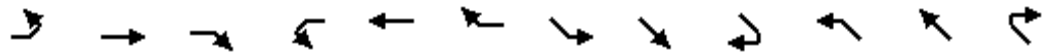
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 22 (22%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 12.9 Intersection LOS: B
 Intersection Capacity Utilization 87.0% ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35



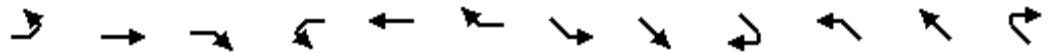
Two Way Analysis cannot be performed on Signalized Intersection.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	432	1160	0	0	1184	48	0	0	0	339	0	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	0		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.994							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	3489	0	0	0	0	1832	0	1639
Fl _t Permitted	0.090									0.950		
Satd. Flow (perm)	159	1729	0	0	3489	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5							97
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1112
Travel Time (s)		7.2			8.2			17.8				25.3
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.90	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	475	1221	0	0	1246	53	0	0	0	361	0	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	475	1221	0	0	1299	0	0	0	0	361	0	118
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)		23			23			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1					1		1
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	88	88			88					88		88
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
Turn Type	pm+pt	NA			NA					Perm		Perm
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

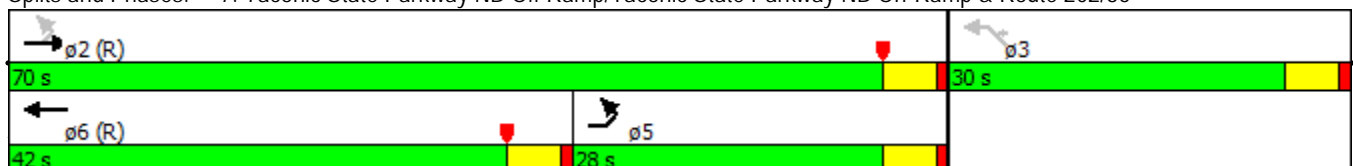


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	28.0	70.0			42.0					30.0		30.0
Total Split (%)	28.0%	70.0%			42.0%					30.0%		30.0%
Maximum Green (s)	23.0	65.0			37.0					25.0		25.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.5	-2.0			-1.0					-1.0		-1.0
Total Lost Time (s)	3.5	3.0			4.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					None		None
Act Effct Green (s)	69.1	69.6			40.6					23.4		23.4
Actuated g/C Ratio	0.69	0.70			0.41					0.23		0.23
v/c Ratio	0.99	1.01			0.92					0.84		0.26
Control Delay	54.7	36.6			40.2					54.5		10.2
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	54.7	36.6			40.2					54.5		10.2
LOS	D	D			D					D		B
Approach Delay		41.7			40.2							
Approach LOS		D			D							
Queue Length 50th (ft)	266	-866			416					215		10
Queue Length 95th (ft)	#455	#1085			#581					#341		54
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)												530
Base Capacity (vph)	481	1203			1418					476		497
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	0.99	1.01			0.92					0.76		0.24

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 41.4 Intersection LOS: D
 Intersection Capacity Utilization 87.0% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volums
8: Old Crompond Road & Site Access

Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	114	114	71	0	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.948		0.865	
Flt Protected		0.985				
Satd. Flow (prot)	0	1835	1766	0	1611	0
Flt Permitted		0.985				
Satd. Flow (perm)	0	1835	1766	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		991	1067		252	
Travel Time (s)		22.5	24.3		5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	124	124	77	0	125
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	178	201	0	125	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	36.2%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	50	114	114	71	0	115
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, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	124	124	77	0	125

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	201	0	396
Stage 1	-	-	163
Stage 2	-	-	233
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1371	-	609
Stage 1	-	-	866
Stage 2	-	-	806
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1371	-	583
Mov Cap-2 Maneuver	-	-	583
Stage 1	-	-	866
Stage 2	-	-	772

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1371	-	-	-	882
HCM Lane V/C Ratio	0.04	-	-	-	0.142
HCM Control Delay (s)	7.7	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

2019 No-Build Traffic Volumes with Improvements
 2: Stoney Street & Old Crompond Road

AM PEAK HOUR
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	19	240	44	22	30	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.875				0.926	
Flt Protected				0.968	0.978	
Satd. Flow (prot)	1622	0	0	1812	1670	0
Flt Permitted				0.968	0.978	
Satd. Flow (perm)	1622	0	0	1812	1670	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1020	190	
Travel Time (s)	12.3			23.2	4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	267	49	24	33	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	288	0	0	73	73	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	33.3%
Analysis Period (min)	15
	ICU Level of Service A

2019 No-Build Traffic Volumes with Improvements
 2: Stoney Street & Old Crompond Road

AM PEAK HOUR
 4/2/2015

Intersection									
Intersection Delay, s/veh	8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	19	240	0	44	22	0	30	36
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	267	0	49	24	0	33	40
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.1	7.9	7.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	45%	0%	67%
Vol Thru, %	0%	7%	33%
Vol Right, %	55%	93%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	66	259	66
LT Vol	30	0	44
Through Vol	0	19	22
RT Vol	36	240	0
Lane Flow Rate	73	288	73
Geometry Grp	1	1	1
Degree of Util (X)	0.088	0.285	0.09
Departure Headway (Hd)	4.312	3.561	4.416
Convergence, Y/N	Yes	Yes	Yes
Cap	817	996	803
Service Time	2.411	1.629	2.49
HCM Lane V/C Ratio	0.089	0.289	0.091
HCM Control Delay	7.8	8.1	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	1.2	0.3

2019 No-Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	1197	227	137	462	16	132	13	254	93	72	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.960		0.950	0.987	
Satd. Flow (prot)	1770	3471	1552	1770	3664	0	1681	1699	1583	1698	1764	1546
Flt Permitted	0.488			0.488			0.950	0.960		0.950	0.987	
Satd. Flow (perm)	909	3471	1552	909	3664	0	1665	1686	1583	1698	1764	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			226		4				149			149
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1517			289				190
Travel Time (s)		9.3			23.0			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	38	1301	247	149	502	17	147	14	282	103	80	129
Shared Lane Traffic (%)							46%			28%		
Lane Group Flow (vph)	38	1301	247	149	519	0	79	82	282	74	109	129
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		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	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				43			43	43	43	43	43	43
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

2019 No-Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015



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	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	16.0	11.0	36.0		16.0	16.0	11.0	16.0	16.0	11.0
Total Split (s)	19.0	49.0	20.0	19.0	49.0		20.0	20.0	19.0	22.0	22.0	19.0
Total Split (%)	17.3%	44.5%	18.2%	17.3%	44.5%		18.2%	18.2%	17.3%	20.0%	20.0%	17.3%
Maximum Green (s)	13.0	43.0	14.0	13.0	43.0		14.0	14.0	13.0	16.0	16.0	13.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	Max	C-Max	None	None	None		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	50.8	50.8	67.5	21.2	21.2		12.6	12.6	25.6	13.5	13.5	56.1
Actuated g/C Ratio	0.46	0.46	0.61	0.19	0.19		0.11	0.11	0.23	0.12	0.12	0.51
v/c Ratio	0.05	0.81	0.24	0.54	0.73		0.41	0.42	0.58	0.36	0.50	0.15
Control Delay	19.9	31.9	2.5	45.7	47.5		51.5	51.8	14.7	48.4	52.9	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	31.9	2.5	45.7	47.5		51.5	51.8	14.7	48.4	52.9	1.4
LOS	B	C	A	D	D		D	D	B	D	D	A
Approach Delay		27.0			47.1			28.1			30.6	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	14	403	6	93	181		55	57	55	51	76	0
Queue Length 95th (ft)	38	#606	40	148	226		105	107	102	96	132	14
Internal Link Dist (ft)		532			1437			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	753	1604	1067	288	1468		229	231	502	262	272	857
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.81	0.23	0.52	0.35		0.34	0.35	0.56	0.28	0.40	0.15

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

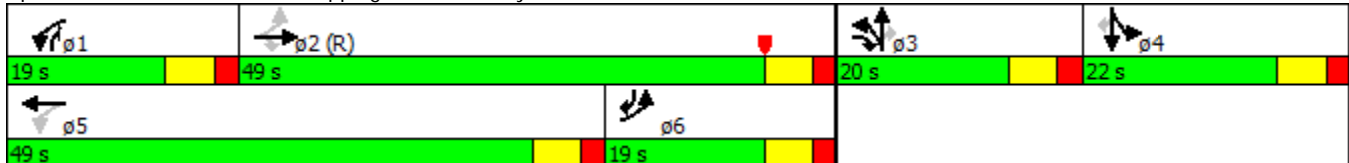
2019 No-Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015

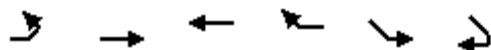
Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 32.0 Intersection LOS: C
 Intersection Capacity Utilization 74.4% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 No-Build Traffic Volumes with Improvements
4: Route 202/35 & Old Crompond Road

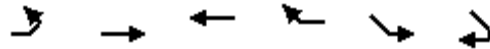
AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1543	647	10	24	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	3350	3587	0	1675	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	3350	3587	0	1675	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			4		2	
Link Speed (mph)		45	45		30	
Link Distance (ft)		293	457		1070	
Travel Time (s)		4.4	6.9		24.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.90
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1677	703	11	26	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1677	714	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		2	
Detector Template						
Leading Detector (ft)		83	83		83	
Trailing Detector (ft)		-5	-5		-5	
Detector 1 Position(ft)		-5	-5		-5	
Detector 1 Size(ft)		40	40		40	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(ft)		43	43		43	
Detector 2 Size(ft)		40	40		40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						

2019 No-Build Traffic Volumes with Improvements
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015

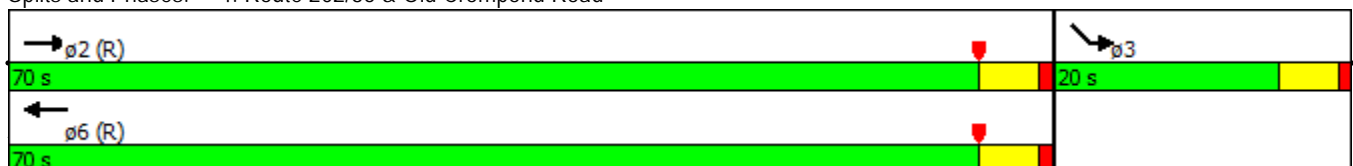


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		70.0	70.0		20.0	
Total Split (%)		77.8%	77.8%		22.2%	
Maximum Green (s)		65.0	65.0		15.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effect Green (s)		82.6	82.6		7.1	
Actuated g/C Ratio		0.92	0.92		0.08	
v/c Ratio		0.55	0.22		0.21	
Control Delay		2.7	3.6		39.9	
Queue Delay		0.1	0.0		0.0	
Total Delay		2.9	3.6		40.0	
LOS		A	A		D	
Approach Delay		2.9	3.6		40.0	
Approach LOS		A	A		D	
Queue Length 50th (ft)		0	0		14	
Queue Length 95th (ft)		208	156		40	
Internal Link Dist (ft)		213	377		990	
Turn Bay Length (ft)						
Base Capacity (vph)		3075	3293		280	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		369	0		27	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.62	0.22		0.11	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 71 (79%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 3.5
 Intersection Capacity Utilization 54.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 No-Build Traffic Volumes with Improvements
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	66	244	160	68	114	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.894				0.933	
Flt Protected				0.966	0.975	
Satd. Flow (prot)	1657	0	0	1808	1678	0
Flt Permitted				0.966	0.975	
Satd. Flow (perm)	1657	0	0	1808	1678	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1014	190	
Travel Time (s)	12.3			23.0	4.3	
Peak Hour Factor	0.77	0.77	0.56	0.56	0.74	0.74
Adj. Flow (vph)	86	317	286	121	154	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	403	0	0	407	304	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.1% ICU Level of Service A
Analysis Period (min)	15

2019 No-Build Traffic Volumes with Improvements
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015

Intersection									
Intersection Delay, s/veh	15.5								
Intersection LOS	C								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	66	244	0	160	68	0	114	111
Peak Hour Factor	0.92	0.77	0.77	0.92	0.56	0.56	0.92	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	86	317	0	286	121	0	154	150
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	14.3	17.7	14.2
HCM LOS	B	C	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	51%	0%	70%
Vol Thru, %	0%	21%	30%
Vol Right, %	49%	79%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	225	310	228
LT Vol	114	0	160
Through Vol	0	66	68
RT Vol	111	244	0
Lane Flow Rate	304	403	407
Geometry Grp	1	1	1
Degree of Util (X)	0.487	0.561	0.63
Departure Headway (Hd)	5.767	5.018	5.57
Convergence, Y/N	Yes	Yes	Yes
Cap	623	717	647
Service Time	3.821	3.07	3.621
HCM Lane V/C Ratio	0.488	0.562	0.629
HCM Control Delay	14.2	14.3	17.7
HCM Lane LOS	B	B	C
HCM 95th-tile Q	2.7	3.5	4.4

2019 No-Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↗	↗	↘	↗	↗
Volume (vph)	92	940	230	225	727	56	257	58	301	116	124	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.989				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.969		0.950	0.989	
Satd. Flow (prot)	1770	3539	1552	1770	3711	0	1681	1715	1583	1698	1768	1546
Flt Permitted	0.344			0.181			0.950	0.969		0.950	0.989	
Satd. Flow (perm)	641	3539	1552	337	3711	0	1669	1707	1583	1698	1768	1514
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253		9				230			145
Link Speed (mph)		45		45				30			30	
Link Distance (ft)		612		1512				289			190	
Travel Time (s)		9.3		22.9				6.6			4.3	
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	101	1033	253	234	757	58	289	65	338	138	148	218
Shared Lane Traffic (%)							40%			29%		
Lane Group Flow (vph)	101	1033	253	234	815	0	173	181	338	98	188	218
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12		12				12			12	
Link Offset(ft)		0		0				0			0	
Crosswalk Width(ft)		16		16				16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2019 No-Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



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	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	10.0	20.0	15.0	10.0	20.0		15.0	15.0	10.0	15.0	15.0	10.0
Total Split (s)	15.0	33.0	18.0	15.0	33.0		18.0	18.0	15.0	24.0	24.0	15.0
Total Split (%)	16.7%	36.7%	20.0%	16.7%	36.7%		20.0%	20.0%	16.7%	26.7%	26.7%	16.7%
Maximum Green (s)	10.0	28.0	13.0	10.0	28.0		13.0	13.0	10.0	19.0	19.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	33.3	33.3	49.4	34.6	34.6		13.2	13.2	25.5	15.2	15.2	26.2
Actuated g/C Ratio	0.37	0.37	0.55	0.38	0.38		0.15	0.15	0.28	0.17	0.17	0.29
v/c Ratio	0.27	0.79	0.26	0.72	0.57		0.70	0.72	0.55	0.34	0.63	0.40
Control Delay	26.7	32.2	2.3	29.6	18.3		52.9	54.0	8.2	35.2	44.0	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	32.2	2.3	29.6	18.3		52.9	54.0	8.2	35.2	44.0	6.9
LOS	C	C	A	C	B		D	D	A	D	D	A
Approach Delay		26.3			20.8			31.3				26.2
Approach LOS		C			C			C				C
Queue Length 50th (ft)	40	288	0	71	168		98	103	26	52	106	19
Queue Length 95th (ft)	79	#415	35	#205	321		#183	#191	61	87	154	40
Internal Link Dist (ft)		532			1432			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	374	1307	978	330	1432		261	266	617	377	392	547
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.79	0.26	0.71	0.57		0.66	0.68	0.55	0.26	0.48	0.40

Intersection Summary

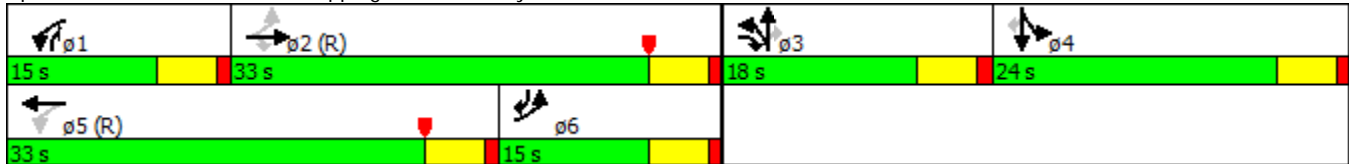
Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79

2019 No-Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015

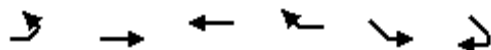
Intersection Signal Delay: 25.7 Intersection LOS: C
 Intersection Capacity Utilization 73.5% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 No-Build Traffic Volumes with Improvements
4: Route 202/35 & Old Crompond Road

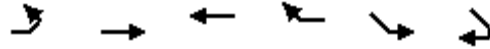
PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1358	1084	44	87	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt			0.994		0.999	
Flt Protected					0.953	
Satd. Flow (prot)	0	3350	3574	0	1685	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	3350	3574	0	1685	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			10			
Link Speed (mph)		45	45		30	
Link Distance (ft)		309	457		1058	
Travel Time (s)		4.7	6.9		24.0	
Peak Hour Factor	0.85	0.85	0.93	0.93	0.80	0.80
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1598	1166	47	109	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1598	1213	0	110	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		1	1		1	
Detector Template						
Leading Detector (ft)		50	50		50	
Trailing Detector (ft)		0	0		0	
Detector 1 Position(ft)		0	0		0	
Detector 1 Size(ft)		50	50		50	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		65.0	65.0		25.0	
Total Split (%)		72.2%	72.2%		27.8%	
Maximum Green (s)		60.0	60.0		20.0	

2019 No-Build Traffic Volumes with Improvements
 4: Route 202/35 & Old Crompond Road

PM Peak Hour
 4/2/2015

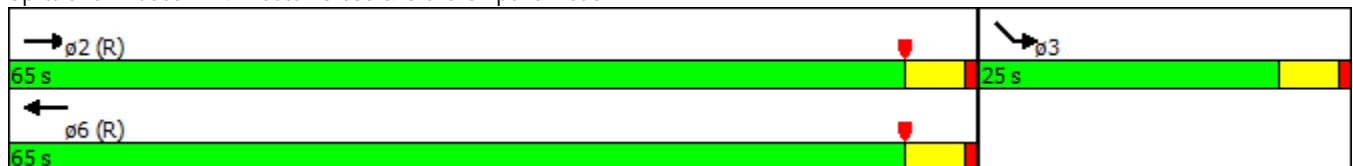


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)		72.2	72.2		11.2	
Actuated g/C Ratio		0.80	0.80		0.12	
v/c Ratio		0.59	0.42		0.53	
Control Delay		3.8	2.5		45.4	
Queue Delay		0.0	0.1		0.0	
Total Delay		3.9	2.6		45.4	
LOS		A	A		D	
Approach Delay		3.9	2.6		45.4	
Approach LOS		A	A		D	
Queue Length 50th (ft)		68	51		60	
Queue Length 95th (ft)		87	108		93	
Internal Link Dist (ft)		229	377		978	
Turn Bay Length (ft)						
Base Capacity (vph)		2686	2868		374	
Starvation Cap Reductn		0	510		0	
Spillback Cap Reductn		111	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.62	0.51		0.29	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 4.9
 Intersection LOS: A
 Intersection Capacity Utilization 50.8%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 No-Build Traffic Volumes with Improvements
2: Stoney Street & Old Crompond Road

Saturday Peak Hour
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	75	204	133	74	99	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901				0.927	
Flt Protected				0.969	0.978	
Satd. Flow (prot)	1670	0	0	1814	1672	0
Flt Permitted				0.969	0.978	
Satd. Flow (perm)	1670	0	0	1814	1672	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			991	190	
Travel Time (s)	12.3			22.5	4.3	
Peak Hour Factor	0.88	0.88	0.58	0.58	0.91	0.91
Adj. Flow (vph)	85	232	229	128	109	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	317	0	0	357	239	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.5%
Analysis Period (min)	15
	ICU Level of Service A

2019 No-Build Traffic Volumes with Improvements
2: Stoney Street & Old Crompond Road

Saturday Peak Hour
4/2/2015

Intersection									
Intersection Delay, s/veh	11.8								
Intersection LOS	B								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	75	204	0	133	74	0	99	118
Peak Hour Factor	0.92	0.88	0.88	0.92	0.58	0.58	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	85	232	0	229	128	0	109	130
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	10.8	13.2	11.2
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	46%	0%	64%
Vol Thru, %	0%	27%	36%
Vol Right, %	54%	73%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	217	279	207
LT Vol	99	0	133
Through Vol	0	75	74
RT Vol	118	204	0
Lane Flow Rate	238	317	357
Geometry Grp	1	1	1
Degree of Util (X)	0.353	0.403	0.501
Departure Headway (Hd)	5.324	4.679	5.157
Convergence, Y/N	Yes	Yes	Yes
Cap	680	774	703
Service Time	3.324	2.679	3.157
HCM Lane V/C Ratio	0.35	0.41	0.508
HCM Control Delay	11.2	10.8	13.2
HCM Lane LOS	B	B	B
HCM 95th-tile Q	1.6	2	2.8

2019 No-Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	1076	262	274	724	46	254	54	366	117	126	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.968		0.950		
Satd. Flow (prot)	1770	3539	1552	1770	3719	0	1681	1713	1583	1698	1787	1546
Flt Permitted	0.345			0.166			0.950	0.968		0.950		
Satd. Flow (perm)	643	3539	1552	309	3719	0	1667	1704	1583	1698	1787	1512
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			288		7				208			131
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1502			289				190
Travel Time (s)		9.3			22.8			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	118	1133	288	304	762	51	282	60	407	130	140	94
Shared Lane Traffic (%)							41%			0%		
Lane Group Flow (vph)	118	1133	288	304	813	0	166	176	407	130	140	94
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	88	0	0	88	0		88	88	88	50	88	88
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6

2019 No-Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015

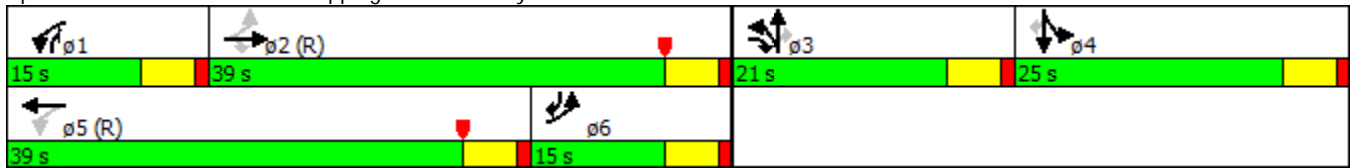


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	14.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	4.0
Minimum Split (s)	10.0	20.0	16.0	11.0	36.0		16.0	16.0	11.0	20.0	20.0	10.0
Total Split (s)	15.0	39.0	21.0	15.0	39.0		21.0	21.0	15.0	25.0	25.0	15.0
Total Split (%)	15.0%	39.0%	21.0%	15.0%	39.0%		21.0%	21.0%	15.0%	25.0%	25.0%	15.0%
Maximum Green (s)	10.0	34.0	16.0	10.0	34.0		16.0	16.0	10.0	20.0	20.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-0.7	-1.0	-1.0	0.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.3	4.0	4.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	35.0	34.7	54.2	43.2	42.2		15.2	15.2	34.5	14.5	14.5	25.5
Actuated g/C Ratio	0.35	0.35	0.54	0.43	0.42		0.15	0.15	0.34	0.14	0.14	0.26
v/c Ratio	0.34	0.92	0.30	0.73	0.52		0.65	0.67	0.60	0.53	0.54	0.19
Control Delay	30.1	44.9	2.1	29.6	15.2		51.9	53.1	11.2	46.9	46.9	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	44.9	2.1	29.6	15.2		51.9	53.1	11.2	46.9	46.9	2.0
LOS	C	D	A	C	B		D	D	B	D	D	A
Approach Delay		35.7			19.1			30.1				35.3
Approach LOS		D			B			C				D
Queue Length 50th (ft)	52	361	0	103	143		104	110	59	82	88	0
Queue Length 95th (ft)	94	#495	35	#313	265		175	185	119	137	145	11
Internal Link Dist (ft)		532			1422			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	349	1228	995	414	1574		285	291	682	356	375	487
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.92	0.29	0.73	0.52		0.58	0.60	0.60	0.37	0.37	0.19

Intersection Summary

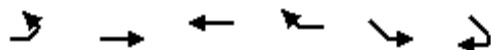
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 59 (59%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 29.6
 Intersection LOS: C
 Intersection Capacity Utilization 80.0%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 No-Build Traffic Volumes with Improvements
4: Route 202/35 & Old Crompond Road

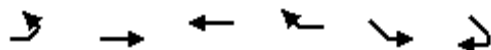
Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1559	1134	50	116	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt			0.994		0.998	
Flt Protected					0.953	
Satd. Flow (prot)	0	3415	3641	0	1683	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	3415	3641	0	1683	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			6		1	
Link Speed (mph)		45	45		30	
Link Distance (ft)		316	457		1067	
Travel Time (s)		4.8	6.9		24.3	
Peak Hour Factor	0.97	0.97	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1607	1260	56	129	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1607	1316	0	131	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		2	
Detector Template						
Leading Detector (ft)		83	83		83	
Trailing Detector (ft)		-5	-5		-5	
Detector 1 Position(ft)		-5	-5		-5	
Detector 1 Size(ft)		40	40		40	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(ft)		43	43		43	
Detector 2 Size(ft)		40	40		40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	

2019 No-Build Traffic Volumes with Improvements
4: Route 202/35 & Old Crompond Road

Saturday Peak Hour
4/2/2015

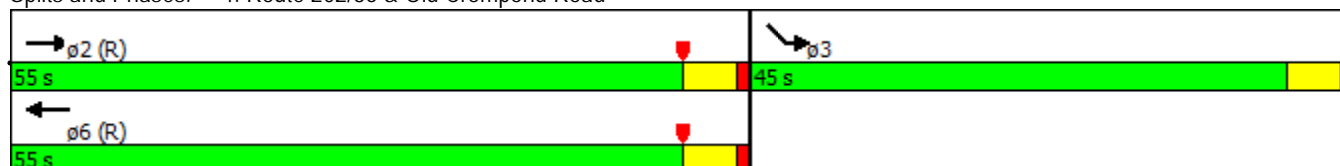


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		55.0	55.0		45.0	
Total Split (%)		55.0%	55.0%		45.0%	
Maximum Green (s)		50.0	50.0		40.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Min	C-Min		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effect Green (s)		76.7	76.7		13.3	
Actuated g/C Ratio		0.77	0.77		0.13	
v/c Ratio		0.61	0.47		0.58	
Control Delay		6.7	2.2		50.4	
Queue Delay		0.2	0.5		0.1	
Total Delay		6.9	2.7		50.4	
LOS		A	A		D	
Approach Delay		6.9	2.7		50.4	
Approach LOS		A	A		D	
Queue Length 50th (ft)		41	58		79	
Queue Length 95th (ft)		m555	m46		132	
Internal Link Dist (ft)		236	377		987	
Turn Bay Length (ft)						
Base Capacity (vph)		2620	2795		673	
Starvation Cap Reductn		0	891		0	
Spillback Cap Reductn		345	0		76	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.71	0.69		0.22	

Intersection Summary




















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 50 (50%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 7.0
 Intersection Capacity Utilization 58.0%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 Build Traffic Volumes
1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
4/2/2015

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	90	130	50	2	33	26	21	188	2	149	253	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.958			0.943			0.999				0.995
Flt Protected	0.950				0.998		0.950			0.950		
Satd. Flow (prot)	1885	1901	0	0	1762	0	1805	1898	0	1805	1890	0
Flt Permitted	0.577				0.980		0.582			0.477		
Satd. Flow (perm)	1145	1901	0	0	1730	0	1106	1898	0	906	1890	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			28			1				2
Link Speed (mph)		30			30			30				30
Link Distance (ft)		353			539			433				768
Travel Time (s)		8.0			12.3			9.8				17.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	98	141	54	2	36	28	23	209	2	166	281	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	195	0	0	66	0	23	211	0	166	291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2		2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	40	40		50	40		40	40		40	40	
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)	43	43			43		43	43		43	43	
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												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	

2019 Build Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
 4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		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	
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			0.5		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.5		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effect Green (s)	13.1	13.1			6.9		17.6	13.0		22.9	21.3	
Actuated g/C Ratio	0.28	0.28			0.15		0.37	0.28		0.49	0.45	
v/c Ratio	0.24	0.36			0.24		0.05	0.40		0.28	0.34	
Control Delay	15.3	14.7			17.1		8.0	19.9		8.7	12.0	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	15.3	14.7			17.1		8.0	19.9		8.7	12.0	
LOS	B	B			B		A	B		A	B	
Approach Delay		14.9			17.1			18.7			10.8	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	20	37			11		3	56		26	49	
Queue Length 95th (ft)	54	90			42		13	116		57	146	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	415	1294			780		640	1435		645	1430	
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	0.24	0.15			0.08		0.04	0.15		0.26	0.20	

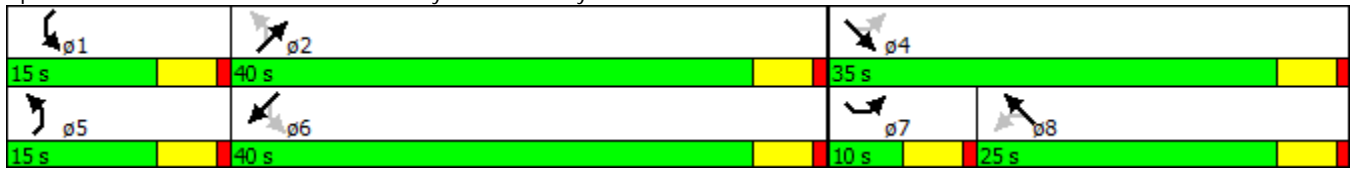
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	47
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.40
Intersection Signal Delay:	14.1
Intersection Capacity Utilization:	42.4%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	A

2019 Build Traffic Volumes
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
 4/2/2015

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
2: Stoney Street & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	43	240	131	35	30	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.886				0.905	
Flt Protected				0.962	0.985	
Satd. Flow (prot)	1642	0	0	1801	1644	0
Flt Permitted				0.962	0.985	
Satd. Flow (perm)	1642	0	0	1801	1644	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1020	190	
Travel Time (s)	12.3			23.2	4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	267	146	39	33	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	315	0	0	185	110	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.1%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	43	240	0	131	35	0	30	69
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	267	0	146	39	0	33	77
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach

	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.9	9.1	8.4
HCM LOS	A	A	A

Lane

	NBLn1	EBLn1	WBLn1
Vol Left, %	30%	0%	79%
Vol Thru, %	0%	15%	21%
Vol Right, %	70%	85%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	99	283	166
LT Vol	30	0	131
Through Vol	0	43	35
RT Vol	69	240	0
Lane Flow Rate	110	314	184
Geometry Grp	1	1	1
Degree of Util (X)	0.141	0.34	0.238
Departure Headway (Hd)	4.615	3.896	4.651
Convergence, Y/N	Yes	Yes	Yes
Cap	777	924	773
Service Time	2.647	1.913	2.675
HCM Lane V/C Ratio	0.142	0.34	0.238
HCM Control Delay	8.4	8.9	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	1.5	0.9

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	1197	227	137	462	16	132	13	254	161	74	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.960		0.950	0.981	
Satd. Flow (prot)	1770	3471	1552	1770	3664	0	1681	1699	1583	1698	1753	1546
Flt Permitted	0.476			0.476			0.950	0.960		0.950	0.981	
Satd. Flow (perm)	887	3471	1552	887	3664	0	1666	1686	1583	1698	1753	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			222		4				149			149
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1517			289				190
Travel Time (s)		9.3			23.0			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	71	1301	247	149	502	17	147	14	282	179	82	149
Shared Lane Traffic (%)							46%			28%		
Lane Group Flow (vph)	71	1301	247	149	519	0	79	82	282	129	132	149
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		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	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				43			43	43	43	43	43	43
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

2019 Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015



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	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	16.0	11.0	36.0		16.0	16.0	11.0	16.0	16.0	11.0
Total Split (s)	19.0	49.0	19.0	19.0	49.0		19.0	19.0	19.0	23.0	23.0	19.0
Total Split (%)	17.3%	44.5%	17.3%	17.3%	44.5%		17.3%	17.3%	17.3%	20.9%	20.9%	17.3%
Maximum Green (s)	13.0	43.0	13.0	13.0	43.0		13.0	13.0	13.0	17.0	17.0	13.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	Max	C-Max	None	None	None		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	50.2	50.2	66.6	21.2	21.2		12.3	12.3	25.1	14.6	14.6	56.4
Actuated g/C Ratio	0.46	0.46	0.61	0.19	0.19		0.11	0.11	0.23	0.13	0.13	0.51
v/c Ratio	0.10	0.82	0.24	0.55	0.73		0.42	0.43	0.59	0.57	0.57	0.17
Control Delay	20.8	32.7	2.7	46.0	47.5		52.3	52.6	14.9	54.6	54.1	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	32.7	2.7	46.0	47.5		52.3	52.6	14.9	54.6	54.1	1.9
LOS	C	C	A	D	D		D	D	B	D	D	A
Approach Delay		27.6			47.1			28.6				35.3
Approach LOS		C			D			C				D
Queue Length 50th (ft)	28	414	7	93	181		55	57	54	91	93	0
Queue Length 95th (ft)	61	#606	43	148	226		106	108	102	152	154	20
Internal Link Dist (ft)		532			1437			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	740	1585	1047	285	1468		213	216	495	277	286	860
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.82	0.24	0.52	0.35		0.37	0.38	0.57	0.47	0.46	0.17

Intersection Summary

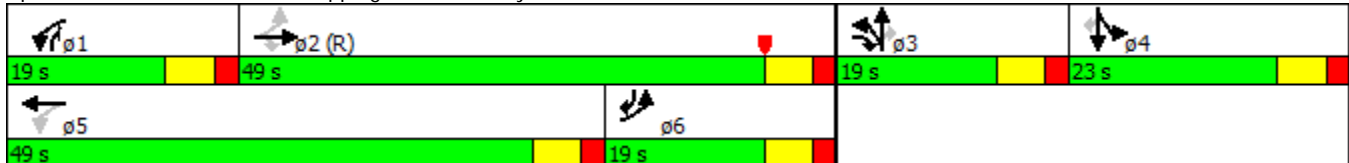
Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

2019 Build Traffic Volumes
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015

Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 32.9 Intersection LOS: C
 Intersection Capacity Utilization 74.4% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

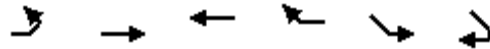
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1611	647	92	3	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.981		0.946	
Flt Protected					0.971	
Satd. Flow (prot)	0	3350	3533	0	1626	0
Flt Permitted					0.971	
Satd. Flow (perm)	0	3350	3533	0	1626	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		293	457		1070	
Travel Time (s)		4.4	6.9		24.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.90
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1751	703	100	3	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1751	803	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.5%
Analysis Period (min)	15
	ICU Level of Service A

2019 Build Traffic Volumes
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1611	647	92	3	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	92	92	92	92	92	90
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1751	703	100	3	2

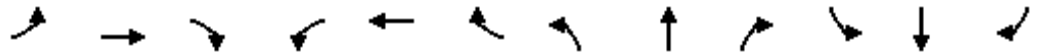
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	803	0	1629
Stage 1	-	-	753
Stage 2	-	-	876
Critical Hdwy	4.14	-	8.84
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuver	1096	-	67
Stage 1	-	-	672
Stage 2	-	-	226
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	1096	-	67
Mov Cap-2 Maneuver	-	-	67
Stage 1	-	-	672
Stage 2	-	-	226

Approach	EB	WB	SE
HCM Control Delay, s	0	0	40.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	1096	-	-	-	107
HCM Lane V/C Ratio	-	-	-	-	0.051
HCM Control Delay (s)	0	-	-	-	40.5
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	1559	12	45	659	121	21	1	36	80	1	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		100	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.999			0.977				0.850		0.876	
Flt Protected	0.950			0.950				0.954		0.950	0.992	
Satd. Flow (prot)	1699	3329	0	1832	3521	0	0	1813	1615	1681	1538	0
Flt Permitted	0.297			0.071				0.954		0.950	0.992	
Satd. Flow (perm)	531	3329	0	137	3521	0	0	1813	1615	1681	1538	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			31				85		63	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		457			251			624			252	
Travel Time (s)		6.9			3.8			14.2			5.7	
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%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	47	1695	13	49	716	132	23	1	39	87	1	63
Shared Lane Traffic (%)										14%		
Lane Group Flow (vph)	47	1708	0	49	848	0	0	24	39	75	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2	2	2	2	
Detector Template												
Leading Detector (ft)	83	83		83	83		50	83	83	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Size(ft)	40	40		40	40		50	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)	43	43		43	43			43	43	43	43	
Detector 2 Size(ft)	40	40		40	40			40	40	40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	

2019 Build Traffic Volumes
5: Mohansic Avenue/COSTCO Access & Route 202/35

AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases	2			6					8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		1.0	1.0		4.0	4.0	1.0	4.0	4.0	
Minimum Split (s)	9.0	10.0		7.0	9.0		10.0	10.0	7.0	10.0	10.0	
Total Split (s)	15.0	45.0		15.0	45.0		15.0	15.0	15.0	15.0	15.0	
Total Split (%)	16.7%	50.0%		16.7%	50.0%		16.7%	16.7%	16.7%	16.7%	16.7%	
Maximum Green (s)	10.0	40.0		10.0	40.0		10.0	10.0	10.0	10.0	10.0	
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)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effct Green (s)	66.1	60.9		66.9	63.0			7.9	12.6	9.6	7.6	
Actuated g/C Ratio	0.73	0.68		0.74	0.70			0.09	0.14	0.11	0.08	
v/c Ratio	0.10	0.76		0.20	0.34			0.15	0.13	0.42	0.41	
Control Delay	5.3	18.2		9.4	2.9			39.6	1.5	44.4	20.4	
Queue Delay	0.0	0.0		0.0	0.2			0.0	0.0	0.0	0.0	
Total Delay	5.3	18.2		9.4	3.1			39.6	1.5	44.4	20.4	
LOS	A	B		A	A			D	A	D	C	
Approach Delay		17.9			3.5			16.0			32.3	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	4	301		1	8			13	0	42	7	
Queue Length 95th (ft)	21	#692		21	77			37	4	87	50	
Internal Link Dist (ft)		377			171			544			172	
Turn Bay Length (ft)	150			170					100			
Base Capacity (vph)	548	2251		312	2475			221	361	205	210	
Starvation Cap Reductn	0	0		0	742			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.09	0.76		0.16	0.49			0.11	0.11	0.37	0.36	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 9 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 14.1
 Intersection LOS: B
 Intersection Capacity Utilization 62.5%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

<p>ø1</p>	<p>ø2 (R)</p>	<p>ø4</p>	<p>ø8</p>
<p>15 s</p>	<p>45 s</p>	<p>15 s</p>	<p>15 s</p>
<p>ø5</p>	<p>ø6 (R)</p>		
<p>15 s</p>	<p>45 s</p>		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes

AM PEAK HOUR

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355

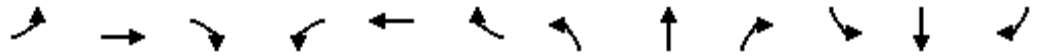


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	904	770	323	723	0	0	0	0	92	0	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850									0.850
Fl _t Protected				0.950						0.950		
Satd. Flow (prot)	0	3350	1558	1877	3490	0	0	0	0	1769	0	1583
Fl _t Permitted				0.226						0.950		
Satd. Flow (perm)	0	3350	1558	447	3490	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			453									113
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	983	837	351	786	0	0	0	0	102	0	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	983	837	351	786	0	0	0	0	102	0	113
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	2	2					2		2
Detector Template												
Leading Detector (ft)		83	0	83	83					83		83
Trailing Detector (ft)		-5	0	-5	-5					-5		-5
Detector 1 Position(ft)		-5	0	-5	-5					-5		-5
Detector 1 Size(ft)		40	50	40	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43		43	43					43		43
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
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

2019 Build Traffic Volumes

AM PEAK HOUR

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		50.0		20.0	70.0					20.0		20.0
Total Split (%)		55.6%		22.2%	77.8%					22.2%		22.2%
Maximum Green (s)		45.0		15.0	65.0					15.0		15.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effct Green (s)		56.3	90.0	71.4	71.4					10.6		10.6
Actuated g/C Ratio		0.63	1.00	0.79	0.79					0.12		0.12
v/c Ratio		0.47	0.54	0.66	0.28					0.49		0.40
Control Delay		3.1	3.1	22.7	0.4					44.5		11.3
Queue Delay		0.7	0.0	0.0	0.0					0.0		0.0
Total Delay		3.8	3.1	22.7	0.4					44.5		11.3
LOS		A	A	C	A					D		B
Approach Delay		3.5			7.3							
Approach LOS		A			A							
Queue Length 50th (ft)		18	0	81	0					55		0
Queue Length 95th (ft)		27	303	159	7					100		45
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2094	1558	613	2768					314		374
Starvation Cap Reductn		692	0	0	0					0		0
Spillback Cap Reductn		131	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.70	0.54	0.57	0.28					0.32		0.30

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	12 (13%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	6.4
Intersection LOS:	A
Intersection Capacity Utilization:	61.9%
ICU Level of Service:	B
Analysis Period (min):	15

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

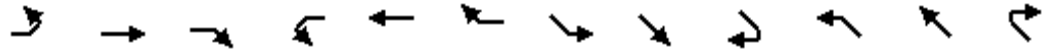


Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes

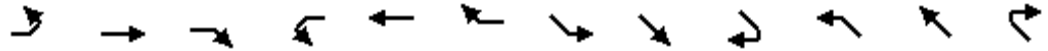
AM PEAK HOUR

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	128	869	0	0	875	13	0	0	0	171	0	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	0		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.998							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1695	0	0	3434	0	0	0	0	1832	0	1639
Fl _t Permitted	0.200									0.950		
Satd. Flow (perm)	353	1695	0	0	3434	0	0	0	0	1832	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2							91
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1112
Travel Time (s)		7.2			8.2			17.8				25.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	139	945	0	0	951	14	0	0	0	190	0	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	945	0	0	965	0	0	0	0	190	0	91
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)		23			23			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	16.0	61.0			45.0					29.0		29.0
Total Split (%)	17.8%	67.8%			50.0%					32.2%		32.2%
Maximum Green (s)	11.0	56.0			40.0					24.0		24.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-0.7	-1.0			0.0					-1.0		-1.0
Total Lost Time (s)	4.3	4.0			5.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					Max		Max
Act Effct Green (s)	56.7	57.0			40.0					25.0		25.0
Actuated g/C Ratio	0.63	0.63			0.44					0.28		0.28
v/c Ratio	0.35	0.88			0.63					0.37		0.17
Control Delay	7.6	19.4			21.6					28.8		6.6
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	7.6	19.4			21.6					28.8		6.6
LOS	A	B			C					C		A
Approach Delay		17.9			21.6							
Approach LOS		B			C							
Queue Length 50th (ft)	11	450			215					87		0
Queue Length 95th (ft)	24	#691			281					147		34
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)												530
Base Capacity (vph)	394	1073			1527					508		521
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	0.35	0.88			0.63					0.37		0.17

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow, Master Intersection

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 19.9

Intersection LOS: B

Intersection Capacity Utilization 61.9%

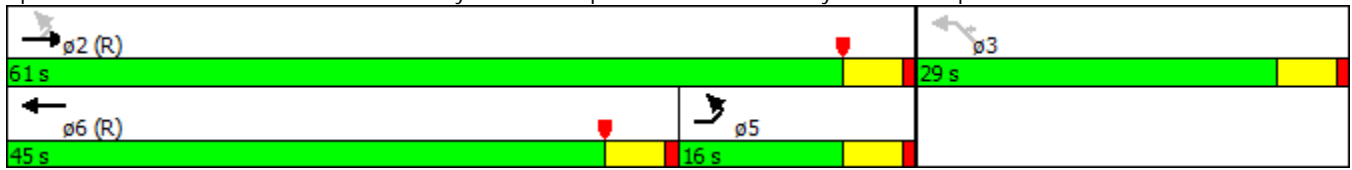
ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes
8: Old Crompond Road & Site Access

AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	40	40	49	57	0	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.927		0.865	
Flt Protected		0.976				
Satd. Flow (prot)	0	1818	1727	0	1611	0
Flt Permitted		0.976				
Satd. Flow (perm)	0	1818	1727	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1020	1070		240	
Travel Time (s)		23.2	24.3		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	43	53	62	0	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	86	115	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.5%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	40	40	49	57	0	62
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, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	43	53	62	0	67

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	115	0	214
Stage 1	-	-	84
Stage 2	-	-	130
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1474	-	774
Stage 1	-	-	939
Stage 2	-	-	896
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1474	-	751
Mov Cap-2 Maneuver	-	-	751
Stage 1	-	-	939
Stage 2	-	-	869

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1474	-	-	-	975
HCM Lane V/C Ratio	0.029	-	-	-	0.069
HCM Control Delay (s)	7.5	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

2019 Build Traffic Volumes with Improvements
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	92	244	208	102	114	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.902				0.924	
Flt Protected				0.968	0.979	
Satd. Flow (prot)	1672	0	0	1812	1668	0
Flt Permitted				0.968	0.979	
Satd. Flow (perm)	1672	0	0	1812	1668	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1014	190	
Travel Time (s)	12.3			23.0	4.3	
Peak Hour Factor	0.77	0.77	0.56	0.56	0.74	0.74
Adj. Flow (vph)	119	317	371	182	154	200
Shared Lane Traffic (%)						
Lane Group Flow (vph)	436	0	0	553	354	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.1%
Analysis Period (min)	15
	ICU Level of Service B

2019 Build Traffic Volumes with Improvements
2: Stoney Street & Old Crompond Road

PM Peak Hour
4/2/2015

Intersection									
Intersection Delay, s/veh	29.4								
Intersection LOS	D								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	92	244	0	208	102	0	114	148
Peak Hour Factor	0.92	0.77	0.77	0.92	0.56	0.56	0.92	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	119	317	0	371	182	0	154	200
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	20.5	42.9	19.4
HCM LOS	C	E	C

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	44%	0%	67%
Vol Thru, %	0%	27%	33%
Vol Right, %	56%	73%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	262	336	310
LT Vol	114	0	208
Through Vol	0	92	102
RT Vol	148	244	0
Lane Flow Rate	354	436	554
Geometry Grp	1	1	1
Degree of Util (X)	0.626	0.691	0.912
Departure Headway (Hd)	6.361	5.701	6.066
Convergence, Y/N	Yes	Yes	Yes
Cap	570	637	603
Service Time	4.377	3.727	4.066
HCM Lane V/C Ratio	0.621	0.684	0.919
HCM Control Delay	19.4	20.5	42.9
HCM Lane LOS	C	C	E
HCM 95th-tile Q	4.3	5.5	11.4

2019 Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↗	↗	↘	↗	↗
Volume (vph)	126	940	230	225	727	56	257	61	301	116	128	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.989				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.970		0.950	0.990	
Satd. Flow (prot)	1770	3539	1552	1770	3711	0	1681	1717	1583	1698	1769	1546
Flt Permitted	0.344			0.180			0.950	0.970		0.950	0.990	
Satd. Flow (perm)	641	3539	1552	335	3711	0	1670	1709	1583	1698	1769	1514
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253		9				230			145
Link Speed (mph)		45		45				30				30
Link Distance (ft)		612		1512				289				190
Travel Time (s)		9.3		22.9				6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	138	1033	253	234	757	58	289	69	338	138	152	270
Shared Lane Traffic (%)							40%			29%		
Lane Group Flow (vph)	138	1033	253	234	815	0	173	185	338	98	192	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2019 Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



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	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	10.0	20.0	15.0	10.0	20.0		15.0	15.0	10.0	15.0	15.0	10.0
Total Split (s)	15.0	33.0	18.0	15.0	33.0		18.0	18.0	15.0	24.0	24.0	15.0
Total Split (%)	16.7%	36.7%	20.0%	16.7%	36.7%		20.0%	20.0%	16.7%	26.7%	26.7%	16.7%
Maximum Green (s)	10.0	28.0	13.0	10.0	28.0		13.0	13.0	10.0	19.0	19.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	33.1	33.1	49.4	34.5	34.5		13.2	13.2	25.6	15.3	15.3	26.3
Actuated g/C Ratio	0.37	0.37	0.55	0.38	0.38		0.15	0.15	0.28	0.17	0.17	0.29
v/c Ratio	0.37	0.79	0.26	0.72	0.57		0.70	0.73	0.55	0.34	0.64	0.49
Control Delay	29.1	32.4	2.3	28.1	17.3		52.6	54.8	8.2	35.1	44.3	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	32.4	2.3	28.1	17.3		52.6	54.8	8.2	35.1	44.3	9.3
LOS	C	C	A	C	B		D	D	A	D	D	A
Approach Delay		26.7			19.7			31.6			25.8	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	56	289	0	72	166		98	106	26	52	108	34
Queue Length 95th (ft)	103	#415	35	#205	320		#183	#197	61	87	156	57
Internal Link Dist (ft)		532			1432			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	373	1303	976	329	1427		261	267	618	377	393	548
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.79	0.26	0.71	0.57		0.66	0.69	0.55	0.26	0.49	0.49

Intersection Summary

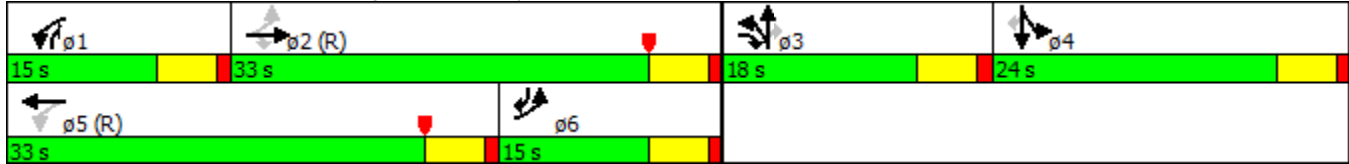
Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79

2019 Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015

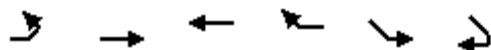
Intersection Signal Delay: 25.5
 Intersection LOS: C
 Intersection Capacity Utilization 73.6%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 Build Traffic Volumes with Improvements
4: Route 202/35 & Old Crompond Road

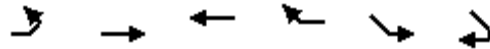
PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1358	1084	136	205	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.983		0.999	
Flt Protected					0.953	
Satd. Flow (prot)	0	3350	3539	0	1685	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	3350	3539	0	1685	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			32			
Link Speed (mph)		45	45		30	
Link Distance (ft)		309	457		1058	
Travel Time (s)		4.7	6.9		24.0	
Peak Hour Factor	0.85	0.85	0.93	0.93	0.80	0.80
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1598	1166	146	256	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1598	1312	0	257	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		1	1		1	
Detector Template						
Leading Detector (ft)		50	50		50	
Trailing Detector (ft)		0	0		0	
Detector 1 Position(ft)		0	0		0	
Detector 1 Size(ft)		50	50		50	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		65.0	65.0		25.0	
Total Split (%)		72.2%	72.2%		27.8%	
Maximum Green (s)		60.0	60.0		20.0	

2019 Build Traffic Volumes with Improvements
 4: Route 202/35 & Old Crompond Road

PM Peak Hour
 4/2/2015

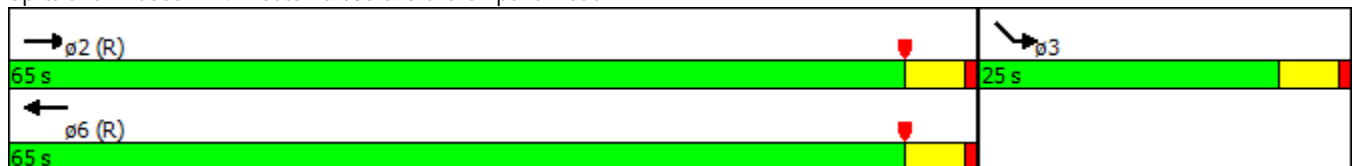


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effect Green (s)		62.5	62.5		17.5	
Actuated g/C Ratio		0.69	0.69		0.19	
v/c Ratio		0.69	0.53		0.79	
Control Delay		5.6	4.2		51.8	
Queue Delay		0.1	0.2		0.0	
Total Delay		5.7	4.4		51.8	
LOS		A	A		D	
Approach Delay		5.7	4.4		51.8	
Approach LOS		A	A		D	
Queue Length 50th (ft)		83	70		137	
Queue Length 95th (ft)		94	114		189	
Internal Link Dist (ft)		229	377		978	
Turn Bay Length (ft)						
Base Capacity (vph)		2327	2469		374	
Starvation Cap Reductn		0	333		0	
Spillback Cap Reductn		84	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.71	0.61		0.69	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 8.9
 Intersection LOS: A
 Intersection Capacity Utilization 57.3%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 Build Traffic Volumes with Improvements
 8: Old Crompond Road & Site Access

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	45	154	169	64	78	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.963		0.944	
Flt Protected		0.989			0.972	
Satd. Flow (prot)	0	1842	1794	0	1709	0
Flt Permitted		0.989			0.972	
Satd. Flow (perm)	0	1842	1794	0	1709	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1014	1058		274	
Travel Time (s)		23.0	24.0		6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	167	184	70	85	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	216	254	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.1%
Analysis Period (min)	15
	ICU Level of Service A

2019 Build Traffic Volumes with Improvements
 2: Stoney Street & Old Crompond Road

Saturday Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	106	204	174	103	99	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.911				0.917	
Flt Protected				0.970	0.981	
Satd. Flow (prot)	1688	0	0	1816	1659	0
Flt Permitted				0.970	0.981	
Satd. Flow (perm)	1688	0	0	1816	1659	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			991	190	
Travel Time (s)	12.3			22.5	4.3	
Peak Hour Factor	0.88	0.88	0.58	0.58	0.91	0.91
Adj. Flow (vph)	120	232	300	178	109	176
Shared Lane Traffic (%)						
Lane Group Flow (vph)	352	0	0	478	285	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.5%
Analysis Period (min)	15
	ICU Level of Service B

2019 Build Traffic Volumes with Improvements
2: Stoney Street & Old Crompond Road

Saturday Peak Hour
4/2/2015

Intersection									
Intersection Delay, s/veh	16.7								
Intersection LOS	C								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	106	204	0	174	103	0	99	160
Peak Hour Factor	0.92	0.88	0.88	0.92	0.58	0.58	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	120	232	0	300	178	0	109	176
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	13.2	21.2	13.4
HCM LOS	B	C	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	38%	0%	63%
Vol Thru, %	0%	34%	37%
Vol Right, %	62%	66%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	259	310	277
LT Vol	99	0	174
Through Vol	0	106	103
RT Vol	160	204	0
Lane Flow Rate	285	352	478
Geometry Grp	1	1	1
Degree of Util (X)	0.452	0.5	0.719
Departure Headway (Hd)	5.717	5.113	5.422
Convergence, Y/N	Yes	Yes	Yes
Cap	629	701	664
Service Time	3.77	3.162	3.466
HCM Lane V/C Ratio	0.453	0.502	0.72
HCM Control Delay	13.4	13.2	21.2
HCM Lane LOS	B	B	C
HCM 95th-tile Q	2.3	2.8	6.1

2019 Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	1076	262	274	724	46	254	58	366	117	130	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.990				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.969		0.950		
Satd. Flow (prot)	1770	3539	1552	1770	3715	0	1681	1715	1583	1698	1787	1546
Flt Permitted	0.344			0.167			0.950	0.969		0.950		
Satd. Flow (perm)	641	3539	1552	311	3715	0	1667	1706	1583	1698	1787	1512
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			288		8				208			131
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1502			289				190
Travel Time (s)		9.3			22.8			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	160	1133	288	304	762	54	282	64	407	130	144	137
Shared Lane Traffic (%)							40%			0%		
Lane Group Flow (vph)	160	1133	288	304	816	0	169	177	407	130	144	137
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	88	0	0	88	0		88	88	88	50	88	88
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6

2019 Build Traffic Volumes with Improvements
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015

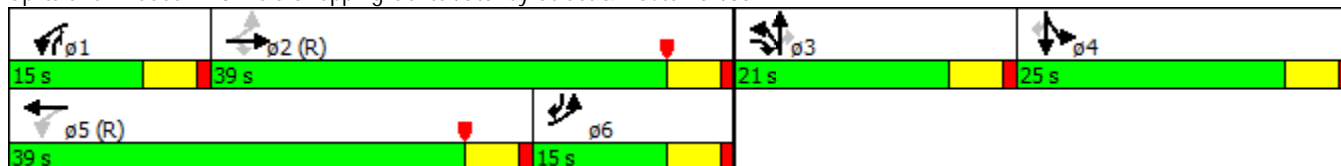


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	14.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	4.0
Minimum Split (s)	10.0	20.0	16.0	11.0	36.0		16.0	16.0	11.0	20.0	20.0	10.0
Total Split (s)	15.0	39.0	21.0	15.0	39.0		21.0	21.0	15.0	25.0	25.0	15.0
Total Split (%)	15.0%	39.0%	21.0%	15.0%	39.0%		21.0%	21.0%	15.0%	25.0%	25.0%	15.0%
Maximum Green (s)	10.0	34.0	16.0	10.0	34.0		16.0	16.0	10.0	20.0	20.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-0.7	-1.0	-1.0	0.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.3	4.0	4.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	35.0	34.7	54.4	42.9	41.9		15.4	15.4	34.3	14.7	14.7	25.7
Actuated g/C Ratio	0.35	0.35	0.54	0.43	0.42		0.15	0.15	0.34	0.15	0.15	0.26
v/c Ratio	0.46	0.92	0.30	0.75	0.52		0.66	0.67	0.60	0.52	0.55	0.28
Control Delay	34.0	44.9	2.1	30.7	12.5		52.0	52.7	11.3	46.4	47.0	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	44.9	2.1	30.7	12.5		52.0	52.7	11.3	46.4	47.0	4.5
LOS	C	D	A	C	B		D	D	B	D	D	A
Approach Delay		36.0			17.4			30.2				32.6
Approach LOS		D			B			C				C
Queue Length 50th (ft)	72	361	0	99	127		105	111	59	82	91	2
Queue Length 95th (ft)	123	#495	35	#311	171		178	186	119	136	148	28
Internal Link Dist (ft)		532			1422			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	348	1228	995	408	1559		285	291	679	356	375	489
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.92	0.29	0.75	0.52		0.59	0.61	0.60	0.37	0.38	0.28

Intersection Summary

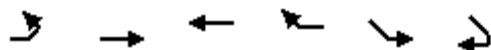
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 59 (59%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 29.1 Intersection LOS: C
 Intersection Capacity Utilization 80.1% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 Build Traffic Volumes with Improvements
4: Route 202/35 & Old Crompond Road

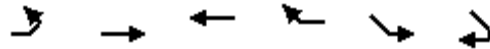
Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1559	1134	155	217	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.981		0.999	
Flt Protected					0.953	
Satd. Flow (prot)	0	3415	3593	0	1685	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	3415	3593	0	1685	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			23			
Link Speed (mph)		45	45		30	
Link Distance (ft)		316	457		1067	
Travel Time (s)		4.8	6.9		24.3	
Peak Hour Factor	0.97	0.97	0.95	0.90	0.90	0.90
Adj. Flow (vph)	0	1607	1194	172	241	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1607	1366	0	243	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		1	1		1	
Detector Template						
Leading Detector (ft)		50	50		50	
Trailing Detector (ft)		0	0		0	
Detector 1 Position(ft)		0	0		0	
Detector 1 Size(ft)		50	50		50	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		56.0	56.0		44.0	
Total Split (%)		56.0%	56.0%		44.0%	
Maximum Green (s)		51.0	51.0		39.0	
Yellow Time (s)		4.0	4.0		4.0	

2019 Build Traffic Volumes with Improvements
 4: Route 202/35 & Old Crompond Road

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Min	C-Min		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effect Green (s)		70.0	70.0		20.0	
Actuated g/C Ratio		0.70	0.70		0.20	
v/c Ratio		0.67	0.54		0.72	
Control Delay		11.8	3.9		49.1	
Queue Delay		0.3	0.8		1.0	
Total Delay		12.1	4.7		50.2	
LOS		B	A		D	
Approach Delay		12.1	4.7		50.2	
Approach LOS		B	A		D	
Queue Length 50th (ft)		464	63		146	
Queue Length 95th (ft)		m583	m116		210	
Internal Link Dist (ft)		236	377		987	
Turn Bay Length (ft)						
Base Capacity (vph)		2390	2522		657	
Starvation Cap Reductn		0	758		0	
Spillback Cap Reductn		265	0		218	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.76	0.77		0.55	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 50 (50%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 11.8
 Intersection LOS: B
 Intersection Capacity Utilization 63.6%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 Build Traffic Volumes with Improvements
 8: Old Crompond Road & Site Access

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	181	141	71	68	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.955		0.945	
Flt Protected		0.989			0.971	
Satd. Flow (prot)	0	1842	1779	0	1709	0
Flt Permitted		0.989			0.971	
Satd. Flow (perm)	0	1842	1779	0	1709	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		991	1067		252	
Travel Time (s)		22.5	24.3		5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	197	153	77	74	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	251	230	0	125	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.7%
Analysis Period (min)	15
	ICU Level of Service A



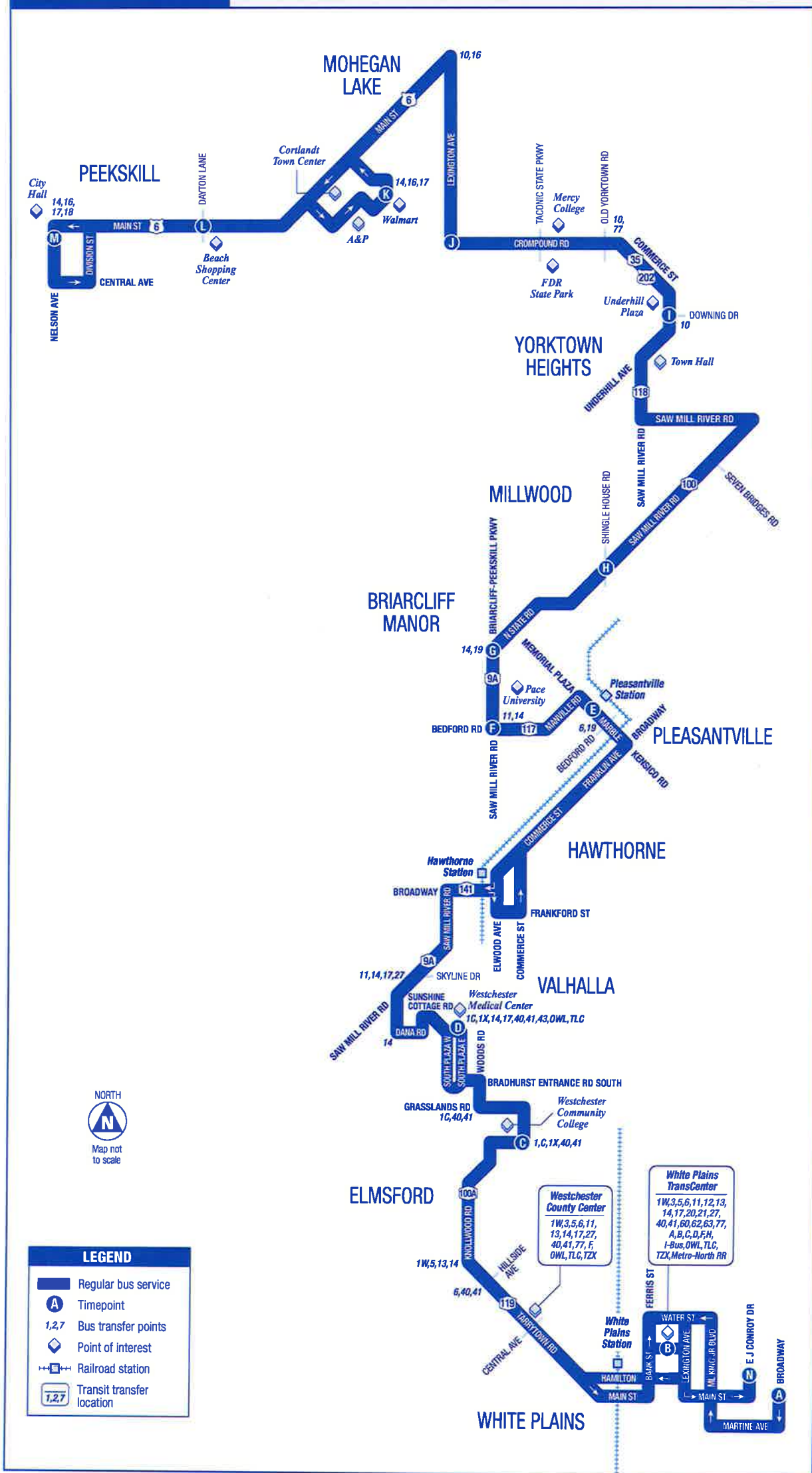
***PROPOSED BEAR MOUNTAIN TRIANGLE
REZONING AND CROMPOND TERRACES***

APPENDIX E

**EXISTING PUBLIC
TRANSPORTATION SERVICES**

ROUTE 15: Local

Peekskill • Yorktown • Pleasantville • White Plains



WHITE PLAINS TO PEEKSKILL AND YORKTOWN / MONDAY - FRIDAY

	A	B	C	D	E	F	G	H	I	J	K	L	M
	N Broadway at Main St	White Plains TransCenter (Lane E)	Westchester Community College	Westchester Medical Center	Memorial Plaza Pleasantville RR Station (Harlem Line)	Bedford Rd at Rte 9A	N State Rd at Rt 9A	Rt 100 at Shingle House Rd	Commerce St at Downing Dr	Lexington Ave at Crompond Rd	Cortlandt Town Center	Beach Shopping Center	Main St at Nelson Ave
WHITE PLAINS	VALHALLA	PLEASANTVILLE	BRIARCLIFF MANOR	MILLWOOD	YORKTOWN HEIGHTS	MOHEGAN LAKE	PEEKSKILL						
AM	7:53 9:53 11:26	7:58 9:58 11:31	8:13 10:13 11:46	8:21 10:21 11:54	8:39 10:39 12:12	8:43 10:43 12:16	8:47 10:47 12:20	8:54 10:54 12:27	9:10 11:10 12:43	9:22 11:22 12:55	9:29 11:29 1:02	9:35 11:35 1:08	9:40 11:40 1:13
PM	1:26 4:20 4:55 5:24	1:31 4:25 5:00 5:29	1:46 4:40 5:15 5:44	1:54 4:48 5:23 5:52	2:12 5:08 5:41 6:10	2:16 5:12 5:45 6:14	2:20 5:16 5:49 6:18	2:27 5:23 5:56 6:25	2:43 5:37 6:10 6:39	2:55 5:49 6:22 6:51	3:02 5:56 6:29 6:58	3:08 6:02 6:35 7:04	3:13 6:07 6:40 7:09

PEEKSKILL AND YORKTOWN TO WHITE PLAINS / MONDAY - FRIDAY

	M	L	K	J	I	H	G	F	E	D	C	B	N
	Main St at Nelson Ave	Beach Shopping Center	Cortlandt Town Center	Lexington Ave at Crompond Rd	Commerce St at Downing Dr	Rt 100 at Shingle House Rd	N State Rd at Rt 9A	Bedford Rd at Rte 9A	Memorial Plaza Pleasantville RR Station (Harlem Line)	Westchester Medical Center	Westchester Community College	White Plains TransCenter (Lane E)	Main St at E.J. Conroy Dr
PEEKSKILL	MOHEGAN LAKE	YORKTOWN HEIGHTS	MILLWOOD	BRIARCLIFF MANOR	PLEASANTVILLE	VALHALLA	WHITE PLAINS						
AM	6:10 6:51 8:31 10:20 11:55	6:15 6:57 8:42 10:25 12:00	6:21 7:04 8:42 10:31 12:06	6:28 7:11 8:49 10:38 12:13	6:42 7:26 9:03 10:52 12:27	6:56 7:41 9:18 11:07 12:42	7:01 7:48 9:24 11:13 12:48	7:05 7:46 9:28 11:17 12:52	7:09 8:00 9:32 11:21 12:56	7:25 8:17 9:49 11:38 1:13	7:31 8:24 9:56 11:45 1:20	7:45 8:40 10:12 12:01 1:36	7:49 8:44 10:16 12:05 1:40
PM	1:30 3:30 5:12	1:35 3:35 5:17	1:41 3:41 5:23	1:48 3:48 5:30	2:02 4:07 5:44	2:17 4:22 5:59	2:23 4:28 6:05	2:27 4:32 6:09	2:31 4:36 6:13	2:48 4:53 6:30	2:55 5:00 6:37	3:11 5:16 6:53	3:15 5:20 6:57

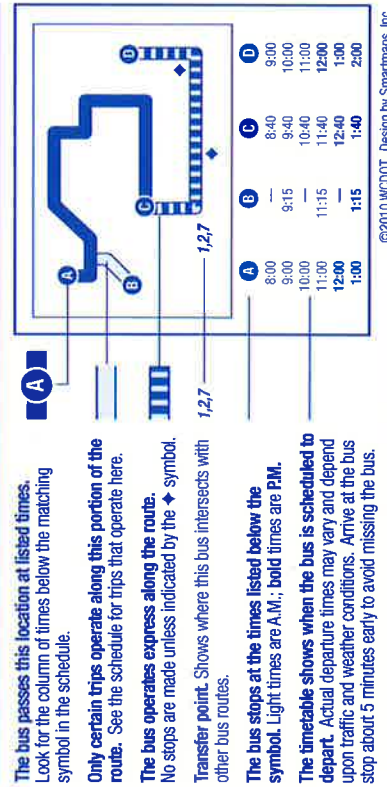
WHITE PLAINS TO PEEKSKILL AND YORKTOWN / SATURDAY

	A	B	C	D	E	F	G	H	I	J	K	L	M
N Broadway at Main St		White Plains TransCenter (Lane E)	Westchester Community College	Westchester Medical Center	Memorial Plaza at RR Station (Harlem Line)	Bedford Rd at Rt 9A	N State Rd at Rt 9A	Rt 100 at Shingle House Rd	Commerce St at Downing Dr	Lexington Ave at Crompond Rd	Cortlandt Town Center	Beach Shopping Center	Main St at Nelson Ave
AM	10:00	10:07	10:22	10:30	10:48	10:52	10:56	11:02	11:17	11:30	11:41	11:51	11:57
PM	1:41	1:48	2:03	2:11	2:29	2:33	2:37	2:43	2:58	3:11	3:22	3:32	3:38
	5:10	5:16	5:29	5:37	5:54	5:58	6:02	6:07	6:22	6:33	6:44	6:51	6:57

PEEKSKILL AND YORKTOWN TO WHITE PLAINS / SATURDAY

	M	L	K	J	I	H	G	F	E	D	C	B	N
Main St at Nelson Ave		Beach Shopping Center	Cortlandt Town Center	Lexington Ave at Crompond Rd	Commerce St at Downing Dr	Rt 100 at Shingle House Rd	N State Rd at Rt 9A	Bedford Rd at Rt 9A	Memorial Plaza at Pleasantville RR Station (Harlem Line)	Westchester Medical Center	Westchester Community College	White Plains TransCenter (Lane E)	Main St at Conroy Dr
AM	9:26	9:32	9:38	9:49	10:02	10:16	10:22	10:26	10:30	10:47	10:54	11:08	11:13
PM	12:14	12:20	12:26	12:37	12:50	1:04	1:10	1:14	1:18	1:35	1:42	1:58	2:01
	3:58	4:04	4:10	4:21	4:34	4:48	4:54	4:58	5:02	5:19	5:26	5:40	5:45

INSTRUCTIONS



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BEE-LINE HOLIDAY SCHEDULE

HOLIDAY	SCHEDULE IN EFFECT
New Years Day	Sunday
Martin Luther King, Jr. Day	Saturday
Presidents' Day	Saturday
Memorial Day	Sunday
Independence Day	Sunday
Labor Day	Sunday
Columbus Day	Weekday
Election Day	Weekday
Veterans Day	Weekday
Thanksgiving Day	No Service
Christmas Day	No Service

Save Time and Money Buy a MetroCard

MetroCard Choices What's best for you?

Unlimited Ride OR Pay-per-Ride

Unlimited Ride MetroCard: Available for 7 or 30 days

- The more you ride, the less each ride costs
- All bus and subway transfers included
- Can only be used by one person at a time
- Cannot be used again on the same bus route or at the same subway station for 18 minutes

Pay-Per-Ride MetroCard:

- Get a 5% bonus with the purchase or addition of \$ 5.00 or more.
- Free bus-to-bus, bus-to-subway, or subway-to-bus transfer within 2 hours of paying fare (some exceptions apply)
- Refill as often as you like until card expires (cards usually expire in one year).
- Can be used to pay for up to 4 people at a time

For more information on MetroCard, call **Bee-Line Customer Service at (914) 813-7777** or visit us online at www.westchestergov.com/beelinebus



7 Easy Steps to Faster Boarding

- Check the route number and final destination.
- Check the route map for your desired stop.
- Check the arrival time of the next bus.
- To speed boarding, have your MetroCard or exact coin fare ready.
- Transfers are issued only at the time of fare payment.
- Children under 5 ride free when accompanied by a fare-paying adult.
- Check the route number on the sign above the windshield before boarding.

Enjoy Your Ride on the Bee-Line System! For more information, call **(914) 813-7777** or visit us online at www.westchestergov.com/beelinebus

Bee-Line Cash and MetroCard Fares

Effective March 3, 2013

Cash Fares (Coins Only)	
One Ride	\$2.50
Paper Transfer to Bee-Line & NYC Buses	FREE
Senior/Disabled Reduced Fare One Ride	\$1.25
Senior/Disabled Paper Transfer to Bee-Line & NYC Buses	FREE
BXM4C One Ride	\$7.50
BXM4C Paper Transfer to Bee-Line & NYC Buses	FREE
BXM4C Senior/Disabled Reduced Fare (Off-Peak Only)	\$3.75

Effective March 4, 2013

LOCAL ROUTE

15

Peekskill
Yorktown
Pleasantville
White Plains

ALSO SERVING

- Beach Shopping Center
- Cortlandt Town Center
- Millwood
- Westchester Medical Center
- Westchester Community College

Customer Service (914) 813-7777

24-Hour Automated Schedule Information
Representatives are available 8 a.m. to 4 p.m. weekdays.

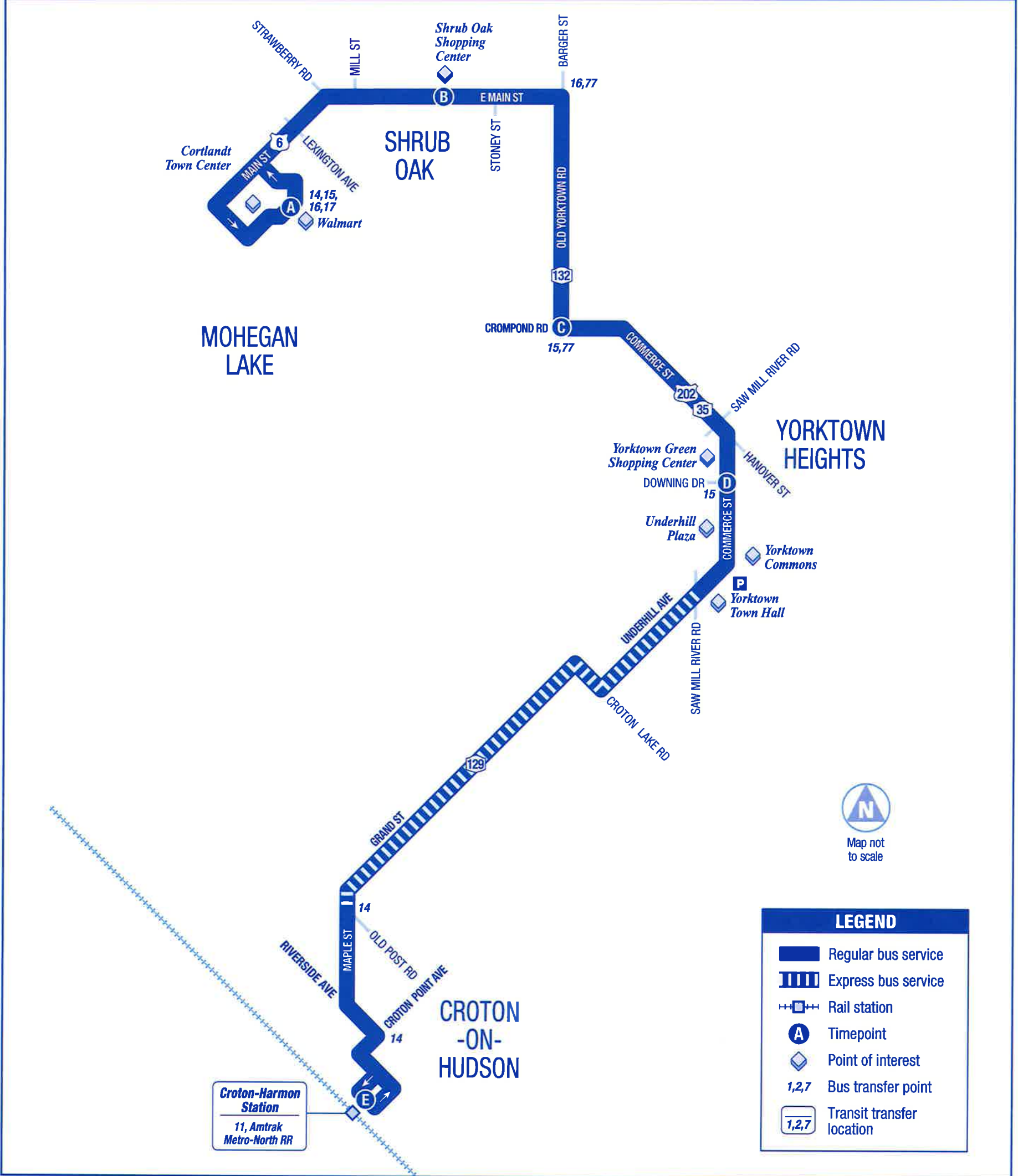
Large print timetables are available upon request.
TTY for the hearing impaired at (914) 813-7711

Fares, schedule and equipment are subject to change.

[Westchester.gov.com](http://www.westchestergov.com)
(914) 813-7777

ROUTE 10: Commuter

Cortlandt Town Center • Croton



CORTLANDT TOWN CENTER AND YORKTOWN TO CROTON / MONDAY – FRIDAY • AM SERVICE

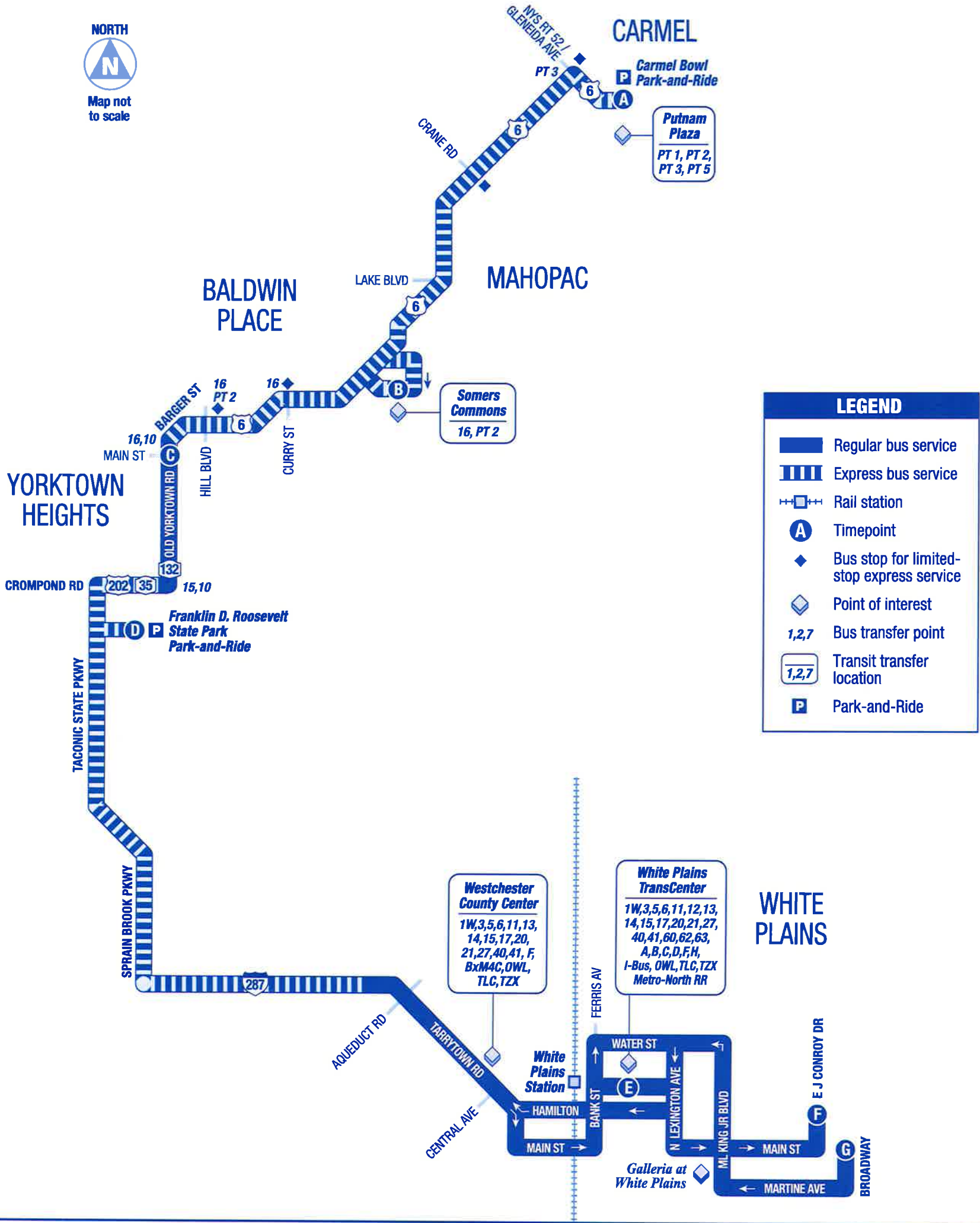
	A Cortlandt Town Center	B Shrub Oak Shopping Center	C Rt 132 at Rt 202/35	D Commerce St at Downing Dr	E Croton-Harmon RR Station (Hudson Line)	MTA Metro-North Railroad Connecting Train departs Croton-Harmon RR Station	Connecting Train arrives Grand Central Terminal
MOHEGAN LAKE							
SHRUB OAK							
YORKTOWN HEIGHTS							
CROTON-ON-HUDSON							
AM	5:33 6:02 6:32 6:49	5:38 6:07 6:37 6:56	5:45 6:14 6:44 7:03	5:53 6:22 6:52 7:15	6:13 6:42 7:12 7:35	6:18 6:47 7:17 7:40	7:06 7:38 8:04 8:28

CROTON TO YORKTOWN AND CORTLANDT TOWN CENTER / MONDAY – FRIDAY • PM SERVICE

	MTA Metro-North Railroad Connecting Train departs Grand Central Terminal	Connecting Train arrives Croton-Harmon RR Station	E Croton-Harmon RR Station (Hudson Line)	D Commerce St at Downing Dr	C Rt 132 at Rt 202/35	B Shrub Oak Shopping Center	A Cortlandt Town Center
CROTON-ON-HUDSON							
YORKTOWN HEIGHTS							
SHRUB OAK							
MOHEGAN LAKE							
PM	4:52 5:20 5:57 6:25	5:43 6:18 6:48 7:32	5:48 6:23 6:53 7:37	6:08 6:43 7:13 7:57	6:16 6:46 7:21 8:05	6:23 6:58 7:28 8:12	6:28 7:03 7:33 8:17

ROUTE 77: Express

Carmel • Yorktown • White Plains



CARMELO TO WHITE PLAINS / MONDAY – FRIDAY • AM SERVICE

	A Carmel Bowl (Park & Ride)	B Somers Commons Shopping Center	C Barger St (Rt 132) at E Main St	D FDR State Park (Park & Ride)	E TransCenter (Lane C)	F E J Conroy Dr at Main St
	CARMELO	BALDWIN PLACE	SHRUB OAK	YORKTOWN HEIGHTS	WHITE PLAINS	
AM	6:20 6:50 7:20	6:35 7:05 7:35	6:43 7:13 7:43	6:54 7:24 7:54	7:23 8:05 8:35	7:28 8:10 8:40

WHITE PLAINS TO CARMELO / MONDAY – FRIDAY • PM SERVICE

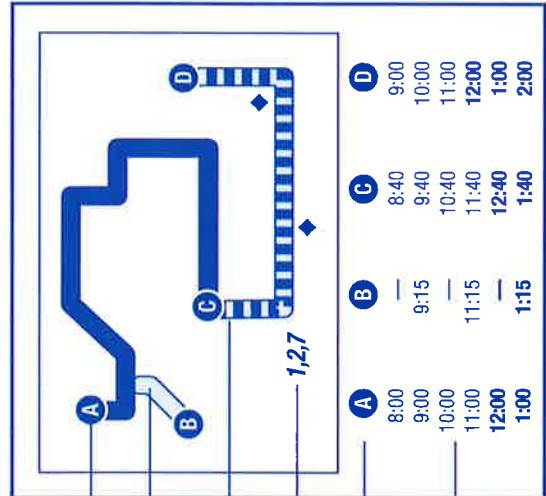
	G N Broadway at Main St	E TransCenter (Lane E)	D FDR State Park (Park & Ride)	C Barger St (Rt 132) at E Main St	B Somers Commons Shopping Center	A Carmel Bowl (Park & Ride)
	WHITE PLAINS	YORKTOWN HEIGHTS	SHRUB OAK	BALDWIN PLACE	CARMELO	
PM	4:25 5:20 6:15	4:30 5:25 6:20	5:14 6:09 7:04	5:29 6:24 7:19	5:37 6:32 7:27	5:52 6:47 7:42

Service on this route is funded in part by the New York State Department of Transportation.

BEE-LINE HOLIDAY SCHEDULE

HOLIDAY	SCHEDULE IN EFFECT
New Years Day.....	Sunday
Martin Luther King, Jr. Day.....	Saturday
Presidents' Day.....	Saturday
Memorial Day.....	Sunday
Independence Day.....	Sunday
Labor Day.....	Sunday
Columbus Day.....	Weekday
Election Day.....	Weekday
Veterans Day.....	Weekday
Thanksgiving Day.....	No Service
Christmas Day.....	No Service

INSTRUCTIONS



- A** The bus passes this location at listed times. Look for the column of times below the matching symbol in the schedule.
- Only certain trips operate along this portion of the route. See the schedule for trips that operate here.
- The bus operates express along the route. No stops are made unless indicated by the **◆** symbol.
- Transfer point. Shows where this bus intersects with other bus routes.
- The bus stops at the times listed below the symbol. Light times are A.M.; bold times are P.M.
- The timetable shows when the bus is scheduled to depart. Actual departure times may vary and depend upon traffic and weather conditions. Arrive at the bus stop about 5 minutes early to avoid missing the bus.

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Save Time and Money Buy a MetroCard

MetroCard Choices What's best for you?



Unlimited Ride or Pay-per-Ride

Unlimited Ride MetroCard: Available for 7 or 30 days

- The more you ride, the less each ride costs
- All bus and subway transfers included
- Can only be used by one person at a time
- Cannot be used again on the same bus route or at the same subway station for 18 minutes

Pay-Per-Ride MetroCard:

- Get a 7% bonus with the purchase or addition of \$10.00 or more.
- Free bus-to-bus, bus-to-subway, or subway-to-bus transfer within 2 hours of paying fare (some exceptions apply)
- Refill as often as you like until card expires (cards usually expire in one year).
- Can be used to pay for up to 4 people at a time

For more information on MetroCard, call **Bee-Line Customer Service at (914) 813-7777** or visit us online at www.westchestergov.com/beelinebus

Bee-Line Cash and MetroCard Fares

Effective March 3, 2013

Cash Fares (Coins Only)

One Ride.....	\$2.50
Paper Transfer to Bee-Line & NYC Buses	FREE
Senior/Disabled Reduced Fare One Ride	\$1.25
Senior/Disabled Paper Transfer to Bee-Line & NYC Buses	FREE
BXM4C One Ride	\$7.50
BXM4C Paper Transfer to Bee-Line & NYC Buses	FREE
BXM4C Senior/Disabled Reduced Fare (Off-Peak Only)	\$3.75

Pay-Per-Ride MetroCard Fares
(Includes One Transfer to Bee-Line Buses, NYC Buses & Subways)

One Ride with Transfer	\$2.50
Senior/Disabled Reduced Fare One Ride with Transfer.....	\$1.25

Unlimited Ride 30-Day MetroCard Fare.....\$112.00
(Good on Bee-Line Buses, NYC Buses & Subways)

Transfers

- (1) Paper transfers will be accepted on all local routes, except the same route initially boarded. Paper transfers must be obtained at the time of initial boarding.
- (2) Pay-Per-Ride MetroCards will be accepted on all Bee-Line routes, except the same route initially boarded, NYC local buses and subways with no additional fare charged to the card, within two hours of the initial boarding.

Senior/Disabled Reduced Fares

Reduced fares are available to riders at least 65 years of age, certified disabled persons and valid Medicare card holders with proper photo identification. MetroCard reduced fares are available only to holders of a personalized Reduced-Fare MetroCard. For more information call (718) 330-1234 or log on to www.mta.info/metrocard.

Customer Service (914) 813-7777
24-Hour Automated Schedule Information
Representatives are available 8 a.m. to 4 p.m. weekdays.

Large print timetables are available upon request.
TTY for the hearing impaired at (914) 813-7711
Fares, schedule and equipment are subject to change.

the bee-line system

Effective March 4, 2013

EXPRESS ROUTE



77

**Carmel
Yorktown
White Plains**

ALSO SERVING

- Baldwin Place
- Shrub Oak
- FDR Park



Westchester
gov.com

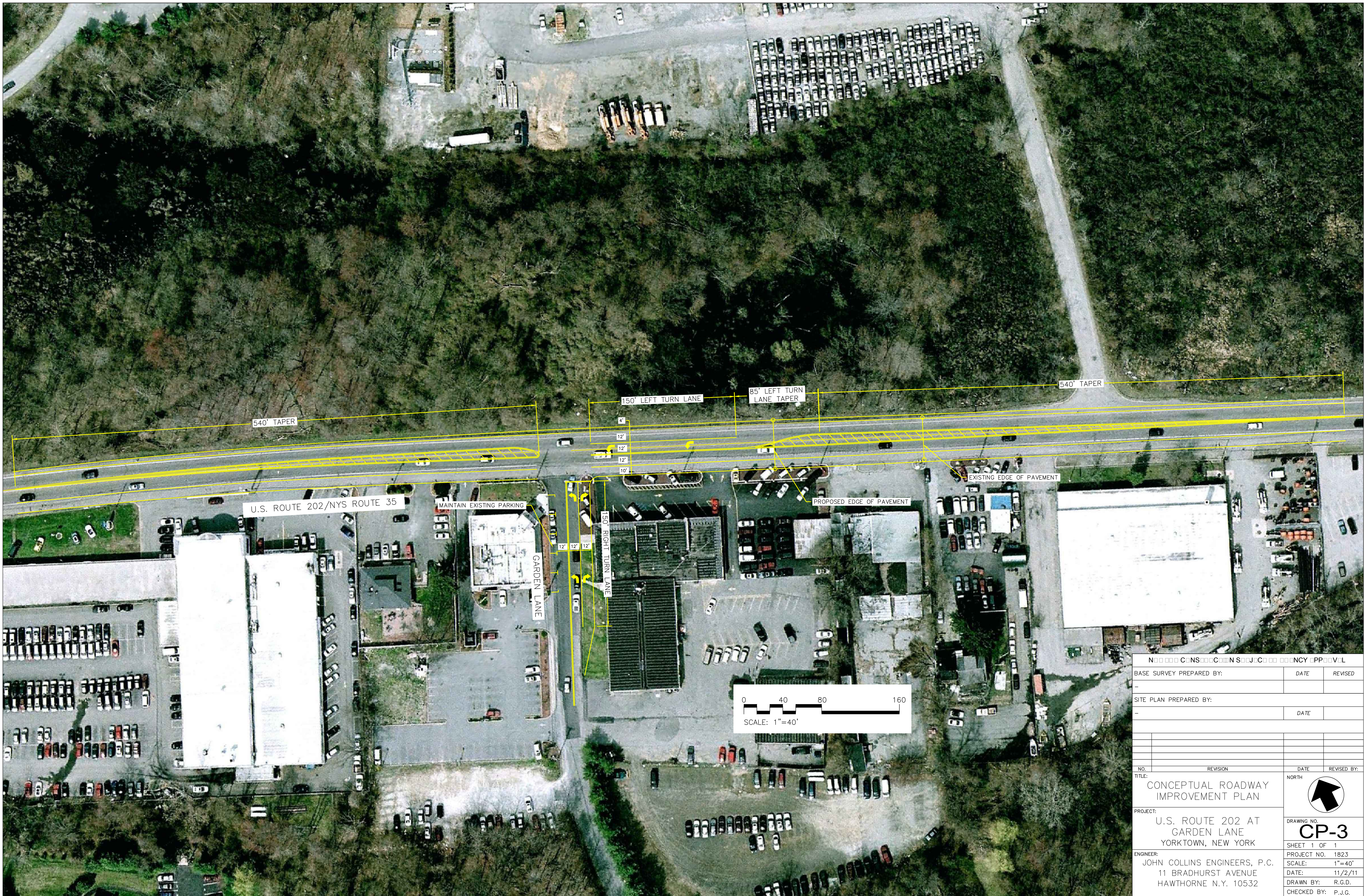
(914) 813-7777



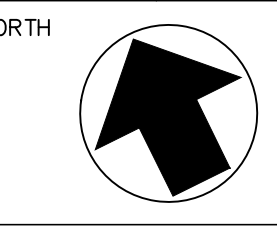
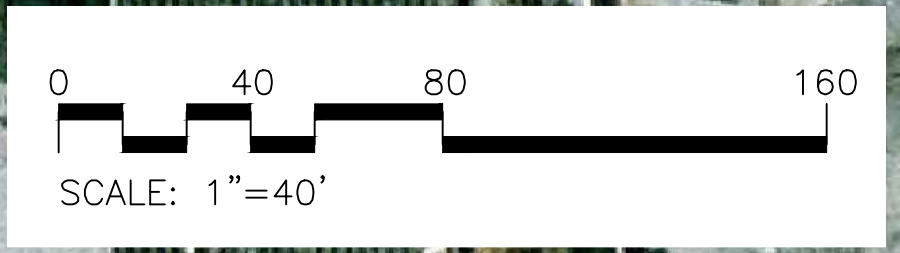
***PROPOSED BEAR MOUNTAIN TRIANGLE
REZONING AND CROMPOND TERRACES***

APPENDIX F

POTENTIAL IMPROVEMENT PLANS



NO. 000 CONS. 00000N S. 000000 000000 000000 000000			
BASE SURVEY PREPARED BY:	DATE	REVISED	
-			
SITE PLAN PREPARED BY:	DATE	REVISED	
-			
NO.	REVISION	DATE	REVISED BY:
TITLE: CONCEPTUAL ROADWAY IMPROVEMENT PLAN			
PROJECT: U.S. ROUTE 202 AT GARDEN LANE YORKTOWN, NEW YORK			
ENGINEER: JOHN COLLINS ENGINEERS, P.C. 11 BRADHURST AVENUE HAWTHORNE N.Y. 10532			
DRAWING NO. CP-3		SHEET 1 OF 1	
PROJECT NO. 1823		SCALE: 1"=40'	
DATE: 11/2/11		DRAWN BY: R.G.D.	
CHECKED BY: P.J.G.			





***PROPOSED BEAR MOUNTAIN TRIANGLE
REZONING AND CROMPOND TERRACES***

APPENDIX G

**CONSIDERATION OF POTENTIAL
STATE LAND DEVELOPMENT**

**TABLE 2-S
LEVEL OF SERVICE SUMMARY TABLE
WITH STATE LAND DEVELOPMENT**

			2014 EXISTING			2019 NO-BUILD			2019 BUILD WITH REZONING							
			AM	PM	SAT	AM	PM	SAT	AM	PM	SAT					
1	BEAR MOUNTAIN PARKWAY EXT. & STONY STREET	SIGNALIZED	EB	LT	B[15.9]	C[23.7]	C[23.0]	B[15.8]	E[55.5]	C[21.9]	B[16.0]	E[55.9]	C[21.8]			
					R	B[15.2]	B[19.4]	B[19.5]	B[15.0]	D[48.9]	C[20.3]	B[15.3]	D[47.8]	C[20.9]		
			WB	LTR	B[18.8]	D[36.2]	C[31.3]	B[19.1]	E[67.0]	C[28.9]	B[17.6]	E[74.8]	C[28.3]			
					L	A[6.5]	A[8.4]	A[5.1]	A[7.8]	C[30.1]	A[7.4]	A[7.9]	C[30.2]	A[8.2]		
			SB	TR	B[15.8]	B[11.2]	A[8.3]	B[19.4]	B[10.4]	B[11.3]	B[19.7]	B[11.0]	B[12.1]			
					L	A[6.5]	A[6.7]	A[5.0]	A[8.3]	A[5.1]	A[5.4]	A[8.6]	A[5.6]	A[5.9]		
			OVERALL	TR	A[9.6]	C[26.6]	B[11.2]	B[12.2]	D[50.0]	C[23.3]	B[12.2]	D[54.1]	C[24.6]			
					B[12.5]	C[22.8]	B[13.4]	B[14.3]	D[41.0]	B[19.7]	B[14.3]	D[44.2]	C[20.5]			
			2	STONY STREET & OLD CROMPOND ROAD	UNSIGNALIZED	EB	TR	A[7.5]	A[8.7]	A[7.6]	A[8.1]	C[16.1]	B[12.0]	A[8.9]	C[20.7]	B[14.3]
								WB	LT	A[7.3]	A[8.4]	A[7.6]	A[8.1]	E[37.4]	D[26.8]	A[9.1]
NB	LR	A[7.7]				A[9.2]	A[8.2]	A[7.9]	C[15.9]	B[12.6]	A[8.4]	C[19.7]	B[14.8]			
		OVERALL				A[7.5]	A[8.8]	A[7.8]	A[8.1]	D[25.5]	C[19.5]	A[8.9]	E[42.4]	E[39.8]		
WITH REDISTRIBUTED TRAFFIC VOLUMES	EB	TR				-	-	-	A[8.1]	B[14.3]	B[10.8]	A[8.7]	C[20.5]	B[12.5]		
						WB	LT	-	-	-	A[7.9]	C[17.7]	B[13.2]	A[8.4]	E[42.9]	C[18.2]
OVERALL	NB	LR				-	-	-	A[7.8]	B[14.2]	B[11.2]	A[8.2]	C[19.4]	B[12.8]		
						-	-	-	A[8.0]	C[15.5]	B[11.8]	A[8.5]	D[29.4]	B[15.0]		
3	NYS ROUTE 35/U.S. ROUTE 202 & STONY STREET/BJ'S	SIGNALIZED				EB	L	B[10.5]	B[17.2]	B[17.8]	C[20.0]	C[27.5]	C[29.2]	C[21.0]	C[31.2]	C[33.1]
								T	B[14.9]	C[21.7]	C[25.8]	C[32.7]	D[38.9]	C[33.5]	D[43.0]	D[53.8]
			WB	L	A[3.2]	A[3.7]	A[5.0]	A[2.8]	A[2.4]	A[2.5]	A[2.8]	A[2.4]	A[2.7]			
					TR	D[42.1]	C[30.0]	E[57.2]	D[45.2]	C[24.6]	D[36.0]	D[45.4]	C[25.8]	D[45.5]		
			NB	L	D[47.1]	C[20.8]	C[22.3]	D[47.3]	B[16.0]	B[18.1]	D[47.3]	B[16.9]	B[18.4]			
					TR	E[64.0]	F[83.5]	F[84.2]	D[52.3]	D[52.9]	D[51.9]	D[52.2]	D[52.6]	D[52.0]		
			SB	L	D[37.5]	C[31.0]	C[31.0]	D[52.6]	D[54.0]	D[53.1]	D[53.1]	D[54.8]	D[52.7]			
					TR	B[17.9]	B[15.9]	B[18.4]	B[14.9]	B[13.4]	B[19.7]	B[14.9]	B[14.0]	C[21.2]		
			OVERALL	LT	E[56.9]	D[37.2]	D[36.5]	D[49.7]	D[40.4]	D[51.2]	D[54.6]	D[51.9]	E[61.9]			
					R	A[1.4]	A[5.7]	A[0.7]	A[1.5]	A[6.6]	A[1.9]	A[2.0]	A[8.2]	A[4.1]		
WITH REDISTRIBUTED TRAFFIC VOLUMES	EB	L	-	-	-	B[19.9]	C[27.3]	C[29.2]	C[20.7]	C[29.7]	C[32.1]					
			T	-	-	-	C[32.5]	D[37.4]	D[53.8]	C[32.7]	D[37.8]	D[53.8]				
OVERALL	WB	L	-	-	-	A[2.6]	A[2.3]	A[2.6]	A[2.6]	A[2.3]	A[2.6]					
			TR	-	-	-	D[45.2]	C[29.7]	D[44.5]	D[45.2]	C[28.0]	D[42.6]				
OVERALL	NB	L	-	-	-	D[47.3]	B[19.5]	C[23.8]	D[47.3]	B[18.5]	C[23.6]					
			TR	-	-	-	D[51.5]	D[52.9]	D[51.9]	D[51.2]	D[52.6]	D[52.0]				
OVERALL	SB	L	-	-	-	D[51.8]	D[54.0]	D[53.1]	D[52.1]	D[54.8]	D[52.5]					
			TR	-	-	-	B[14.7]	A[8.3]	B[14.6]	B[14.6]	A[8.3]	B[14.9]				
OVERALL	LT	R	-	-	-	D[48.4]	D[35.2]	D[46.9]	D[48.3]	D[35.1]	D[47.2]					
			R	-	-	-	D[52.9]	D[44.0]	D[47.0]	D[53.1]	D[44.3]	D[47.1]				
OVERALL	OVERALL	R	-	-	-	A[1.5]	A[6.9]	A[2.0]	A[2.0]	A[9.3]	A[3.6]					
			-	-	-	C[32.3]	C[27.6]	D[36.2]	C[32.2]	C[27.5]	D[35.9]					
4	NYS ROUTE 35/U.S. ROUTE 202 & OLD CROMPOND ROAD ²	UNSIGNALIZED	EB	LT	A[-]	A[-]	B[10.7]	A[-]	A[-]	A[-]	A[-]	A[-]	A[-]			
					SB	LR	E[40.1]	F[62.6]	F[86.4]	E[37.3]	F[84.1]	F[100.6]	E[43.5]	F[131.1]	F[163.0]	
			WITH SIGNALIZATION AND REDISTRIBUTED TRAFFIC VOLUMES ³	EB	LT	-	-	-	A[2.9]	A[5.2]	A[4.8]	A[6.8]	A[7.2]	A[6.2]		
						WB	TR	-	-	-	A[3.6]	A[2.8]	A[6.1]	A[7.6]	A[4.5]	A[7.2]
			OVERALL	SB	LR	-	-	-	D[40.0]	D[45.4]	D[50.6]	D[44.3]	D[51.8]	D[47.3]		
						-	-	-	A[3.5]	A[5.7]	A[7.2]	A[8.2]	A[9.5]	A[9.2]		

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND AVERAGE VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH APPROACH AS WELL AS FOR THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS AND FOR THE KEY APPROACHES FOR THE UNSIGNALIZED LOCATIONS. SEE APPENDIX "D" FOR ADDITIONAL DETAILS.
- 2) THE NO-BUILD AND BUILD ANALYSES FOR THE INTERSECTION OF NYS ROUTE 35/U.S. ROUTE 202 & OLD CROMPOND ROAD INCLUDES THE ADDITIONAL WESTBOUND THROUGH LANE TO BE CONSTRUCTED IN ASSOCIATION WITH THE COSTCO DEVELOPMENT.
- 2) THE SIGNALIZATION OF THE NYS ROUTE 35/U.S. ROUTE 202 & OLD CROMPOND ROAD INTERSECTION WOULD ALLOW FOR LEFT TURNS OUT OF THIS LOCATION TO EASTBOUND NYS ROUTE 35/U.S. ROUTE 202 AND THEREFORE IS EXPECTED TO REDISTRIBUTE FUTURE TRAFFIC VOLUMES TO THIS INTERSECTION AND AWAY FROM THE STONEY STREET INTERSECTIONS (I.E. INTERSECTION 2 AND 3).

TABLE 2-S (CONTINUED)
LEVEL OF SERVICE SUMMARY TABLE
WITH STATE LAND DEVELOPMENT

			2014 EXISTING			2019 NO-BUILD			2019 BUILD WITH REZONING				
			AM	PM	SAT	AM	PM	SAT	AM	PM	SAT		
5	NYS ROUTE 35/U.S. ROUTE 202 & MOHANSIC AVENUE/COSTCO DRIVEWAY	SIGNALIZED											
		EB	TR	A[8.3]	B[13.0]	B[12.3]	-	-	-	-	-	-	
		WB	L	A[2.7]	A[7.6]	A[7.5]	-	-	-	-	-	-	
			T	A[3.7]	C[33.8]	A[29.1]	-	-	-	-	-	-	
		NB	LTR	B[17.0]	B[14.1]	B[15.5]	-	-	-	-	-	-	
		OVERALL		A[7.2]	C[20.7]	B[18.3]	-	-	-	-	-	-	
	WITH COSTCO IMPROVEMENTS ²	EB	L	-	-	-	A[5.3]	C[29.3]	D[48.6]	A[5.4]	C[26.6]	D[45.6]	
			TR	-	-	-	B[17.7]	C[22.5]	D[52.7]	B[18.6]	D[41.8]	E[67.1]	
		WB	L	-	-	-	B[10.0]	C[32.8]	D[46.5]	A[9.5]	C[33.0]	D[46.2]	
			T	-	-	-	A[2.8]	B[18.7]	C[23.3]	A[3.1]	C[33.5]	D[41.3]	
		NB	LT	-	-	-	D[39.6]	D[51.5]	E[61.0]	D[39.7]	D[52.4]	E[62.5]	
			R	-	-	-	A[1.5]	B[18.7]	A[4.6]	A[1.5]	B[18.8]	A[4.7]	
		SB	L	-	-	-	D[44.4]	D[47.9]	E[67.9]	D[44.4]	D[47.9]	E[67.9]	
			TR	-	-	-	C[20.4]	C[33.4]	D[50.5]	C[20.4]	C[33.4]	D[50.9]	
		OVERALL		-	-	-	B[14.0]	C[24.4]	D[42.5]	B[14.3]	D[37.1]	D[53.9]	
6	NYS ROUTE 35/U.S. ROUTE 202 & TACONIC STATE PARKWAY SB RAMPS	SIGNALIZED											
		EB	T	E[72.1]	E[79.9]	E[72.9]	-	-	-	-	-	-	
			R	A[1.1]	A[0.4]	A[0.3]	-	-	-	-	-	-	
		WB	L	B[18.9]	A[7.5]	B[10.4]	-	-	-	-	-	-	
		T	A[4.5]	C[20.3]	A[8.7]	-	-	-	-	-	-		
		SB	L	D[35.1]	C[30.4]	C[34.9]	-	-	-	-	-	-	
			R	A[3.1]	A[2.2]	A[5.3]	-	-	-	-	-	-	
		OVERALL		C[27.5]	D[41.5]	C[34.4]	-	-	-	-	-	-	
	WITH COSTCO IMPROVEMENTS ²	EB	T	-	-	-	A[3.7]	A[9.0]	B[19.2]	A[3.8]	B[15.2]	D[47.2]	
			R	-	-	-	A[3.0]	A[0.4]	A[0.2]	A[3.2]	A[0.4]	A[0.2]	
		WB	L	-	-	-	C[22.8]	B[16.5]	B[18.6]	C[24.1]	B[18.5]	C[25.4]	
			T	-	-	-	A[0.7]	A[2.2]	A[3.2]	A[0.8]	A[4.2]	A[5.3]	
		SB	L	-	-	-	D[44.5]	D[37.5]	D[41.5]	D[44.5]	D[35.2]	D[39.7]	
			R	-	-	-	B[11.5]	C[29.2]	D[38.0]	B[11.3]	C[31.3]	D[42.9]	
			OVERALL		-	-	-	A[6.6]	A[6.5]	B[12.1]	A[6.7]	B[10.0]	C[24.7]
7	NYS ROUTE 35/U.S. ROUTE 202 & TACONIC STATE PARKWAY NB RAMPS	SIGNALIZED											
		EB	L	C[21.1]	E[74.8]	E[73.7]	-	-	-	-	-	-	
			T	C[32.3]	E[63.0]	C[21.5]	-	-	-	-	-	-	
		WB	TR	D[42.6]	F[116.1]	F[93.5]	-	-	-	-	-	-	
		NB	L	C[25.4]	C[30.6]	D[39.0]	-	-	-	-	-	-	
			R	A[6.4]	B[19.1]	A[7.2]	-	-	-	-	-	-	
		OVERALL		C[34.6]	E[69.5]	E[56.8]	-	-	-	-	-	-	
	WITH COSTCO IMPROVEMENTS ² AND NB RAMP DOUBLE LEFT TURN LANE	EB	L	-	-	-	A[7.0]	C[30.0]	D[51.0]	A[8.3]	D[36.5]	E[79.3]	
			T	-	-	-	B[17.6]	C[33.8]	C[22.2]	B[19.6]	D[51.1]	C[32.2]	
		WB	TR	-	-	-	C[21.1]	C[32.0]	C[31.2]	C[21.8]	D[35.2]	C[31.4]	
			L	-	-	-	C[25.2]	D[35.9]	D[44.8]	C[25.5]	D[36.3]	D[44.7]	
			R	-	-	-	A[6.6]	D[47.2]	B[11.5]	A[6.6]	D[51.2]	B[13.3]	
			OVERALL		-	-	-	B[18.6]	C[34.6]	C[31.6]	B[19.8]	D[42.2]	D[39.6]

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND AVERAGE VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH APPROACH AS WELL AS FOR THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS AND FOR THE KEY APPROACHES FOR THE UNSIGNALIZED LOCATIONS. SEE APPENDIX "D" FOR ADDITIONAL DETAILS.
- 2) UNDER EXISTING CONDITIONS, DURING PEAK HOURS, THE OPERATION OF INTERSECTIONS 5 & 6 (MOHANSIC AVENUE & TACONIC STATE PARKWAY SB RAMPS) IS CURRENTLY IMPACTED BY QUEUEING IN THE EASTBOUND DIRECTION WHICH OCCASIONALLY EXTENDS FROM THE NORTHBOUND RAMP INTERSECTION. THE WIDENING OF NYS ROUTE 35/U.S. ROUTE 202 AND ASSOCIATED SIGNAL TIMING AND COORDINATION IMPROVEMENTS ARE BEING COMPLETED TO ADDRESS THESE EXISTING CONDITIONS IN THE VICINITY OF THE TACONIC STATE PARKWAY INTERCHANGE. THESE IMPROVEMENTS HAVE BEEN INCLUDED IN THE NO-BUILD AND BUILD ANALYSIS SCENARIOS FOR INTERSECTION 5, 6 & 7.

2019 No-Build Traffic Volumes - With State Land
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
 4/2/2015

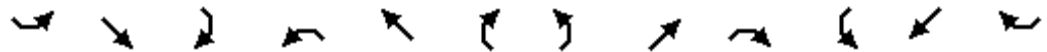


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	90	127	52	2	31	14	22	208	2	128	297	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%			0%	
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.956			0.960			0.999			0.996	
Flt Protected	0.950				0.998		0.950			0.950		
Satd. Flow (prot)	1885	1897	0	0	1794	0	1805	1898	0	1805	1892	0
Flt Permitted	0.603				0.980		0.556			0.461		
Satd. Flow (perm)	1196	1897	0	0	1761	0	1056	1898	0	876	1892	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			15			1			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	98	138	57	2	34	15	24	231	2	142	330	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	195	0	0	51	0	24	233	0	142	340	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2		2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	40	40		50	40		40	40		40	40	
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)	43	43			43		43	43		43	43	
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												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	

2019 No-Build Traffic Volumes - With State Land
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR

4/2/2015










Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		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	
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			0.5		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.5		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effct Green (s)	13.1	13.1			7.4		18.6	14.0		23.6	22.1	
Actuated g/C Ratio	0.28	0.28			0.16		0.39	0.29		0.50	0.46	
v/c Ratio	0.24	0.36			0.18		0.05	0.42		0.24	0.39	
Control Delay	15.8	15.0			19.1		7.8	19.4		8.3	12.2	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	15.8	15.0			19.1		7.8	19.4		8.3	12.2	
LOS	B	B			B		A	B		A	B	
Approach Delay		15.3			19.1			18.3			11.0	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	20	37			10		4	62		22	59	
Queue Length 95th (ft)	57	94			39		13	126		49	170	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	404	1277			774		645	1437		642	1432	
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	0.24	0.15			0.07		0.04	0.16		0.22	0.24	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	47.6
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.42
Intersection Signal Delay:	14.3
Intersection Capacity Utilization:	43.7%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	A

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street

 ø1	 ø2	 ø4	
15 s	40 s	35 s	
 ø5	 ø6	 ø7	 ø8
15 s	40 s	10 s	25 s

Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land
2: Stoney Street & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	19	240	64	22	30	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.875				0.926	
Flt Protected				0.964	0.978	
Satd. Flow (prot)	1622	0	0	1805	1670	0
Flt Permitted				0.964	0.978	
Satd. Flow (perm)	1622	0	0	1805	1670	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1020	190	
Travel Time (s)	12.3			23.2	4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	267	71	24	33	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	288	0	0	95	73	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	34.4%
Analysis Period (min)	15
	ICU Level of Service A

Intersection									
Intersection Delay, s/veh	8.1								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	19	240	0	64	22	0	30	36
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	267	0	71	24	0	33	40
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.1	8.1	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	45%	0%	74%
Vol Thru, %	0%	7%	26%
Vol Right, %	55%	93%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	66	259	86
LT Vol	30	0	64
Through Vol	0	19	22
RT Vol	36	240	0
Lane Flow Rate	73	288	96
Geometry Grp	1	1	1
Degree of Util (X)	0.091	0.286	0.118
Departure Headway (Hd)	4.462	3.578	4.432
Convergence, Y/N	Yes	Yes	Yes
Cap	808	987	799
Service Time	2.462	1.659	2.512
HCM Lane V/C Ratio	0.09	0.292	0.12
HCM Control Delay	7.9	8.1	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	1.2	0.4

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 No-Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	1216	227	137	479	16	132	13	254	114	72	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.960		0.950	0.985	
Satd. Flow (prot)	1770	3471	1552	1770	3664	0	1681	1699	1583	1698	1760	1546
Flt Permitted	0.455			0.455			0.950	0.960		0.950	0.985	
Satd. Flow (perm)	848	3471	1552	848	3664	0	1665	1686	1583	1698	1760	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			218		3				149			149
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1517			289				190
Travel Time (s)		9.3			23.0			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	38	1322	247	149	521	17	147	14	282	127	80	129
Shared Lane Traffic (%)							46%			28%		
Lane Group Flow (vph)	38	1322	247	149	538	0	79	82	282	91	116	129
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		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	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				43			43	43	43	43	43	43
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

2019 No-Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015



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	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	16.0	11.0	36.0		16.0	16.0	11.0	16.0	16.0	11.0
Total Split (s)	19.0	49.0	19.0	19.0	49.0		19.0	19.0	19.0	23.0	23.0	19.0
Total Split (%)	17.3%	44.5%	17.3%	17.3%	44.5%		17.3%	17.3%	17.3%	20.9%	20.9%	17.3%
Maximum Green (s)	13.0	43.0	13.0	13.0	43.0		13.0	13.0	13.0	17.0	17.0	13.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	Max	C-Max	None	None	None		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	50.7	50.7	67.0	21.8	21.8		12.3	12.3	25.3	14.0	14.0	55.8
Actuated g/C Ratio	0.46	0.46	0.61	0.20	0.20		0.11	0.11	0.23	0.13	0.13	0.51
v/c Ratio	0.05	0.83	0.24	0.54	0.74		0.42	0.43	0.59	0.42	0.52	0.15
Control Delay	20.0	32.7	2.8	45.2	47.3		52.3	52.6	14.9	49.7	52.8	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	32.7	2.8	45.2	47.3		52.3	52.6	14.9	49.7	52.8	1.5
LOS	C	C	A	D	D		D	D	B	D	D	A
Approach Delay		27.8			46.8			28.5			32.3	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	14	416	8	93	187		55	57	55	63	82	0
Queue Length 95th (ft)	38	#623	44	147	233		106	108	102	113	137	14
Internal Link Dist (ft)		532			1437			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	741	1599	1051	289	1467		213	216	498	277	288	853
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.83	0.24	0.52	0.37		0.37	0.38	0.57	0.33	0.40	0.15

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

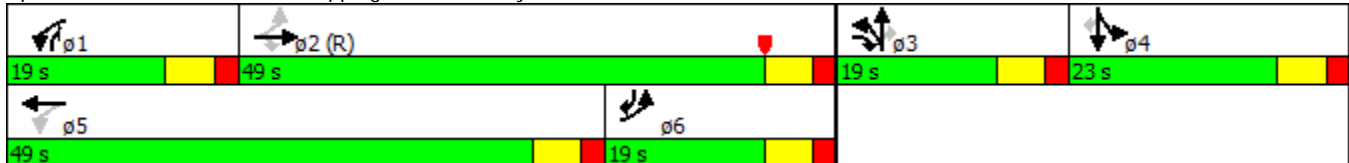
2019 No-Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015

Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 32.7 Intersection LOS: C
 Intersection Capacity Utilization 74.9% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

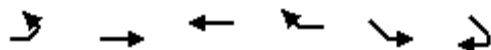
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1583	664	10	3	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.946	
Flt Protected					0.971	
Satd. Flow (prot)	0	3350	3586	0	1626	0
Flt Permitted					0.971	
Satd. Flow (perm)	0	3350	3586	0	1626	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		293	457		1070	
Travel Time (s)		4.4	6.9		24.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.90
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1721	722	11	3	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1721	733	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.8%
Analysis Period (min)	15
	ICU Level of Service A

2019 No-Build Traffic Volumes - With State Land
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1583	664	10	3	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	92	92	92	92	92	90
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1721	722	11	3	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	733	0	1587
Stage 1	-	-	727
Stage 2	-	-	860
Critical Hdwy	4.14	-	8.84
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuver	1182	-	74
Stage 1	-	-	712
Stage 2	-	-	232
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	1182	-	74
Mov Cap-2 Maneuver	-	-	74
Stage 1	-	-	712
Stage 2	-	-	232

Approach	EB	WB	SE
HCM Control Delay, s	0	0	37.3
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	1182	-	-	-	117
HCM Lane V/C Ratio	-	-	-	-	0.047
HCM Control Delay (s)	0	-	-	-	37.3
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 No-Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

AM PEAK HOUR
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	1531	12	45	593	121	21	1	36	80	1	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		100	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.999			0.975				0.850		0.876	
Flt Protected	0.950			0.950				0.954		0.950	0.992	
Satd. Flow (prot)	1699	3329	0	1832	3514	0	0	1813	1615	1681	1538	0
Flt Permitted	0.327			0.071				0.954		0.950	0.992	
Satd. Flow (perm)	585	3329	0	137	3514	0	0	1813	1615	1681	1538	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			35				85			63
Link Speed (mph)		45			45			30				30
Link Distance (ft)		457			251			624				252
Travel Time (s)		6.9			3.8			14.2				5.7
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%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	47	1664	13	49	645	132	23	1	39	87	1	63
Shared Lane Traffic (%)										14%		
Lane Group Flow (vph)	47	1677	0	49	777	0	0	24	39	75	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2	2	2	2	
Detector Template												
Leading Detector (ft)	83	83		83	83		50	83	83	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Size(ft)	40	40		40	40		50	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)	43	43		43	43			43	43	43	43	
Detector 2 Size(ft)	40	40		40	40			40	40	40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	

2019 No-Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

AM PEAK HOUR
 4/2/2015




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases	2			6					8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		1.0	1.0		4.0	4.0	1.0	4.0	4.0	
Minimum Split (s)	9.0	10.0		7.0	9.0		10.0	10.0	7.0	10.0	10.0	
Total Split (s)	15.0	45.0		15.0	45.0		15.0	15.0	15.0	15.0	15.0	
Total Split (%)	16.7%	50.0%		16.7%	50.0%		16.7%	16.7%	16.7%	16.7%	16.7%	
Maximum Green (s)	10.0	40.0		10.0	40.0		10.0	10.0	10.0	10.0	10.0	
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)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effct Green (s)	66.1	60.9		66.9	63.0			7.9	12.6	9.6	7.6	
Actuated g/C Ratio	0.73	0.68		0.74	0.70			0.09	0.14	0.11	0.08	
v/c Ratio	0.09	0.75		0.20	0.31			0.15	0.13	0.42	0.41	
Control Delay	5.3	17.7		10.0	2.7			39.6	1.5	44.4	20.4	
Queue Delay	0.0	0.0		0.0	0.2			0.0	0.0	0.0	0.0	
Total Delay	5.3	17.7		10.0	2.8			39.6	1.5	44.4	20.4	
LOS	A	B		B	A			D	A	D	C	
Approach Delay		17.4			3.3			16.0			32.3	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	4	290		1	6			13	0	42	7	
Queue Length 95th (ft)	21	#672		21	64			37	4	87	50	
Internal Link Dist (ft)		377			171			544			172	
Turn Bay Length (ft)	150			170					100			
Base Capacity (vph)	583	2251		312	2471			221	361	205	210	
Starvation Cap Reductn	0	0		0	811			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.08	0.75		0.16	0.47			0.11	0.11	0.37	0.36	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 9 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 14.0 Intersection LOS: B
 Intersection Capacity Utilization 61.7% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 ø1	 ø2 (R)	 ø4	 ø8
15 s	45 s	15 s	15 s
 ø5	 ø6 (R)		
15 s	45 s		

Two Way Analysis cannot be performed on Signalized Intersection.

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	881	765	323	676	0	0	0	0	92	0	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%			4%	
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3350	1558	1877	3490	0	0	0	0	1769	0	1583
Flt Permitted				0.234						0.950		
Satd. Flow (perm)	0	3350	1558	462	3490	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			462									93
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	958	832	351	735	0	0	0	0	102	0	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	958	832	351	735	0	0	0	0	102	0	93
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	2	2					2		2
Detector Template												
Leading Detector (ft)		83	0	83	83					83		83
Trailing Detector (ft)		-5	0	-5	-5					-5		-5
Detector 1 Position(ft)		-5	0	-5	-5					-5		-5
Detector 1 Size(ft)		40	50	40	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43		43	43					43		43
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
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		50.0		20.0	70.0					20.0		20.0
Total Split (%)		55.6%		22.2%	77.8%					22.2%		22.2%
Maximum Green (s)		45.0		15.0	65.0					15.0		15.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effct Green (s)		56.4	90.0	71.4	71.4					10.6		10.6
Actuated g/C Ratio		0.63	1.00	0.79	0.79					0.12		0.12
v/c Ratio		0.46	0.53	0.65	0.27					0.49		0.35
Control Delay		3.1	3.0	22.7	0.6					44.5		11.5
Queue Delay		0.6	0.0	0.0	0.0					0.0		0.0
Total Delay		3.7	3.0	22.7	0.6					44.5		11.5
LOS		A	A	C	A					D		B
Approach Delay		3.4			7.8							
Approach LOS		A			A							
Queue Length 50th (ft)		18	0	82	0					55		0
Queue Length 95th (ft)		27	297	154	23					100		41
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2099	1558	622	2768					314		357
Starvation Cap Reductn		698	0	0	0					0		0
Spillback Cap Reductn		122	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.68	0.53	0.56	0.27					0.32		0.26

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	12 (13%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	6.5
Intersection LOS:	A
Intersection Capacity Utilization:	57.3%
ICU Level of Service:	B
Analysis Period (min):	15

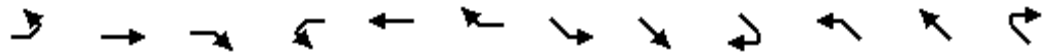
6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35



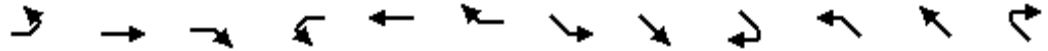
Two Way Analysis cannot be performed on Signalized Intersection.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	124	848	0	0	844	13	0	0	0	154	0	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	300		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t					0.998							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1695	0	0	3434	0	0	0	0	3554	0	1639
Fl _t Permitted	0.213									0.950		
Satd. Flow (perm)	376	1695	0	0	3434	0	0	0	0	3554	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2							91
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1112
Travel Time (s)		7.2			8.2			17.8				25.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	135	922	0	0	917	14	0	0	0	171	0	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	922	0	0	931	0	0	0	0	171	0	91
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)		23			23			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



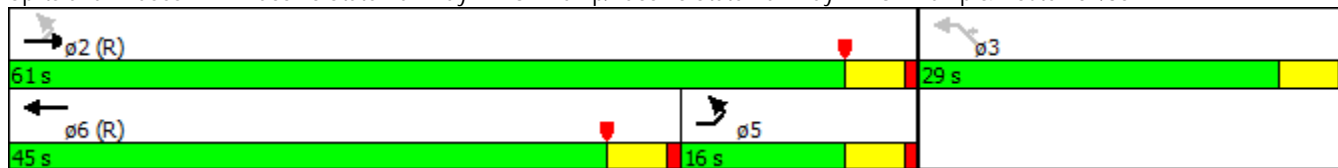
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	16.0	61.0			45.0					29.0		29.0
Total Split (%)	17.8%	67.8%			50.0%					32.2%		32.2%
Maximum Green (s)	11.0	56.0			40.0					24.0		24.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-0.7	-1.0			0.0					-1.0		-1.0
Total Lost Time (s)	4.3	4.0			5.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					Max		Max
Act Effct Green (s)	56.7	57.0			40.0					25.0		25.0
Actuated g/C Ratio	0.63	0.63			0.44					0.28		0.28
v/c Ratio	0.33	0.86			0.61					0.17		0.17
Control Delay	7.0	17.6			21.1					25.2		6.6
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	7.0	17.6			21.1					25.2		6.6
LOS	A	B			C					C		A
Approach Delay		16.2			21.1							
Approach LOS		B			C							
Queue Length 50th (ft)	11	430			205					38		0
Queue Length 95th (ft)	23	#617			267					63		34
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)										300		530
Base Capacity (vph)	405	1073			1527					987		521
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	0.33	0.86			0.61					0.17		0.17

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 18.6 Intersection LOS: B
 Intersection Capacity Utilization 57.3% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land
 1: Bear Mountain Parkway Ext. & Stoney Street

PM Peak Hour
 4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	76	31	2	119	36	63	155	11	239	1005	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.956			0.969			0.990			0.989	
Flt Protected	0.950				0.999		0.950			0.950		
Satd. Flow (prot)	1885	1897	0	0	1812	0	1805	1881	0	1805	1879	0
Flt Permitted	0.269				0.997		0.055			0.580		
Satd. Flow (perm)	534	1897	0	0	1809	0	104	1881	0	1102	1879	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			10			5			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.82	0.82	0.82	0.83	0.83	0.83	0.76	0.76	0.76	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	18	93	38	2	143	43	83	204	14	285	1196	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	131	0	0	188	0	83	218	0	285	1294	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
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	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		12.0	30.0		12.0	22.0	

2019 No-Build Traffic Volumes - With State Land
 1: Bear Mountain Parkway Ext. & Stoney Street

PM Peak Hour
 4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (s)	23.0	23.0		23.0	23.0		13.0	77.0		20.0	84.0	
Total Split (%)	19.2%	19.2%		19.2%	19.2%		10.8%	64.2%		16.7%	70.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		6.0	70.0		13.0	77.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
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		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	8.0	8.0		8.0	8.0			7.0				
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			10.0				
Pedestrian Calls (#/hr)	0	0		0	0			0				
Act Effect Green (s)	14.9	14.9			14.9		76.2	70.6		85.6	77.4	
Actuated g/C Ratio	0.13	0.13			0.13		0.67	0.62		0.75	0.68	
v/c Ratio	0.26	0.51			0.77		0.55	0.19		0.32	1.01	
Control Delay	55.5	48.9			67.0		30.1	10.4		5.1	50.0	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	55.5	48.9			67.0		30.1	10.4		5.1	50.0	
LOS	E	D			E		C	B		A	D	
Approach Delay		49.7			67.0			15.9			41.9	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)	12	83			132		13	65		52	~1073	
Queue Length 95th (ft)	34	131			193		46	93		77	#1219	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	84	312			294		159	1188		922	1275	
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	0.21	0.42			0.64		0.52	0.18		0.31	1.01	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 114.3
 Natural Cycle: 110
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 41.0
 Intersection LOS: D
 Intersection Capacity Utilization 88.3%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

2019 No-Build Traffic Volumes - With State Land
 1: Bear Mountain Parkway Ext. & Stoney Street

PM Peak Hour
 4/2/2015

Splits and Phases: 1: Bear Mountain Parkway Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	66	244	246	68	114	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.894				0.933	
Flt Protected				0.962	0.975	
Satd. Flow (prot)	1657	0	0	1801	1678	0
Flt Permitted				0.962	0.975	
Satd. Flow (perm)	1657	0	0	1801	1678	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1014	190	
Travel Time (s)	12.3			23.0	4.3	
Peak Hour Factor	0.77	0.77	0.56	0.56	0.74	0.74
Adj. Flow (vph)	86	317	439	121	154	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	403	0	0	560	304	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.8%
Analysis Period (min)	15
	ICU Level of Service B

2019 No-Build Traffic Volumes - With State Land
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015

Intersection									
Intersection Delay, s/veh	25.5								
Intersection LOS	D								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	66	244	0	246	68	0	114	111
Peak Hour Factor	0.92	0.77	0.77	0.92	0.56	0.56	0.92	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	86	317	0	439	121	0	154	150
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	16.1	37.4	15.9
HCM LOS	C	E	C

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	51%	0%	78%
Vol Thru, %	0%	21%	22%
Vol Right, %	49%	79%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	225	310	314
LT Vol	114	0	246
Through Vol	0	66	68
RT Vol	111	244	0
Lane Flow Rate	304	403	561
Geometry Grp	1	1	1
Degree of Util (X)	0.523	0.597	0.886
Departure Headway (Hd)	6.188	5.34	5.686
Convergence, Y/N	Yes	Yes	Yes
Cap	578	668	634
Service Time	4.27	3.42	3.756
HCM Lane V/C Ratio	0.526	0.603	0.885
HCM Control Delay	15.9	16.1	37.4
HCM Lane LOS	C	C	E
HCM 95th-tile Q	3	4	10.6

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 No-Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	1044	230	225	787	56	257	58	301	202	124	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.990				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.969		0.950	0.984	
Satd. Flow (prot)	1770	3539	1552	1770	3715	0	1681	1715	1583	1698	1759	1546
Flt Permitted	0.323			0.185			0.950	0.969		0.950	0.984	
Satd. Flow (perm)	602	3539	1552	345	3715	0	1670	1707	1583	1698	1759	1514
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253		8				145			145
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1512			289				190
Travel Time (s)		9.3			22.9			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	101	1147	253	234	820	58	289	65	338	240	148	218
Shared Lane Traffic (%)							40%			29%		
Lane Group Flow (vph)	101	1147	253	234	878	0	173	181	338	170	218	218
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2019 No-Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



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	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	10.0	20.0	15.0	10.0	20.0		15.0	15.0	10.0	15.0	15.0	10.0
Total Split (s)	15.0	33.0	18.0	15.0	33.0		18.0	18.0	15.0	24.0	24.0	15.0
Total Split (%)	16.7%	36.7%	20.0%	16.7%	36.7%		20.0%	20.0%	16.7%	26.7%	26.7%	16.7%
Maximum Green (s)	10.0	28.0	13.0	10.0	28.0		13.0	13.0	10.0	19.0	19.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	32.8	32.8	48.9	33.7	33.7		13.2	13.2	25.1	16.1	16.1	27.1
Actuated g/C Ratio	0.36	0.36	0.54	0.37	0.37		0.15	0.15	0.28	0.18	0.18	0.30
v/c Ratio	0.28	0.89	0.26	0.74	0.63		0.70	0.72	0.62	0.56	0.69	0.39
Control Delay	27.5	38.9	2.4	24.6	16.0		52.9	54.0	13.4	40.4	46.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	38.9	2.4	24.6	16.0		52.9	54.0	13.4	40.4	46.2	6.6
LOS	C	D	A	C	B		D	D	B	D	D	A
Approach Delay		32.0			17.8			33.9			30.3	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	41	~344	0	66	176		98	103	47	92	123	18
Queue Length 95th (ft)	79	#490	35	m#115	m277		#183	#191	92	141	176	40
Internal Link Dist (ft)		532			1432			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	361	1288	970	323	1396		261	266	551	377	390	561
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.89	0.26	0.72	0.63		0.66	0.68	0.61	0.45	0.56	0.39

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89

2019 No-Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015

Intersection Signal Delay: 28.0 Intersection LOS: C
 Intersection Capacity Utilization 76.7% ICU Level of Service D
 Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

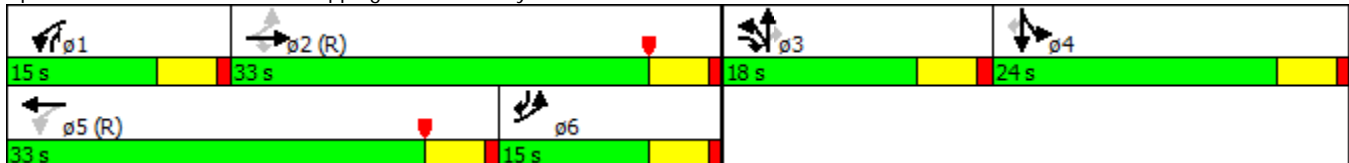
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

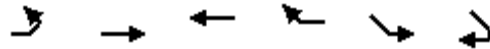
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land
 4: Route 202/35 & Old Crompond Road

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1548	1144	44	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.994		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3350	3574	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3350	3574	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		309	457		1058	
Travel Time (s)		4.7	6.9		24.0	
Peak Hour Factor	0.85	0.85	0.93	0.93	0.80	0.80
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1821	1230	47	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1821	1277	0	2	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.8%
Analysis Period (min)	15
	ICU Level of Service A

2019 No-Build Traffic Volumes - With State Land
4: Route 202/35 & Old Crompond Road

PM Peak Hour
4/2/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1548	1144	44	1	1
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, %	-	7	-7	-	10	-
Peak Hour Factor	85	85	93	93	80	80
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1821	1230	47	1	1

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1277	0	639
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	7.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	905	-	*633
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	905	-	*633
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SE
HCM Control Delay, s	0	0	84.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	905	-	-	-	48
HCM Lane V/C Ratio	-	-	-	-	0.052
HCM Control Delay (s)	0	-	-	-	84.1
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 No-Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	1383	39	160	952	357	44	3	94	291	3	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		150	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t		0.996			0.960				0.850		0.894	
Fl _t Protected	0.950			0.950				0.954		0.950	0.986	
Satd. Flow (prot)	1699	3384	0	1832	3517	0	0	1813	1615	1681	1560	0
Fl _t Permitted	0.094			0.093				0.954		0.950	0.986	
Satd. Flow (perm)	168	3384	0	179	3517	0	0	1813	1615	1681	1560	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			72				85			120
Link Speed (mph)		45			45			30				30
Link Distance (ft)		457			251			624				331
Travel Time (s)		6.9			3.8			14.2				7.5
Peak Hour Factor	0.92	0.92	0.92	0.88	0.88	0.92	0.65	0.92	0.65	0.92	0.92	0.92
Adj. Flow (vph)	137	1503	42	182	1082	388	68	3	145	316	3	209
Shared Lane Traffic (%)										27%		
Lane Group Flow (vph)	137	1545	0	182	1470	0	0	71	145	231	297	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		2	2	1	2	2	
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83	50	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		5	-5	0	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		5	-5	0	-5	-5	
Detector 1 Size(ft)	40	40		40	40		40	40	50	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)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	

2019 No-Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6				8					
Detector Phase	5	2	1		6	8		8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	10.0	9.0		9.0	9.0		9.0	9.0	9.0	9.0	
Total Split (s)	12.0	44.0	12.0		44.0	11.0		11.0	12.0	23.0	23.0	
Total Split (%)	13.3%	48.9%	13.3%		48.9%	12.2%		12.2%	13.3%	25.6%	25.6%	
Maximum Green (s)	7.0	39.0	7.0		39.0	6.0		6.0	7.0	18.0	18.0	
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)	-1.0	-1.0	-1.0		-1.0	-1.0		0.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0		5.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lead		Lag	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None	None	None	
Walk Time (s)							5.0	5.0				
Flash Dont Walk (s)							11.0	11.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	51.5	43.6	52.1		43.9	7.3		16.4	17.0	17.0		
Actuated g/C Ratio	0.57	0.48	0.58		0.49	0.08		0.18	0.19	0.19		
v/c Ratio	0.59	0.94	0.71		0.84	0.49		0.40	0.73	0.76		
Control Delay	29.3	22.5	32.8		14.9	51.5		17.7	47.9	33.2		
Queue Delay	0.0	0.0	0.0		3.8	0.0		1.0	0.0	0.2		
Total Delay	29.3	22.5	32.8		18.7	51.5		18.7	47.9	33.4		
LOS	C	C	C		B	D		B	D	C		
Approach Delay	23.1						20.3		29.5		39.7	
Approach LOS	C						C		C		D	
Queue Length 50th (ft)	44	~177	47		256	40		29	127	97		
Queue Length 95th (ft)	m69	m#607	#140		#411	#84		44	210	#197		
Internal Link Dist (ft)	377						171		544		251	
Turn Bay Length (ft)	150						170		150			
Base Capacity (vph)	234	1641	255		1752	147		364	354	424		
Starvation Cap Reductn	0	0	0		205	0		0	0	0		
Spillback Cap Reductn	0	0	0		0	0		79	0	7		
Storage Cap Reductn	0	0	0		0	0		0	0	0		
Reduced v/c Ratio	0.59	0.94	0.71		0.95	0.48		0.51	0.65	0.71		

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	87 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	24.4
Intersection LOS:	C
Intersection Capacity Utilization:	79.0%
ICU Level of Service:	D
Analysis Period (min):	15

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 ø1 12 s	 ø2 (R) 44 s	 ø4 23 s	 ø8 11 s
 ø5 12 s	 ø6 (R) 44 s		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land

PM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	1343	426	82	1338	0	0	0	0	45	0	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3415	1558	1877	3558	0	0	0	0	1769	0	1583
Flt Permitted				0.071						0.950		
Satd. Flow (perm)	0	3415	1558	140	3558	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			169									85
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.92	0.92	0.92	0.79	0.79	0.79
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1767	561	105	1715	0	0	0	0	57	0	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1767	561	105	1715	0	0	0	0	57	0	165
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	1	2					2		2
Detector Template												
Leading Detector (ft)		83	0	50	83					83		83
Trailing Detector (ft)		-5	0	0	-5					-5		-5
Detector 1 Position(ft)		-5	0	0	-5					-5		-5
Detector 1 Size(ft)		40	50	50	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43			43					43		43
Detector 2 Size(ft)		40			40					40		40
Detector 2 Type		Cl+Ex			Cl+Ex					Cl+Ex		Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0					0.0		0.0
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		35.0		20.0	55.0					35.0		35.0
Total Split (%)		38.9%		22.2%	61.1%					38.9%		38.9%
Maximum Green (s)		30.0		15.0	50.0					30.0		30.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effct Green (s)		62.5	90.0	71.3	71.3					10.7		10.7
Actuated g/C Ratio		0.69	1.00	0.79	0.79					0.12		0.12
v/c Ratio		0.74	0.36	0.44	0.61					0.27		0.63
Control Delay		6.8	0.4	16.5	1.3					37.5		29.2
Queue Delay		2.2	0.0	0.0	0.9					0.0		0.0
Total Delay		9.0	0.4	16.5	2.2					37.5		29.2
LOS		A	A	B	A					D		C
Approach Delay		6.9			3.0							
Approach LOS		A			A							
Queue Length 50th (ft)		135	0	9	14					30		43
Queue Length 95th (ft)		146	m0	m21	21					53		79
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2372	1558	419	2818					609		600
Starvation Cap Reductn		443	0	0	374					0		0
Spillback Cap Reductn		59	0	0	728					0		16
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.92	0.36	0.25	0.82					0.09		0.28

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 6.5
 Intersection Capacity Utilization 81.2%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

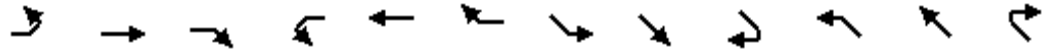


Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land

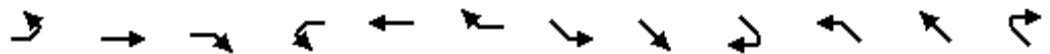
PM Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	397	991	0	0	981	81	0	0	0	440	0	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	300		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t					0.989							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	3473	0	0	0	0	3554	0	1639
Fl _t Permitted	0.106									0.950		
Satd. Flow (perm)	187	1729	0	0	3473	0	0	0	0	3554	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11							125
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1119
Travel Time (s)		7.2			8.2			17.8				25.4
Peak Hour Factor	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	446	1113	0	0	1022	84	0	0	0	494	0	406
Shared Lane Traffic (%)												
Lane Group Flow (vph)	446	1113	0	0	1106	0	0	0	0	494	0	406
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)		23			23			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



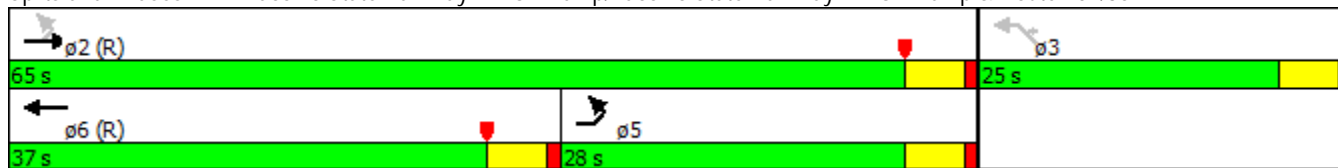
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	28.0	65.0			37.0					25.0		25.0
Total Split (%)	31.1%	72.2%			41.1%					27.8%		27.8%
Maximum Green (s)	23.0	60.0			32.0					20.0		20.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0					-1.0		-1.0
Total Lost Time (s)	4.0	4.0			4.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					None		None
Act Effct Green (s)	62.4	62.4			34.4					19.6		19.6
Actuated g/C Ratio	0.69	0.69			0.38					0.22		0.22
v/c Ratio	0.85	0.93			0.83					0.64		0.89
Control Delay	30.0	16.2			32.0					35.9		47.2
Queue Delay	0.0	17.6			0.0					0.0		0.0
Total Delay	30.0	33.8			32.0					35.9		47.2
LOS	C	C			C					D		D
Approach Delay		32.7			32.0							
Approach LOS		C			C							
Queue Length 50th (ft)	188	178			298					129		157
Queue Length 95th (ft)	#361	#880			#401					177		#311
Internal Link Dist (ft)		395			460			701			1039	
Turn Bay Length (ft)										300		530
Base Capacity (vph)	526	1199			1335					829		478
Starvation Cap Reductn	0	116			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.85	1.03			0.83					0.60		0.85

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 76 (84%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 34.6 Intersection LOS: C
 Intersection Capacity Utilization 81.2% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

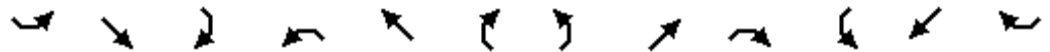
Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land
 1: Bear Mountain Pkwy. Ext. & Stoney Street

Saturday Peak Hour
 4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	9	66	23	1	99	40	80	200	13	92	637	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.961			0.961			0.991				0.972
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1885	1906	0	0	1799	0	1805	1883	0	1805	1847	0
Flt Permitted	0.363				0.998		0.117			0.587		
Satd. Flow (perm)	720	1906	0	0	1795	0	222	1883	0	1115	1847	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			21			4			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	73	26	1	109	44	89	222	14	97	671	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	99	0	0	154	0	89	236	0	97	823	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	88	88		50	88		88	88		88	88	
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	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	

2019 No-Build Traffic Volumes - With State Land
 1: Bear Mountain Pkwy. Ext. & Stoney Street

Saturday Peak Hour
 4/2/2015

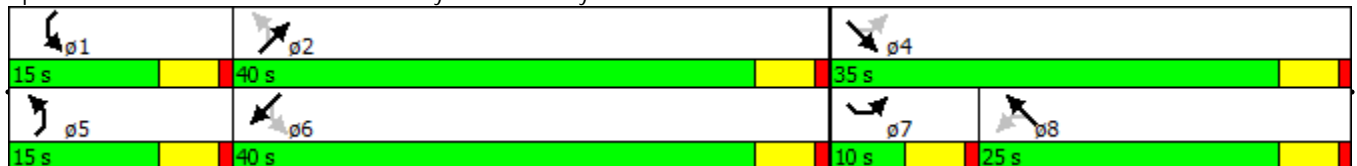


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-1.0	-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effect Green (s)	13.4	13.4			11.8		46.0	39.4		46.1	39.5	
Actuated g/C Ratio	0.19	0.19			0.17		0.65	0.56		0.65	0.56	
v/c Ratio	0.04	0.26			0.49		0.28	0.22		0.12	0.79	
Control Delay	21.9	20.3			28.9		7.4	11.3		5.4	23.3	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	21.9	20.3			28.9		7.4	11.3		5.4	23.3	
LOS	C	C			C		A	B		A	C	
Approach Delay		20.5			28.9			10.2			21.4	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	4	28			50		9	46		10	253	
Queue Length 95th (ft)	15	65			118		38	134		41	#710	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	236	857			554		400	1052		869	1038	
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	0.04	0.12			0.28		0.22	0.22		0.11	0.79	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 70.7
 Natural Cycle: 80
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 19.7
 Intersection LOS: B
 Intersection Capacity Utilization 65.2%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land
 2: Stoney Street & Old Crompond Road

Saturday Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	75	204	247	74	99	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901				0.927	
Flt Protected				0.963	0.978	
Satd. Flow (prot)	1670	0	0	1803	1672	0
Flt Permitted				0.963	0.978	
Satd. Flow (perm)	1670	0	0	1803	1672	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			991	190	
Travel Time (s)	12.3			22.5	4.3	
Peak Hour Factor	0.88	0.88	0.58	0.58	0.91	0.91
Adj. Flow (vph)	85	232	426	128	109	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	317	0	0	554	239	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.8%
Analysis Period (min)	15
	ICU Level of Service B

Intersection									
Intersection Delay, s/veh	19.5								
Intersection LOS	C								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	75	204	0	247	74	0	99	118
Peak Hour Factor	0.92	0.88	0.88	0.92	0.58	0.58	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	85	232	0	426	128	0	109	130
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	12	26.8	12.6
HCM LOS	B	D	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	46%	0%	77%
Vol Thru, %	0%	27%	23%
Vol Right, %	54%	73%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	217	279	321
LT Vol	99	0	247
Through Vol	0	75	74
RT Vol	118	204	0
Lane Flow Rate	238	317	553
Geometry Grp	1	1	1
Degree of Util (X)	0.387	0.442	0.809
Departure Headway (Hd)	5.843	5.016	5.26
Convergence, Y/N	Yes	Yes	Yes
Cap	615	717	686
Service Time	3.894	3.059	3.294
HCM Lane V/C Ratio	0.387	0.442	0.806
HCM Control Delay	12.6	12	26.8
HCM Lane LOS	B	B	D
HCM 95th-tile Q	1.8	2.3	8.4

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 No-Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	1214	262	274	803	46	254	54	366	232	126	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.968		0.950	0.984	
Satd. Flow (prot)	1770	3539	1552	1770	3719	0	1681	1713	1583	1698	1759	1546
Flt Permitted	0.318			0.154			0.950	0.968		0.950	0.984	
Satd. Flow (perm)	592	3539	1552	287	3719	0	1669	1705	1583	1698	1759	1512
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			261		7				131			131
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1502			289				190
Travel Time (s)		9.3			22.8			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	118	1278	288	304	845	51	282	60	407	258	140	94
Shared Lane Traffic (%)							41%			26%		
Lane Group Flow (vph)	118	1278	288	304	896	0	166	176	407	191	207	94
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	88	0	0	88	0		88	88	88	50	88	88
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6

2019 No-Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



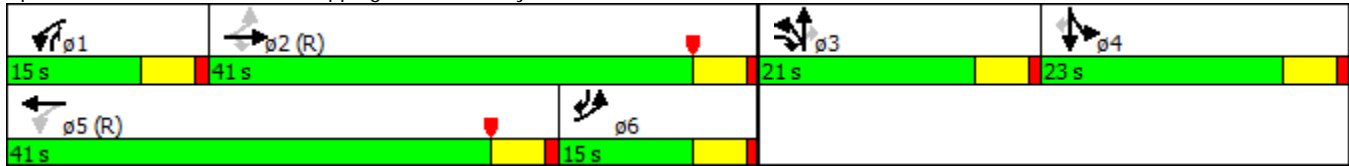
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	14.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	4.0
Minimum Split (s)	10.0	20.0	16.0	11.0	36.0		16.0	16.0	11.0	20.0	20.0	10.0
Total Split (s)	15.0	41.0	21.0	15.0	41.0		21.0	21.0	15.0	23.0	23.0	15.0
Total Split (%)	15.0%	41.0%	21.0%	15.0%	41.0%		21.0%	21.0%	15.0%	23.0%	23.0%	15.0%
Maximum Green (s)	10.0	36.0	16.0	10.0	36.0		16.0	16.0	10.0	18.0	18.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-0.7	-1.0	-1.0	0.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.3	4.0	4.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	37.0	36.7	56.2	41.1	40.1		15.2	15.2	30.3	16.7	16.7	27.7
Actuated g/C Ratio	0.37	0.37	0.56	0.41	0.40		0.15	0.15	0.30	0.17	0.17	0.28
v/c Ratio	0.34	0.98	0.29	0.89	0.60		0.65	0.67	0.71	0.67	0.71	0.18
Control Delay	29.2	53.8	2.5	36.0	18.1		51.9	53.1	19.7	51.2	52.6	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	53.8	2.5	36.0	18.1		51.9	53.1	19.7	51.2	52.6	1.9
LOS	C	D	A	D	B		D	D	B	D	D	A
Approach Delay		43.3			22.6			34.7				42.4
Approach LOS		D			C			C				D
Queue Length 50th (ft)	50	419	7	~157	231		104	110	93	120	130	0
Queue Length 95th (ft)	91	#574	41	m#206	m275		175	185	#168	194	209	11
Internal Link Dist (ft)		532			1422			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	348	1298	1009	341	1494		285	291	571	322	334	517
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.98	0.29	0.89	0.60		0.58	0.60	0.71	0.59	0.62	0.18

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 62 (62%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 35.6
 Intersection LOS: D
 Intersection Capacity Utilization 84.8%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

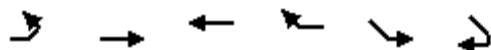
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 No-Build Traffic Volumes - With State Land
4: Route 202/35 & Old Crompond Road

Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1811	1213	50	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.993		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3415	3637	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3415	3637	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		316	457		1067	
Travel Time (s)		4.8	6.9		24.3	
Peak Hour Factor	0.97	0.97	0.95	0.85	0.90	0.90
Adj. Flow (vph)	0	1867	1277	59	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1867	1336	0	4	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.1%
Analysis Period (min)	15
	ICU Level of Service B

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1811	1213	50	2	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	97	97	95	85	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1867	1277	59	2	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1336	0	2240
Stage 1	-	-	1306
Stage 2	-	-	934
Critical Hdwy	4.14	-	8.84
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuver	*878	-	*22
Stage 1	-	-	*553
Stage 2	-	-	*204
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	*878	-	*22
Mov Cap-2 Maneuver	-	-	*22
Stage 1	-	-	*553
Stage 2	-	-	*204

Approach	EB	WB	SE
HCM Control Delay, s	0	0	100.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	* 878	-	-	-	42
HCM Lane V/C Ratio	-	-	-	-	0.106
HCM Control Delay (s)	0	-	-	-	100.6
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 No-Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	194	1580	39	115	921	542	44	5	81	438	5	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		150	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t		0.996			0.943				0.850		0.888	
Fl _t Protected	0.950			0.950				0.957		0.950	0.988	
Satd. Flow (prot)	1699	3384	0	1832	3454	0	0	1818	1615	1681	1553	0
Fl _t Permitted	0.083			0.090				0.957		0.950	0.988	
Satd. Flow (perm)	148	3384	0	174	3454	0	0	1818	1615	1681	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			161				131			140
Link Speed (mph)		45			45			30				30
Link Distance (ft)		457			251			624				173
Travel Time (s)		6.9			3.8			14.2				3.9
Peak Hour Factor	0.92	0.95	0.90	0.91	0.95	0.92	0.90	0.92	0.90	0.92	0.92	0.92
Adj. Flow (vph)	211	1663	43	126	969	589	49	5	90	476	5	324
Shared Lane Traffic (%)										22%		
Lane Group Flow (vph)	211	1706	0	126	1558	0	0	54	90	371	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83	50	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		-5	-5	0	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		-5	-5	0	-5	-5	
Detector 1 Size(ft)	88	88		88	88		88	88	50	88	88	
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	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases	2			6					8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		1.0	1.0		4.0	4.0	1.0	4.0	4.0	
Minimum Split (s)	9.0	10.0		7.0	9.0		9.0	9.0	7.0	9.0	9.0	

2019 No-Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

Saturday Peak Hour
 4/2/2015

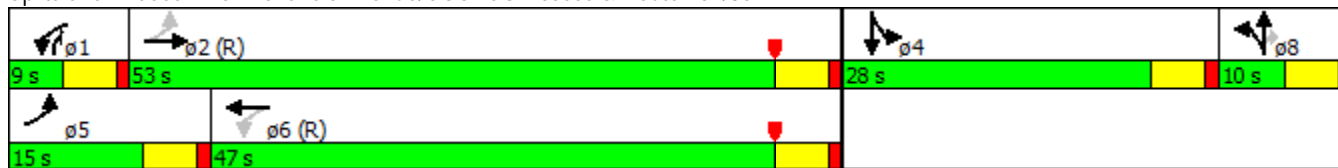


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	15.0	53.0		9.0	47.0		10.0	10.0	9.0	28.0	28.0	
Total Split (%)	15.0%	53.0%		9.0%	47.0%		10.0%	10.0%	9.0%	28.0%	28.0%	
Maximum Green (s)	10.0	48.0		4.0	42.0		5.0	5.0	4.0	23.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	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)	-1.0	-1.0		-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)							5.0	5.0		5.0	5.0	
Flash Dont Walk (s)							11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effect Green (s)	59.7	50.5		50.9	45.3			6.1	13.6	23.9	23.9	
Actuated g/C Ratio	0.60	0.50		0.51	0.45			0.06	0.14	0.24	0.24	
v/c Ratio	0.83	1.00		0.70	0.94			0.49	0.27	0.92	0.91	
Control Delay	48.6	28.9		46.5	22.6			61.0	4.6	67.9	49.9	
Queue Delay	0.0	23.8		0.0	0.7			0.0	0.0	0.0	0.7	
Total Delay	48.6	52.7		46.5	23.3			61.0	4.6	67.9	50.5	
LOS	D	D		D	C			E	A	E	D	
Approach Delay		52.3			25.1			25.8			58.5	
Approach LOS		D			C			C			E	
Queue Length 50th (ft)	98	-609		29	394			34	0	244	200	
Queue Length 95th (ft)	m120	m#665		#129	#111			#79	20	#426	#397	
Internal Link Dist (ft)		377			171			544			93	
Turn Bay Length (ft)	150			170					150			
Base Capacity (vph)	259	1711		180	1653			110	332	403	479	
Starvation Cap Reductn	0	0		0	17			0	0	0	0	
Spillback Cap Reductn	0	113		0	0			0	4	0	4	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.81	1.07		0.70	0.95			0.49	0.27	0.92	0.91	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 12 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 42.5 Intersection LOS: D
 Intersection Capacity Utilization 91.6% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	1557	543	121	1393	0	0	0	0	64	0	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3415	1558	1877	3558	0	0	0	0	1769	0	1583
Flt Permitted				0.089						0.950		
Satd. Flow (perm)	0	3415	1558	176	3558	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			169									80
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.94	0.95	0.94	0.97	0.97	0.97	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1639	578	125	1436	0	0	0	0	71	0	193
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1639	578	125	1436	0	0	0	0	71	0	193
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1		1
Detector Template												
Leading Detector (ft)		83	0	83	83					83		83
Trailing Detector (ft)		-5	0	-5	-5					-5		-5
Detector 1 Position(ft)		-5	0	-5	-5					-5		-5
Detector 1 Size(ft)		88	0	88	88					88		88
Detector 1 Type		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
Detector 1 Queue (s)		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
Turn Type		NA	Free	pm+pt	NA					Perm		Perm
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

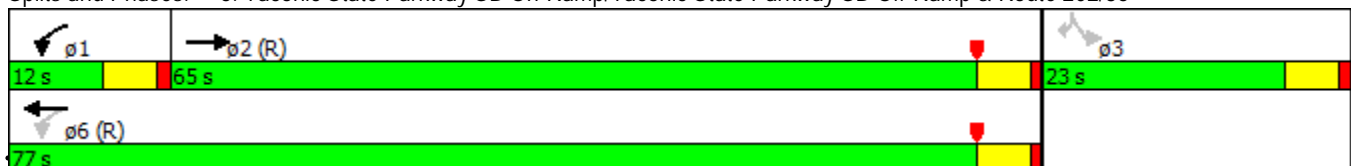


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		65.0		12.0	77.0					23.0		23.0
Total Split (%)		65.0%		12.0%	77.0%					23.0%		23.0%
Maximum Green (s)		60.0		7.0	72.0					18.0		18.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effect Green (s)		68.1	100.0	79.2	79.2					12.8		12.8
Actuated g/C Ratio		0.68	1.00	0.79	0.79					0.13		0.13
v/c Ratio		0.71	0.37	0.48	0.51					0.31		0.71
Control Delay		5.7	0.2	18.6	2.4					41.3		37.9
Queue Delay		13.5	0.0	0.0	0.8					0.2		0.1
Total Delay		19.2	0.2	18.6	3.2					41.5		38.0
LOS		B	A	B	A					D		D
Approach Delay		14.3			4.4							
Approach LOS		B			A							
Queue Length 50th (ft)		68	0	17	111					42		69
Queue Length 95th (ft)		m240	m0	m37	130					79		135
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2324	1558	278	2818					336		365
Starvation Cap Reductn		697	0	0	972					0		0
Spillback Cap Reductn		88	0	0	226					53		4
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		1.01	0.37	0.45	0.78					0.25		0.53

Intersection Summary

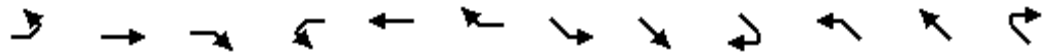
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 12.1 Intersection LOS: B
 Intersection Capacity Utilization 79.8% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35



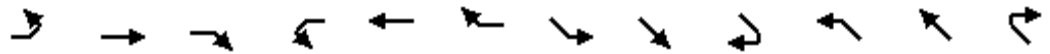
Two Way Analysis cannot be performed on Signalized Intersection.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	↘	↑			↑↑					↘↘		↘
Volume (vph)	472	1148	0	0	1182	48	0	0	0	332	0	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	300		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t					0.994							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	3489	0	0	0	0	3554	0	1639
Fl _t Permitted	0.082									0.950		
Satd. Flow (perm)	145	1729	0	0	3489	0	0	0	0	3554	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5							107
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1112
Travel Time (s)		7.2			8.2			17.8				25.3
Peak Hour Factor	0.91	0.91	0.91	0.90	0.95	0.90	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	519	1262	0	0	1244	53	0	0	0	353	0	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	519	1262	0	0	1297	0	0	0	0	353	0	118
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)		23			23			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1					1		1
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	88	88			88					88		88
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
Turn Type	pm+pt	NA			NA					Perm		Perm
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

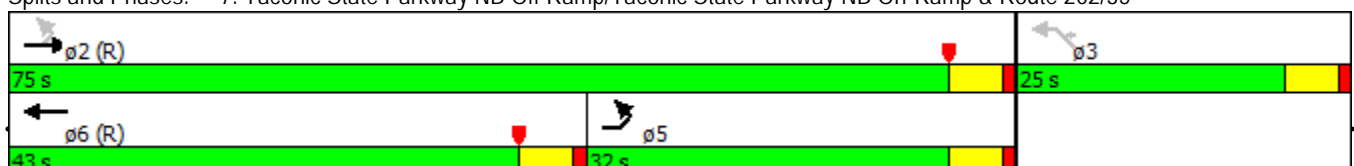


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	32.0	75.0			43.0					25.0		25.0
Total Split (%)	32.0%	75.0%			43.0%					25.0%		25.0%
Maximum Green (s)	27.0	70.0			38.0					20.0		20.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.5	-2.0			-1.0					-1.0		-1.0
Total Lost Time (s)	3.5	3.0			4.0					4.0		4.0
Lead/Lag	Lag			Lead								
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					None		None
Act Effct Green (s)	77.0	77.5			44.5					15.5		15.5
Actuated g/C Ratio	0.77	0.78			0.44					0.16		0.16
v/c Ratio	0.95	0.94			0.83					0.64		0.34
Control Delay	44.9	22.2			31.2					44.8		11.5
Queue Delay	6.1	0.0			0.0					0.0		0.0
Total Delay	51.0	22.2			31.2					44.8		11.5
LOS	D	C			C					D		B
Approach Delay		30.6			31.2							
Approach LOS		C			C							
Queue Length 50th (ft)	292	607			371					110		6
Queue Length 95th (ft)	#490	#1098			#555					147		52
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)										300		530
Base Capacity (vph)	547	1339			1554					746		428
Starvation Cap Reductn	20	0			0					0		0
Spillback Cap Reductn	0	0			4					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.98	0.94			0.84					0.47		0.28

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 31.6 Intersection LOS: C
 Intersection Capacity Utilization 79.8% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

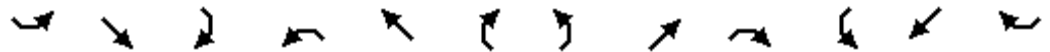


Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR

4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	90	130	52	2	33	26	22	208	2	149	297	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%			0%	
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.957			0.943			0.999			0.996	
Flt Protected	0.950				0.998		0.950			0.950		
Satd. Flow (prot)	1885	1899	0	0	1762	0	1805	1898	0	1805	1892	0
Flt Permitted	0.578				0.980		0.556			0.459		
Satd. Flow (perm)	1147	1899	0	0	1730	0	1056	1898	0	872	1892	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			28			1			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	98	141	57	2	36	28	24	231	2	166	330	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	198	0	0	66	0	24	233	0	166	340	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2		2	2		2	2	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	40	40		50	40		40	40		40	40	
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)	43	43			43		43	43		43	43	
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												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	

2019 Build Traffic Volumes - With State Land
 1: Bear Mountain Pkwy. Ext. & Stoney Street

AM PEAK HOUR
 4/2/2015










Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		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	
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			0.5		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.5		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effct Green (s)	13.3	13.3			7.0		18.5	13.9		23.8	22.3	
Actuated g/C Ratio	0.28	0.28			0.15		0.38	0.29		0.49	0.46	
v/c Ratio	0.24	0.37			0.24		0.05	0.42		0.28	0.39	
Control Delay	16.0	15.3			17.6		7.9	19.7		8.6	12.2	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	16.0	15.3			17.6		7.9	19.7		8.6	12.2	
LOS	B	B			B		A	B		A	B	
Approach Delay		15.5			17.6			18.6			11.1	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	21	39			11		4	62		26	59	
Queue Length 95th (ft)	58	97			44		13	127		57	172	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	410	1275			766		636	1414		639	1410	
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	0.24	0.16			0.09		0.04	0.16		0.26	0.24	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	48.1
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.42
Intersection Signal Delay:	14.3
Intersection Capacity Utilization:	43.7%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	A

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street

 ø1	 ø2	 ø4	
15 s	40 s	35 s	
 ø5	 ø6	 ø7	 ø8
15 s	40 s	10 s	25 s

Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
2: Stoney Street & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	43	240	131	35	30	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.886				0.905	
Flt Protected				0.962	0.985	
Satd. Flow (prot)	1642	0	0	1801	1644	0
Flt Permitted				0.962	0.985	
Satd. Flow (perm)	1642	0	0	1801	1644	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1020	190	
Travel Time (s)	12.3			23.2	4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	267	146	39	33	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	315	0	0	185	110	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.1%
Analysis Period (min)	15
	ICU Level of Service A

Intersection									
Intersection Delay, s/veh	8.9								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	43	240	0	131	35	0	30	69
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	267	0	146	39	0	33	77
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.9	9.1	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	30%	0%	79%
Vol Thru, %	0%	15%	21%
Vol Right, %	70%	85%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	99	283	166
LT Vol	30	0	131
Through Vol	0	43	35
RT Vol	69	240	0
Lane Flow Rate	110	314	184
Geometry Grp	1	1	1
Degree of Util (X)	0.141	0.34	0.238
Departure Headway (Hd)	4.615	3.896	4.651
Convergence, Y/N	Yes	Yes	Yes
Cap	777	924	773
Service Time	2.647	1.913	2.675
HCM Lane V/C Ratio	0.142	0.34	0.238
HCM Control Delay	8.4	8.9	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	1.5	0.9

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	1216	227	137	479	16	132	16	254	161	74	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.962		0.950	0.981	
Satd. Flow (prot)	1770	3471	1552	1770	3664	0	1681	1702	1583	1698	1753	1546
Flt Permitted	0.452			0.444			0.950	0.962		0.950	0.981	
Satd. Flow (perm)	842	3471	1552	827	3664	0	1666	1690	1583	1698	1753	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			218		3				149			149
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1517			289				190
Travel Time (s)		9.3			23.0			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	71	1322	247	149	521	17	147	18	282	179	82	149
Shared Lane Traffic (%)							46%			28%		
Lane Group Flow (vph)	71	1322	247	149	538	0	79	86	282	129	132	149
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		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	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				43			43	43	43	43	43	43
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

2019 Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015



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	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	16.0	11.0	36.0		16.0	16.0	11.0	16.0	16.0	11.0
Total Split (s)	19.0	49.0	19.0	19.0	49.0		19.0	19.0	19.0	23.0	23.0	19.0
Total Split (%)	17.3%	44.5%	17.3%	17.3%	44.5%		17.3%	17.3%	17.3%	20.9%	20.9%	17.3%
Maximum Green (s)	13.0	43.0	13.0	13.0	43.0		13.0	13.0	13.0	17.0	17.0	13.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	Max	C-Max	None	None	None		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	50.2	50.2	66.6	21.8	21.8		12.4	12.4	25.2	14.6	14.6	55.8
Actuated g/C Ratio	0.46	0.46	0.61	0.20	0.20		0.11	0.11	0.23	0.13	0.13	0.51
v/c Ratio	0.10	0.83	0.24	0.55	0.74		0.42	0.45	0.59	0.57	0.57	0.17
Control Delay	21.0	33.5	2.8	45.4	47.3		52.2	53.1	14.9	54.6	54.1	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	33.5	2.8	45.4	47.3		52.2	53.1	14.9	54.6	54.1	2.0
LOS	C	C	A	D	D		D	D	B	D	D	A
Approach Delay		28.3			46.9			28.9				35.3
Approach LOS		C			D			C				D
Queue Length 50th (ft)	28	427	8	93	187		55	61	54	91	93	0
Queue Length 95th (ft)	61	#623	44	147	233		106	112	102	152	154	21
Internal Link Dist (ft)		532			1437			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	731	1584	1045	286	1467		213	216	496	277	286	852
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.83	0.24	0.52	0.37		0.37	0.40	0.57	0.47	0.46	0.17

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

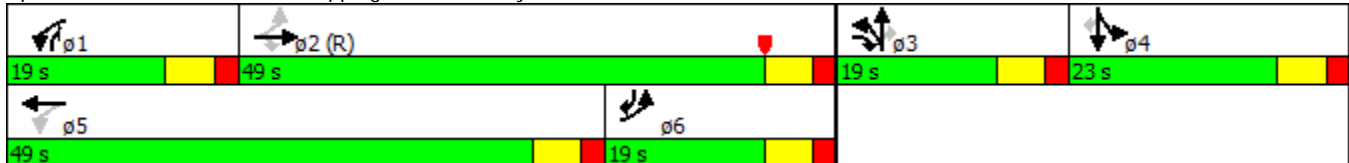
2019 Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015

Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 33.3 Intersection LOS: C
 Intersection Capacity Utilization 74.9% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

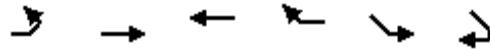
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1630	664	92	3	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.982		0.946	
Flt Protected					0.971	
Satd. Flow (prot)	0	3350	3536	0	1626	0
Flt Permitted					0.971	
Satd. Flow (perm)	0	3350	3536	0	1626	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		293	457		1070	
Travel Time (s)		4.4	6.9		24.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.90
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1772	722	100	3	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1772	822	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.1%
Analysis Period (min)	15
	ICU Level of Service B

2019 Build Traffic Volumes - With State Land
4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
4/2/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1630	664	92	3	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	92	92	92	92	92	90
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1772	722	100	3	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	822	0	1658
Stage 1	-	-	772
Stage 2	-	-	886
Critical Hdwy	4.14	-	8.84
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuver	1073	-	62
Stage 1	-	-	645
Stage 2	-	-	222
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	1073	-	62
Mov Cap-2 Maneuver	-	-	62
Stage 1	-	-	645
Stage 2	-	-	222

Approach	EB	WB	SE
HCM Control Delay, s	0	0	43.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	1073	-	-	-	99
HCM Lane V/C Ratio	-	-	-	-	0.055
HCM Control Delay (s)	0	-	-	-	43.5
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

AM PEAK HOUR

4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	1577	13	45	674	121	23	1	36	80	1	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		100	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t		0.999			0.977				0.850		0.876	
Fl _t Protected	0.950			0.950				0.954		0.950	0.992	
Satd. Flow (prot)	1699	3329	0	1832	3520	0	0	1813	1615	1681	1538	0
Fl _t Permitted	0.290			0.071				0.954		0.950	0.992	
Satd. Flow (perm)	519	3329	0	137	3520	0	0	1813	1615	1681	1538	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			30				85		63	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		457			251			624			252	
Travel Time (s)		6.9			3.8			14.2			5.7	
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%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	47	1714	14	49	733	132	25	1	39	87	1	63
Shared Lane Traffic (%)										14%		
Lane Group Flow (vph)	47	1728	0	49	865	0	0	26	39	75	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2	2	2	2	
Detector Template												
Leading Detector (ft)	83	83		83	83		50	83	83	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5	-5	-5	-5	
Detector 1 Size(ft)	40	40		40	40		50	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)	43	43		43	43			43	43	43	43	
Detector 2 Size(ft)	40	40		40	40			40	40	40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	

2019 Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

AM PEAK HOUR
 4/2/2015




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases	2			6					8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		1.0	1.0		4.0	4.0	1.0	4.0	4.0	
Minimum Split (s)	9.0	10.0		7.0	9.0		10.0	10.0	7.0	10.0	10.0	
Total Split (s)	15.0	45.0		15.0	45.0		15.0	15.0	15.0	15.0	15.0	
Total Split (%)	16.7%	50.0%		16.7%	50.0%		16.7%	16.7%	16.7%	16.7%	16.7%	
Maximum Green (s)	10.0	40.0		10.0	40.0		10.0	10.0	10.0	10.0	10.0	
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)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effct Green (s)	66.0	60.8		66.9	63.0			8.0	12.7	9.6	7.6	
Actuated g/C Ratio	0.73	0.68		0.74	0.70			0.09	0.14	0.11	0.08	
v/c Ratio	0.10	0.77		0.20	0.35			0.16	0.13	0.42	0.41	
Control Delay	5.4	18.6		9.5	3.0			39.7	1.5	44.4	20.4	
Queue Delay	0.0	0.0		0.0	0.2			0.0	0.0	0.0	0.0	
Total Delay	5.4	18.6		9.5	3.1			39.7	1.5	44.4	20.4	
LOS	A	B		A	A			D	A	D	C	
Approach Delay		18.3			3.5			16.8			32.3	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	4	308		1	8			14	0	42	7	
Queue Length 95th (ft)	21	#707		21	78			38	4	87	50	
Internal Link Dist (ft)		377			171			544			172	
Turn Bay Length (ft)	150			170					100			
Base Capacity (vph)	540	2249		311	2472			221	362	205	210	
Starvation Cap Reductn	0	0		0	720			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.09	0.77		0.16	0.49			0.12	0.11	0.37	0.36	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 9 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 14.3
 Intersection LOS: B
 Intersection Capacity Utilization 63.0%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 ø1	 ø2 (R)	 ø4	 ø8
15 s	45 s	15 s	15 s
 ø5	 ø6 (R)		
15 s	45 s		

Two Way Analysis cannot be performed on Signalized Intersection.

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	919	773	323	738	0	0	0	0	92	0	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850									0.850
Fl _t Protected				0.950						0.950		
Satd. Flow (prot)	0	3350	1558	1877	3490	0	0	0	0	1769	0	1583
Fl _t Permitted				0.220						0.950		
Satd. Flow (perm)	0	3350	1558	435	3490	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			447									113
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	999	840	351	802	0	0	0	0	102	0	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	999	840	351	802	0	0	0	0	102	0	113
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	2	2					2		2
Detector Template												
Leading Detector (ft)		83	0	83	83					83		83
Trailing Detector (ft)		-5	0	-5	-5					-5		-5
Detector 1 Position(ft)		-5	0	-5	-5					-5		-5
Detector 1 Size(ft)		40	50	40	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43		43	43					43		43
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
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



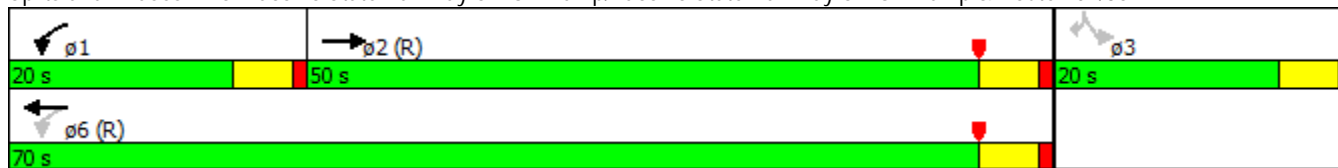
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		50.0		20.0	70.0					20.0		20.0
Total Split (%)		55.6%		22.2%	77.8%					22.2%		22.2%
Maximum Green (s)		45.0		15.0	65.0					15.0		15.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effct Green (s)		56.2	90.0	71.4	71.4					10.6		10.6
Actuated g/C Ratio		0.62	1.00	0.79	0.79					0.12		0.12
v/c Ratio		0.48	0.54	0.67	0.29					0.49		0.40
Control Delay		3.1	3.2	23.9	0.7					44.5		11.3
Queue Delay		0.7	0.0	0.0	0.0					0.0		0.0
Total Delay		3.8	3.2	23.9	0.7					44.5		11.3
LOS		A	A	C	A					D		B
Approach Delay		3.5			7.8							
Approach LOS		A			A							
Queue Length 50th (ft)		18	0	82	0					55		0
Queue Length 95th (ft)		27	311	162	24					100		45
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2091	1558	605	2768					314		374
Starvation Cap Reductn		687	0	0	0					0		0
Spillback Cap Reductn		127	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.71	0.54	0.58	0.29					0.32		0.30

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	12 (13%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.67
Intersection Signal Delay:	6.6
Intersection LOS:	A
Intersection Capacity Utilization:	58.4%
ICU Level of Service:	B
Analysis Period (min):	15

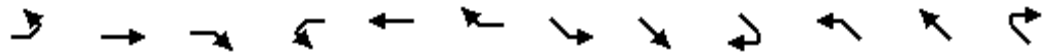
6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35



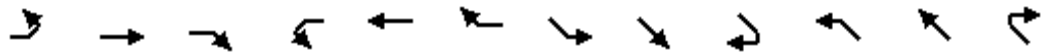
Two Way Analysis cannot be performed on Signalized Intersection.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	138	872	0	0	886	13	0	0	0	175	0	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%			-3%	
Storage Length (ft)	0		0	0		350	0		0	300		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Frt					0.998							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1675	1695	0	0	3434	0	0	0	0	3554	0	1639
Flt Permitted	0.196									0.950		
Satd. Flow (perm)	346	1695	0	0	3434	0	0	0	0	3554	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2							91
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		475			540			781			1112	
Travel Time (s)		7.2			8.2			17.8			25.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	150	948	0	0	963	14	0	0	0	194	0	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	150	948	0	0	977	0	0	0	0	194	0	91
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)		23			23			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



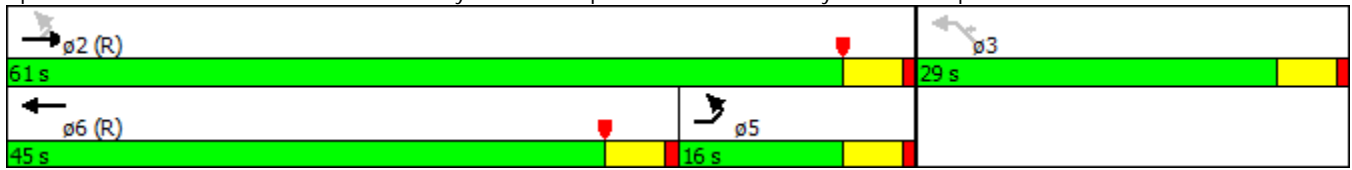
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	16.0	61.0			45.0					29.0		29.0
Total Split (%)	17.8%	67.8%			50.0%					32.2%		32.2%
Maximum Green (s)	11.0	56.0			40.0					24.0		24.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-0.7	-1.0			0.0					-1.0		-1.0
Total Lost Time (s)	4.3	4.0			5.0					4.0		4.0
Lead/Lag		Lag			Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					Max		Max
Act Effct Green (s)	56.7	57.0			40.0					25.0		25.0
Actuated g/C Ratio	0.63	0.63			0.44					0.28		0.28
v/c Ratio	0.38	0.88			0.64					0.20		0.17
Control Delay	8.3	19.6			21.8					25.5		6.6
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	8.3	19.6			21.8					25.5		6.6
LOS	A	B			C					C		A
Approach Delay		18.1			21.8							
Approach LOS		B			C							
Queue Length 50th (ft)	12	453			218					43		0
Queue Length 95th (ft)	25	#704			285					70		34
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)										300		530
Base Capacity (vph)	390	1073			1527					987		521
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	0.38	0.88			0.64					0.20		0.17

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 19.8 Intersection LOS: B
 Intersection Capacity Utilization 58.4% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
 8: Old Crompond Road & Site Access

AM PEAK HOUR
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	40	40	49	57	0	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.927		0.865	
Flt Protected		0.976				
Satd. Flow (prot)	0	1818	1727	0	1611	0
Flt Permitted		0.976				
Satd. Flow (perm)	0	1818	1727	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1020	1070		240	
Travel Time (s)		23.2	24.3		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	43	53	62	0	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	86	115	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.5%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	40	40	49	57	0	62
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, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	43	53	62	0	67

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	115	0	214
Stage 1	-	-	84
Stage 2	-	-	130
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1474	-	774
Stage 1	-	-	939
Stage 2	-	-	896
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1474	-	751
Mov Cap-2 Maneuver	-	-	751
Stage 1	-	-	939
Stage 2	-	-	869

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1474	-	-	-	975
HCM Lane V/C Ratio	0.029	-	-	-	0.069
HCM Control Delay (s)	7.5	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

2019 Build Traffic Volumes - With State Land
 1: Bear Mountain Parkway Ext. & Stoney Street

PM Peak Hour
 4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	79	31	2	123	66	63	155	11	263	1005	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.957			0.953			0.990			0.989	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1885	1899	0	0	1784	0	1805	1881	0	1805	1879	0
Flt Permitted	0.247				0.998		0.056			0.574		
Satd. Flow (perm)	490	1899	0	0	1781	0	106	1881	0	1091	1879	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			19			5			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.82	0.82	0.82	0.83	0.83	0.83	0.76	0.76	0.76	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	18	96	38	2	148	80	83	204	14	313	1196	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	134	0	0	230	0	83	218	0	313	1294	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
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	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		12.0	30.0		12.0	22.0	

2019 Build Traffic Volumes - With State Land
 1: Bear Mountain Parkway Ext. & Stoney Street

PM Peak Hour
 4/2/2015








Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (s)	23.0	23.0		23.0	23.0		13.0	77.0		20.0	84.0	
Total Split (%)	19.2%	19.2%		19.2%	19.2%		10.8%	64.2%		16.7%	70.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		6.0	70.0		13.0	77.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
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		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	8.0	8.0		8.0	8.0			7.0				
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			10.0				
Pedestrian Calls (#/hr)	0	0		0	0			0				
Act Effct Green (s)	16.2	16.2			16.2		75.6	69.9		86.1	77.4	
Actuated g/C Ratio	0.14	0.14			0.14		0.65	0.60		0.74	0.67	
v/c Ratio	0.26	0.48			0.86		0.55	0.19		0.36	1.03	
Control Delay	55.9	47.8			74.8		30.2	11.0		5.6	54.1	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	55.9	47.8			74.8		30.2	11.0		5.6	54.1	
LOS	E	D			E		C	B		A	D	
Approach Delay		48.7			74.8			16.3			44.6	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)	12	85			160		15	70		63	~1110	
Queue Length 95th (ft)	34	134			#250		45	93		85	#1219	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	76	308			294		158	1166		904	1260	
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	0.24	0.44			0.78		0.53	0.19		0.35	1.03	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 115.6
 Natural Cycle: 120
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 44.2 Intersection LOS: D
 Intersection Capacity Utilization 90.0% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Bear Mountain Parkway Ext. & Stoney Street

 $\phi 1$	 $\phi 2$	 $\phi 3$
13 s	84 s	23 s
 $\phi 5$	 $\phi 6$	
20 s	77 s	

Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	92	244	412	102	114	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.902				0.924	
Flt Protected				0.961	0.979	
Satd. Flow (prot)	1672	0	0	1799	1668	0
Flt Permitted				0.961	0.979	
Satd. Flow (perm)	1672	0	0	1799	1668	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1014	190	
Travel Time (s)	12.3			23.0	4.3	
Peak Hour Factor	0.77	0.77	0.56	0.56	0.74	0.74
Adj. Flow (vph)	119	317	736	182	154	200
Shared Lane Traffic (%)						
Lane Group Flow (vph)	436	0	0	918	354	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.4%
Analysis Period (min)	15
	ICU Level of Service D

Intersection									
Intersection Delay, s/veh	42.4								
Intersection LOS	E								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	92	244	0	412	102	0	114	148
Peak Hour Factor	0.92	0.77	0.77	0.92	0.56	0.56	0.92	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	119	317	0	736	182	0	154	200
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	20.7	61.5	19.7
HCM LOS	C	F	C

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	44%	0%	80%
Vol Thru, %	0%	27%	20%
Vol Right, %	56%	73%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	262	336	514
LT Vol	114	0	412
Through Vol	0	92	102
RT Vol	148	244	0
Lane Flow Rate	354	436	918
Geometry Grp	1	1	1
Degree of Util (X)	0.629	0.694	1
Departure Headway (Hd)	6.396	5.726	6.066
Convergence, Y/N	Yes	Yes	Yes
Cap	566	633	606
Service Time	4.412	3.749	4.103
HCM Lane V/C Ratio	0.625	0.689	1.515
HCM Control Delay	19.7	20.7	61.5
HCM Lane LOS	C	C	F
HCM 95th-tile Q	4.4	5.5	14.9

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	1044	230	225	787	56	257	61	301	320	128	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.990				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.970		0.950	0.979	
Satd. Flow (prot)	1770	3539	1552	1770	3715	0	1681	1717	1583	1698	1750	1546
Flt Permitted	0.307			0.194			0.950	0.970		0.950	0.979	
Satd. Flow (perm)	572	3539	1552	361	3715	0	1671	1710	1583	1698	1750	1514
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253		8				145			145
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1512			289				190
Travel Time (s)		9.3			22.9			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	138	1147	253	234	820	58	289	69	338	381	152	270
Shared Lane Traffic (%)							40%			29%		
Lane Group Flow (vph)	138	1147	253	234	878	0	173	185	338	271	262	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2019 Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



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	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	10.0	20.0	15.0	10.0	20.0		15.0	15.0	10.0	15.0	15.0	10.0
Total Split (s)	15.0	33.0	18.0	15.0	33.0		18.0	18.0	15.0	24.0	24.0	15.0
Total Split (%)	16.7%	36.7%	20.0%	16.7%	36.7%		20.0%	20.0%	16.7%	26.7%	26.7%	16.7%
Maximum Green (s)	10.0	28.0	13.0	10.0	28.0		13.0	13.0	10.0	19.0	19.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	31.6	31.6	47.8	31.7	31.7		13.2	13.2	24.4	18.1	18.1	29.1
Actuated g/C Ratio	0.35	0.35	0.53	0.35	0.35		0.15	0.15	0.27	0.20	0.20	0.32
v/c Ratio	0.40	0.92	0.27	0.78	0.67		0.70	0.73	0.63	0.80	0.75	0.46
Control Delay	31.2	43.0	2.4	25.8	16.9		52.6	54.8	14.0	51.9	47.5	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	43.0	2.4	25.8	16.9		52.6	54.8	14.0	51.9	47.5	8.2
LOS	C	D	A	C	B		D	D	B	D	D	A
Approach Delay		35.3			18.8			34.5			35.8	
Approach LOS		D			B			C			D	
Queue Length 50th (ft)	57	~344	0	76	197		98	106	47	150	144	29
Queue Length 95th (ft)	103	#490	35	m95	m247		#183	#197	92	222	212	57
Internal Link Dist (ft)		532			1432			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	346	1241	953	305	1314		261	267	538	377	388	590
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.92	0.27	0.77	0.67		0.66	0.69	0.63	0.72	0.68	0.46

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92

2019 Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015

Intersection Signal Delay: 30.8 Intersection LOS: C
 Intersection Capacity Utilization 79.2% ICU Level of Service D
 Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

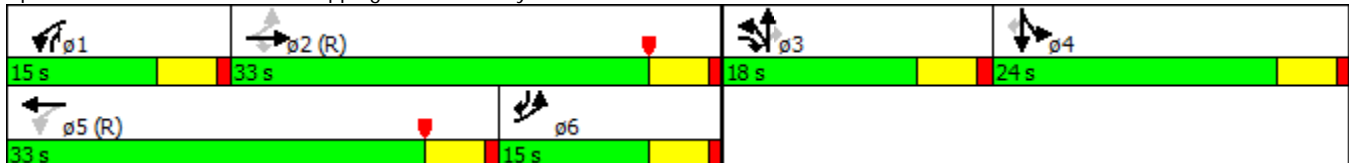
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

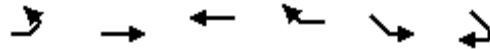
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
4: Route 202/35 & Old Crompond Road

PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1666	1144	136	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.984		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3350	3542	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3350	3542	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		309	457		1058	
Travel Time (s)		4.7	6.9		24.0	
Peak Hour Factor	0.85	0.85	0.93	0.93	0.80	0.80
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1960	1230	146	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1960	1376	0	2	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.1%
Analysis Period (min)	15
	ICU Level of Service B

2019 Build Traffic Volumes - With State Land
4: Route 202/35 & Old Crompond Road

PM Peak Hour
4/2/2015

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1666	1144	136	1	1
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, %	-	7	-7	-	10	-
Peak Hour Factor	85	85	93	93	80	80
Heavy Vehicles, %	2	4	4	2	2	2
Mvmt Flow	0	1960	1230	146	1	1

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1376	0	688
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	7.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	785	-	*633
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	785	-	*633
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SE
HCM Control Delay, s	0	0	131.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	785	-	-	-	31
HCM Lane V/C Ratio	-	-	-	-	0.081
HCM Control Delay (s)	0	-	-	-	131.1
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	1499	41	160	1042	357	46	3	94	291	3	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		150	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t		0.996			0.963				0.850		0.894	
Fl _t Protected	0.950			0.950				0.954		0.950	0.986	
Satd. Flow (prot)	1699	3384	0	1832	3528	0	0	1813	1615	1681	1560	0
Fl _t Permitted	0.094			0.093				0.954		0.950	0.986	
Satd. Flow (perm)	168	3384	0	179	3528	0	0	1813	1615	1681	1560	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			64				85			120
Link Speed (mph)		45			45			30				30
Link Distance (ft)		457			251			624				331
Travel Time (s)		6.9			3.8			14.2				7.5
Peak Hour Factor	0.92	0.92	0.92	0.88	0.88	0.92	0.65	0.92	0.65	0.92	0.92	0.92
Adj. Flow (vph)	137	1629	45	182	1184	388	71	3	145	316	3	209
Shared Lane Traffic (%)										27%		
Lane Group Flow (vph)	137	1674	0	182	1572	0	0	74	145	231	297	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		2	2	1	2	2	
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83	50	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		5	-5	0	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		5	-5	0	-5	-5	
Detector 1 Size(ft)	40	40		40	40		40	40	50	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)	43	43		43	43		43	43		43	43	
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	

2019 Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6				8					
Detector Phase	5	2	1		6	8		8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	10.0	9.0		9.0	9.0		9.0	9.0	9.0	9.0	
Total Split (s)	12.0	44.0	12.0		44.0	11.0		11.0	12.0	23.0	23.0	
Total Split (%)	13.3%	48.9%	13.3%		48.9%	12.2%		12.2%	13.3%	25.6%	25.6%	
Maximum Green (s)	7.0	39.0	7.0		39.0	6.0		6.0	7.0	18.0	18.0	
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)	-1.0	-1.0	-1.0		-1.0	-1.0		0.0	0.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0		5.0	5.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lead		Lag	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes				
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None	None	None	
Walk Time (s)							5.0	5.0			5.0	5.0
Flash Dont Walk (s)							11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)							0	0			0	0
Act Effct Green (s)	51.5	43.6	52.1		43.9	7.3		16.4	17.0	17.0	17.0	
Actuated g/C Ratio	0.57	0.48	0.58		0.49	0.08		0.18	0.19	0.19	0.19	
v/c Ratio	0.59	1.02	0.72		0.90	0.50		0.40	0.73	0.76	0.76	
Control Delay	26.6	39.4	33.0		19.7	52.4		17.7	47.9	33.2	33.2	
Queue Delay	0.0	2.4	0.0		13.8	0.0		1.1	0.0	0.2	0.2	
Total Delay	26.6	41.8	33.0		33.5	52.4		18.8	47.9	33.4	33.4	
LOS	C	D	C		C	D		B	D	C	C	
Approach Delay	40.7				33.5	30.1				39.7		
Approach LOS	D				C	C				D		
Queue Length 50th (ft)	44	-566	50		417	41		29	127	97	97	
Queue Length 95th (ft)	m61	m#674	m#136		#582	#91		44	210	#197	#197	
Internal Link Dist (ft)	377				171	544				251		
Turn Bay Length (ft)	150				170			150				
Base Capacity (vph)	234	1641	255		1752	148		364	354	424	424	
Starvation Cap Reductn	0	0	0		203	0		0	0	0	0	
Spillback Cap Reductn	0	12	0		0	0		84	0	8	8	
Storage Cap Reductn	0	0	0		0	0		0	0	0	0	
Reduced v/c Ratio	0.59	1.03	0.71		1.01	0.50		0.52	0.65	0.71	0.71	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 87 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 37.1
 Intersection Capacity Utilization 82.3%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service E

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

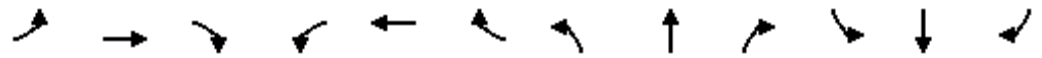
 12 s	 44 s	 23 s	 11 s
 12 s	 44 s		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land

PM Peak Hour

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	1439	446	82	1409	0	0	0	0	45	0	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850									0.850
Fl _t Protected				0.950						0.950		
Satd. Flow (prot)	0	3415	1558	1877	3558	0	0	0	0	1769	0	1583
Fl _t Permitted				0.062						0.950		
Satd. Flow (perm)	0	3415	1558	123	3558	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			165									85
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.92	0.92	0.92	0.79	0.79	0.79
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1893	587	105	1806	0	0	0	0	57	0	190
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1893	587	105	1806	0	0	0	0	57	0	190
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	0	1	2					2		2
Detector Template												
Leading Detector (ft)		83	0	50	83					83		83
Trailing Detector (ft)		-5	0	0	-5					-5		-5
Detector 1 Position(ft)		-5	0	0	-5					-5		-5
Detector 1 Size(ft)		40	50	50	40					40		40
Detector 1 Type		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
Detector 1 Queue (s)		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
Detector 2 Position(ft)		43			43					43		43
Detector 2 Size(ft)		40			40					40		40
Detector 2 Type		Cl+Ex			Cl+Ex					Cl+Ex		Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0					0.0		0.0
Turn Type		NA	Free	pm+pt	NA					Perm		Perm

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/255



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		35.0		20.0	55.0					35.0		35.0
Total Split (%)		38.9%		22.2%	61.1%					38.9%		38.9%
Maximum Green (s)		30.0		15.0	50.0					30.0		30.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effct Green (s)		61.1	90.0	70.0	70.0					12.0		12.0
Actuated g/C Ratio		0.68	1.00	0.78	0.78					0.13		0.13
v/c Ratio		0.82	0.38	0.46	0.65					0.24		0.67
Control Delay		8.9	0.4	18.5	2.0					35.2		31.2
Queue Delay		6.3	0.0	0.0	2.2					0.0		0.1
Total Delay		15.2	0.4	18.5	4.2					35.2		31.3
LOS		B	A	B	A					D		C
Approach Delay		11.7			5.0							
Approach LOS		B			A							
Queue Length 50th (ft)		144	0	12	17					30		56
Queue Length 95th (ft)		154	m0	m23	25					52		93
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2317	1558	407	2765					609		600
Starvation Cap Reductn		383	0	0	388					0		0
Spillback Cap Reductn		21	0	0	782					0		36
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.98	0.38	0.26	0.91					0.09		0.34

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 10.0 Intersection LOS: B
 Intersection Capacity Utilization 84.3% ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

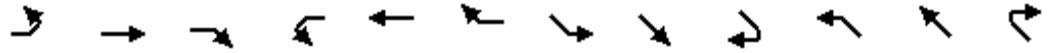
↙ ø1	→ ø2 (R)	↘ ø3
20 s	35 s	35 s
← ø6 (R)		
55 s		

Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land

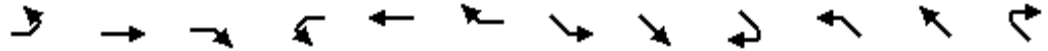
PM Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	433	1051	0	0	1028	81	0	0	0	463	0	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	300		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t					0.989							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	3473	0	0	0	0	3554	0	1639
Fl _t Permitted	0.105									0.950		
Satd. Flow (perm)	185	1729	0	0	3473	0	0	0	0	3554	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10							108
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1119
Travel Time (s)		7.2			8.2			17.8				25.4
Peak Hour Factor	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	487	1181	0	0	1071	84	0	0	0	520	0	406
Shared Lane Traffic (%)												
Lane Group Flow (vph)	487	1181	0	0	1155	0	0	0	0	520	0	406
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)		23			23			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2			2					2		2
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	40	40			40					40		40
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)	43	43			43					43		43
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
Turn Type	pm+pt	NA			NA					Perm		Perm

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	28.0	65.0			37.0					25.0		25.0
Total Split (%)	31.1%	72.2%			41.1%					27.8%		27.8%
Maximum Green (s)	23.0	60.0			32.0					20.0		20.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0					-1.0		-1.0
Total Lost Time (s)	4.0	4.0			4.0					4.0		4.0
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					None		None
Act Effct Green (s)	62.1	62.1			34.1					19.9		19.9
Actuated g/C Ratio	0.69	0.69			0.38					0.22		0.22
v/c Ratio	0.93	0.99			0.87					0.66		0.91
Control Delay	36.5	25.7			35.2					36.3		51.2
Queue Delay	0.0	25.4			0.0					0.0		0.0
Total Delay	36.5	51.1			35.2					36.3		51.2
LOS	D	D			D					D		D
Approach Delay		46.8			35.2							
Approach LOS		D			D							
Queue Length 50th (ft)	220	~739			320					137		168
Queue Length 95th (ft)	m#372	#977			#450					187		#327
Internal Link Dist (ft)		395			460			701			1039	
Turn Bay Length (ft)										300		530
Base Capacity (vph)	524	1192			1321					829		465
Starvation Cap Reductn	0	88			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.93	1.07			0.87					0.63		0.87

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 74 (82%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 42.2 Intersection LOS: D
 Intersection Capacity Utilization 84.3% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

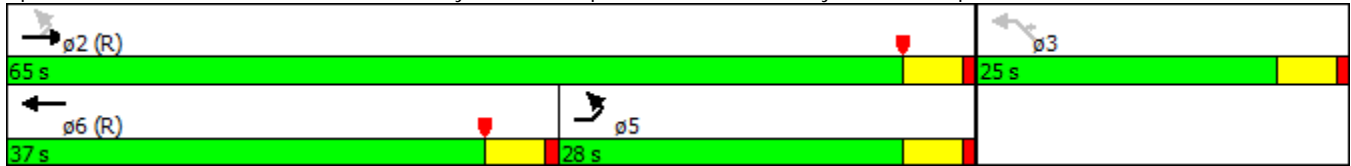
7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

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: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
 8: Old Crompond Road & Site Access

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	45	108	143	64	0	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.958		0.865	
Flt Protected		0.985				
Satd. Flow (prot)	0	1835	1785	0	1611	0
Flt Permitted		0.985				
Satd. Flow (perm)	0	1835	1785	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1014	1058		274	
Travel Time (s)		23.0	24.0		6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	117	155	70	0	145
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	166	225	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.8%
Analysis Period (min)	15
	ICU Level of Service A

2019 Build Traffic Volumes - With State Land
8: Old Crompond Road & Site Access

PM Peak Hour
4/2/2015

Intersection

Int Delay, s/veh 3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	45	108	143	64	0	133
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, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	117	155	70	0	145

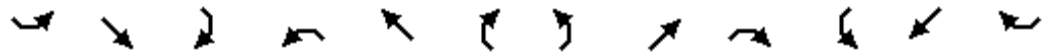
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	225	0	190
Stage 1	-	-	190
Stage 2	-	-	215
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1344	-	852
Stage 1	-	-	842
Stage 2	-	-	821
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1344	-	852
Mov Cap-2 Maneuver	-	-	579
Stage 1	-	-	842
Stage 2	-	-	789

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1344	-	-	-	852
HCM Lane V/C Ratio	0.036	-	-	-	0.17
HCM Control Delay (s)	7.8	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

2019 Build Traffic Volumes - With State Land
1: Bear Mountain Pkwy. Ext. & Stoney Street

Saturday Peak Hour
4/2/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	9	70	23	1	102	65	80	200	13	119	637	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-13%			-1%			0%				0%
Storage Length (ft)	100		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			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
Frt		0.962			0.948			0.991			0.972	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1885	1908	0	0	1775	0	1805	1883	0	1805	1847	0
Flt Permitted	0.321				0.999		0.106			0.581		
Satd. Flow (perm)	637	1908	0	0	1773	0	201	1883	0	1104	1847	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			33			4			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		353			539			433			768	
Travel Time (s)		8.0			12.3			9.8			17.5	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	78	26	1	112	71	89	222	14	125	671	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	104	0	0	184	0	89	236	0	125	823	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.92	0.92	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	83	83		50	83		83	83		83	83	
Trailing Detector (ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	-5	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	88	88		50	88		88	88		88	88	
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	
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	

2019 Build Traffic Volumes - With State Land
 1: Bear Mountain Pkwy. Ext. & Stoney Street

Saturday Peak Hour
 4/2/2015

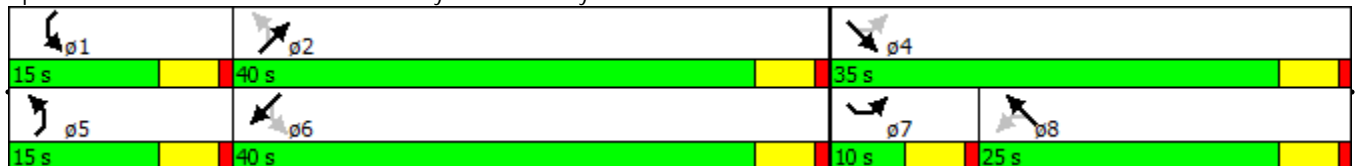


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Split (s)	10.0	35.0		25.0	25.0		15.0	40.0		15.0	40.0	
Total Split (%)	11.1%	38.9%		27.8%	27.8%		16.7%	44.4%		16.7%	44.4%	
Maximum Green (s)	5.0	30.0		20.0	20.0		10.0	35.0		10.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-1.0	-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0			0			0	
Act Effect Green (s)	14.2	14.2			12.6		44.8	38.3		45.5	38.7	
Actuated g/C Ratio	0.20	0.20			0.18		0.63	0.54		0.64	0.55	
v/c Ratio	0.04	0.26			0.54		0.29	0.23		0.16	0.81	
Control Delay	21.8	20.9			28.3		8.2	12.1		5.9	24.6	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	21.8	20.9			28.3		8.2	12.1		5.9	24.6	
LOS	C	C			C		A	B		A	C	
Approach Delay		21.0			28.3			11.0			22.1	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	4	31			57		9	49		13	262	
Queue Length 95th (ft)	15	69			135		41	140		54	#732	
Internal Link Dist (ft)		273			459			353			688	
Turn Bay Length (ft)	100						200			200		
Base Capacity (vph)	236	863			559		387	1024		849	1018	
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	0.04	0.12			0.33		0.23	0.23		0.15	0.81	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 70.6
 Natural Cycle: 80
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 20.5
 Intersection LOS: C
 Intersection Capacity Utilization 66.9%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Bear Mountain Pkwy. Ext. & Stoney Street



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
2: Stoney Street & Old Crompond Road

Saturday Peak Hour
4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	106	204	389	103	99	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.911				0.917	
Flt Protected				0.962	0.981	
Satd. Flow (prot)	1688	0	0	1801	1659	0
Flt Permitted				0.962	0.981	
Satd. Flow (perm)	1688	0	0	1801	1659	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			991	190	
Travel Time (s)	12.3			22.5	4.3	
Peak Hour Factor	0.88	0.88	0.58	0.58	0.91	0.91
Adj. Flow (vph)	120	232	671	178	109	176
Shared Lane Traffic (%)						
Lane Group Flow (vph)	352	0	0	849	285	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.4%
Analysis Period (min)	15
	ICU Level of Service C

Intersection									
Intersection Delay, s/veh	39.8								
Intersection LOS	E								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	106	204	0	389	103	0	99	160
Peak Hour Factor	0.92	0.88	0.88	0.92	0.58	0.58	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	120	232	0	671	178	0	109	176
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	14.3	58.7	14.8
HCM LOS	B	F	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	38%	0%	79%
Vol Thru, %	0%	34%	21%
Vol Right, %	62%	66%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	259	310	492
LT Vol	99	0	389
Through Vol	0	106	103
RT Vol	160	204	0
Lane Flow Rate	285	352	848
Geometry Grp	1	1	1
Degree of Util (X)	0.482	0.524	1
Departure Headway (Hd)	6.091	5.35	5.59
Convergence, Y/N	Yes	Yes	Yes
Cap	589	666	653
Service Time	4.164	3.449	3.59
HCM Lane V/C Ratio	0.484	0.529	1.299
HCM Control Delay	14.8	14.3	58.7
HCM Lane LOS	B	B	F
HCM 95th-tile Q	2.6	3.1	15.5

Two Way Analysis cannot be performed on an All Way Stop Intersection.

2019 Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↗	↗	↘	↗	↗
Volume (vph)	146	1214	262	274	806	46	254	58	366	332	130	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.969		0.950	0.978	
Satd. Flow (prot)	1770	3539	1552	1770	3719	0	1681	1715	1583	1698	1748	1546
Flt Permitted	0.317			0.154			0.950	0.969		0.950	0.978	
Satd. Flow (perm)	590	3539	1552	287	3719	0	1669	1707	1583	1698	1748	1512
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			255		7				131			131
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1502			289				190
Travel Time (s)		9.3			22.8			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	160	1278	288	304	848	51	282	64	407	369	144	137
Shared Lane Traffic (%)							40%			31%		
Lane Group Flow (vph)	160	1278	288	304	899	0	169	177	407	255	258	137
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	88	0	0	88	0		88	88	88	50	88	88
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6

2019 Build Traffic Volumes - With State Land
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	14.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	4.0
Minimum Split (s)	10.0	20.0	16.0	11.0	36.0		16.0	16.0	11.0	20.0	20.0	10.0
Total Split (s)	15.0	41.0	21.0	15.0	41.0		21.0	21.0	15.0	23.0	23.0	15.0
Total Split (%)	15.0%	41.0%	21.0%	15.0%	41.0%		21.0%	21.0%	15.0%	23.0%	23.0%	15.0%
Maximum Green (s)	10.0	36.0	16.0	10.0	36.0		16.0	16.0	10.0	18.0	18.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-0.7	-1.0	-1.0	0.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.3	4.0	4.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	37.0	36.7	56.4	39.4	38.4		15.4	15.4	28.8	18.2	18.2	29.2
Actuated g/C Ratio	0.37	0.37	0.56	0.39	0.38		0.15	0.15	0.29	0.18	0.18	0.29
v/c Ratio	0.46	0.98	0.29	0.98	0.63		0.66	0.67	0.74	0.83	0.81	0.25
Control Delay	33.1	53.8	2.7	45.5	18.4		52.0	52.7	21.2	61.9	59.8	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	53.8	2.7	45.5	18.4		52.0	52.7	21.2	61.9	59.8	4.1
LOS	C	D	A	D	B		D	D	C	E	E	A
Approach Delay		43.3			25.2			35.5				48.9
Approach LOS		D			C			D				D
Queue Length 50th (ft)	70	419	8	~169	240		105	111	93	164	166	2
Queue Length 95th (ft)	119	#574	43	m#182	m254		178	186	#168	#295	#293	28
Internal Link Dist (ft)		532			1422			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	348	1298	1007	311	1431		285	291	549	322	332	538
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.98	0.29	0.98	0.63		0.59	0.61	0.74	0.79	0.78	0.25

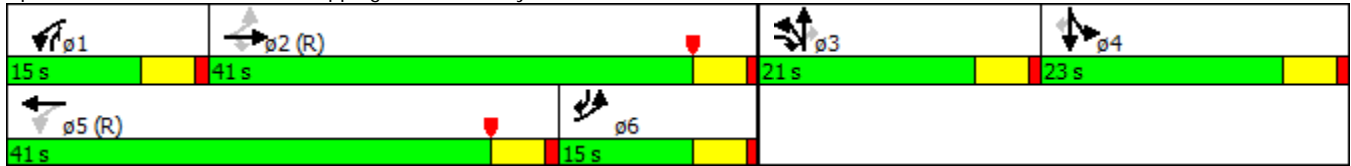
Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 62 (62%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 37.8
 Intersection LOS: D
 Intersection Capacity Utilization 87.0%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

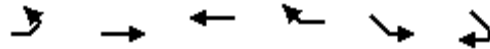
Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
 4: Route 202/35 & Old Crompond Road

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1912	1213	155	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.982		0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	3415	3597	0	1610	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	3415	3597	0	1610	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		316	457		1067	
Travel Time (s)		4.8	6.9		24.3	
Peak Hour Factor	0.97	0.97	0.95	0.90	0.90	0.90
Adj. Flow (vph)	0	1971	1277	172	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1971	1449	0	4	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.9%
Analysis Period (min)	15
	ICU Level of Service B

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SEL	SER
Vol, veh/h	0	1912	1213	155	2	2
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, %	-	7	-7	-	10	-
Peak Hour Factor	97	97	95	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1971	1277	172	2	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1449	0	2349
Stage 1	-	-	1363
Stage 2	-	-	986
Critical Hdwy	4.14	-	8.84
Critical Hdwy Stg 1	-	-	7.84
Critical Hdwy Stg 2	-	-	7.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuver	782	-	*14
Stage 1	-	-	*553
Stage 2	-	-	*186
Platoon blocked, %	1	-	1
Mov Cap-1 Maneuver	782	-	*14
Mov Cap-2 Maneuver	-	-	*14
Stage 1	-	-	*553
Stage 2	-	-	*186

Approach	EB	WB	SE
HCM Control Delay, s	0	0	163
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SELn1
Capacity (veh/h)	782	-	-	-	27
HCM Lane V/C Ratio	-	-	-	-	0.165
HCM Control Delay (s)	0	-	-	-	163
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2019 Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	194	1679	40	115	1023	542	46	5	81	438	5	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	16	12	12	12	12	12
Grade (%)		8%			-7%			-4%				0%
Storage Length (ft)	150		0	170		0	0		150	0		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t		0.996			0.947				0.850		0.888	
Fl _t Protected	0.950			0.950				0.956		0.950	0.988	
Satd. Flow (prot)	1699	3384	0	1832	3469	0	0	1816	1615	1681	1553	0
Fl _t Permitted	0.083			0.090				0.956		0.950	0.988	
Satd. Flow (perm)	148	3384	0	174	3469	0	0	1816	1615	1681	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			129				131			140
Link Speed (mph)		45			45			30				30
Link Distance (ft)		457			251			624				173
Travel Time (s)		6.9			3.8			14.2				3.9
Peak Hour Factor	0.92	0.95	0.87	0.91	0.95	0.92	0.90	0.92	0.90	0.92	0.92	0.92
Adj. Flow (vph)	211	1767	46	126	1077	589	51	5	90	476	5	324
Shared Lane Traffic (%)										22%		
Lane Group Flow (vph)	211	1813	0	126	1666	0	0	56	90	371	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.96	0.96	0.96	0.82	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83	50	83	83	
Trailing Detector (ft)	-5	-5		-5	-5		-5	-5	0	-5	-5	
Detector 1 Position(ft)	-5	-5		-5	-5		-5	-5	0	-5	-5	
Detector 1 Size(ft)	88	88		88	88		88	88	50	88	88	
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	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2		1	6		8	8	1	4	4	
Permitted Phases	2			6					8			
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		1.0	1.0		4.0	4.0	1.0	4.0	4.0	
Minimum Split (s)	9.0	10.0		7.0	9.0		9.0	9.0	7.0	9.0	9.0	

2019 Build Traffic Volumes - With State Land
 5: Mohansic Avenue/COSTCO Access & Route 202/35

Saturday Peak Hour
 4/2/2015









Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	15.0	53.0		9.0	47.0		10.0	10.0	9.0	28.0	28.0	
Total Split (%)	15.0%	53.0%		9.0%	47.0%		10.0%	10.0%	9.0%	28.0%	28.0%	
Maximum Green (s)	10.0	48.0		4.0	42.0		5.0	5.0	4.0	23.0	23.0	
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)	-1.0	-1.0		-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)							5.0	5.0		5.0	5.0	
Flash Dont Walk (s)							11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effect Green (s)	59.7	50.5		50.9	45.3			6.1	13.6	23.9	23.9	
Actuated g/C Ratio	0.60	0.50		0.51	0.45			0.06	0.14	0.24	0.24	
v/c Ratio	0.83	1.06		0.70	1.01			0.51	0.27	0.92	0.91	
Control Delay	45.6	50.1		46.2	38.2			62.5	4.6	67.9	49.9	
Queue Delay	0.0	17.0		0.0	3.1			0.0	0.0	0.0	1.0	
Total Delay	45.6	67.1		46.2	41.3			62.5	4.7	67.9	50.9	
LOS	D	E		D	D			E	A	E	D	
Approach Delay		64.8			41.6			26.8			58.7	
Approach LOS		E			D			C			E	
Queue Length 50th (ft)	99	-688		32	-85			35	0	244	200	
Queue Length 95th (ft)	m116	m#751		m#126	#721			#83	20	#426	#397	
Internal Link Dist (ft)		377			171			544			93	
Turn Bay Length (ft)	150			170					150			
Base Capacity (vph)	259	1711		180	1643			110	332	403	479	
Starvation Cap Reductn	0	0		0	16			0	0	0	0	
Spillback Cap Reductn	0	166		0	0			0	5	0	6	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.81	1.17		0.70	1.02			0.51	0.28	0.92	0.92	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 12 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 53.9 Intersection LOS: D
 Intersection Capacity Utilization 94.4% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Mohansic Avenue/COSTCO Access & Route 202/35

 ø1	 ø2 (R)	 ø4	 ø8
9 s	53 s	28 s	10 s
 ø5	 ø6 (R)		
15 s	47 s		

Two Way Analysis cannot be performed on Signalized Intersection.

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/355



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘		↗
Volume (vph)	0	1639	560	121	1473	0	0	0	0	64	0	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12	12	12	12	12	12	12
Grade (%)		7%			-8%			0%				4%
Storage Length (ft)	0		150	300		0	0		0	0		130
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3415	1558	1877	3558	0	0	0	0	1769	0	1583
Flt Permitted				0.071						0.950		
Satd. Flow (perm)	0	3415	1558	140	3558	0	0	0	0	1769	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			165									76
Link Speed (mph)		45			45			30				30
Link Distance (ft)		251			475			607				868
Travel Time (s)		3.8			7.2			13.8				19.7
Peak Hour Factor	0.94	0.95	0.94	0.97	0.97	0.97	0.92	0.92	0.92	0.90	0.72	0.90
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1725	596	125	1519	0	0	0	0	71	0	219
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1725	596	125	1519	0	0	0	0	71	0	219
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.95	0.99	0.95	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1					1		1
Detector Template												
Leading Detector (ft)		83	0	83	83					83		83
Trailing Detector (ft)		-5	0	-5	-5					-5		-5
Detector 1 Position(ft)		-5	0	-5	-5					-5		-5
Detector 1 Size(ft)		88	0	88	88					88		88
Detector 1 Type		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
Detector 1 Queue (s)		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
Turn Type		NA	Free	pm+pt	NA					Perm		Perm
Protected Phases		2		1	6							
Permitted Phases			Free	6						3		3
Detector Phase		2		1	6					3		3
Switch Phase												
Minimum Initial (s)		10.0		3.0	10.0					5.0		5.0

6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

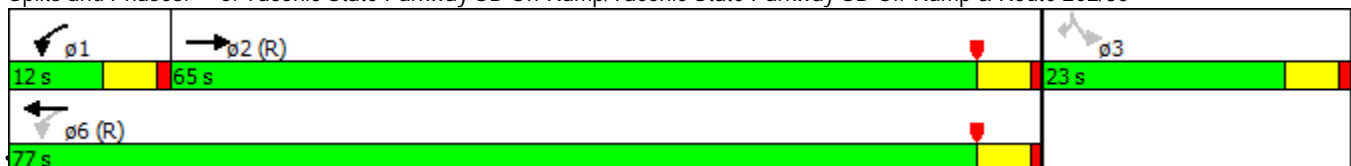


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		16.0		9.0	16.0					11.0		11.0
Total Split (s)		65.0		12.0	77.0					23.0		23.0
Total Split (%)		65.0%		12.0%	77.0%					23.0%		23.0%
Maximum Green (s)		60.0		7.0	72.0					18.0		18.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0		-1.0
Total Lost Time (s)		4.0		4.0	4.0					4.0		4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		2.0		2.0	2.0					2.0		2.0
Recall Mode		C-Max		None	C-Max					None		None
Act Effect Green (s)		66.5	100.0	77.8	77.8					14.2		14.2
Actuated g/C Ratio		0.66	1.00	0.78	0.78					0.14		0.14
v/c Ratio		0.76	0.38	0.53	0.55					0.28		0.76
Control Delay		6.7	0.2	25.4	4.0					39.5		42.8
Queue Delay		40.5	0.0	0.0	1.3					0.2		0.2
Total Delay		47.2	0.2	25.4	5.3					39.7		42.9
LOS		D	A	C	A					D		D
Approach Delay		35.1			6.8							
Approach LOS		D			A							
Queue Length 50th (ft)		70	0	23	126					41		87
Queue Length 95th (ft)		m237	m0	m48	143					79		162
Internal Link Dist (ft)		171			395			527			788	
Turn Bay Length (ft)			150	300								130
Base Capacity (vph)		2271	1558	251	2768					336		362
Starvation Cap Reductn		678	0	0	961					0		0
Spillback Cap Reductn		165	0	0	357					55		7
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		1.08	0.38	0.50	0.84					0.25		0.62

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 24.7 Intersection LOS: C
 Intersection Capacity Utilization 83.8% ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Taconic State Parkway SB On-Ramp/Taconic State Parkway SB Off-Ramp & Route 202/35

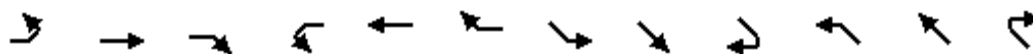


Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land

Saturday Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/355

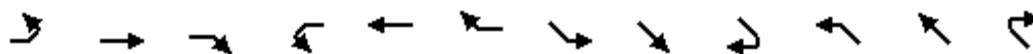


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	503	1199	0	0	1235	48	0	0	0	359	0	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		8%			-5%			0%				-3%
Storage Length (ft)	0		0	0		350	0		0	300		530
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t					0.994							0.850
Fl _t Protected	0.950									0.950		
Satd. Flow (prot)	1675	1729	0	0	3488	0	0	0	0	3554	0	1639
Fl _t Permitted	0.080									0.950		
Satd. Flow (perm)	141	1729	0	0	3488	0	0	0	0	3554	0	1639
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5							96
Link Speed (mph)		45			45			30				30
Link Distance (ft)		475			540			781				1112
Travel Time (s)		7.2			8.2			17.8				25.3
Peak Hour Factor	0.91	0.91	0.91	0.90	0.95	0.90	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	553	1318	0	0	1300	53	0	0	0	382	0	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	553	1318	0	0	1353	0	0	0	0	382	0	118
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)		23			23			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.10	1.10	1.05	0.97	1.01	0.97	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1			1					1		1
Detector Template												
Leading Detector (ft)	83	83			83					83		83
Trailing Detector (ft)	-5	-5			-5					-5		-5
Detector 1 Position(ft)	-5	-5			-5					-5		-5
Detector 1 Size(ft)	88	88			88					88		88
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
Turn Type	pm+pt	NA			NA					Perm		Perm
Protected Phases	5	2			6							
Permitted Phases	2									3		3
Detector Phase	5	2			6					3		3
Switch Phase												
Minimum Initial (s)	3.0	10.0			10.0					5.0		5.0

2019 Build Traffic Volumes - With State Land

Saturday Peak Hour

7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35

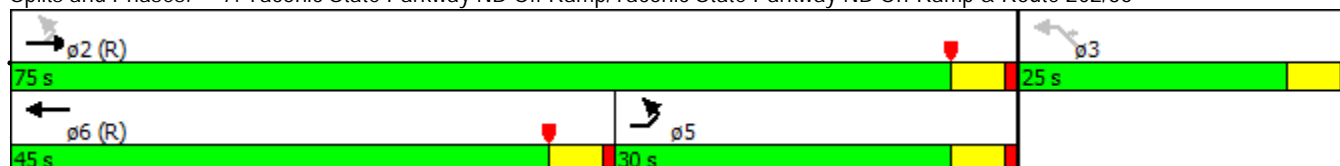


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Split (s)	9.0	16.0			16.0					11.0		11.0
Total Split (s)	30.0	75.0			45.0					25.0		25.0
Total Split (%)	30.0%	75.0%			45.0%					25.0%		25.0%
Maximum Green (s)	25.0	70.0			40.0					20.0		20.0
Yellow Time (s)	4.0	4.0			4.0					4.0		4.0
All-Red Time (s)	1.0	1.0			1.0					1.0		1.0
Lost Time Adjust (s)	-1.5	-2.0			-1.0					-1.0		-1.0
Total Lost Time (s)	3.5	3.0			4.0					4.0		4.0
Lead/Lag	Lag			Lead								
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	2.0	2.0			2.0					2.0		2.0
Recall Mode	None	C-Max			C-Max					None		None
Act Effct Green (s)	76.2	76.7			45.7					16.3		16.3
Actuated g/C Ratio	0.76	0.77			0.46					0.16		0.16
v/c Ratio	1.08	0.99			0.85					0.66		0.34
Control Delay	79.3	32.2			31.1					44.7		13.3
Queue Delay	0.0	0.0			0.3					0.0		0.0
Total Delay	79.3	32.2			31.4					44.7		13.3
LOS	E	C			C					D		B
Approach Delay		46.1			31.4							
Approach LOS		D			C							
Queue Length 50th (ft)	~350	602			386					119		12
Queue Length 95th (ft)	#555	#1163			#581					158		58
Internal Link Dist (ft)		395			460			701			1032	
Turn Bay Length (ft)										300		530
Base Capacity (vph)	514	1326			1597					746		420
Starvation Cap Reductn	0	0			0					0		0
Spillback Cap Reductn	0	0			31					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	1.08	0.99			0.86					0.51		0.28

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 39.6 Intersection LOS: D
 Intersection Capacity Utilization 83.8% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Taconic State Parkway NB Off Ramp/Taconic State Parkway NB On-Ramp & Route 202/35



Two Way Analysis cannot be performed on Signalized Intersection.

2019 Build Traffic Volumes - With State Land
 8: Old Crompond Road & Site Access

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	114	114	71	0	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.948		0.865	
Flt Protected		0.985				
Satd. Flow (prot)	0	1835	1766	0	1611	0
Flt Permitted		0.985				
Satd. Flow (perm)	0	1835	1766	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		991	1067		252	
Travel Time (s)		22.5	24.3		5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	124	124	77	0	125
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	178	201	0	125	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	36.2%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	50	114	114	71	0	115
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, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	124	124	77	0	125

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	201	0	396
Stage 1	-	-	163
Stage 2	-	-	233
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1371	-	609
Stage 1	-	-	866
Stage 2	-	-	806
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1371	-	583
Mov Cap-2 Maneuver	-	-	583
Stage 1	-	-	866
Stage 2	-	-	772

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1371	-	-	-	882
HCM Lane V/C Ratio	0.04	-	-	-	0.142
HCM Control Delay (s)	7.7	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

2019 No-Build Traffic Volumes - With State Land - W/Imp
 2: Stoney Street & Old Crompond Road

AM PEAK HOUR
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	19	240	44	22	30	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.875				0.926	
Flt Protected				0.968	0.978	
Satd. Flow (prot)	1622	0	0	1812	1670	0
Flt Permitted				0.968	0.978	
Satd. Flow (perm)	1622	0	0	1812	1670	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1020	190	
Travel Time (s)	12.3			23.2	4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	267	49	24	33	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	288	0	0	73	73	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	33.3%
Analysis Period (min)	15
	ICU Level of Service A

2019 No-Build Traffic Volumes - With State Land - W/Imp
 2: Stoney Street & Old Crompond Road

AM PEAK HOUR
 4/2/2015

Intersection									
Intersection Delay, s/veh	8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	19	240	0	44	22	0	30	36
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	267	0	49	24	0	33	40
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.1	7.9	7.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	45%	0%	67%
Vol Thru, %	0%	7%	33%
Vol Right, %	55%	93%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	66	259	66
LT Vol	30	0	44
Through Vol	0	19	22
RT Vol	36	240	0
Lane Flow Rate	73	288	73
Geometry Grp	1	1	1
Degree of Util (X)	0.088	0.285	0.09
Departure Headway (Hd)	4.312	3.561	4.416
Convergence, Y/N	Yes	Yes	Yes
Cap	817	996	803
Service Time	2.411	1.629	2.49
HCM Lane V/C Ratio	0.089	0.289	0.091
HCM Control Delay	7.8	8.1	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	1.2	0.3

2019 No-Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015

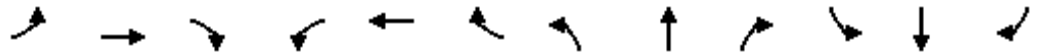


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	1216	227	137	479	16	132	13	254	93	72	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.960		0.950	0.987	
Satd. Flow (prot)	1770	3471	1552	1770	3664	0	1681	1699	1583	1698	1764	1546
Flt Permitted	0.455			0.455			0.950	0.960		0.950	0.987	
Satd. Flow (perm)	848	3471	1552	848	3664	0	1665	1686	1583	1698	1764	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			223		3				149			149
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1517			289				190
Travel Time (s)		9.3			23.0			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	38	1322	247	149	521	17	147	14	282	103	80	129
Shared Lane Traffic (%)							46%			28%		
Lane Group Flow (vph)	38	1322	247	149	538	0	79	82	282	74	109	129
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		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	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				43			43	43	43	43	43	43
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

2019 No-Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015



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	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	16.0	11.0	36.0		16.0	16.0	11.0	16.0	16.0	11.0
Total Split (s)	19.0	49.0	20.0	19.0	49.0		20.0	20.0	19.0	22.0	22.0	19.0
Total Split (%)	17.3%	44.5%	18.2%	17.3%	44.5%		18.2%	18.2%	17.3%	20.0%	20.0%	17.3%
Maximum Green (s)	13.0	43.0	14.0	13.0	43.0		14.0	14.0	13.0	16.0	16.0	13.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	Max	C-Max	None	None	None		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	50.9	50.9	67.5	21.8	21.8		12.6	12.6	25.6	13.5	13.5	55.6
Actuated g/C Ratio	0.46	0.46	0.61	0.20	0.20		0.11	0.11	0.23	0.12	0.12	0.51
v/c Ratio	0.05	0.82	0.24	0.54	0.74		0.41	0.42	0.59	0.36	0.50	0.15
Control Delay	19.9	32.5	2.6	45.2	47.3		51.5	51.8	14.7	48.4	52.9	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	32.5	2.6	45.2	47.3		51.5	51.8	14.7	48.4	52.9	1.5
LOS	B	C	A	D	D		D	D	B	D	D	A
Approach Delay		27.6			46.8			28.1			30.6	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	14	413	6	93	187		55	57	56	51	76	0
Queue Length 95th (ft)	38	#623	41	147	233		105	107	102	96	132	14
Internal Link Dist (ft)		532			1437			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	744	1605	1067	289	1467		229	231	501	262	272	850
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.82	0.23	0.52	0.37		0.34	0.35	0.56	0.28	0.40	0.15

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

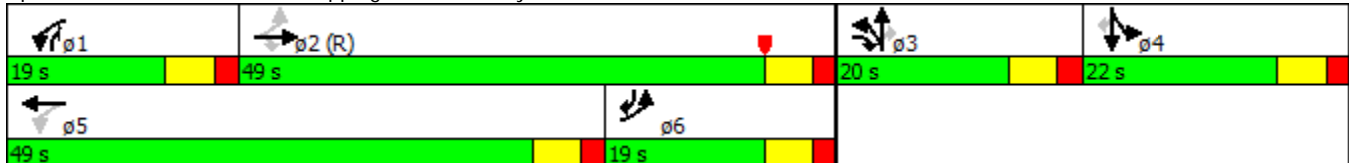
2019 No-Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015

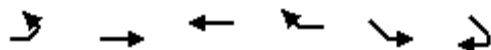
Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 32.3 Intersection LOS: C
 Intersection Capacity Utilization 74.9% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 No-Build Traffic Volumes - With State Land - W/Imp
4: Route 202/35 & Old Crompond Road

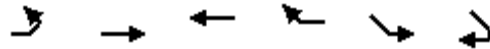
AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1562	664	10	24	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	3350	3586	0	1675	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	3350	3586	0	1675	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			4		2	
Link Speed (mph)		45	45		30	
Link Distance (ft)		293	457		1070	
Travel Time (s)		4.4	6.9		24.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.90
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1698	722	11	26	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1698	733	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		2	
Detector Template						
Leading Detector (ft)		83	83		83	
Trailing Detector (ft)		-5	-5		-5	
Detector 1 Position(ft)		-5	-5		-5	
Detector 1 Size(ft)		40	40		40	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(ft)		43	43		43	
Detector 2 Size(ft)		40	40		40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						

2019 No-Build Traffic Volumes - With State Land - W/Imp
 4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
 4/2/2015

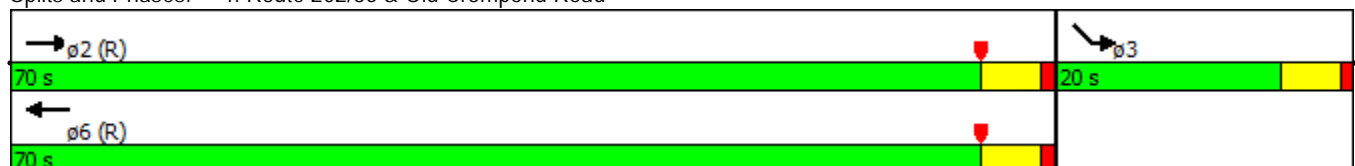


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		70.0	70.0		20.0	
Total Split (%)		77.8%	77.8%		22.2%	
Maximum Green (s)		65.0	65.0		15.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effect Green (s)		82.6	82.6		7.1	
Actuated g/C Ratio		0.92	0.92		0.08	
v/c Ratio		0.55	0.22		0.21	
Control Delay		2.8	3.6		39.9	
Queue Delay		0.1	0.0		0.0	
Total Delay		2.9	3.6		40.0	
LOS		A	A		D	
Approach Delay		2.9	3.6		40.0	
Approach LOS		A	A		D	
Queue Length 50th (ft)		0	0		14	
Queue Length 95th (ft)		214	160		40	
Internal Link Dist (ft)		213	377		990	
Turn Bay Length (ft)						
Base Capacity (vph)		3075	3292		280	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		378	0		29	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.63	0.22		0.11	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 71 (79%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 3.5
 Intersection Capacity Utilization 54.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 No-Build Traffic Volumes - With State Land - W/Imp
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	66	244	160	68	114	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.894				0.933	
Flt Protected				0.966	0.975	
Satd. Flow (prot)	1657	0	0	1808	1678	0
Flt Permitted				0.966	0.975	
Satd. Flow (perm)	1657	0	0	1808	1678	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1014	190	
Travel Time (s)	12.3			23.0	4.3	
Peak Hour Factor	0.77	0.77	0.56	0.56	0.74	0.74
Adj. Flow (vph)	86	317	286	121	154	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	403	0	0	407	304	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.1%
Analysis Period (min)	15
	ICU Level of Service A

2019 No-Build Traffic Volumes - With State Land - W/Imp
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015

Intersection									
Intersection Delay, s/veh	15.5								
Intersection LOS	C								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	66	244	0	160	68	0	114	111
Peak Hour Factor	0.92	0.77	0.77	0.92	0.56	0.56	0.92	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	86	317	0	286	121	0	154	150
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	14.3	17.7	14.2
HCM LOS	B	C	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	51%	0%	70%
Vol Thru, %	0%	21%	30%
Vol Right, %	49%	79%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	225	310	228
LT Vol	114	0	160
Through Vol	0	66	68
RT Vol	111	244	0
Lane Flow Rate	304	403	407
Geometry Grp	1	1	1
Degree of Util (X)	0.487	0.561	0.63
Departure Headway (Hd)	5.767	5.018	5.57
Convergence, Y/N	Yes	Yes	Yes
Cap	623	717	647
Service Time	3.821	3.07	3.621
HCM Lane V/C Ratio	0.488	0.562	0.629
HCM Control Delay	14.2	14.3	17.7
HCM Lane LOS	B	B	C
HCM 95th-tile Q	2.7	3.5	4.4

2019 No-Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	1044	230	225	787	56	257	58	301	116	124	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.990				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.969		0.950	0.989	
Satd. Flow (prot)	1770	3539	1552	1770	3715	0	1681	1715	1583	1698	1768	1546
Flt Permitted	0.323			0.181			0.950	0.969		0.950	0.989	
Satd. Flow (perm)	602	3539	1552	337	3715	0	1669	1707	1583	1698	1768	1514
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253		8				227			145
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1512			289				190
Travel Time (s)		9.3			22.9			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	103	1147	253	234	820	58	289	65	338	138	148	218
Shared Lane Traffic (%)							40%			29%		
Lane Group Flow (vph)	103	1147	253	234	878	0	173	181	338	98	188	218
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2019 No-Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



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	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	10.0	20.0	15.0	10.0	20.0		15.0	15.0	10.0	15.0	15.0	10.0
Total Split (s)	15.0	33.0	18.0	15.0	33.0		18.0	18.0	15.0	24.0	24.0	15.0
Total Split (%)	16.7%	36.7%	20.0%	16.7%	36.7%		20.0%	20.0%	16.7%	26.7%	26.7%	16.7%
Maximum Green (s)	10.0	28.0	13.0	10.0	28.0		13.0	13.0	10.0	19.0	19.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	33.3	33.3	49.4	34.6	34.6		13.2	13.2	25.5	15.2	15.2	26.2
Actuated g/C Ratio	0.37	0.37	0.55	0.38	0.38		0.15	0.15	0.28	0.17	0.17	0.29
v/c Ratio	0.28	0.88	0.26	0.72	0.61		0.70	0.72	0.55	0.34	0.63	0.40
Control Delay	27.3	37.4	2.3	29.7	19.5		52.9	54.0	8.3	35.2	44.0	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	37.4	2.3	29.7	19.5		52.9	54.0	8.3	35.2	44.0	6.9
LOS	C	D	A	C	B		D	D	A	D	D	A
Approach Delay		30.8			21.6			31.4				26.2
Approach LOS		C			C			C				C
Queue Length 50th (ft)	41	335	0	69	186		98	103	27	52	106	19
Queue Length 95th (ft)	80	#490	35	#206	349		#183	#191	62	87	154	40
Internal Link Dist (ft)		532			1432			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	365	1307	978	330	1433		261	266	615	377	392	547
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.88	0.26	0.71	0.61		0.66	0.68	0.55	0.26	0.48	0.40

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88

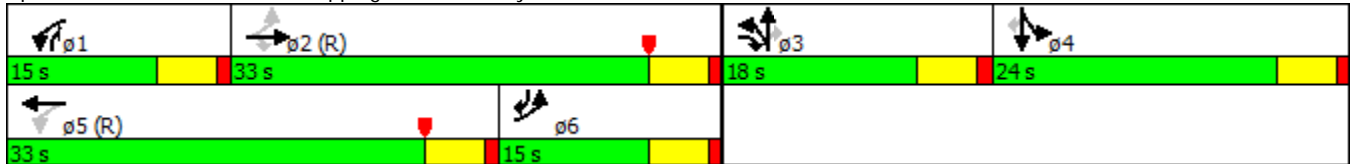
2019 No-Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015

Intersection Signal Delay: 27.6 Intersection LOS: C
 Intersection Capacity Utilization 76.4% ICU Level of Service D
 Analysis Period (min) 15

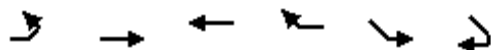
95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 No-Build Traffic Volumes - With State Land - W/Imp
4: Route 202/35 & Old Crompond Road

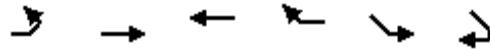
PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1462	1144	44	87	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.994		0.999	
Flt Protected					0.953	
Satd. Flow (prot)	0	3350	3574	0	1685	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	3350	3574	0	1685	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			9			
Link Speed (mph)		45	45		30	
Link Distance (ft)		309	457		1058	
Travel Time (s)		4.7	6.9		24.0	
Peak Hour Factor	0.85	0.85	0.93	0.93	0.80	0.80
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1720	1230	47	109	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1720	1277	0	110	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		1	1		1	
Detector Template						
Leading Detector (ft)		50	50		50	
Trailing Detector (ft)		0	0		0	
Detector 1 Position(ft)		0	0		0	
Detector 1 Size(ft)		50	50		50	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		65.0	65.0		25.0	
Total Split (%)		72.2%	72.2%		27.8%	
Maximum Green (s)		60.0	60.0		20.0	

2019 No-Build Traffic Volumes - With State Land - W/Imp
 4: Route 202/35 & Old Crompond Road

PM Peak Hour
 4/2/2015

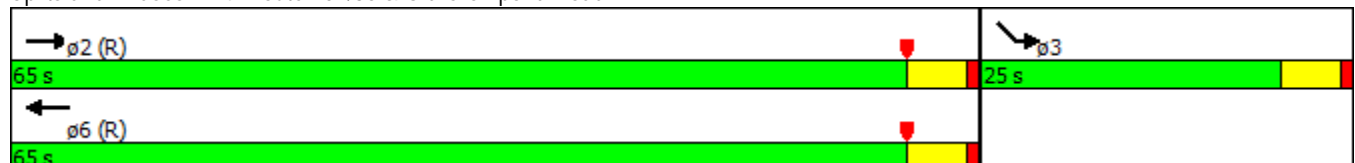


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)		72.2	72.2		11.2	
Actuated g/C Ratio		0.80	0.80		0.12	
v/c Ratio		0.64	0.45		0.53	
Control Delay		5.2	2.7		45.4	
Queue Delay		0.0	0.1		0.0	
Total Delay		5.2	2.8		45.4	
LOS		A	A		D	
Approach Delay		5.2	2.8		45.4	
Approach LOS		A	A		D	
Queue Length 50th (ft)		70	55		60	
Queue Length 95th (ft)		87	110		93	
Internal Link Dist (ft)		229	377		978	
Turn Bay Length (ft)						
Base Capacity (vph)		2686	2868		374	
Starvation Cap Reductn		0	497		0	
Spillback Cap Reductn		69	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.66	0.54		0.29	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 5.7
 Intersection LOS: A
 Intersection Capacity Utilization 53.6%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 No-Build Traffic Volumes - With State Land - W/Imp
 2: Stoney Street & Old Crompond Road

Saturday Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	75	204	133	74	99	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901				0.927	
Flt Protected				0.969	0.978	
Satd. Flow (prot)	1670	0	0	1814	1672	0
Flt Permitted				0.969	0.978	
Satd. Flow (perm)	1670	0	0	1814	1672	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			991	190	
Travel Time (s)	12.3			22.5	4.3	
Peak Hour Factor	0.88	0.88	0.58	0.58	0.91	0.91
Adj. Flow (vph)	85	232	229	128	109	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	317	0	0	357	239	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.5%
Analysis Period (min)	15
	ICU Level of Service A

Intersection									
Intersection Delay, s/veh	11.8								
Intersection LOS	B								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	75	204	0	133	74	0	99	118
Peak Hour Factor	0.92	0.88	0.88	0.92	0.58	0.58	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	85	232	0	229	128	0	109	130
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	10.8	13.2	11.2
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	46%	0%	64%
Vol Thru, %	0%	27%	36%
Vol Right, %	54%	73%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	217	279	207
LT Vol	99	0	133
Through Vol	0	75	74
RT Vol	118	204	0
Lane Flow Rate	238	317	357
Geometry Grp	1	1	1
Degree of Util (X)	0.353	0.403	0.501
Departure Headway (Hd)	5.324	4.679	5.157
Convergence, Y/N	Yes	Yes	Yes
Cap	680	774	703
Service Time	3.324	2.679	3.157
HCM Lane V/C Ratio	0.35	0.41	0.508
HCM Control Delay	11.2	10.8	13.2
HCM Lane LOS	B	B	B
HCM 95th-tile Q	1.6	2	2.8

2019 No-Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↗	↗	↘	↗	↗
Volume (vph)	107	1214	262	274	803	46	254	54	366	117	126	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.968		0.950		
Satd. Flow (prot)	1770	3539	1552	1770	3719	0	1681	1713	1583	1698	1787	1546
Flt Permitted	0.318			0.153			0.950	0.968		0.950		
Satd. Flow (perm)	592	3539	1552	285	3719	0	1667	1704	1583	1698	1787	1512
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			260		7				171			131
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1502			289				190
Travel Time (s)		9.3			22.8			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	118	1278	288	304	845	51	282	60	407	130	140	94
Shared Lane Traffic (%)							41%			0%		
Lane Group Flow (vph)	118	1278	288	304	896	0	166	176	407	130	140	94
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	88	0	0	88	0		88	88	88	50	88	88
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6

2019 No-Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015

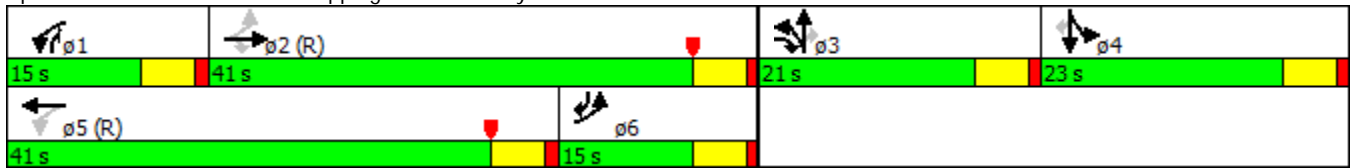


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	14.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	4.0
Minimum Split (s)	10.0	20.0	16.0	11.0	36.0		16.0	16.0	11.0	20.0	20.0	10.0
Total Split (s)	15.0	41.0	21.0	15.0	41.0		21.0	21.0	15.0	23.0	23.0	15.0
Total Split (%)	15.0%	41.0%	21.0%	15.0%	41.0%		21.0%	21.0%	15.0%	23.0%	23.0%	15.0%
Maximum Green (s)	10.0	36.0	16.0	10.0	36.0		16.0	16.0	10.0	18.0	18.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-0.7	-1.0	-1.0	0.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.3	4.0	4.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	37.0	36.7	56.2	43.2	42.2		15.2	15.2	32.5	14.5	14.5	25.5
Actuated g/C Ratio	0.37	0.37	0.56	0.43	0.42		0.15	0.15	0.32	0.14	0.14	0.26
v/c Ratio	0.34	0.98	0.29	0.80	0.57		0.65	0.67	0.65	0.53	0.54	0.19
Control Delay	29.2	53.8	2.6	44.5	23.8		51.9	53.1	14.6	46.9	47.0	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	53.8	2.6	44.5	23.8		51.9	53.1	14.6	46.9	47.0	2.0
LOS	C	D	A	D	C		D	D	B	D	D	A
Approach Delay		43.3			29.0			32.0				35.4
Approach LOS		D			C			C				D
Queue Length 50th (ft)	50	419	7	183	297		104	110	77	82	88	0
Queue Length 95th (ft)	91	#574	42	#338	342		175	185	144	137	145	11
Internal Link Dist (ft)		532			1422			209				110
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	348	1298	1009	379	1575		285	291	629	322	339	487
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.98	0.29	0.80	0.57		0.58	0.60	0.65	0.40	0.41	0.19

Intersection Summary

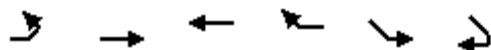
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 63 (63%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 36.2 Intersection LOS: D
 Intersection Capacity Utilization 83.8% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 No-Build Traffic Volumes - With State Land - W/Imp
4: Route 202/35 & Old Crompond Road

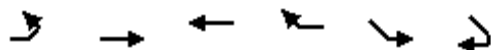
Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1697	1213	50	116	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.994		0.998	
Flt Protected					0.953	
Satd. Flow (prot)	0	3415	3641	0	1683	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	3415	3641	0	1683	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			8		1	
Link Speed (mph)		45	45		30	
Link Distance (ft)		316	457		1067	
Travel Time (s)		4.8	6.9		24.3	
Peak Hour Factor	0.97	0.97	0.95	0.90	0.90	0.90
Adj. Flow (vph)	0	1749	1277	56	129	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1749	1333	0	131	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		2	
Detector Template						
Leading Detector (ft)		83	83		83	
Trailing Detector (ft)		-5	-5		-5	
Detector 1 Position(ft)		-5	-5		-5	
Detector 1 Size(ft)		40	40		40	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(ft)		43	43		43	
Detector 2 Size(ft)		40	40		40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	

2019 No-Build Traffic Volumes - With State Land - W/Imp
4: Route 202/35 & Old Crompond Road

Saturday Peak Hour
4/2/2015

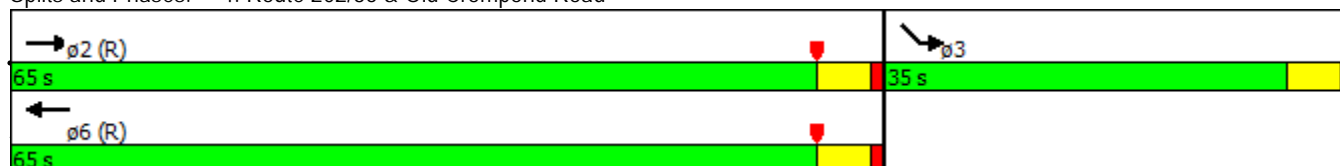


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		65.0	65.0		35.0	
Total Split (%)		65.0%	65.0%		35.0%	
Maximum Green (s)		60.0	60.0		30.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Min	C-Min		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effect Green (s)		76.8	76.8		13.2	
Actuated g/C Ratio		0.77	0.77		0.13	
v/c Ratio		0.67	0.48		0.59	
Control Delay		4.5	5.6		50.6	
Queue Delay		0.3	0.5		0.0	
Total Delay		4.8	6.1		50.6	
LOS		A	A		D	
Approach Delay		4.8	6.1		50.6	
Approach LOS		A	A		D	
Queue Length 50th (ft)		65	182		79	
Queue Length 95th (ft)		m64	m116		132	
Internal Link Dist (ft)		236	377		987	
Turn Bay Length (ft)						
Base Capacity (vph)		2623	2799		505	
Starvation Cap Reductn		0	911		0	
Spillback Cap Reductn		327	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.76	0.71		0.26	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 28 (28%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 7.2
 Intersection LOS: A
 Intersection Capacity Utilization 61.8%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 Build Traffic Volumes - With State Land - W/Imp
 2: Stoney Street & Old Crompond Road

AM PEAK HOUR
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	43	240	63	35	30	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.886				0.905	
Flt Protected				0.969	0.985	
Satd. Flow (prot)	1642	0	0	1814	1644	0
Flt Permitted				0.969	0.985	
Satd. Flow (perm)	1642	0	0	1814	1644	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1020	190	
Travel Time (s)	12.3			23.2	4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	267	70	39	33	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	315	0	0	109	110	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection									
Intersection Delay, s/veh	8.5								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	43	240	0	63	35	0	30	69
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	267	0	70	39	0	33	77
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.7	8.4	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	30%	0%	64%
Vol Thru, %	0%	15%	36%
Vol Right, %	70%	85%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	99	283	98
LT Vol	30	0	63
Through Vol	0	43	35
RT Vol	69	240	0
Lane Flow Rate	110	314	109
Geometry Grp	1	1	1
Degree of Util (X)	0.136	0.332	0.139
Departure Headway (Hd)	4.441	3.803	4.609
Convergence, Y/N	Yes	Yes	Yes
Cap	809	950	780
Service Time	2.462	1.815	2.627
HCM Lane V/C Ratio	0.136	0.331	0.14
HCM Control Delay	8.2	8.7	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	1.5	0.5

2019 Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	1216	227	137	479	16	132	16	254	93	74	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				
Frt			0.850		0.995				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.962		0.950	0.987	
Satd. Flow (prot)	1770	3471	1552	1770	3664	0	1681	1702	1583	1698	1764	1546
Flt Permitted	0.455			0.455			0.950	0.962		0.950	0.987	
Satd. Flow (perm)	848	3471	1552	848	3664	0	1665	1690	1583	1698	1764	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			223		3				149			149
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1517			289				190
Travel Time (s)		9.3			23.0			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	71	1322	247	149	521	17	147	18	282	103	82	149
Shared Lane Traffic (%)							46%			28%		
Lane Group Flow (vph)	71	1322	247	149	538	0	79	86	282	74	111	149
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		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	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				43			43	43	43	43	43	43
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

2019 Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

AM PEAK HOUR

4/2/2015



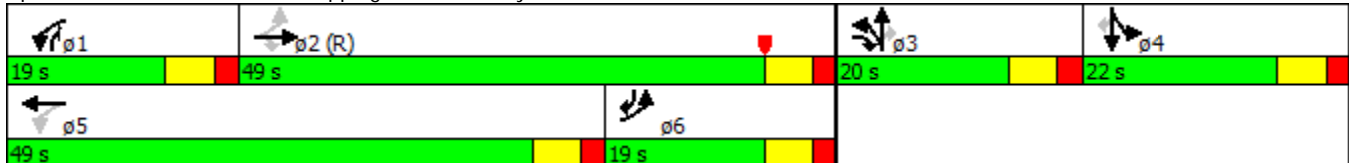
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	11.0	36.0	16.0	11.0	36.0		16.0	16.0	11.0	16.0	16.0	11.0
Total Split (s)	19.0	49.0	20.0	19.0	49.0		20.0	20.0	19.0	22.0	22.0	19.0
Total Split (%)	17.3%	44.5%	18.2%	17.3%	44.5%		18.2%	18.2%	17.3%	20.0%	20.0%	17.3%
Maximum Green (s)	13.0	43.0	14.0	13.0	43.0		14.0	14.0	13.0	16.0	16.0	13.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	6.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	Max	C-Max	None	None	None		None	None	None	None	None	Max
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	50.7	50.7	67.4	21.8	21.8		12.7	12.7	25.7	13.6	13.6	55.5
Actuated g/C Ratio	0.46	0.46	0.61	0.20	0.20		0.12	0.12	0.23	0.12	0.12	0.50
v/c Ratio	0.10	0.83	0.24	0.54	0.74		0.41	0.44	0.58	0.35	0.51	0.18
Control Delay	20.7	32.7	2.6	45.2	47.3		51.2	52.1	14.6	48.3	53.1	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	32.7	2.6	45.2	47.3		51.2	52.1	14.6	48.3	53.1	2.0
LOS	C	C	A	D	D		D	D	B	D	D	A
Approach Delay		27.7			46.8			28.3			29.3	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	27	416	6	93	187		55	61	55	51	78	0
Queue Length 95th (ft)	61	#623	41	147	233		105	111	102	96	134	21
Internal Link Dist (ft)		532			1437			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	741	1600	1065	289	1467		229	232	502	262	272	849
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.83	0.23	0.52	0.37		0.34	0.37	0.56	0.28	0.41	0.18

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

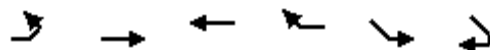
Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 32.2 Intersection LOS: C
 Intersection Capacity Utilization 74.9% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 Build Traffic Volumes - With State Land - W/Imp
4: Route 202/35 & Old Crompond Road

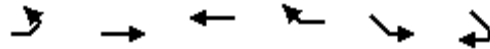
AM PEAK HOUR
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1562	664	92	71	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.982		0.997	
Flt Protected					0.954	
Satd. Flow (prot)	0	3350	3536	0	1683	0
Flt Permitted					0.954	
Satd. Flow (perm)	0	3350	3536	0	1683	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			43		1	
Link Speed (mph)		45	45		30	
Link Distance (ft)		293	457		1070	
Travel Time (s)		4.4	6.9		24.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.90
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1698	722	100	77	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1698	822	0	79	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		2	
Detector Template						
Leading Detector (ft)		83	83		83	
Trailing Detector (ft)		-5	-5		-5	
Detector 1 Position(ft)		-5	-5		-5	
Detector 1 Size(ft)		40	40		40	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(ft)		43	43		43	
Detector 2 Size(ft)		40	40		40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						

2019 Build Traffic Volumes - With State Land - W/Imp
 4: Route 202/35 & Old Crompond Road

AM PEAK HOUR
 4/2/2015

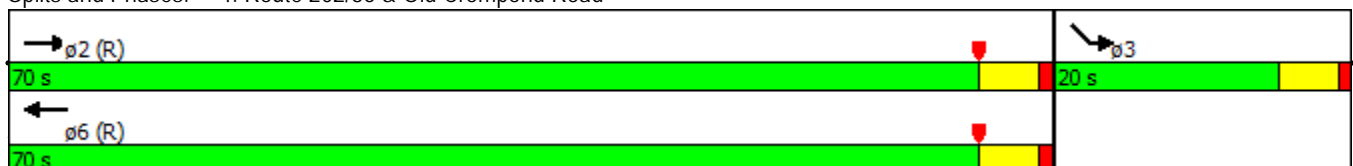


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		70.0	70.0		20.0	
Total Split (%)		77.8%	77.8%		22.2%	
Maximum Green (s)		65.0	65.0		15.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effect Green (s)		73.6	73.6		9.6	
Actuated g/C Ratio		0.82	0.82		0.11	
v/c Ratio		0.62	0.28		0.44	
Control Delay		5.6	7.6		44.1	
Queue Delay		1.3	0.0		0.2	
Total Delay		6.8	7.6		44.3	
LOS		A	A		D	
Approach Delay		6.8	7.6		44.3	
Approach LOS		A	A		D	
Queue Length 50th (ft)		171	140		42	
Queue Length 95th (ft)		283	192		83	
Internal Link Dist (ft)		213	377		990	
Turn Bay Length (ft)						
Base Capacity (vph)		2739	2899		281	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		756	0		30	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.86	0.28		0.31	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 71 (79%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 8.2
 Intersection Capacity Utilization 55.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 Build Traffic Volumes - With State Land - W/Imp
 8: Old Crompond Road & Site Access

AM PEAK HOUR
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	40	49	58	57	37	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.933		0.946	
Flt Protected		0.978			0.971	
Satd. Flow (prot)	0	1822	1738	0	1711	0
Flt Permitted		0.978			0.971	
Satd. Flow (perm)	0	1822	1738	0	1711	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1020	1070		240	
Travel Time (s)		23.2	24.3		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	53	63	62	40	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	96	125	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.7%
Analysis Period (min)	15
	ICU Level of Service A

2019 Build Traffic Volumes - With State Land - W/Imp
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	92	244	208	102	114	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.902				0.924	
Flt Protected				0.968	0.979	
Satd. Flow (prot)	1672	0	0	1812	1668	0
Flt Permitted				0.968	0.979	
Satd. Flow (perm)	1672	0	0	1812	1668	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			1014	190	
Travel Time (s)	12.3			23.0	4.3	
Peak Hour Factor	0.77	0.77	0.56	0.56	0.74	0.74
Adj. Flow (vph)	119	317	371	182	154	200
Shared Lane Traffic (%)						
Lane Group Flow (vph)	436	0	0	553	354	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.1%
Analysis Period (min)	15
	ICU Level of Service B

2019 Build Traffic Volumes - With State Land - W/Imp
 2: Stoney Street & Old Crompond Road

PM Peak Hour
 4/2/2015

Intersection									
Intersection Delay, s/veh	29.4								
Intersection LOS	D								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	92	244	0	208	102	0	114	148
Peak Hour Factor	0.92	0.77	0.77	0.92	0.56	0.56	0.92	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	119	317	0	371	182	0	154	200
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	20.5	42.9	19.4
HCM LOS	C	E	C

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	44%	0%	67%
Vol Thru, %	0%	27%	33%
Vol Right, %	56%	73%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	262	336	310
LT Vol	114	0	208
Through Vol	0	92	102
RT Vol	148	244	0
Lane Flow Rate	354	436	554
Geometry Grp	1	1	1
Degree of Util (X)	0.626	0.691	0.912
Departure Headway (Hd)	6.361	5.701	6.066
Convergence, Y/N	Yes	Yes	Yes
Cap	570	637	603
Service Time	4.377	3.727	4.066
HCM Lane V/C Ratio	0.621	0.684	0.919
HCM Control Delay	19.4	20.5	42.9
HCM Lane LOS	C	C	E
HCM 95th-tile Q	4.3	5.5	11.4

2019 Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	1044	230	225	787	56	257	61	301	116	128	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	1.00				0.98
Frt			0.850		0.990				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.970		0.950	0.990	
Satd. Flow (prot)	1770	3539	1552	1770	3715	0	1681	1717	1583	1698	1769	1546
Flt Permitted	0.323			0.180			0.950	0.970		0.950	0.990	
Satd. Flow (perm)	602	3539	1552	335	3715	0	1670	1709	1583	1698	1769	1514
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253		8				227			145
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1512			289				190
Travel Time (s)		9.3			22.9			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	138	1147	253	234	820	58	289	69	338	138	152	270
Shared Lane Traffic (%)							40%			29%		
Lane Group Flow (vph)	138	1147	253	234	878	0	173	185	338	98	192	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	1	2	2
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	40	50	50	40	50		40	40	40	50	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43		43	43
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												

2019 Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015



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	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	10.0	20.0	15.0	10.0	20.0		15.0	15.0	10.0	15.0	15.0	10.0
Total Split (s)	15.0	33.0	18.0	15.0	33.0		18.0	18.0	15.0	24.0	24.0	15.0
Total Split (%)	16.7%	36.7%	20.0%	16.7%	36.7%		20.0%	20.0%	16.7%	26.7%	26.7%	16.7%
Maximum Green (s)	10.0	28.0	13.0	10.0	28.0		13.0	13.0	10.0	19.0	19.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	33.1	33.1	49.4	34.5	34.5		13.2	13.2	25.6	15.3	15.3	26.3
Actuated g/C Ratio	0.37	0.37	0.55	0.38	0.38		0.15	0.15	0.28	0.17	0.17	0.29
v/c Ratio	0.38	0.88	0.26	0.72	0.61		0.70	0.73	0.55	0.34	0.64	0.49
Control Delay	29.7	37.8	2.3	28.0	18.5		52.6	54.8	8.3	35.1	44.3	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	37.8	2.3	28.0	18.5		52.6	54.8	8.3	35.1	44.3	9.3
LOS	C	D	A	C	B		D	D	A	D	D	A
Approach Delay		31.2			20.5			31.7			25.8	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	56	336	0	75	197		98	106	26	52	108	34
Queue Length 95th (ft)	103	#490	35	#206	348		#183	#197	62	87	156	57
Internal Link Dist (ft)		532			1432			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	364	1303	976	329	1428		261	267	616	377	393	548
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.88	0.26	0.71	0.61		0.66	0.69	0.55	0.26	0.49	0.49

Intersection Summary

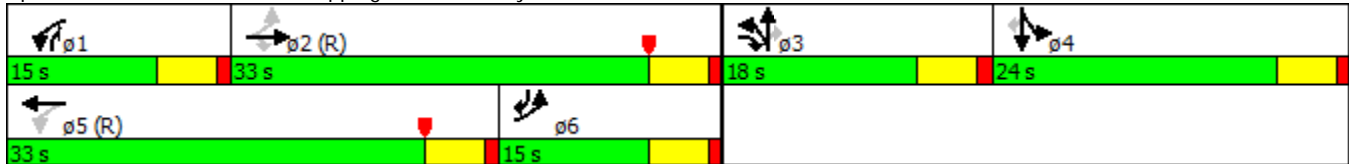
Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88

2019 Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

PM Peak Hour
 4/2/2015

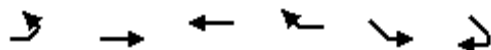
Intersection Signal Delay: 27.5	Intersection LOS: C
Intersection Capacity Utilization 76.4%	ICU Level of Service D
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35



2019 Build Traffic Volumes - With State Land - W/Imp
4: Route 202/35 & Old Crompond Road

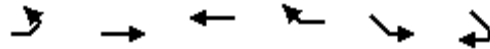
PM Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1462	1144	136	205	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.984		0.999	
Flt Protected					0.953	
Satd. Flow (prot)	0	3350	3542	0	1685	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	3350	3542	0	1685	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			30			
Link Speed (mph)		45	45		30	
Link Distance (ft)		309	457		1058	
Travel Time (s)		4.7	6.9		24.0	
Peak Hour Factor	0.85	0.85	0.93	0.93	0.80	0.80
Heavy Vehicles (%)	2%	4%	4%	2%	2%	2%
Adj. Flow (vph)	0	1720	1230	146	256	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1720	1376	0	257	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		1	1		1	
Detector Template						
Leading Detector (ft)		50	50		50	
Trailing Detector (ft)		0	0		0	
Detector 1 Position(ft)		0	0		0	
Detector 1 Size(ft)		50	50		50	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		65.0	65.0		25.0	
Total Split (%)		72.2%	72.2%		27.8%	
Maximum Green (s)		60.0	60.0		20.0	

2019 Build Traffic Volumes - With State Land - W/Imp
 4: Route 202/35 & Old Crompond Road

PM Peak Hour
 4/2/2015

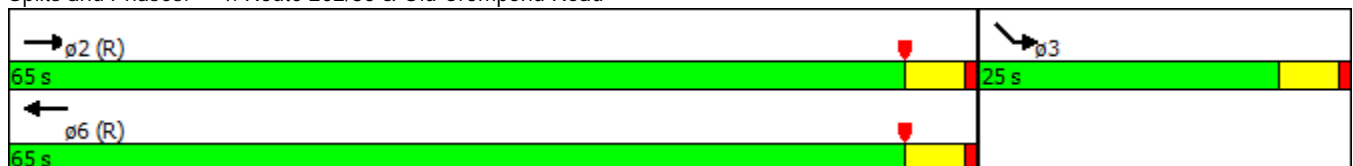


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Max	C-Max		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)		62.5	62.5		17.5	
Actuated g/C Ratio		0.69	0.69		0.19	
v/c Ratio		0.74	0.56		0.79	
Control Delay		7.2	4.4		51.8	
Queue Delay		0.0	0.2		0.0	
Total Delay		7.2	4.5		51.8	
LOS		A	A		D	
Approach Delay		7.2	4.5		51.8	
Approach LOS		A	A		D	
Queue Length 50th (ft)		84	85		137	
Queue Length 95th (ft)		95	m113		189	
Internal Link Dist (ft)		229	377		978	
Turn Bay Length (ft)						
Base Capacity (vph)		2327	2470		374	
Starvation Cap Reductn		0	322		0	
Spillback Cap Reductn		16	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.74	0.64		0.69	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 9.5
 Intersection LOS: A
 Intersection Capacity Utilization 60.2%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Route 202/35 & Old Crompond Road



2019 Build Traffic Volumes - With State Land - W/Imp
 8: Old Crompond Road & Site Access

PM Peak Hour
 4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	45	154	169	64	78	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.963		0.944	
Flt Protected		0.989			0.972	
Satd. Flow (prot)	0	1842	1794	0	1709	0
Flt Permitted		0.989			0.972	
Satd. Flow (perm)	0	1842	1794	0	1709	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1014	1058		274	
Travel Time (s)		23.0	24.0		6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	167	184	70	85	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	216	254	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.1%
Analysis Period (min)	15
	ICU Level of Service A

2019 Build Traffic Volumes - With State Land - W/Imp
 2: Stoney Street & Old Crompond Road

Saturday Peak Hour
 4/2/2015



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	106	204	174	103	99	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1%			-1%	2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.911				0.917	
Flt Protected				0.970	0.981	
Satd. Flow (prot)	1688	0	0	1816	1659	0
Flt Permitted				0.970	0.981	
Satd. Flow (perm)	1688	0	0	1816	1659	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	539			991	190	
Travel Time (s)	12.3			22.5	4.3	
Peak Hour Factor	0.88	0.88	0.58	0.58	0.91	0.91
Adj. Flow (vph)	120	232	300	178	109	176
Shared Lane Traffic (%)						
Lane Group Flow (vph)	352	0	0	478	285	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.01	1.01
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.5%
Analysis Period (min)	15
	ICU Level of Service B

Intersection									
Intersection Delay, s/veh	16.7								
Intersection LOS	C								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	106	204	0	174	103	0	99	160
Peak Hour Factor	0.92	0.88	0.88	0.92	0.58	0.58	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	120	232	0	300	178	0	109	176
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	13.2	21.2	13.4
HCM LOS	B	C	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	38%	0%	63%
Vol Thru, %	0%	34%	37%
Vol Right, %	62%	66%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	259	310	277
LT Vol	99	0	174
Through Vol	0	106	103
RT Vol	160	204	0
Lane Flow Rate	285	352	478
Geometry Grp	1	1	1
Degree of Util (X)	0.452	0.5	0.719
Departure Headway (Hd)	5.717	5.113	5.422
Convergence, Y/N	Yes	Yes	Yes
Cap	629	701	664
Service Time	3.77	3.162	3.466
HCM Lane V/C Ratio	0.453	0.502	0.72
HCM Control Delay	13.4	13.2	21.2
HCM Lane LOS	B	B	C
HCM 95th-tile Q	2.3	2.8	6.1

2019 Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	1214	262	274	803	46	254	58	366	117	130	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	12	12	11
Grade (%)		0%			0%			0%				-2%
Storage Length (ft)	180		180	450		575	0		0	0		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor							0.99	0.99				0.98
Frt			0.850		0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.969		0.950		
Satd. Flow (prot)	1770	3539	1552	1770	3719	0	1681	1715	1583	1698	1787	1546
Flt Permitted	0.318			0.153			0.950	0.969		0.950		
Satd. Flow (perm)	592	3539	1552	285	3719	0	1667	1706	1583	1698	1787	1512
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			254		7				171			131
Link Speed (mph)		45			45			30				30
Link Distance (ft)		612			1502			289				190
Travel Time (s)		9.3			22.8			6.6				4.3
Confl. Peds. (#/hr)							10					10
Peak Hour Factor	0.91	0.95	0.91	0.90	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Bus Blockages (#/hr)	0	0	5	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	160	1278	288	304	845	51	282	64	407	130	144	137
Shared Lane Traffic (%)							40%			0%		
Lane Group Flow (vph)	160	1278	288	304	896	0	169	177	407	130	144	137
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00	0.99	0.99	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	83	0	0	83	0		83	83	83	50	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Position(ft)	-5	0	0	-5	0		-5	-5	-5	0	-5	-5
Detector 1 Size(ft)	88	0	0	88	0		88	88	88	50	88	88
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	6	2	3	1	5		3	3	1	4	4	6
Permitted Phases	2		2	5					3			4
Detector Phase	6	2	3	1	5		3	3	1	4	4	6

2019 Build Traffic Volumes - With State Land - W/Imp
 3: BJ's Shopping Center/Stoney Street & Route 202/35

Saturday Peak Hour
 4/2/2015

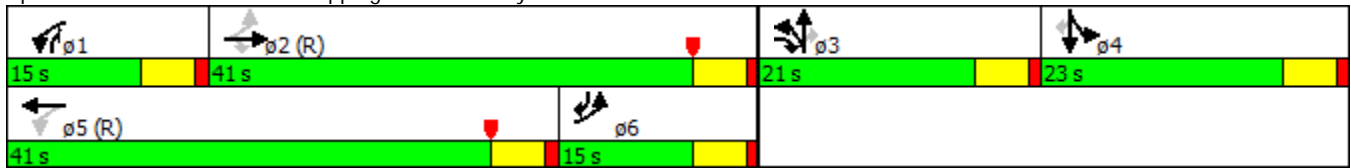


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	4.0	14.0	10.0	5.0	15.0		10.0	10.0	5.0	10.0	10.0	4.0
Minimum Split (s)	10.0	20.0	16.0	11.0	36.0		16.0	16.0	11.0	20.0	20.0	10.0
Total Split (s)	15.0	41.0	21.0	15.0	41.0		21.0	21.0	15.0	23.0	23.0	15.0
Total Split (%)	15.0%	41.0%	21.0%	15.0%	41.0%		21.0%	21.0%	15.0%	23.0%	23.0%	15.0%
Maximum Green (s)	10.0	36.0	16.0	10.0	36.0		16.0	16.0	10.0	18.0	18.0	10.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lost Time Adjust (s)	-1.0	-0.7	-1.0	-1.0	0.0		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.3	4.0	4.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	3.0	2.0	2.0		3.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		22.0	22.0		22.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	37.0	36.7	56.4	42.9	41.9		15.4	15.4	32.4	14.6	14.6	25.6
Actuated g/C Ratio	0.37	0.37	0.56	0.43	0.42		0.15	0.15	0.32	0.15	0.15	0.26
v/c Ratio	0.46	0.98	0.29	0.81	0.57		0.66	0.67	0.65	0.52	0.55	0.28
Control Delay	33.1	53.8	2.7	41.1	22.5		52.0	52.7	14.7	46.6	47.3	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	53.8	2.7	41.1	22.5		52.0	52.7	14.7	46.6	47.3	4.5
LOS	C	D	A	D	C		D	D	B	D	D	A
Approach Delay		43.3			27.2			32.0			32.8	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	70	419	9	172	318		105	111	77	82	91	2
Queue Length 95th (ft)	119	#574	43	#337	336		178	186	144	137	149	28
Internal Link Dist (ft)		532			1422			209			110	
Turn Bay Length (ft)	180		180	450								
Base Capacity (vph)	348	1298	1006	374	1564		285	291	627	322	339	488
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.98	0.29	0.81	0.57		0.59	0.61	0.65	0.40	0.42	0.28

Intersection Summary

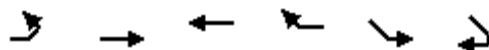
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 63 (63%), Referenced to phase 2:EBTL and 5:WBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 35.5 Intersection LOS: D
 Intersection Capacity Utilization 83.9% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: BJ's Shopping Center/Stoney Street & Route 202/35

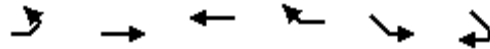


2019 Build Traffic Volumes - With State Land - W/Imp
4: Route 202/35 & Old Crompond Road

Saturday Peak Hour
4/2/2015



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑		↑↑	
Volume (vph)	0	1697	1213	155	217	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		7%	-7%		10%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.982		0.999	
Flt Protected					0.953	
Satd. Flow (prot)	0	3415	3597	0	1685	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	3415	3597	0	1685	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			27			
Link Speed (mph)		45	45		30	
Link Distance (ft)		316	457		1067	
Travel Time (s)		4.8	6.9		24.3	
Peak Hour Factor	0.97	0.97	0.95	0.90	0.90	0.90
Adj. Flow (vph)	0	1749	1277	172	241	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1749	1449	0	243	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.05	1.05	0.96	0.96	1.07	1.07
Turning Speed (mph)	15			9	15	9
Number of Detectors		1	1		1	
Detector Template						
Leading Detector (ft)		50	50		50	
Trailing Detector (ft)		0	0		0	
Detector 1 Position(ft)		0	0		0	
Detector 1 Size(ft)		50	50		50	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		21.0	21.0		9.0	
Total Split (s)		65.0	65.0		35.0	
Total Split (%)		65.0%	65.0%		35.0%	
Maximum Green (s)		60.0	60.0		30.0	
Yellow Time (s)		4.0	4.0		4.0	



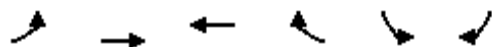
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		-1.0	-1.0		-1.0	
Total Lost Time (s)		4.0	4.0		4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		C-Min	C-Min		None	
Walk Time (s)		5.0	5.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effect Green (s)		71.3	71.3		20.7	
Actuated g/C Ratio		0.71	0.71		0.21	
v/c Ratio		0.72	0.56		0.70	
Control Delay		6.1	6.9		47.1	
Queue Delay		1.2	0.6		0.0	
Total Delay		7.3	7.5		47.1	
LOS		A	A		D	
Approach Delay		7.3	7.5		47.1	
Approach LOS		A	A		D	
Queue Length 50th (ft)		102	209		145	
Queue Length 95th (ft)		m105	m127		209	
Internal Link Dist (ft)		236	377		987	
Turn Bay Length (ft)						
Base Capacity (vph)		2436	2573		522	
Starvation Cap Reductn		0	668		0	
Spillback Cap Reductn		429	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.87	0.76		0.47	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 28 (28%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 10.2
 Intersection LOS: B
 Intersection Capacity Utilization 65.7%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Route 202/35 & Old Crompond Road





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	181	141	71	68	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.955		0.945	
Flt Protected		0.989			0.971	
Satd. Flow (prot)	0	1842	1779	0	1709	0
Flt Permitted		0.989			0.971	
Satd. Flow (perm)	0	1842	1779	0	1709	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		991	1067		252	
Travel Time (s)		22.5	24.3		5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	197	153	77	74	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	251	230	0	125	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.7%
Analysis Period (min)	15
	ICU Level of Service A

APPENDIX D

KW Housing Trends



Housing Trends

Single Family

Yorktown Residential real estate has experienced some extremely long cycles in recent history. June 2006 was the absolute high point in both sold prices and number of sales. After that time there was a very long, if somewhat irregular, plunge in both of those indexes with short spurts of activity and price levels. In addition to the uncertain market, the market has also experienced the normal seasonal ups and downs. Since 2011, looking at the median sales price, there is a range in January of each year from 345,000 in 2011, to a high of \$421,000 in 2013, to a low the following year, 2014, of \$290,000 and 2015 saw a jump to \$369,000. Some of this fluctuation is caused by winter weather and its severity.

In addition to seasonal fluctuations, housing stock inventory plays a significant role. In January 2014 and 2015 the housing stock is at the lowest point since before 2010. During a similar period, the economy also played a role. We can see from the data that the heaviest concentration of homes that were sold were under \$450,000. When looking at the absorption rate, (months of housing supply), for the prior 4-6 months, there is a 4.26 months of housing supply. Current date to 3 months back, there is a 10 month supply. This is due in part to the advent of the Spring Market. If we adjust statistics to account for seasonal variations, the market appears to be stabilizing in both inventory and pricing.

I believe the most interesting aspect of the single family market in Yorktown is the diversity of options for potential buyers with a concentration of activity between \$250,000 and \$450,000. Conventional wisdom tells us that new or recently constructed homes traditionally sell better than older dwellings. This can be attributed to the changing tastes of potential buyers preferring more recent styles and layouts, i.e. open floor plans, larger rooms, more and larger windows, as well as a desire to avoid major home repairs that might be required in older homes.

In conclusion, identifiable market trends indicate newly constructed homes in the \$250,000-\$450,000 range will sell best. Since a good percentage of the Crompond Terraces project contains homes in this price range, they should sell well in the current market.

Condominiums

The number of sales of condos peaked in February of this year over all years, back to 2009. The numbers of sales should level out during late Spring and into Summer. In March of this year, the median sales price for Condos peaked at \$341,250 which is significantly higher than any time since before 2011. I believe this is due, in part, to the economy. You can buy a condo for generally less than a house, and taxes and utilities will cost you less as well. Overall savings could be significant. However, the absorption rate, similar to single family homes, has increased from a 5.88 month supply to 9.29 months of housing supply.

This data would seem to indicate that of the two types of home ownership, condominium currently seems more desirable.

Commercial

Let me first qualify my remarks by saying that many, many commercial properties are not listed in the Multiple Listing Service (MLS). However, the information contained here is based solely on the MLS data. There are so few units listed that it is difficult to identify trends. But, some basic conclusions can be drawn.

From 2010 to the present, we show a reasonably stable commercial market, with active listings ranging from 15 -23 properties in 2014, 10-18 properties in 2013, 16-24 properties in 2012. Each year averages 6-7 actual sales.

Anecdotally, most of the vacant store fronts visible in town, are for rent, not “for sale” properties. Conventional wisdom about the preference of new versus existing construction holds in the commercial market as well.

All of this data seems to indicate that additional, newly constructed commercial property, would sell quite well. Therefore the Crompond Terraces commercial units, which will be offered as condominium units, should sell quite well.

Prepared by:

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Keller Williams Realty Partners

2 Old Tomahawk Street

Yorktown Heights, NY 10598

914-413-3342

APPENDIX E

Soil Sample Data Sheets

MANDALAY

6/23/15

TEST PIT DATA REQUIRED TO BE SUBMITTED WITH APPLICATION
DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH G.L.	HOLE NO. <u>1</u>	HOLE NO. <u>2</u>	HOLE NO. _____	HOLE NO. _____
6"	<u>6" TOPSOIL</u>	<u>6" TOPSOIL</u>		
12"				
18"	<u>30" ROOTS</u>	<u>6-40 ORANGE</u>		
24"		<u>BROWN SANDY</u>		
30"	<u>6-32"</u>	<u>LOAM</u>		
36"	<u>ORANGE BROWN</u>	<u>COBBLES</u>		
42"	<u>LOAM</u>	<u>1/2 BOULDERS</u>		
48"				
54"	<u>32-60</u>	<u>40-60</u>		
60"	<u>BROWN COARSE</u>	<u>GREY BROWN</u>		
66"	<u>SAND WITH</u>	<u>SAND WITH</u>		
72"	<u>COBBLES 1/4</u>	<u>COBBLES</u>		
78"	<u>BOULDERS</u>			
84"				

60" TOTAL 45" TOTAL → 60

WAS GROUNDWATER ENCOUNTERED? YES (NO)

INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED _____ Ft./In.

INDICATED LEVEL FOR WHICH WATER LEVEL RISES AFTER BEING ENCOUNTERED _____ Ft./In.

DEEP TEST MADE BY _____ DATE OF DEEP TESTS _____

DESIGN

Soil Rate Used _____ Min/1" Drop: S.D. Usable Area Provided _____

No. of Bedrooms _____ Septic Tank Capacity _____ Gals. Masonry _____ Metal _____

Absorption Area Prov. by _____ L.F. x 24" _____ width trench. Other _____

Design Professional Name _____

Signature _____

Address _____

Seal _____

MANDALAY

6/30/15

TEST PIT DATA REQUIRED TO BE SUBMITTED WITH APPLICATION
DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH	HOLE NO. <u>1</u>	HOLE NO. <u>2</u>	HOLE NO. <u>3</u>	HOLE NO. <u>4</u>
G.L.	<u>0-6" TOPSOIL</u>	<u>6" TOPSOIL</u>	<u>0-6" TOPSOIL</u>	<u>0-6" TOPSOIL</u>
6"				
12"	<u>6-38" ORANGE</u>	<u>ROOTS 47"</u>	<u>24" ROOTS</u>	<u>28" ROOTS</u>
18"	<u>BROWN SANDY</u>			
24"	<u>LOAM W/</u>	<u>6-52" ORANGE</u>	<u>6-36"</u>	<u>6-50" GREY</u>
30"	<u>COBBLES &</u>	<u>BROWN SANDY</u>	<u>ORANGE BROWN</u>	<u>BROWN SANDY</u>
36"	<u>ROCK</u>	<u>LOAM W/</u>	<u>SANDY LOAM</u>	<u>LOAM W/</u>
42"		<u>LARGE ROCKS</u>	<u>W/ COBBLES</u>	<u>COBBLES &</u>
48"	<u>38-60" ROCK</u>		<u>AND ROCK</u>	<u>BOULDERS</u>
54"		<u>52-62"</u>		
60"	<u>38" TOTAL</u>	<u>GREY FINE</u>		<u>58" ROCK</u>
66"	<u>TO ROCK</u>	<u>SANDS W/</u>		
72"		<u>COBBLES</u>		
78"			<u>36" BOTTOM</u>	
84"	<u>60" TOTAL</u>	<u>TOTAL 62"</u>	<u>AT ROCK</u>	<u>58" TOTAL</u>

WAS GROUNDWATER ENCOUNTERED? YES (NO) 36" TOTAL
 INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED _____ Ft./In.
 INDICATED LEVEL FOR WHICH WATER LEVEL RISES AFTER BEING ENCOUNTERED _____ Ft./In.
 DEEP TEST MADE BY _____ DATE OF DEEP TESTS _____

DESIGN
 Soil Rate Used _____ Min/1" Drop: _____ S.D. Usable Area Provided _____
 No. of Bedrooms _____ Septic Tank Capacity _____ Gals. Masonry _____ Metal _____
 Absorption Area Prov. by _____ L.F. x 24" _____ width trench. Other _____

Design Professional Name _____ Signature _____
 Address _____ Seal _____

MANDALAY

6/30/15

TEST PIT DATA REQUIRED TO BE SUBMITTED WITH APPLICATION
DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH	HOLE NO. <u>5</u>	HOLE NO. <u>6</u>	HOLE NO. <u>7</u>	HOLE NO. <u>8</u>
G.L.	<u>6" TOPSOIL</u>	<u>6" TOPSOIL</u>	<u>6" TOPSOIL</u>	<u>6" TOPSOIL</u>
6"		<u>26' ROOT</u>		
12"	<u>24" ROOT</u>		<u>22" ROOTS</u>	<u>6-56"</u>
18"		<u>6-38"</u>		<u>ORANGE BROWN</u>
24"	<u>6-32"</u>	<u>ORANGE BROWN</u>	<u>6-28"</u>	<u>SANDY LOAM</u>
30"	<u>ORANGE BROWN</u>	<u>SANDY LOAM</u>	<u>ORANGE BROWN</u>	<u>WITH COBBLES</u>
36"	<u>SANDY LOAM</u>		<u>SANDY LOAM</u>	<u>& BOULDERS</u>
42"		<u>38-72"</u>		
48"	<u>32-76"</u>	<u>GREY BROWN</u>	<u>28-89</u>	<u>ROOTS 32"</u>
54"	<u>GREY BROWN</u>	<u>SAND WITH</u>	<u>GREY BROWN</u>	
60"	<u>SAND WITH</u>	<u>COBBLES</u>	<u>SAND WITH</u>	<u>56" ROCK</u>
66"	<u>COBBLES</u>	<u>& BOULDERS</u>	<u>GRAVEL &</u>	
72"			<u>COBBLES</u>	
78"				
84"	<u>76" TOTAL</u>	<u>72" TOTAL</u>	<u>89" TOTAL</u>	<u>56" TOTAL</u>

WAS GROUNDWATER ENCOUNTERED? YES NO
 INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED _____ Ft./In.
 INDICATED LEVEL FOR WHICH WATER LEVEL RISES AFTER BEING ENCOUNTERED _____ Ft./In.
 DEEP TEST MADE BY _____ DATE OF DEEP TESTS _____

DESIGN
 Soil Rate Used _____ Min/1" Drop: S.D. Usable Area Provided _____
 No. of Bedrooms _____ Septic Tank Capacity _____ Gals. Masonry _____ Metal _____
 Absorption Area Prov. by _____ L.F. x 24" _____ width trench. Other _____

Design Professional Name _____ Signature _____
 Address _____ Seal _____

MANDALAY

6/30/15

TEST PIT DATA REQUIRED TO BE SUBMITTED WITH APPLICATION
DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH	HOLE NO. <u>9</u>	HOLE NO. _____	HOLE NO. _____	HOLE NO. _____
G.L.	<u>6" TOPSOIL</u>	_____	_____	_____
6"	_____	_____	_____	_____
12"	<u>6-42</u>	_____	_____	_____
18"	<u>ORANGE BROWN</u>	_____	_____	_____
24"	<u>SANDY LOAM</u>	_____	_____	_____
30"	<u>26" ROOTS</u>	_____	_____	_____
36"	<u>42 GREY</u>	_____	_____	_____
42"	<u>FINE SAND</u>	_____	_____	_____
48"	<u>42" ROCK</u>	_____	_____	_____
54"	_____	_____	_____	_____
60"	_____	_____	_____	_____
66"	_____	_____	_____	_____
72"	_____	_____	_____	_____
78"	<u>42" TOTAL</u>	_____	_____	_____
84"	_____	_____	_____	_____

WAS GROUNDWATER ENCOUNTERED? YES (NO)

INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED _____ Ft./In.

INDICATED LEVEL FOR WHICH WATER LEVEL RISES AFTER BEING ENCOUNTERED _____ Ft./In.

DEEP TEST MADE BY _____ DATE OF DEEP TESTS _____

DESIGN

Soil Rate Used _____ Min/1" Drop: S.D. Usable Area Provided _____

No. of Bedrooms _____ Septic Tank Capacity _____ Gals. Masonry _____ Metal _____

Absorption Area Prov. by _____ L.F. x 24" _____ width trench. Other _____

Design Professional Name _____

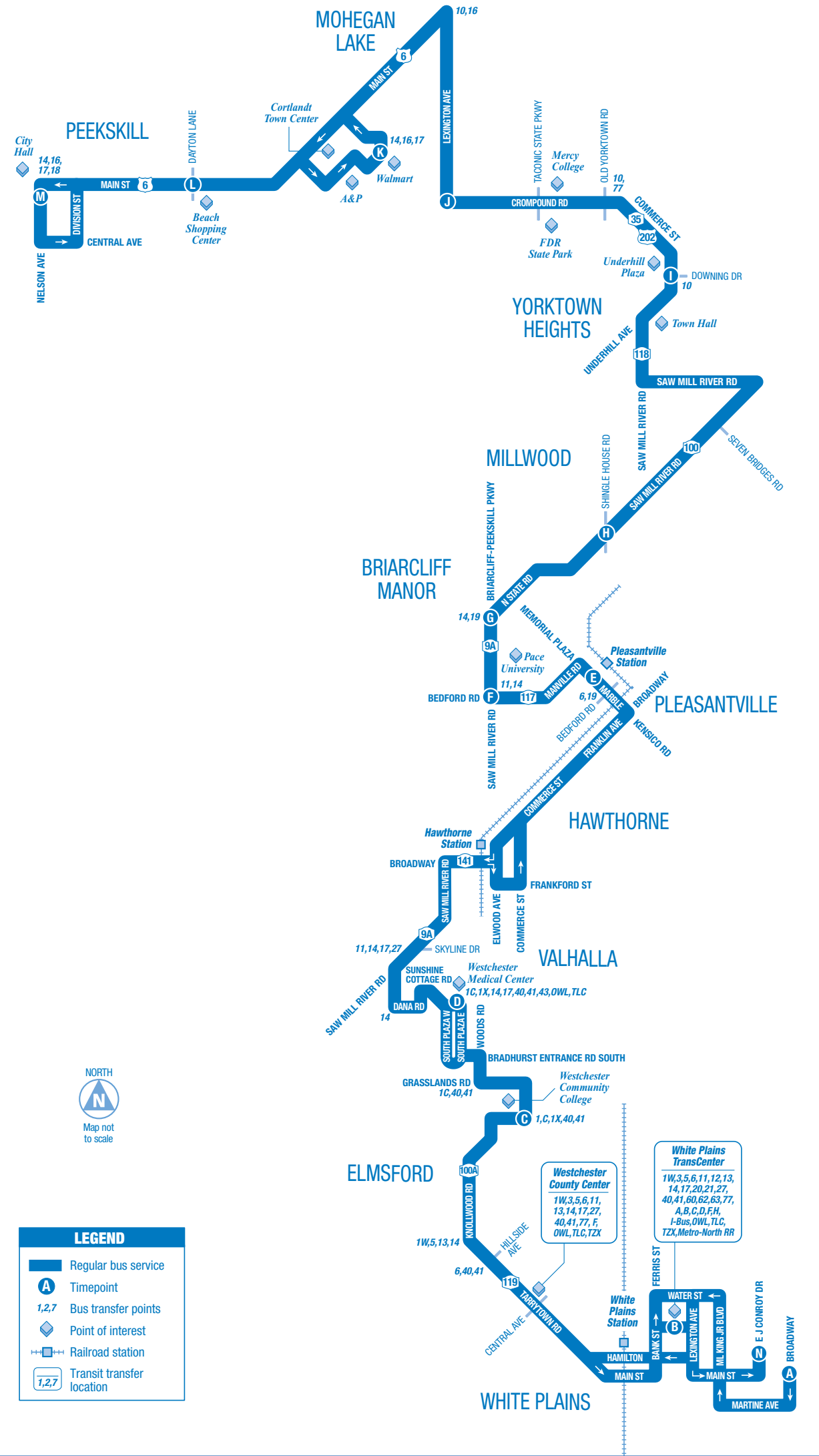
Signature _____

Address _____

Seal

APPENDIX F

Westchester Bee-Line
Route 15 Map



WHITE PLAINS TO PEEKSKILL AND YORKTOWN / MONDAY – FRIDAY

	A	B	C	D	E	F	G	H	I	J	K	L	M
	N Broadway at Main St	White Plains TransCenter (Lane E)	Westchester Community College	Westchester Medical Center	Memorial Plaza Pleasantville RR Station (Harlem Line)	Bedford Rd at Rte 9A	N State Rd at Rt 9A	Rt 100 at Shingle House Rd	Commerce St at Downing Dr	Lexington Ave at Crompond Rd	Cortlandt Town Center	Beach Shopping Center	Main St at Nelson Ave
WHITE PLAINS													
VALHALLA													
PLEASANTVILLE													
BRIARCLIFF MANOR													
MILLWOOD													
YORKTOWN HEIGHTS													
MOHEGAN LAKE													
PEEKSKILL													
AM	7:53	7:58	8:13	8:21	8:39	8:43	8:47	8:54	9:10	9:22	9:29	9:35	9:40
	9:53	9:58	10:13	10:21	10:39	10:43	10:47	10:54	11:10	11:22	11:29	11:35	11:40
	11:26	11:31	11:46	11:54	12:12	12:16	12:20	12:27	12:43	12:55	1:02	1:08	1:13
PM	1:26	1:31	1:46	1:54	2:12	2:16	2:20	2:27	2:43	2:55	3:02	3:08	3:13
	4:26	4:25	4:40	4:48	5:08	5:12	5:16	5:23	5:37	5:49	5:56	6:02	6:07
	4:55	5:00	5:15	5:23	5:41	5:45	5:49	5:56	6:10	6:22	6:29	6:35	6:40
	5:24	5:29	5:44	5:52	6:10	6:14	6:18	6:25	6:39	6:51	6:58	7:04	7:09

PEEKSKILL AND YORKTOWN TO WHITE PLAINS / MONDAY – FRIDAY

	M	L	K	J	I	H	G	F	E	D	C	B	N
	Main St at Nelson Ave	Beach Shopping Center	Cortlandt Town Center	Lexington Ave at Crompond Rd	Commerce St at Downing Dr	Rt 100 at Shingle House Rd	N State Rd at Rt 9A	Bedford Rd at Rte 9A	Memorial Plaza Pleasantville RR Station (Harlem Line)	Westchester Medical Center	Westchester Community College	White Plains TransCenter (Lane E)	Main St at E.J. Conroy Dr
PEEKSKILL													
MOHEGAN LAKE													
YORKTOWN HEIGHTS													
MILLWOOD													
BRIARCLIFF MANOR													
PLEASANTVILLE													
VALHALLA													
WHITE PLAINS													
AM	6:10	6:15	6:21	6:28	6:42	6:56	7:01	7:05	7:09	7:25	7:31	7:45	7:49
	6:51	6:57	7:04	7:11	7:26	7:41	7:48	7:46	8:00	8:17	8:24	8:40	8:44
	8:31	8:36	8:42	8:49	9:03	9:18	9:24	9:28	9:32	9:49	9:56	10:12	10:16
	10:20	10:25	10:31	10:38	10:52	11:07	11:13	11:17	11:21	11:38	11:45	12:01	12:05
	11:55	12:00	12:06	12:13	12:27	12:42	12:48	12:52	12:56	1:13	1:20	1:36	1:40
PM	1:30	1:35	1:41	1:48	2:02	2:17	2:23	2:27	2:31	2:48	2:55	3:11	3:15
	3:30	3:35	3:41	3:48	4:07	4:22	4:28	4:32	4:36	4:53	5:00	5:16	5:20
	5:12	5:17	5:23	5:30	5:44	5:59	6:05	6:09	6:13	6:30	6:37	6:53	6:57

WHITE PLAINS TO PEEKSKILL AND YORKTOWN / SATURDAY

	A	B	C	D	E	F	G	H	I	J	K	L	M
	N Broadway at Main St	White Plains TransCenter (Lane E)	Westchester Community College	Westchester Medical Center	Memorial Plaza Pleasantville RR Station (Harlem Line)	Bedford Rd at Rte 9A	N State Rd at Rt 9A	Rt 100 at Shingle House Rd	Commerce St at Downing Dr	Lexington Ave at Crompond Rd	Cortlandt Town Center	Beach Shopping Center	Main St at Nelson Ave
	WHITE PLAINS	VALHALLA	PLEASANTVILLE	BRIARCLIFF MANOR	MILLWOOD	YORKTOWN HEIGHTS	MOHEGAN LAKE	PEEKSKILL					
AM	10:00	10:07	10:22	10:30	10:48	10:52	10:56	11:02	11:17	11:30	11:41	11:51	11:57
PM	1:41	1:48	2:03	2:11	2:29	2:33	2:37	2:43	2:58	3:11	3:22	3:32	3:38
	5:10	5:16	5:29	5:37	5:54	5:58	6:02	6:07	6:22	6:33	6:44	6:51	6:57

PEEKSKILL AND YORKTOWN TO WHITE PLAINS / SATURDAY

	M	L	K	J	I	H	G	F	E	D	C	B	N
	Main St at Nelson Ave	Beach Shopping Center	Cortlandt Town Center	Lexington Ave at Crompond Rd	Commerce St at Downing Dr	Rt 100 at Shingle House Rd	N State Rd at Rt 9A	Bedford Rd at Rte 9A	Memorial Plaza Pleasantville RR Station (Harlem Line)	Westchester Medical Center	Westchester Community College	White Plains TransCenter (Lane E)	Main St at E.J. Conroy Dr
	PEEKSKILL	MOHEGAN LAKE	YORKTOWN HEIGHTS	MILLWOOD	BRIARCLIFF MANOR	PLEASANTVILLE	VALHALLA	WHITE PLAINS					
AM	9:26	9:32	9:38	9:49	10:02	10:16	10:22	10:26	10:30	10:47	10:54	11:08	11:13
PM	12:14	12:20	12:26	12:37	12:50	1:04	1:10	1:14	1:18	1:35	1:42	1:56	2:01
	3:58	4:04	4:10	4:21	4:34	4:48	4:54	4:58	5:02	5:19	5:26	5:40	5:45

INSTRUCTIONS

The bus passes this location at listed times. Look for the column of times below the matching symbol in the schedule.

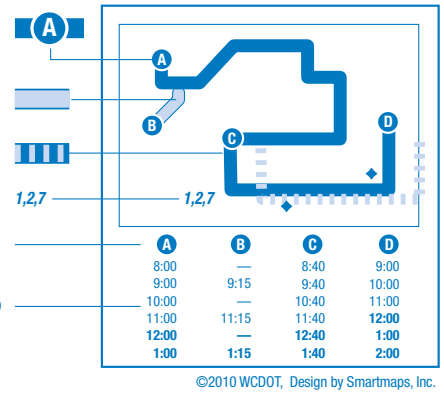
Only certain trips operate along this portion of the route. See the schedule for trips that operate here.

The bus operates express along the route. No stops are made unless indicated by the F symbol.

Transfer point. Shows where this bus intersects with other bus routes.

The bus stops at the times listed below the symbol. Light times are A.M.; bold times are P.M.

The timetable shows when the bus is scheduled to depart. Actual departure times may vary and depend upon traffic and weather conditions. Arrive at the bus stop about 5 minutes early to avoid missing the bus.



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BEE-LINE HOLIDAY SCHEDULE

HOLIDAY	SCHEDULE IN EFFECT
New Years Day.....	Sunday
Martin Luther King, Jr. Day.....	Saturday
Presidents' Day.....	Saturday
Memorial Day.....	Sunday
Independence Day.....	Sunday
Labor Day.....	Sunday
Columbus Day.....	Weekday
Election Day.....	Weekday
Veterans Day.....	Weekday
Thanksgiving Day.....	No Service
Christmas Day.....	No Service

Unlimited Ride MetroCard:

- Available for 7 or 30 days
- The more you ride, the less each ride costs
- All bus and subway transfers included
- Can only be used by one person at a time
- Cannot be used again in the same direction on the same bus route or at the same subway station for 18 minutes

Pay-Per-Ride MetroCard:

- Get an 11% bonus with the purchase or addition of \$ 5.50 or more.
- Free bus-to-bus, bus-to-subway, or subway-to-bus transfer within 2 hours of paying fare (some exceptions apply)
- Refill as often as you like until card expires (cards usually expire in one year).
- Can be used to pay for up to 4 people at a time

For more information on MetroCard, call **Bee-Line Customer Service at (914) 813-7777** or visit us online at www.westchestergov.com/beelinebus

Save Time and Money Buy a MetroCard

MetroCard Choices

What's best for you?

Unlimited Ride OR Pay-per-Ride

7 Easy Steps to Faster Boarding

1. Check the route number and final destination.
2. Check the route map for your desired stop.
3. Check the arrival time of the next bus.
4. To speed boarding, have your MetroCard or exact coin fare ready.
5. Transfers are issued only at the time of fare payment.
6. Children under 5 ride free when accompanied by a fare-paying adult.
7. Check the route number on the sign above the windshield before boarding.

For more information, call **(914) 813-7777** or visit us online at www.westchestergov.com/beelinebus

the bee-line system

Bee-Line Cash and MetroCard Fares

Effective March 22, 2015

Cash Fares (Coins Only)	
One Ride.....	\$2.75
Paper Transfer to Bee-Line & NYC Buses.....	FREE
Senior/Disabled Reduced Fare One Ride.....	\$1.35
Senior/Disabled Paper Transfer to Bee-Line & NYC Buses.....	FREE
BXM4C One Ride.....	\$7.50
BXM4C Paper Transfer to Bee-Line & NYC Buses.....	FREE
BXM4C Senior/Disabled Reduced Fare (Off-Peak Only).....	\$3.75

Pay-Per-Ride MetroCard Fares	
(Includes One Transfer to Bee-Line Buses, NYC Buses & Subways)	
One Ride with Transfer.....	\$2.75
Senior/Disabled Reduced Fare One Ride with Transfer.....	\$1.35
Unlimited Ride 30-Day MetroCard Fare.....	\$116.50

Transfers

(1) Paper transfers will be accepted on all local routes, except the same route initially boarded. Paper transfers must be obtained at the time of initial boarding.

(2) Pay-Per-Ride MetroCards will be accepted on all Bee-Line routes, except the same route initially boarded, NYC local buses and subways with no additional fare charged to the card, within two hours of the initial boarding.

Senior/Disabled Reduced Fares

Reduced fares are available to riders at least 65 years of age, certified disabled persons and valid Medicare card holders with proper photo identification.

MetroCard reduced fares are available only to holders of a personalized Reduced-Fare MetroCard. For more information call (718) 330-1234 or go to www.mta.info/metrocard.

Customer Service

www.westchestergov.com/beeline

24-Hour Automated Schedule Information (914) 813-7777

Representatives are available 8 a.m. to 4 p.m. weekdays

Lost & Found (914) 376-6361

Large print timetables are available upon request.

Hard of hearing individuals can use the New York State 711 Relay Service

Fares, schedule and equipment are subject to change

the bee-line system

Effective March 30, 2015

LOCAL ROUTE

15

Peekskill
Yorktown
Pleasantville
White Plains

ALSO SERVING

- Beach Shopping Center
- Cortlandt Town Center
- Millwood
- Westchester Medical Center
- Westchester Community College

Westchester gov.com

(914) 813-7777