River Knoll

Preliminary Final Environmental Impact Statement

Applicant: Glenco Residential LLC
Hudson Valley Land Holdings LLC
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August 1, 2018

RIVER KNOLL

PRELIMINARY FINAL ENVIRONMENTAL IMPACT STATEMENT

Project Name:	River Knoll
Project Location:	40 Croton Dam Road, Ossining, Westchester County, New York 10562
Lead Agency:	Town of Ossining Planning Board 101 Route 9A Ossining, NY 10562A (914) 762-8419 Contact: Sandra Anelli, Planning Board Secretary
Applicant/Sponsor:	Glenco Residential LLC Hudson Valley Land Holdings LLC 202 Deep Brook Road Wyckoff, NJ 07481 (646) 473-1014
pFEIS Prepared by:	Sam Schwartz Engineering, D.P.C 1 North Broadway, Suite 403 White Plains, NY 10601 Contact: Nanette H. Bourne, Principal and Director of Hudson Valley Services Phone: (914) 393-2465 *Additional contributors to the pFEIS are identified on the back-side of this Cover Sheet.*

DEIS Notice of Completion: February 21, 2018

DEIS Public Hearing: April 4, 2018

FEIS Acceptance:

This document is the Preliminary Final Environmental Impact Statement for the above-referenced project. Copies are available for review at the office of the Lead Agency and on the Town of Ossining web-site: https://www.townofossining.com

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Chapter 1 : Description of Refined Project

A. INTRODUCTION

Glenco LLC (the “Applicant”) proposes the development of a multifamily residential building (the “Proposed Project”) at 40 Croton Dam Road in the Town of Ossining at the site of the former Stony Lodge Hospital—a child and adolescent psychiatric center. The Project Site is 17.89 acres and is comprised of 16.65 acres within the Town of Ossining and 1.24 acres within the Village of Ossining (see **Figure 1-1**). The Proposed Project will occur on property within the Town of Ossining only.[1]

To facilitate the Proposed Project, the Applicant is seeking a series of permits and approvals from the Town of Ossining, as well as stormwater management and sewer/water approvals from the New York State Department of Environmental Conservation (NYSDEC) and Westchester County Department of Health (WCDOH). A permit will also be required to connect to the Water and Sewer District in the Village of Ossining. An amendment to the Town’s Comprehensive Plan Update (2015) may also be required.

The Proposed Project is a well-amenitized, upscale multifamily community that is being designed to attract young professionals and empty-nesters. There will be 169 market rate rental units plus 19 affordable rental units, as required by Article VI of the Town of Ossining’s Zoning Code. The breakdown of units will be 86 market-rate one-bedroom units, 83 market-rate two-bedroom units, 10 affordable one-bedroom units, and 9 affordable two-bedroom units. By clustering the single building in the approximate location of the existing hospital building, the applicant will be able to create a green buffer around the perimeter of the site ranging in width from 185-438-feet. The Applicant will work with the Town and Village to place a large portion of the perimeter buffer into a Conservation easement to ensure it remains open space and undeveloped in perpetuity.

The applicant has submitted a petition to the Town Board for a new zoning district to be created, MF-2 Multifamily Residence 2, to enable a greater array of housing opportunities in the Town. In addition, the Town Board may elect to amend the Town’s Comprehensive Plan to clarify the Town’s preferred reuse of the several larger underutilized sites from institutional uses to clustered multi-family residential uses with large areas of contiguous open space.

The 1.24 acres of land within the Village of Ossining is currently zoned S-50 single family residential; no structures or paved areas are included as part of the Proposed Project within the Village.

The Proposed Project will have a construction schedule of approximately 18 to 21 months beginning with site preparation, demolition of the nine existing Stony Lodge Hospital buildings, then site excavation and finally building construction. Full build-out of the Proposed Project will occur in a single phase.

A public hearing on the Draft Environmental Impact Statement (DEIS) was held on April 4, 2018.[2]

This Final Environmental Impact Statement (FEIS) describes the refinements that have been made to the Proposed Project and presents the supplemental analyses that were conducted in response to comments on the DEIS. The FEIS has been prepared in accordance with 6 NYCRR Part 617: Preparation and content of environmental impact statements of the Environmental Conservation Law of New York State.

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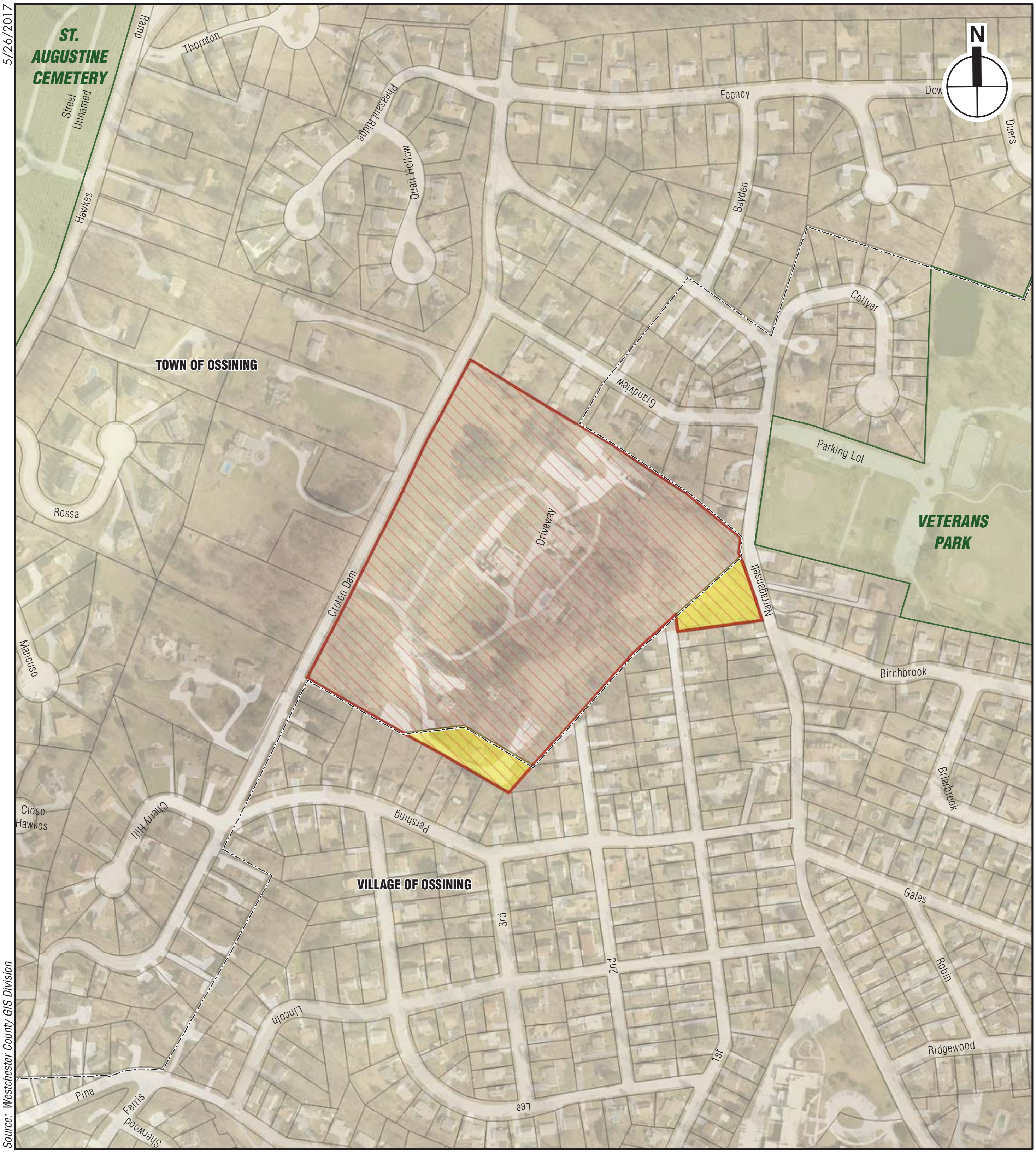
[1] A water and sewer connection permit will be required from the Village of Ossining.
[2] Written comments on the DEIS were received through July 11, 2018.

5/26/2017



Source: Westchester County GIS Division

Project Site

Project Site Within Village Boundary

Village/Town Boundary

Tax Parcel Boundaries

Project Site Location

RIVER KNOLL **Figure 1-1**

Project Review History

For purposes of review under the State Environmental Quality Review Act (SEQRA), the Town of Ossining Planning Board is the Lead Agency. In March 2018, a DEIS for the project was accepted as complete by the Town of Ossining Planning Board for purposes of commencing public review. The DEIS was circulated to all involved and interested agencies, posted on the Town's website, and distributed to any other parties requesting a copy. The DEIS is incorporated herein by reference in its entirety. A public hearing was held on April 4, 2018 at the Joseph G. Caputo Community Center, located at 95 Broadway, Ossining, NY, with the public comment period extending until June 21, 2018 for written comments[3]. At the public hearing, oral comments were recorded by a stenographer in a transcript which was provided to the Lead Agency and the Applicant. A copy of the transcript is included herein as **Appendix A**.

Following circulation of the DEIS and in response to DEIS comments, the details of the Proposed Project have been refined and additional analyses have been prepared. The refinements and additional analyses are presented herein. This FEIS also provides responses to written and verbal comments on the DEIS.

This FEIS is organized as follows:

Chapter 1, "Description of Refined Project", provides a description of the refinements and supplemental studies and information that were made to the project in response to comments provided on the DEIS. **Chapter 2, "Probable Impacts of the Refined Proposed Project,"** provides an analysis of potential environmental impacts related to the additional analyses should they differ from what was presented in the DEIS. **Chapter 3, "Comments and Responses"** provides responses to comments (both verbal and written).

[3] A comment letter from Ray Sanchez, Superintendent of Ossining Union School District, was received on July 11, 2018 and is incorporated herein.

Permits and Approvals

The following permits and authorizations have been updated:

Table 1-1: Required Approvals and Referrals

Approval Required	Government Facility
Comprehensive Plan Amendment, Zoning Map and Text Amendments	Town Board
Sewer District Extension	Town Board
Subdivision Approval	Town Planning Board
Wetland Permit	Town Planning Board
Steep Slope Permit	Town Planning Board
Tree Removal Permit	Town Planning Board
Conditional Use Permit and Site Plan Approval	Town Planning Board
Health Department Subdivision Approval	Westchester County Health Department
New York State Department of Environmental Conservation (NYSDEC) Stormwater Permit	NYSDEC
Water Supply and Sewer District Approval	Village of Ossining
Highway Work Permit	NYS Department of Transportation
Open Space Easement & Demolition Permit	Town and Village of Ossining
Referral Required	
§239-m Referral	Westchester County Department of Planning
Town Board	Town of Ossining Departments and Boards
Planning Board	Town of Ossining Departments and Boards
Highway Department	Town of Ossining Departments and Boards
Environmental Advisory Board	Town of Ossining Departments and Boards

Refined Proposed Project

In consideration of comments received, the Applicant has refined the details of the Proposed Project and conducted additional supplementary studies. Supplementary information pertaining to River Knoll is summarized in **Table 1-2: Supplementary Studies for River Knoll FEIS** below.

Table 1-2: Supplementary Studies for River Knoll FEIS

Supplementary Information	Associated DEIS Chapter
Detailed Landscape Palette	Chapter 2: Project Description
Revised Steep Slopes Disturbance Discussion	Chapter 3.B: Soils, Topography (Steep Slopes), and Geology
Balloon Test	Chapter 3.G: Land Use, Comprehensive Plan, Zoning and Community Character
Additional Traffic Impact Study	Chapter 3.H: Traffic and Transportation
School Age Children Generation Rates	Chapter 3.I: Community Facilities
Municipal Responses to Requests for Information	
Market Study	Chapter 3.J: Fiscal Impacts
Proposed Project Assessed Value	
Additional Alternatives	Chapter 5: Alternatives
Green and “Sustainable” Design Components	Chapter 8: Effects on Use and Conservation of Energy Resources and Solid Waste Management

B. PROJECT SITE BACKGROUND, PURPOSE, AND NEED

The Project Site, Stony Lodge Hospital, was established as a psychiatric hospital in 1927 for adults. It was later modified to serve inner-city children ages 5 to 17 with mental health issues. The hospital provided psychiatric care for 61 children as patients on an average rolling basis of two weeks, hosting an average of 600 patients per year. The oldest building, the Main Building, was built circa 1868 and sits at the highest elevation of the site. The North Building, South Building, and the East Building were built in the 1930's. Additional buildings were built on the hospital campus in the 1950s, including a garage, the maintenance building (1951), the administration building (1953), and the recreation room in what was a large garage adjacent to residential neighbors (1954). The West Building was built in the 1960s. Currently, all buildings are vacant and display significant deferred maintenance and deterioration.

Stony Lodge Hospital was closed in 2012. As a result, the site displays the need for considerable deferred maintenance and is greatly underutilized. This proposal describes a proposed residential use that will remove the nine vacant buildings and repurpose the property with a single residential building surrounded by a large 14-acre landscaped buffer. The existing surface parking areas will be removed, and all parking will be located out of sight and below the proposed building. The architecture will be of the Hudson Valley vernacular with rough-hewn timber and stone. The single building will be situated at the approximate location of the former hospital Main Building to maximize the approximately 14 acres (78 percent of the Project Site) green buffer of around the entire site that would protect the view shed of surrounding neighbors. This green buffer will be placed in a Conservation easement to protect the views currently enjoyed by the community in perpetuity.

C. DESCRIPTION OF REFINED PROPOSED PROJECT

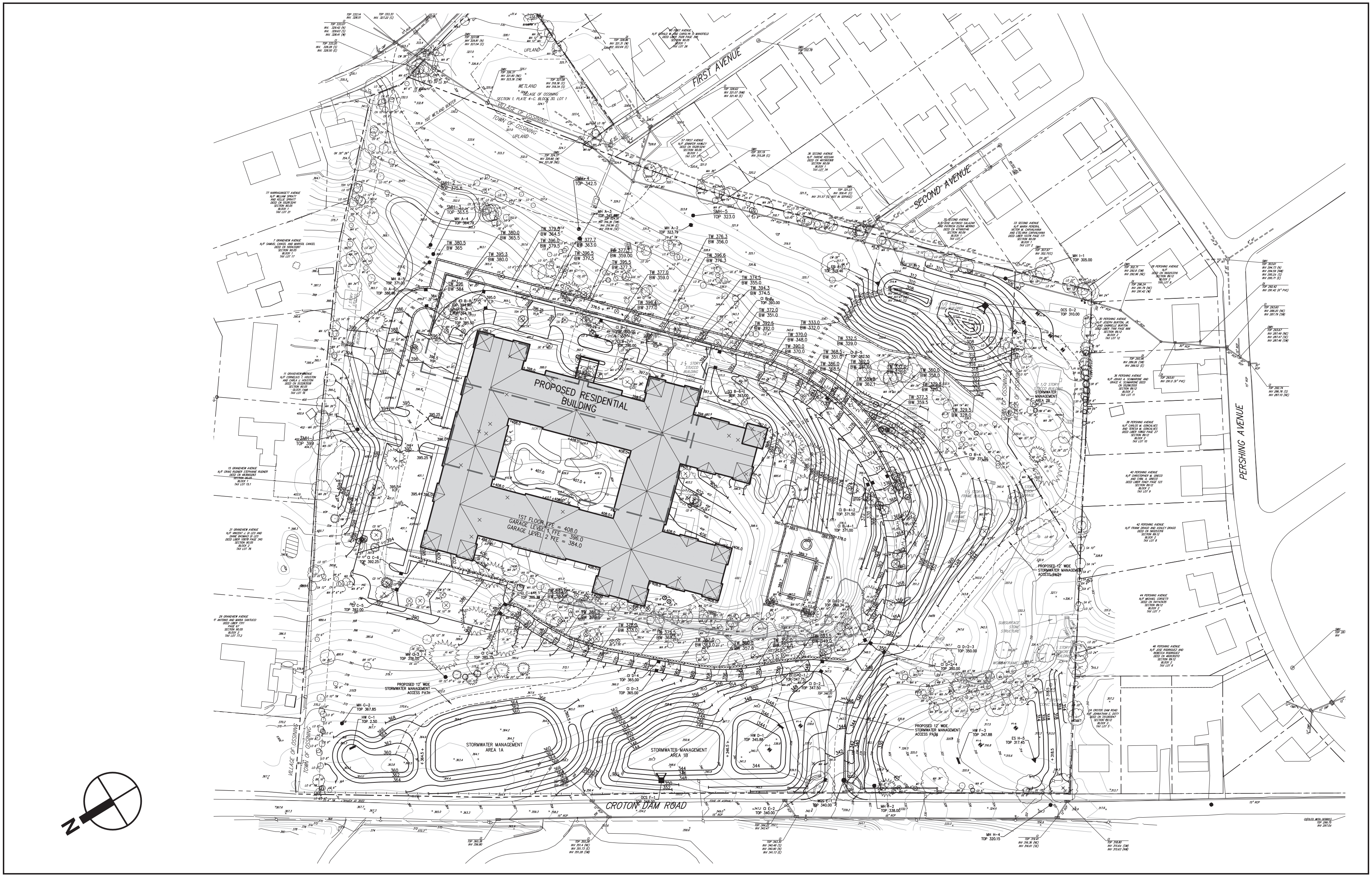
River Knoll has been purposely centered in the middle of the property **(Figure 1-2: Proposed Project Site Plan)** to maximize green buffers, protect the expansive and beautiful meadows, minimize land and steep slopes disturbance, minimize removal of vegetation, minimize removal of stands of trees, and minimize excavation. By centering the building in the middle of the Project Site, the construction of River Knoll will be situated entirely on land previously improved by the existing hospital.

The existing Stony Lodge Hospital is located at the high point of the property, at an elevation of 414-ft above sea level. In comparison, the proposed River Knoll building will be seven feet (7-feet) lower in height.

Approximately 53 percent of the site has slopes in excess of 15 percent. The Proposed Project is designed to avoid steepest slopes to ultimately affect only approximately 30 percent of these slopes relative to the total acreage of the Project Site. A detailed erosion control plan is included in the Stormwater Pollution Prevention Plan (SWPPP) (see **Appendix F in the DEIS**) to ensure that all steep slope disturbance (clearing/grading) does not result in the movement of soil in stormwater runoff and avoids erosion/sedimentation. Because the Proposed Project contemplates the removal of all the existing hospital buildings, several of the removed buildings will be replaced with new vegetation and green buffer plantings, as discussed in the refined landscaping plant palette that was prepared in response to comments during the public review of the DEIS.

The new building will be clustered in the center of the site where the existing hospital buildings and accessory uses are located. The Proposed Project will increase impervious surfaces, but the impervious services will be centered in the middle of the property, where the existing main hospital building is located, versus the ten existing hospital buildings which are spread out over roughly 50-60% of the site. Further, existing impervious surfaces (buildings/pavement) around the periphery of the 17.89-acre site will be removed and converted to landscaped areas. In this way, the vegetated buffers surrounding the Proposed Project will be expanded, particularly to the east, south, and west, which will create wide vegetated buffer areas of 185 to 438 feet – thus, separating the new building from surrounding property boundaries.

1.20.17



Proposed Project Site Plan

Figure 1-2

RIVER KNOLL

Project Description - Refined Landscape Palette

In response to concerns regarding the proposed landscaping plant palette to be used, a more detailed landscaping palette has been prepared. The existing and very visible landscape along Croton Dam Road will be maintained and enhanced with an upland wildflower mix (i.e., Creeping Fescue, Goldenrod, False Indigo, New England Aster, Black Eyed Susan, Little Bluestem, and Milkweed) Areas designated for stormwater management will be treated as wet meadows and planted with a combination of wet site tolerant seed mix (i.e., Sedges, Carex, Bulrush, and New England Aster); live herbaceous plants (i.e., Joe Pye Weed, Switchgrass, and Blue Flag); and native shrubs and trees (i.e., Viburnum, Shadblow Serviceberry, Grey Dogwood, and River Birch).

The existing buffer surrounding the property will be expanded and will provide a 14-acre green belt surrounding the site. Healthy trees have been identified, surveyed, and mapped for protection. Some selective removal and pruning will be required to promote the health and growth of the remaining trees. The landscaping within this buffer will include a mix of shade trees, evergreens, flowering trees and shrubs (i.e., Red Maple, Red Oak, Bicolor Oak, Sweetgum, Spruce, Fir, Great Western Cedar, Viburnum, and Inkberry) as shown on **Figure 1-3: Proposed Project Site Rendering**.

The applicant will work with the Town, Village and Ossining Environmental Advisory Committee (EAC) to place a large portion of the 14-acre greenbelt in a Conservation easement with an appropriate third-party entity and recorded in the Westchester County Clerk’s Office. The easement would support “context-sensitive” landscaping along roadways and between properties to enhance the appearance of the community, increase vegetation and shade, and supplement the open space resources in Ossining.

Also requested during the public review of the DEIS, additional detail concerning proposed plant materials is being provided. New buffers and plantings will be comprised of locally native non-invasive trees, shrubs and ground covers will replace habitat for foraging animals and will improve the diversity of native plants on the site. The proposed planting palette will have *low watering demands.* As previously noted, existing healthy trees in the existing buffer will be protected and preserved; selective removals and pruning will be needed to help promote the health and growth of the trees to remain, and enhancement of the buffer would occur with the addition of woodland fringe plantings consisting of small trees and shrubs (i.e. Flowering Dogwood, Redbud, Viburnum, Witch Hazel).

Table 1-3: Detailed Landscape Plan Plantings List identifies the plants to be used on the Project Site within the limit of disturbance for the project construction work and stormwater treatment area. It should be noted that full-sized copies of the landscaping plan and tree inventory are available at the Town of Ossining Planning Department.

Table 1-3: Detailed Landscape Plan Plantings List

Planting Areas and Type	
Stormwater Management	
Wet Site Tolerant Seed Mix	
	Carex
	Bulrush
	New England Aster
Live Herbaceous Plants – plugs/one-gallon containers	Joe Pye Weed
	Switchgrass
	Blue Flag
Native Shrubs and Trees	Viburnum
	Shadblow Serviceberry
	Grey Dogwood
	River Birch
Upland Meadow along Croton Dam Road	
Upland Wildflower Mix	Creeping Fescue
	Goldenrod
	False Indigo
	New England Aster
	Black Eyed Susan
	Little Bluestem
	Milkweed
Existing Buffers	
Existing Healthy Trees Preserved within Undisturbed Areas – enhanced by addition of woodland fringe plantings consisting of small trees and shrubs	Flowering Dogwood
	Redbud
	Virburnum
	Inkberry
New Buffers	
New Landscape Buffers – created using a mix of shade trees, evergreens, flowering trees and shrubs	Red Maple
	Red Oak
	Bicolor Oak
	Sweetgum
	Spruce
	Fir
	Great Western Cedar
	Viburnum
	Inkberry

11.29.17

RIVER KNOLL

Proposed Project Site Rendering
Figure 1-3

Steep Slopes

A goal of the Town is to "regulate, preserve, protect and conserve its steep slopes so as to maintain and protect the natural terrain and its vegetative features, preserve wetlands, water bodies and watercourses, prevent flooding, protect important scenic views, preserve areas of wildlife habitat, provide safe building sites, protect the subject property and adjoining properties by preventing erosion and sudden slope erosion." "Steep Slopes" are defined as any "geographical area with a topographical gradient of 15% or greater." The Town discourages the disturbance of steep slopes exceeding 15% and prohibits the disturbance of extremely steep slopes, 35% and greater, unless it can be demonstrated that the "site cannot be reasonably used without disturbance of an extremely steep slope".[4] In accordance with Chapter 167, the Town regulates Steep Slope Disturbance. **Table 1-4: Steep Slope Characterization** lists the three categories of steep slopes and associated characteristics, regulated pursuant to the Town Code.

Table 1-4: Steep Slope Characterization

Steep Slope Characterization	Topographical Gradient (ratio of vertical distance to horizontal distance) (%)	Minimum Horizontal Area
Moderately Steep	15< slope <25	.30 acre/13,068 sf
Very Steep	25< slope <35	.20 acres/8,712 sf
Extremely Steep	slope >= 35	.10 acre/4,356 sf

Source: Town of Ossining Code § 167-2

Much of the steep slope disturbance from construction will be in areas already developed as part of the existing hospital structures, roadways and parking areas. Such areas include the widening of the existing entrance road and secondary access road, removing the East Building and adjoining parking areas, removing the North Building and adjoining parking areas, and removing the Maintenance Building and adjoining parking areas. In addition, demolition, removing and subsequent restoration to new greenspace of the South Building, the Administration Building, the Garage and the West Building adds to the calculation of disturbed steep slopes, but creates a larger buffer to neighboring properties.

As part of the public comment period, additional documentation concerning the impact of the proposed project on steep slopes was requested. **Table 1-5: Existing Slopes** presents the square footage and acreage of existing slopes on the proposed River Knoll site. Of the total 17.9 acres that comprise the Project Site, slopes having a topographical gradient of 15% or greater with a minimum horizontal dimension of 10 feet to be considered steep, existing steep slopes account for 9.5 acres of the site.

Table 1-5: Existing Slopes

Slope Category	SF	Acres	Percent of Site
0-15%	366,769	8.4	47%
15-25%	218,201	5	28%
25-35%	109,107	2.5	14%
35% or greater	85,105	2	11%
Total	**779,182**	**17.9***	**100%**

Notes: Slope categories conform to Town of Ossining Code Chapter 167: Steep Slope Protection.
** 17.9 acres rounded from 17.89 acres.*

[4] Town of Ossining Zoning Code 167-1

Table 1-6: Steep Slope Disturbance indicates that Steep Slope Disturbance as a result of the development of the proposed River Knoll project, would impact approximately 3 acres, or 27 percent of the moderately steep slopes present on-site; 1.4 acres, or 13 percent, of the very steep slopes present on-site; and 0.9 acres, or 8 percent, of the extremely steep slopes present on-site. Assessment of the project site indicates that the development of the Proposed Project would result in disturbance to 5.3 acres of steep slopes present on-site.

Table 1-6: Steel Slope Disturbance

Steep Slope Categorization	Minimum Slope	Maximum Slope	SF	Acres	Percent of Project Site
	0%	10%	160,068	3.7	34%
	10%	15%	88,232	2	18%
Moderately Steep	15%	25%	131,494	3	27%
Very Steep	25%	35%	59,666	1.4	13%
Extremely Steep	35%	Vertical	38,137	0.9	8%
Total			**477,597**	**11**	**100%**

As requested by the EAC during the DEIS comment period, the ratio of steep slope disturbance relative to the total 9.5 acres of steep slope at the Project Site was calculated to be approximately 56 percent, whereas relative to the total acreage of the Project Site, total steep slope disturbance would be 30 percent, as shown in **Table 1-7: Percent Steep Slope Disturbance**.

Table 1-7: Percent Steep Slope Disturbance

Total Project Site Area (acres)	Total Steep Slope Area (acres)	Total Steep Slope Disturbance (acres)	Percent Steep Slope Disturbance Relative to Total Project Site Area
17.9	9.5	5.3	30%

According to the Town of Ossining Zoning Code § 167-7, the approval authority for steep slope permits for any application involving a disturbance in an area of very steep slope or extremely steep slope, the Planning Board shall be the approval authority for the steep slope permit.

Balloon Test

As requested by the Town Board, a balloon test was conducted on June 22, 2018 to simulate the height of the proposed River Knoll building in comparison with the existing Stony Lodge Hospital Main Building. Photographs were taken within the Project Site boundaries. Photographs taken during the Balloon Test simulation were aimed in the direction of the Proposed Project. Balloons were raised to the maximum height of the roof of the Proposed Project next to the Main Building to provide a visual reference. The height of the existing roof peaks of the Main Building range from 415 feet to 457 feet, and the roof peak of the proposed River Knoll building would be at elevation 450 feet – seven feet lower than the existing Main Building. Based on this analysis and visible in the photographs, the proposed River Knoll building would be slightly less visible than the existing Main Building during the winter months, and entirely obscured from surrounding roadways and properties by during the growing seasons.

Figures for the Balloon Test are provided in Chapter 2 indicating the locations of the balloons superimposed on the Proposed Project Grading Site Plan. The complete Balloon Test report is included herein as Appendix B.

Additional Traffic Study

As requested during the public review of the DEIS, an additional Traffic Impact Study (TIS) was conducted at the following intersections:

- Intersection of Pershing Avenue and Narragansett Avenue
- Intersections of Pershing Avenue and smaller offshoot roads – specifically, First Avenue and Second Avenue
- Intersection of Pine Avenue and Narragansett Avenue
- Intersection of Dale Avenue where Routes 133 and 134 merge – the Washington School area

The results and findings from the TIS are presented herein, with the full report included in Appendix C of this FEIS. Intersection capacity analyses were computed for the existing intersections utilizing Synchro software developed based on the methodologies of the Highway Capacity Manual, 6^{th} Edition.

<u>Existing Conditions</u>

Existing traffic conditions in the vicinity of the Project Site were assessed to consist of conducting an intersection analysis at the Croton Avenue and Dale Avenue intersection, the Pine Avenue and Narragansett intersection, as well as Pershing Avenue intersection with First Avenue, Second Avenue, and Narragansett Avenue. Weekday traffic counts were conducted on Thursday, June 21, 2018 from 6:00 – 10:00 AM and 3:00 – 7:00 PM. The intersections of Narragansett Avenue and Pershing Avenue were counted on Saturday, June 16, 2018, while the Narragansett Avenue and Pine Avenue intersection, as well as the Pershing Avenue/First Avenue intersection and Pershing Avenue/Second Avenue, were counted on Saturday, June 23, 2018. The Saturday counts were conducted from 9:00 AM – 1:00 PM. The counted volumes were reviewed to determine the peak weekday morning, weekday afternoon, and Saturday hours. The traffic count identified that the peak weekday AM hour occurred from 7:00 – 8:00 AM, the peak weekday PM hour occurred from 5:00 – 6:00 PM, and the peak Saturday midday hour occurred from 12:00 – 1:00 PM. In discussions with the Town's traffic consultant, the existing volumes were increased by 5% to account for end of the school year traffic. The existing peak hour volumes with the 5% increase are available in the full TIS provided in Appendix C.

The Existing Conditions analysis indicated that the intersection of Croton Avenue and Dale Avenue with Todd Place operates at a level of service (LOS) D during the peak weekday AM hour and a LOS C during the peak weekday PM and Saturday midday hours. The Dale Avenue approach to its intersection with Croton Avenue operates at a LOS F, C, and E during the peak weekday AM, weekday PM, and Saturday midday hours, respectively. The Croton Avenue westbound approach to its intersection with Dale Avenue operates at a LOS C during the peak weekday AM and a LOS D during the peak weekday PM and Saturday midday hours. All other movements at the studied intersections operate at a LOS B or better during the studied peak hours.

<u>No-Build Conditions</u>

No-Build Conditions analysis was conducted by increasing existing volumes by a general growth rate of 1% per year compounded annually to the 2022 design year for completion and occupancy of the proposed River Knoll development. This analysis incorporates traffic volumes associated with the proposed Parth Knoll, LLC residential development. The traffic volumes associated with known no-build development projects in the area, such as the proposed Sunshine Children's Home & Rehabilitation Center in New Castle, the proposed Upper Westchester Muslim Society development in New Castle and the proposed

Hudson Ridge Wellness Center development in Cortlandt, will not generate substantial traffic volumes in the study area and have been considered as part of the general growth volumes. The other development volumes and the re-occupancy of the previous hospital use were added to the general growth volumes to project the 2022 No-Build Volumes.

The capacity analyses indicate that the Dale Avenue approach at its intersection with Croton Avenue is projected to increase in delay from a LOS C under Existing Conditions to operate at a LOS D under the No-Build Condition during the peak weekday PM hour. During the peak Saturday midday hour, the Dale Avenue approach is projected to increase in delay from a LOS E under Existing Conditions to operate at a LOS F under the No-Build Condition. The overall intersection of Dale Avenue and Croton Avenue is projected to increase in delay from a LOS C under Existing Conditions to operate at a LOS D under No-Build Conditions during the peak Saturday midday hour. All other turning movements at the studied intersections under the No-Build Condition are projected to operate at the same levels of service as experienced under Existing Conditions during the studied peak hours.

The accident data, requested by the Town, is included in Appendix C.

With-Action/Build Conditions

The With-Action/Build Condition analysis consisted of collecting traffic volumes generated by 188 apartment units as part of the proposed River Knoll project. Traffic volumes were computed based on information published by the Institute of Transportation Engineers in its publication “Trip Generation Manual, 9th Edition”. As included in the full TIS report, the proposed River Knoll project is projected to result in approximately 32, 43, and 24 net additional total trips during the peak weekday AM, weekday PM and Saturday midday hours. The projected Project Site generated traffic was superimposed on the area intersections, based on traffic volume data and consideration of the area roadways. Adding the redevelopment related traffic minus the re-occupancy of the previous hospital use results in 2022 Build Volumes which reflect project volumes after the completion of the redevelopment. In summary, there is no change in LOS between the future without the proposed River Knoll project and the future with the proposed River Knoll project. It is recommended that the Town implement traffic signal timing modifications to involve reallocating 5 seconds of green time from the common Croton Avenue phase to the Dale Avenue phase during the peak weekday morning hour and peak Saturday midday hour. The traffic signal timing modification improves the overall intersection and Dale Avenue approach operations during the studied peak hours. It is the opining of the Applicant that timing modifications should be implemented at the intersection regardless of the proposed River Knoll project.

School Age Children Generation Rates

As requested during the public review of the DEIS, the Applicant is providing more detail concerning school generation rates. As requested, the number of school age children in comparable developments was surveyed. Comparable developments were defined as high-end, multi-family rental projects targeted to young professionals and empty-nesters in both the vicinity of the Project Site and within the larger geographical area. Residential developments that were townhomes, 3+-bedrooms, marketed to seniors, or those in fee ownership were not included in the survey. **Table 1-8: Comparable Developments** lists the 24 comparable developments used for the purposes of this analysis, and the blended ratio was calculated for the likely number of school age children to reside at River Knoll. Please note some townhome developments were included for comparison.

Table 1-8: Comparable Developments

No.	Development	Location	Unit Mix	Total Units	No. of School Children	Number of Children to Dwelling Unit Ratio
1	La Rochelle	255 Huguenot Street, New Rochelle, NY	Studio, 1-br, 2-br, 3-br	1000	125	0.125
2	The Avalon	125 Parkway Road, Bronxville, NY	1-br, 2-br, 3-br	110	12	0.109
3	Avalon Willow/Mamaroneck	746 Mamaroneck Avenue, Mamaroneck, NY	1-br, 2-br	227	20	0.088
4	Avalon Green	500 Town Green Drive, Elmsford, NY	1-br, 2-br, 3-br	105	12	0.114
5	Avalon Ossining	217 N Highland Avenue, Ossining, NY	1-br, 2-br, 3-br	168	25	0.149
6	Harbor Square	1 Harbor Square, Ossining, NY	1-br, 2-br, 3-br	188	20	0.106
7	Bank Street Commons	15 Bank Street, Suite 100, White Plains, NY	1-br, 2-br	502	10	0.020
8	Avalon White Plains	27 Barker, White Plains, NY	Studio, 1-br, 2-br, 3-br	407	15	0.037
9	One City Place	One City Place, White Plains, NY	1-br, 2-br, 3-br	311	14	0.045
10	Avalon at Greyrock	50 Forest Street, Stamford, CT	1-br, 2-br, 3-br	306	11	0.036
11	Avalon at Stamford/Eaves by Avalon	66 Glenbrook Road, Stamford, CT	Studio, 1-br, 2-br, 3-br	328	8	0.024
12	The Boulevard	1201 Washington Boulevard, Stamford, CT	1-br, 2-br	94	1	0.011
13	Grand Street Lofts	690 Mamaroneck Avenue	1-br, 2-br	21	2	0.095
14	(Townhouses)	620 Boston Post Road		6	1	0.167
15	Sheldrake Lofts	270 Waverly Avenue		96	10	0.104
16	Marina Court	422 East Boston Post Road	1-br, 2-br, 3-br	13	1	0.077
17	(Townhouses)	532 West Boston Post Road		7	1	0.143
18	Avalon (Rentals)			225	25	0.11
19	Fairway Green (Townhouse)			53	5	0.09
20	Sweetwater Condo			90	4	0.04
21	Parkview Station			50	4	0.08
22	Condos (Combined)			140	8	0.06
23	Hudson Park	1 Alexander St, Yonkers		560	58	0.10
24	Quarry Place	64 Midland Pl, Tuckahoe		110	8	0.07
					Average	0.084
	River Knoll	Ossining, NY		**188**	**15.77**	

For this assessment, public school enrollment data was obtained from information, gathered in the Full Environmental Assessment Form (EAF) prepared by BFJ Planning in November 2017 for 101 Wolfs Lane in the Village of Pelham, NY. The EAF also includes data from a cumulative impact study of new school district enrollments resulting from multifamily developments in the Village of Mamaroneck, titled *Development Impacts on Village of Mamaroneck School Enrollment, Cumulative Impact Study*, prepared by the Village of Mamaroneck Planning Department, and the *New Rochelle School Capacity Study*, prepared by WXY Studio, 2015.

The fiscal impacts as compared with the generated revenue from the Proposed Project for the Ossining Union Free School District (OUFSD) are discussed further in Chapter 2, "Probable Impacts of Refined Project". Based on the number of SAC generated by the Proposed Project, the revenue generated by the Proposed Project will serve to assist in off-setting the costs to educate the SAC with the OUFSD proposed budget for 2018-2019.

Municipal Agency Responses to Requests for Information

As requested, the applicant has requested updated input from municipal agencies within the Town and Village of Ossining. Requests for updated information were submitted to the agencies on June 19, 2018 via email to the Town Clerk as well as in the form of a letter to the attention of the designated department head. All Agency Correspondence to include requests for information and responses are included herein as Appendix D.

As presented in the DEIS, the Project Site is served by the Ossining Police Department (OPD), the Ossining Fire Department (OFD), the Town of the Ossining Volunteer Ambulance Corp (OVAC), and the Recreation and Parks Department.

The Ossining Police Department responded on July 6, 2018, that the department is currently budgeted for 61 sworn officers. The jurisdiction-wide average response time of the OPD is approximately 3 minutes, with variations depending on time of day, location, and call volume. The total number of calls for services from January 1, 2016 through July 10, 2018 was 88,413 calls.

The Ossining Volunteer Ambulance Corp (OVAC) responded that the OVAC is a contracted agency by the Town of Ossining, staffed with 40 volunteers and 70 career members to comprise a fully-staffed agency, or "combination unit". The OVAC maintains three dispatch units to consist of an A-unit employed 24/7, a B-unit employed from 8:00 am through 12:00 am, and a fly car housed 24/7 at the agency. The OVAC serves both the Town and Village of Ossining, as well as the west end of West Castle, NY. Quarterly reports are sent to the Town of Ossining detailing services levels, call volume, and call dispositions. According to Captain Nick Franzoso, OVAC response time to the proposed River Knoll site would be approximately 4 minutes and the Proposed Project would add approximately 60 additional calls for services to the agency as a result of the additional 188 residential units, estimated from comparable developments in the area.[5] The latest OVAC report including call dispositions from January 2015 through May 2018, as well as call volumes from 2007 through June 2018, are included herein as Appendix D.

According to the Ossining Fire Department (OFD) website, the Ossining Fire Police & Emergency Squad (also known as Rescue 14) has 25 active members responsible for operating a custom-built E-One rescue apparatus which carries a wide range of firefighting, rescue, and first-aid equipment, as well as a built-in generator for use in lighting a fire scene or providing electric power. It is the responsibility of the members to maintain proficiency in extrication, basic first aid, and some members choose to train in more advanced emergency treatment.[6] As of the production of this FEIS, no response has been received.

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[5] Phone call with Captain Nick Franzoso, OVAC, received on June 26, 2018

[6] Source: http://www.ossiningfire.org/history.php

As of the date of this FEIS, the Ossining Recreation and Parks Department has not provided a response to the request for updated information submitted to the Town Clerk and Bill Garrison, Superintendent of Recreation.

Market Study

As requested during the public review of the DEIS, a market study was requested to support the demographic demands in the area. The market study concluded that there was sufficient short- and long-term demand for the Proposed Project.

The Market Assessment, conducted by RCLCO Real Estate Advisors on June 26, 2018 and included herein as Appendix E, found a healthy occupancy rate paired with a strong rental rate growth. This is evidence of a pent-up demand for rental residential uses that is being experienced by similar communities following the 2010 recession. According to the supply-demand analysis for the Primary Market Area (PMA), the demand for new market-rate multifamily apartment units will outpace the supply, given the current 5-year housing pipeline and demand projections. The PMA is defined as the area from which a majority of renters at River Knoll are likely to come from the northwestern portion of Westchester County, bounded by I-684 to the east, and just cutting north of Tarrytown to the south. Therefore, strong occupancy rates will be sustained by sufficient market demand.

Demographically, the Project Site is proximate to a number of high-growth employment areas in addition to residents employed within NYC. The RCLCO report also concluded more than 54% of the PMA earn more than $100,000 per annum. The Market Assessment determined that audience groups ranging from young professionals to empty nesters would be the target audience for River Knoll.

Proposed Project Assessed Value

As requested during the public review of the DEIS, additional detail is provided concerning the current tax obligation for the property. The applicant met with the Town Assessor to discuss the data and conclusions in the fiscal analysis. It was the opinion of the Town's Assessor that the original $26 million market value of River Knoll that was the basis for the fiscal impact analysis in the DEIS should be increased. In addition, since the publication of the DEIS, the Town revised their basis for assessing property and school taxes to full market valuation. Consequently, the applicant increased the market value of River Knoll to $27.5 million and updated the expected tax obligation using current tax rates[7]. **Table 1-9: 2018 Property Tax Rates** summarizes the taxes that will be paid to the Town, Village, County, and School District.

[7] The Town's methodology for calculating taxes was changed in 2018 to full market value.

Table 1-9: 2018 Property Tax Rates

Tax Jurisdiction	Tax Rate per $1,000 Assessed Value (Millage Rate)
Town/County Tax Bill	
County Tax	3.21958
Town-wide	0.75371
Unincorporated Town	5.41966
Ambulance District	0.2098
County Solid Waste	0.28281
County Sewer Ossining	0.84706
Refuse, Light, Fire	1.49977
Town-wide Water District	0.05486
School/Library Tax Bill	
Ossining School Tax (2017-2018)	24.83067
Library Tax (2017-2018)	1.00044
Village Tax Bill	
Village Tax	10.8492

Notes: Tax rates are rounded.
Sources: Town of Ossining Tax Rates for 2018; Town of Ossining School Tax Rates, FY 2017-2018; Village of Ossining FY 2018 Adopted Budget

According to 2018 Property Tax Rates, the full market value and the taxable assessed value of the three tax lots that comprise the Project Site is approximately $2.49 million as a result of the 100 percent assessment revaluation in 2016, as provided in **Table 1-10: Tax Revenues Generated by the Proposed Project**. As such, the annual tax revenues that are generated based on the 2018 millage rates are included below to show that the Project Site generates a total of approximately $95,418 annually to various tax jurisdictions. Approximately 65 percent, or $61,915 is allocated to the OUFSD which represents the largest share of tax revenue generated by the Project Site.

Table 1-10: Tax Revenues Generated by the Project Site (2018)

Tax Lots		89.08-1-83 (Town Lot)	89.12-2-13 (Village Lot)	90.05-1-27 (Village Lot)	Total Site
Full Market Valuation		$2,425,300	$39,500	$28,700	**$2,493,500**
Taxable Assessed Valuation		$2,425,300	$39,500	$28,700	**$2,493,500**
	Mill Rate[1]				
County Tax	3.21958	$7,808	$127	$92	**$8,028**
Town-wide	0.75371	$1,828	$30	$22	**$1,879**
Unincorporated Town	5.41966	$13,144	NA	NA	**$13,144**
Ambulance District	0.2098	$509	$8	$6	**$523**
County Solid Waste	0.28281	$686	$11	$8	**$705**
County Sewer Ossining	0.84706	$2,054	$33	$24	**$2,112**
Refuse, Light, Fire	1.49977	$3,637	$59	$43	**$3,740**
Town-wide Water District	0.05486	$133	$2	$2	**$137**
Ossining School Tax	24.83067	$60,222	$981	$713	**$61,915**
Library Tax	1.00044	$2,426	$40	$29	**$2,495**
Village Tax	10.8492	NA	$429	$311	**$740**
Total		**$92,448**	**$1,720**	**$1,250**	**$95,418**

Notes: Values are rounded to the nearest dollar and may not sum to total.
[1] Mill Rate is provided in dollars per $1,000 of assessed value.
Sources: School District Tax Bills for 2017-2018, Town of Ossining Town/County Tax Bills for 2018, and Village of Ossining Tax Bills for 2016.

Table 1-11: Tax Revenues Generated by the Proposed River Knoll Project presents the projected annual tax revenues that would be generated by River Knoll. As shown in **Table 1-11**, the Proposed Project (including lots within the Town and the Village) is projected to generate approximately $1.05 million annually in property tax revenues to the Town, special districts, OUFSD, and Ossining Public Library. Village taxes would be $427annually.

Table 1-11: Tax Revenues Generated by the Proposed River Knoll Project (2018)

Tax Lots		89.08-1-83 (Town Lot)	89.12-2-13 (Village Lot)	90.05-1-27 (Village Lot)	Total Site
Full Market Valuation		$27,460,658	$15,870	$23,472	**$27,500,000**
Taxable Assessed Valuation		$27,460,658	$15,870	$23,472	**$27,500,000**
	Mill Rate[1]				
County Tax	3.21958	$88,412	$51	$76	**$88,538**
Town-wide	0.75371	$20,697	$12	$18	**$20,727**
Unincorporated Town	5.41966	$148,827	NA	NA	**$148,827**
Ambulance District	0.2098	$5,761	$3	$5	**$5,770**
County Solid Waste	0.28281	$7,766	$4	$7	**$7,777**
County Sewer Ossining	0.84706	$23,261	$13	$20	**$23,294**
Refuse, Light, Fire	1.49977	$41,185	$24	$35	**$41,244**
Town-wide Water District	0.05486	$1,506	$1	$1	**$1,509**
Ossining School Tax	24.83067	$681,867	$394	$583	**$682,843**
Library Tax	1.00044	$27,473	$16	$23	**$27,512**
Village Tax	10.8492	NA	$172	$255	**$427**
Total		**$1,046,755.26**	**$691**	**$1,022**	**$1,048,469**

Notes: Values are rounded to the nearest dollar and may not sum to total.
[1] Mill Rate is provided in dollars per $1,000 of assessed value.
Sources: School District Tax Bills for 2017-2018, Town of Ossining Town/County Tax Bills for 2018, and Village of Ossining Tax Bills for 2018.

Of the $1.05 million estimated total, approximately 65 percent ($682,843) is estimated to be generated annually for the OUFSD.

The conversion of an underutilized, nearly vacant lot to residential use as a result of the Proposed Project, will lead to a significant increase in taxes. The Proposed Project would result in a 90.9 percent increase in Full Market Valuation, and consequently Taxable Assessed Valuation (or an increase of $25,006,500) as compared with tax revenues generated by the existing Project Site. Furthermore, the Proposed Project results in an increase in tax revenues generated by the Project Site by approximately 90.9 percent (or an increase of $953,050). When compared with 2016 conditions, as presented in the DEIS, the Taxable Assessed Valuation for the Proposed Project increased by 94.6 percent (or an increase of $26,027,175), to result in an increase in tax revenues generated by the Proposed Project by 2.8 percent (or an increase of $29,191).

Alternatives

The DEIS presented the following 11 alternatives to the Proposed Project:

- Alternative A: Conventional Development using R-15 Zoning District
- Alternative B: Clustered Development based on R-15 Layout Density
- Alternative C: Conventional Layout using R-5 Zoning District
- Alternative D: Clustered Layout using R-5 Zoning District
- Alternative E: Townhouse and Multiple Dwelling Developments based upon Existing Multifamily Zone
  - Alternative Ea: Multifamily dwellings in one building
  - Alternative Eb: Townhouse dwellings in multiple buildings
- Alternative F: Townhouse and Multiple Dwelling Developments at Eight Dwelling Units per Acre
  - Alternative Fa: Multifamily dwellings in one building
  - Alternative Fb: Townhouse dwellings in multiple buildings
- Alternative G: Continued Institutional Use
- Alternative H: Adaptive Re-Use of Existing Buildings for Residential and Other Non-Residential Uses
- Alternative I: Adaptive Re-Use of Smaller Existing Buildings in the Southeasterly Part of the Site
- Alternative J: Alternative Development with Less Trucking of Rock and Earth Off-Site
- Alternative K: No Build or No Action Alternative

Each alternative was shown in a comparative Table (see Table 1-2 in the DEIS) and analyzed in Chapter 5 in the DEIS, "Alternatives".

As requested by the Planning Board and Town Board, seven (7) additional alternatives were produced using the lot and dimensional regulations for the R-5 and R-15 zoning districts, but making the layouts more compact to preserve the front meadow and other wide swaths of open space on the site, The additional alternatives are both single family, townhomes, and multi-family units located in the area of the proposed 188-unit building. The seven additional alternatives are:

- Alternative Ba: Single-family Cluster Development using R-15 Zoning District – 35 homes
- Alternative Bb: Combination single family and townhome Clustered Development using R-15 Zoning District - Layout Density – 53 residential units (25 single family homes and 28 townhomes)
- Alternative Da: Clustered Layout using R-5 Zoning District – 73 single family homes
- Alternative Db: Combination single family and townhome Clustered Layout using R-5 Zoning District – 86 residential units (58 single family homes and 28 townhomes)
- Alternative Ea: Multi-family Developments based upon Existing Multifamily Zone – 150 residential units (125 market rate units + 20% density bonus = 25 units (15 below market rate + 10 market rate))
- Alternative Fa: Multifamily Dwelling Developments at Eight Dwelling Units per Acre – 160 residential units (133 market rate units + 20% density bonus = 27 units (16 below market rate + 11 market rate))
- Alternative G: Combination R-5 and R-15 Cluster – 42 townhomes

The above alternative layouts are shown in **Figure 1-4: Additional Alternatives**, and their respective impacts are discussed in Chapter 2, "Probable Impacts of Refined Project". As described in Chapter 2, the Proposed Project will result in equal to or greater preservation of open space, enhancement of stormwater management, preservation of vegetation and habitat, and greater tax revenue benefits to the community when compared to the additional alternatives.

DEVELOPMENT PROGRAM

LOT SIZE: 16.65 ACRES

TOTAL NO. DWELLING UNITS 35 DU

TYPICAL LOT AREA: 15,000 SF

UNDISTURBED AREA: 0 Acres (0%)

LOCATION OF EXTREMELY STEEP SLOPES

UNDISTURBED GREEN LAND AREA

DISTURBED AND/OR EXCAVATED LAND AREA

PROPOSED BUILDING LOCATION

NEW ROADWAYS AND INFRASTRUCTURE

REMOVED TREES

SCALE: 1"=50'-0"

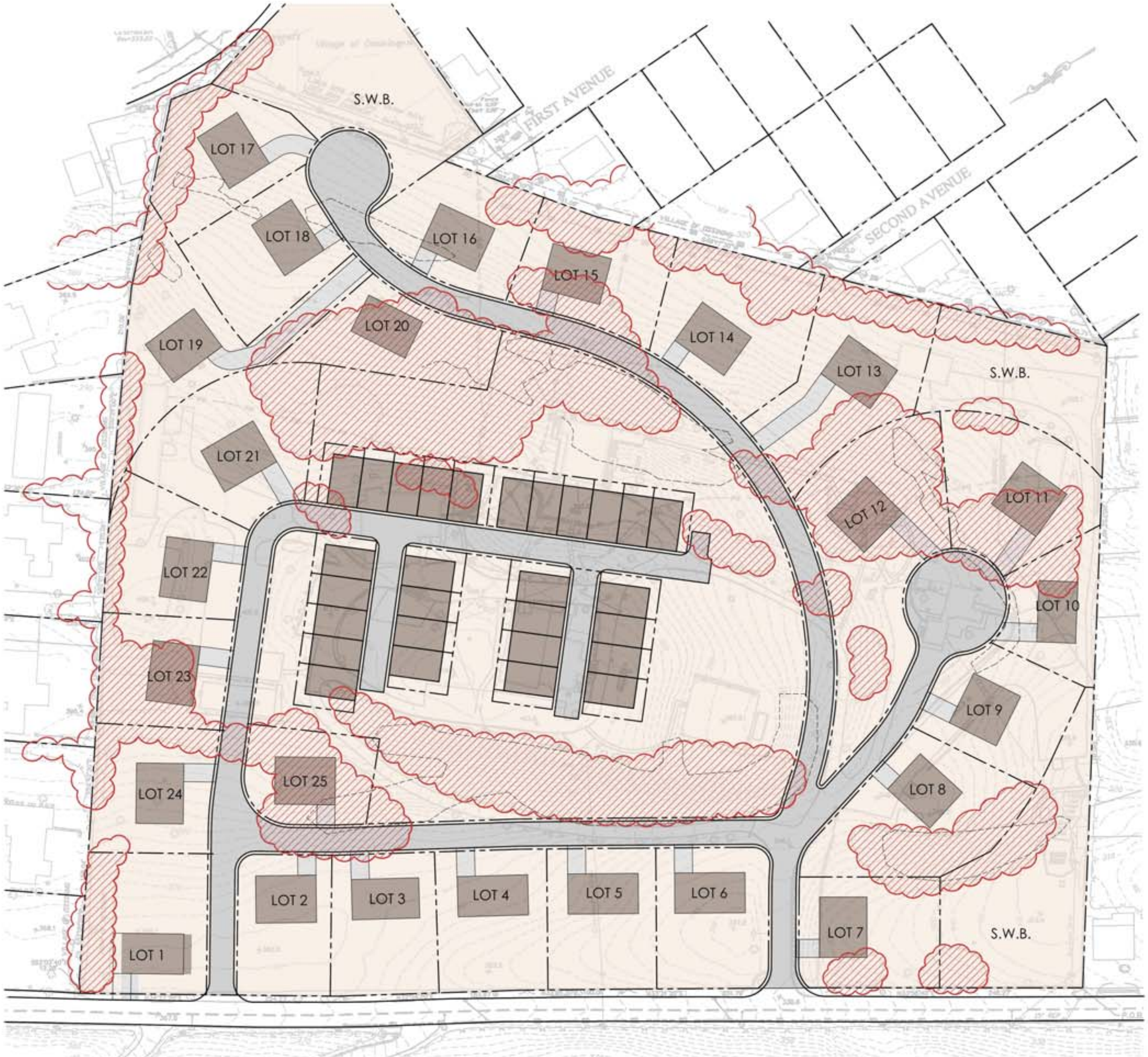
ALTERNATIVE Ba
R15 CLUSTERED ZONE
DATE: 07/13/2018

MINNO WASKO
ARCHITECTS AND PLANNERS
80 LAMBERT LANE, SUITE 105, LAMBERTVILLE, NEW JERSEY 08530 MINNOWASKO.COM

Additional Alternatives - Alternative Ba
Figure 1-4

GLENCO

RIVER KNOLL
TOWN OF OSSINING, WESTCHESTER COUNTY, NEW YORK
XX-XXXX-XX



DEVELOPMENT PROGRAM

LOT SIZE: 16.65 ACRES

TOTAL NO. DWELLING UNITS 53 DU

- SINGLE FAMILY: 25 DU
- TOWNHOMES: 28 DU

TYPICAL LOT AREA: 15,000 SF

UNDISTURBED AREA: 0 Acres (0%)

LOCATION OF EXTREMELY STEEP SLOPES

UNDISTURBED GREEN LAND AREA

DISTURBED AND/OR EXCAVATED LAND AREA

PROPOSED BUILDING LOCATION

NEW ROADWAYS AND INFRASTRUCTURE

REMOVED TREES

SCALE: 1"=50'-0"

ALTERNATIVE Bb
R15 CLUSTERED ZONE

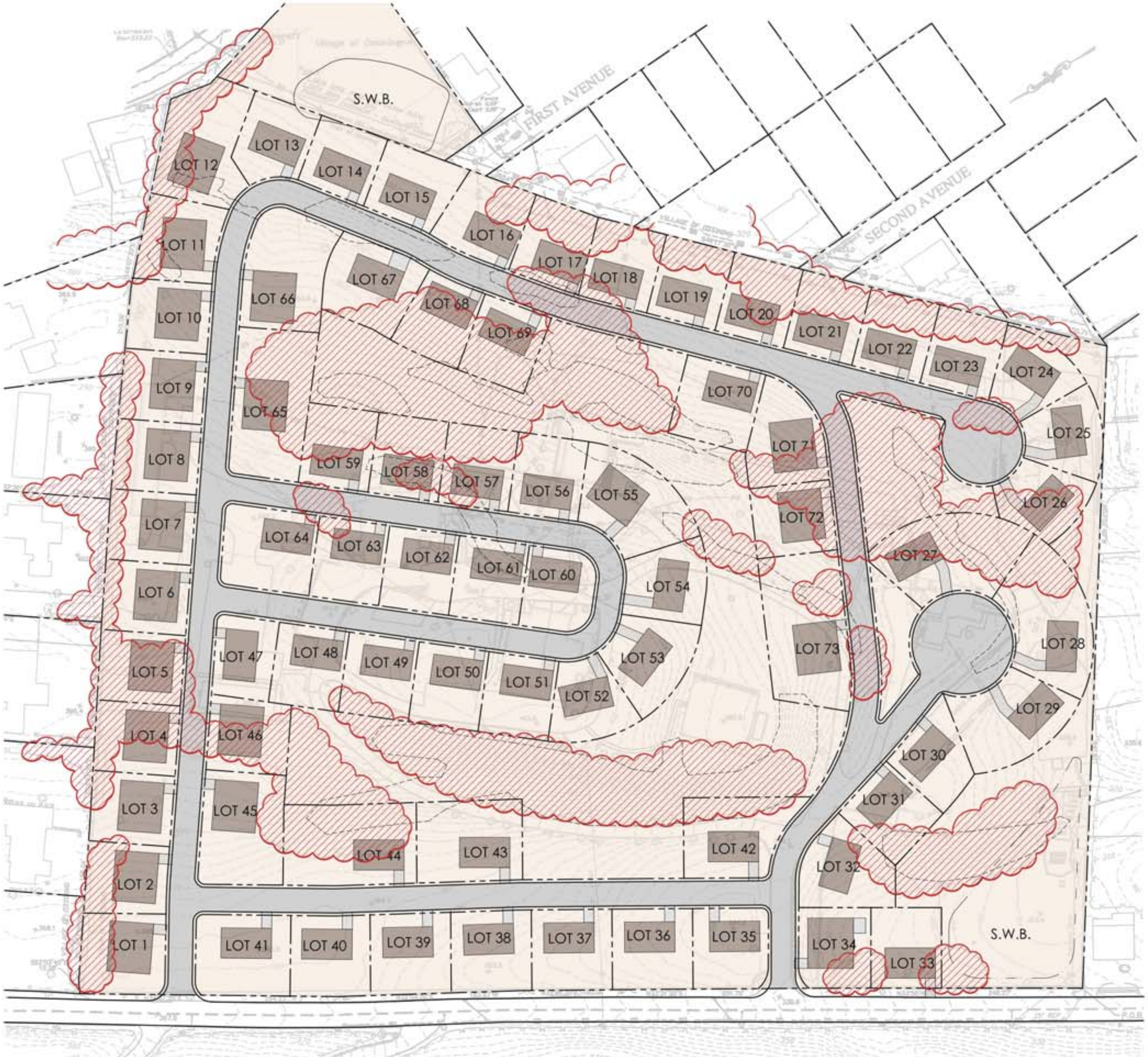
DATE: 07/13/2018

MINNO WASKO
ARCHITECTS AND PLANNERS
80 LAMBERT LANE, SUITE 105, LAMBERTVILLE, NEW JERSEY 08530 MINNOWASKO.COM

Additional Alternatives - Alternative Bb
Figure 1-4

GLENCO

RIVER KNOLL
TOWN OF OSSINING, WESTCHESTER COUNTY, NEW YORK
XX-XXXX-XX



DEVELOPMENT PROGRAM

LOT SIZE: 16.65 ACRES

TOTAL NO. DWELLING UNITS: 73 Lots

TYPICAL LOT SIZE: 70' x 80'

TYPICAL LOT AREA: 5,600 SF

UNDISTURBED AREA: 0 Acres (0%)

LOCATION OF EXTREMELY STEEP SLOPES

UNDISTURBED GREEN LAND AREA

DISTURBED AND/OR EXCAVATED LAND AREA

PROPOSED BUILDING LOCATION

NEW ROADWAYS AND INFRASTRUCTURE

REMOVED TREES

SCALE: 1"=50'-0"

ALTERNATIVE Da
R5 CLUSTERED ZONE

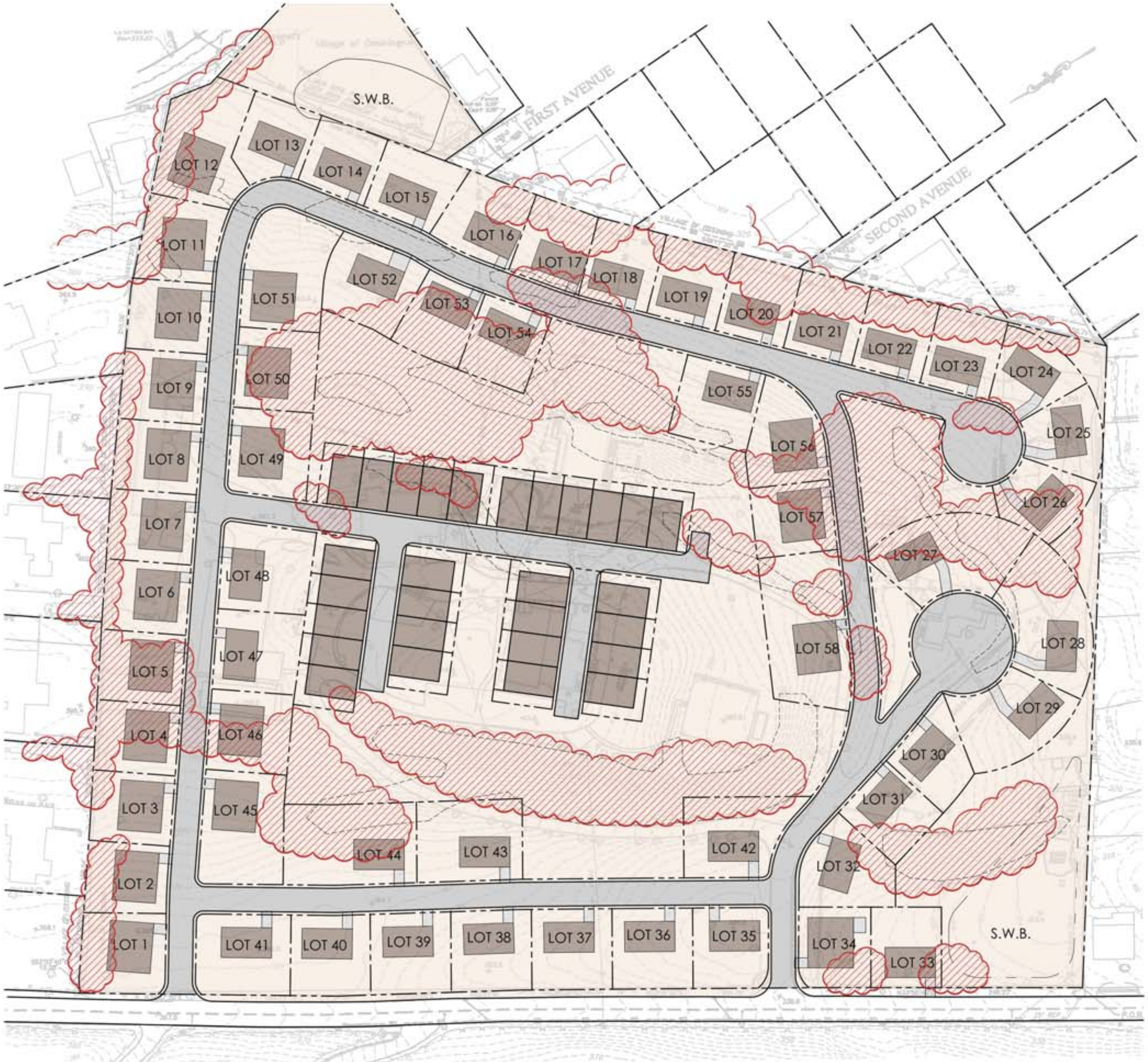
DATE: 07/13/2018

MINNO WASKO
ARCHITECTS AND PLANNERS
80 LAMBERT LANE, SUITE 105, LAMBERTVILLE, NEW JERSEY 08530 MINNOWASKO.COM

Additional Alternatives - Alternative Da
Figure 1-4

GLENCO

RIVER KNOLL
TOWN OF OSSINING, WESTCHESTER COUNTY, NEW YORK
XX-XXXX-XX



DEVELOPMENT PROGRAM

LOT SIZE: 16.65 ACRES

TOTAL NO. DWELLING UNITS: 86 DU

- SINGLE FAMILY: 58 DU
- TOWNHOMES: 28 DU

TYPICAL LOT SIZE: 70' x 80'

TYPICAL LOT AREA: 5,600 SF

UNDISTURBED AREA: 0 Acres (0%)

LOCATION OF EXTREMELY STEEP SLOPES

UNDISTURBED GREEN LAND AREA

DISTURBED AND/OR EXCAVATED LAND AREA

PROPOSED BUILDING LOCATION

NEW ROADWAYS AND INFRASTRUCTURE

REMOVED TREES

SCALE: 1"=50'-0"

ALTERNATIVE Db
R5 CLUSTERED ZONE

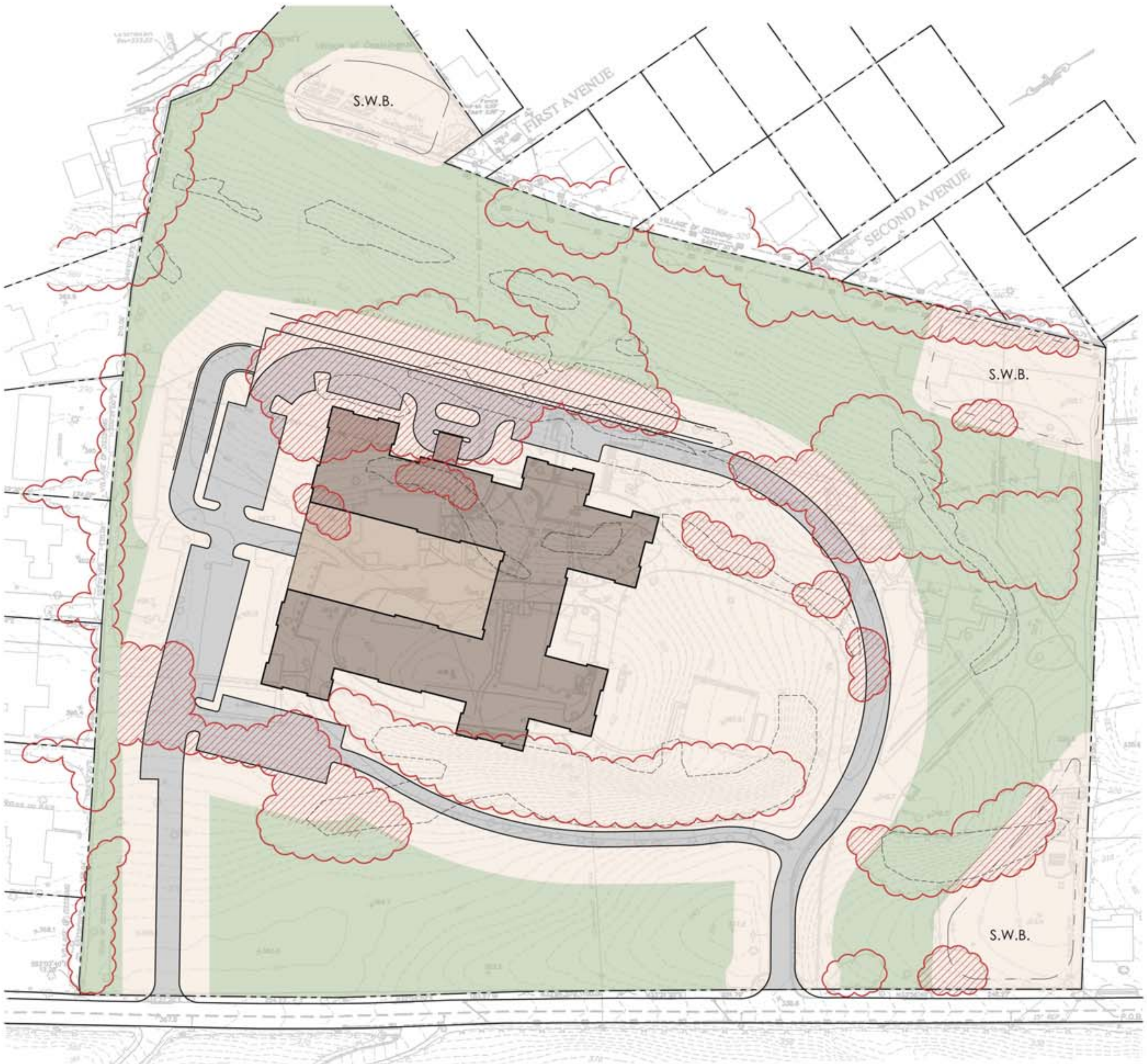
DATE: 07/13/2018

MINNO WASKO
ARCHITECTS AND PLANNERS
60 LAMBERT LANE, SUITE 105, LAMBERTVILLE, NEW JERSEY 08530 MINNOWASKO.COM

Additional Alternatives - Alternative Db
Figure 1-4

GLENCO

RIVER KNOLL
TOWN OF OSSINING, WESTCHESTER COUNTY, NEW YORK
XX-XXXX-XX



DEVELOPMENT PROGRAM

LOT SIZE: 16.65 ACRES

TOTAL NO. DWELLING UNITS 150 DU
- MARKET RATE UNITS: 125 DU
- DENSITY BONUS (20%): 25 DU (15 BMR ; 10 MR)

- 1 BEDROOM: 112 DU (75%)
- 2 BEDROOM: 38 DU (25%)

TOTAL PARKING(1.75 PER DU): 262 SP

LOT DENSITY CALCULATION BASED ON TOWN CODE

MIN. LOT SIZE 725,000 SF (16.64 AC)
- 125 DU * 4000 SF = 500,000 SF
- 150 BEDS * 1,500 SF = 225,000 SF
  - 100 1-BR = 100 BEDS
  - 25 2-BR = 50 BEDS

OPEN SPACE: 589,709 SF
- 188 BEDS @ 1,500 SF/BED = 187,500 SF REQUIRED

UNDISTURBED AREA: 7.40 Acres (41.4%)

LOCATION OF EXTREMELY STEEP SLOPES

UNDISTURBED GREEN LAND AREA

DISTURBED AND/OR EXCAVATED LAND AREA

PROPOSED BUILDING LOCATION

NEW ROADWAYS AND INFRASTRUCTURE

REMOVED TREES

SCALE: 1"=50'-0"

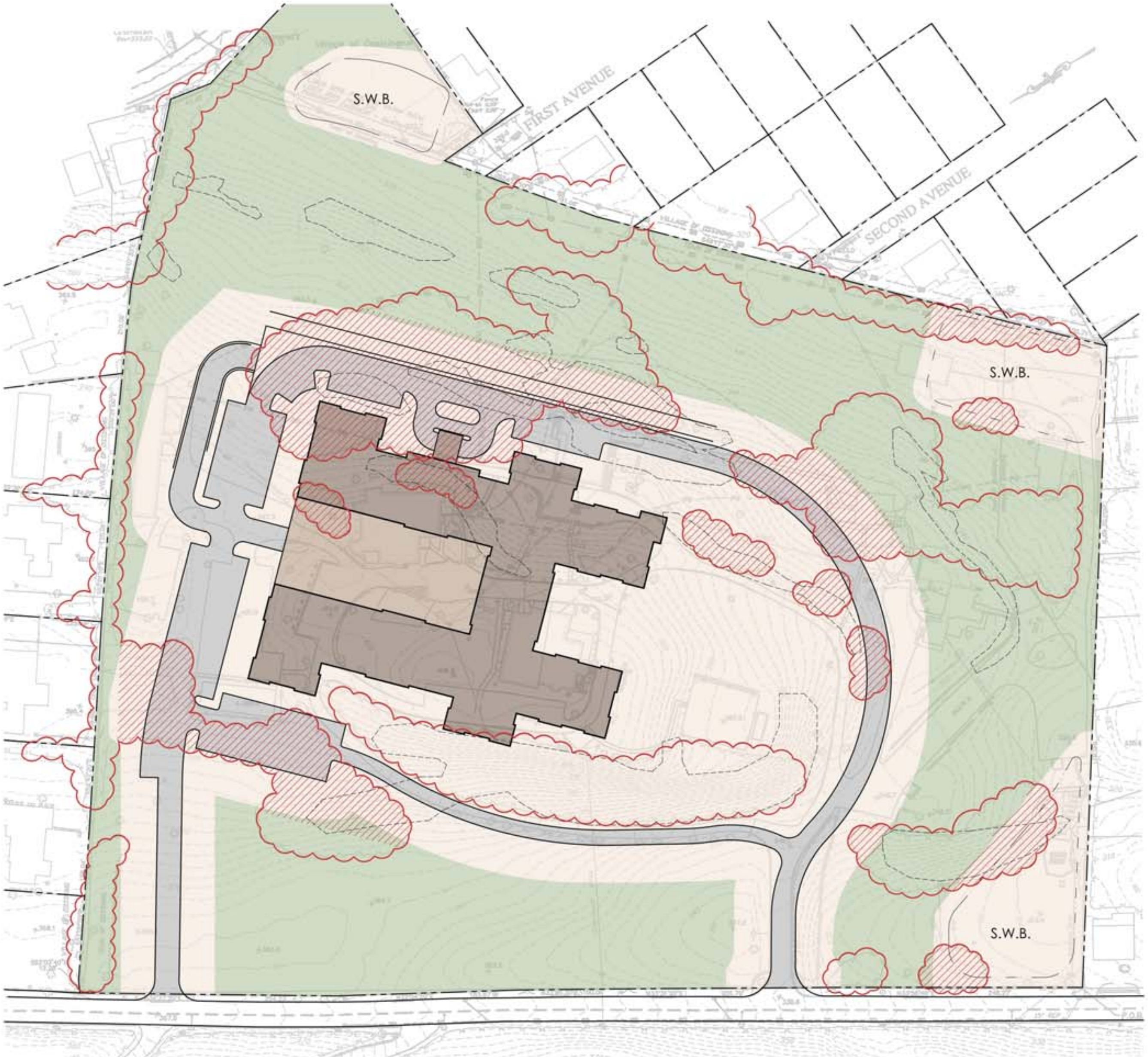
ALTERNATIVE Ea
MF ZONE
DATE: 07/13/2018

MINNO WASKO
ARCHITECTS AND PLANNERS
80 LAMBERT LANE, SUITE 105, LAMBERTVILLE, NEW JERSEY 08530 MINNOWASKO.COM

Additional Alternatives - Alternative Ea
Figure 1-4

GLENCO

RIVER KNOLL
TOWN OF OSSINING, WESTCHESTER COUNTY, NEW YORK
XX-XXXX-XX



DEVELOPMENT PROGRAM

LOT SIZE: 16.65 ACRES

TOTAL NO. DWELLING UNITS 160 DU
- MARKET RATE UNITS: 133 DU
- DENSITY BONUS (20%): 27 DU (16 BMR ; 11 MR)

- 1 BEDROOM: 85 DU (53%)
- 2 BEDROOM: 75 DU (47%)

TOTAL PARKING(1.75 PER DU): 280 SP

UNDISTURBED AREA: 7.40 Acres (41.4%)

LOCATION OF EXTREMELY STEEP SLOPES

UNDISTURBED GREEN LAND AREA

DISTURBED AND/OR EXCAVATED LAND AREA

PROPOSED BUILDING LOCATION

NEW ROADWAYS AND INFRASTRUCTURE

REMOVED TREES

SCALE: 1"=50'-0"

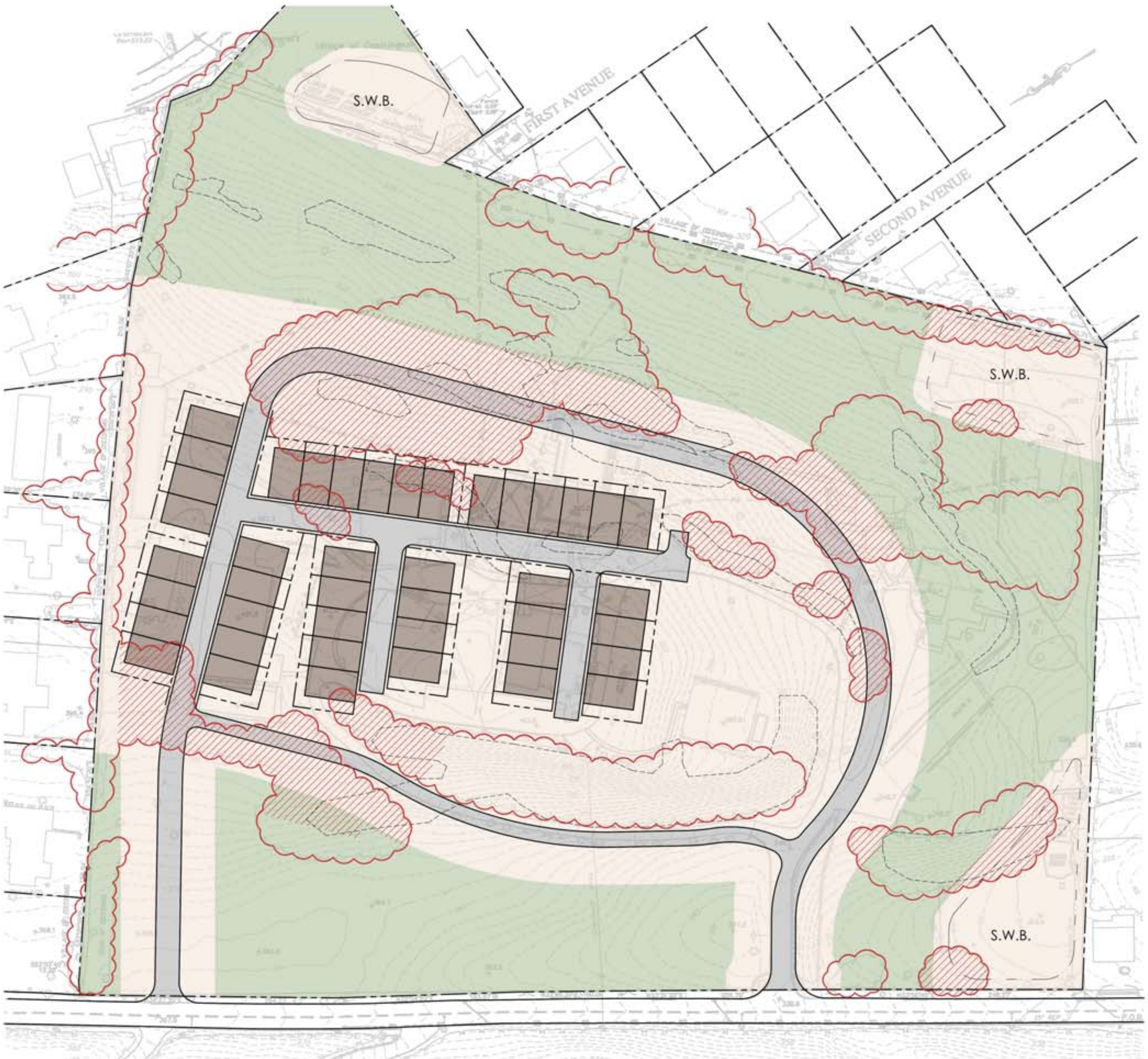
ALTERNATIVE Fa
MF ZONE @ 8 DU/ACRE
DATE: 01/24/2018

MINNO WASKO
ARCHITECTS AND PLANNERS
80 LAMBERT LANE, SUITE 105, LAMBERTVILLE, NEW JERSEY 08530 MINNOWASKO.COM

Additional Alternatives - Alternative Fa
Figure 1-4

GLENCO

RIVER KNOLL
TOWN OF OSSINING, WESTCHESTER COUNTY, NEW YORK
XX-XXXX-XX



DEVELOPMENT PROGRAM

LOT SIZE: 16.65 ACRES

TOTAL NO. DWELLING UNITS: 42 DU

TYPICAL LOT SIZE: 70' x 80'

UNDISTURBED AREA: 5.9 Acres (35%)

LOCATION OF EXTREMELY STEEP SLOPES

UNDISTURBED GREEN LAND AREA

DISTURBED AND/OR EXCAVATED LAND AREA

PROPOSED BUILDING LOCATION

NEW ROADWAYS AND INFRASTRUCTURE

REMOVED TREES

SCALE: 1"=50'-0"

ALTERNATIVE G

R5 & R15 CLUSTERED ZONE

DATE: 07/13/2018

MINNO WASKO

ARCHITECTS AND PLANNERS

80 LAMBERT LANE, SUITE 105, LAMBERTVILLE, NEW JERSEY 08530 MINNOWASKO.COM

Additional Alternatives - Alternative G

Figure 1-4

GLENCO

RIVER KNOLL

TOWN OF OSSINING, WESTCHESTER COUNTY, NEW YORK

XX-XXXX-XX

Proposed ‘Green’/ ‘Sustainable’ Design Components

In response to comments, the Applicant is providing more detail concerning the building program such that the project will incorporate additional sustainability components and will be designed to achieve LEED certification or the equivalent thereof. A number of construction techniques, materials, and operational practices will be utilized to ensure that River Knoll is a ‘green and sustainable’ project —both during construction and operation. To the extent that these methods or techniques reduce River Knoll’s consumption of energy during operation, they may be eligible for points under the United States Green Building Council Leadership in Energy and Environmental Design (LEED) standards. While the Applicant cannot commit to receiving LEED certification, LEED-based energy conservation measures will be incorporated into the design, construction and operation. It should be noted that LEED is a national rating system that integrates the principles of smart growth, urbanism and green building into a national system for neighborhood design. LEED certification provides an independent third-party verification that a development's location and design meet accepted high levels of environmentally responsible and sustainable development by:

- Concrete reinforced timber, bamboo or natural fibers
- Geo-textiles and other products made from crops
- Materials that are accredited as being responsibly sourced
- Electric charging stations
- Solar panels
- Bike facilities

Chapter 2: Probable Impacts of Refined Project

1. EXECUTIVE SUMMARY

This chapter summarizes and evaluates the potential environmental impacts from the Draft Environmental Impact Statement (DEIS) and includes analysis of proposed project refinements and relevant new information since publication of the DEIS. The topics below are the same as those addressed and analyzed in the DEIS. Each project refinement, if any, is analyzed in the topic area where the potential for environmental impacts exists; and for the reasons stated below, these refinements do not have the potential to generate any significant adverse environmental impacts in those subject areas.

2. PROJECT DESCRIPTION

As described in Chapter 1, River Knoll will repurpose the site of the former Stony Lodge Hospital into a 188-unit residential building in the approximate location of the former main hospital building. River Knoll will have 169 market rate units and 19 affordable housing units. Ninety-three (93) units will be one-bedroom; and eighty-three (83) units will be two-bedrooms. Ten of the affordable rental units will be one-bedroom and nine will be two-bedroom units. There will be 376 parking spaces for residents of River Knoll and their guests, as required by the Town Code. River Knoll will be a well-amenitized and upscale residential community attractive to empty-nesters and young professionals. Amenities will include a swimming pool, outdoor kitchen for private entertaining, extensive landscaping, a dedicated dog walk and ‘dog spa’, and a walkway to Veterans Memorial Park. Each apartment will have an indoor garage parking space in a secure and well-lighted facility. In addition, a “jitney” shuttle will provide morning and evening commuter service to residents, either to the Croton and/or Ossining Metro-North rail stations, plus service to the downtown Ossining commercial district for access to retailers and services.

Nine existing hospital buildings onsite and their respective contiguous parking areas will be removed. The new building will be located in the same general location as the original Main, East and North Stony Lodge Hospital buildings. The Proposed Project will create approximately 14 acres (or 76 percent of the Project Site) of permanently protected open space.

The Project Site is currently zoned R-15, which permits single family homes on 15,000 square foot lots. There is no zoning district within the Town Code to facilitate the development of the Proposed Project at its proposed density. Accordingly, the applicant determined that a new zoning district would be needed to enable the kind of development envisioned for the Project Site. Therefore, the applicant is proposing the adoption of a new Multifamily Residence 2 (MF 2) zoning district to enable the proposed use. Multifamily housing would be permitted in this new district as a conditional use subject to approval by the Planning Board.

The Proposed Project includes permanently protected open space in the form of large landscaped buffers surrounding the perimeter of the Project Site. The proposed buffers will be infilled with additional trees and shrubs and will range from a minimum width of 53.8 feet in the north to approximately 260 feet in the south. In addition, the existing signature grassy-meadow fronting Croton Dam Road will be preserved (approximately one quarter-mile in length) via a Conservation Easement with a third-part entity that will be coordinated with the Town and the Village. This buffer will replace existing surface parking areas and accessory buildings that are currently located adjacent to existing single family residential uses.

As described in Chapter 1, “Description of Refined Project”, a landscaping palette has been prepared in greater detail for the Proposed Project. The plants and meadows will be primarily native species with low watering demands, as opposed to introducing non-native, invasive species. Those areas designated for stormwater management will be planted with a combination of wet site tolerant seed mix (i.e. Sedges, Carex, Bulrush, New England Aster) live herbaceous plants (i.e. plus/one-gallon containers of Joe Pye Weed, Switchgrass, Blue Flag), and native shrubs and trees (i.e. Viburnum, Shadblow Serviceberry, Grey Dogwood, River Birch). The upland meadow along Croton Dam Road will be planted with an upland wildflower mix (i.e. Creeping Fescue, Goldenrod, False Indigo, New England Aster, Black Eyed Susan, Little Bluestem, Milkweed). The perimeter buffer will retain healthy trees within undisturbed areas for preservation; and selectively remove and prune existing trees to help promote the health and growth of trees to remain. The proposed perimeter buffer will be enhanced with the addition of woodland fringe plantings consisting of small trees and shrubs (i.e. Flowering Dogwood, Redbud, Viburnum, Witch Hazel), and a mix of shade trees, evergreens, flowering trees and shrubs (i.e. Red Maple, Red Oak, Bicolor Oak, Sweetgum, Spruce, Fir, Great Western Cedar, Viburnum, Inkberry).

3A. WETLANDS

The Proposed Project will not encroach into the wetland, or the 100-foot buffer regulated by the Town of Ossining. The Village of Ossining does not regulate a buffer around Village regulated wetlands. There are no New York State Department of Environmental Conservation (NYSDEC) regulated wetlands on or within the proximity of the Project Site.

3B. SOILS, TOPOGRAPHY (STEEP SLOPES), AND GEOLOGY

The topography of the Project Site has a high point at elevation 414-ft and descends in elevation to 305-ft towards the southeast corner. The existing Stony Lodge Hospital is located at the high point of the property, and the proposed River Knoll building will be located in this approximate location, though seven-feet lower in height than the existing former hospital buildings.

The Project Site is 17.9 acres (Town and Village), and existing slopes are shown in the **Table 2-1: Existing Slopes** below:

Table 2-1: Existing Slopes

Slope Category	SF (Acres)	Percent of Site
0-15%	366,769 (8.4)	47%
15-25%	218,201 (5.0)	28%
25-35%	109,107 (2.5)	14%
35% or greater	85,105 (2.0)	11%
Total	**779,182/17.9***	**100%**

Notes: Slope categories conform to Town of Ossining Code Chapter 167: Steep Slope Protection.
* 17.9 acres rounded from 17.89 acres.
Sources: Town of Ossining Code Sect.167

The total acreage of steep slopes on the site is 9.5 acres (or approximately 53 percent of the Project Site). Construction of River Knoll will disturb 5.37 acres (or approximately 30 percent) of the total site area. Disturbance of that portion of the site considered to consist of slopes in excess of 15 percent to be considered steep, will be approximately 30 percent of total Project Site area. Within the existing campus of hospital buildings, several areas of steep slopes will be returned to new vegetated buffer.

3C. STORMWATER MANAGEMENT

As presented in the DEIS, the refined Proposed Project will not alter the proposed stormwater management plan that was analyzed in the DEIS. As presented in the DEIS, stormwater is currently discharged untreated directly off-site to the surrounding neighborhoods and streets, particularly along the southern edge of the property. This condition will be alleviated as the Proposed Project will collect and convey runoff into an engineered new onsite stormwater system using conventional and green infrastructure stormwater practices, such as infiltration basins with forebays and stormwater planters. The vegetated stormwater practices and overland discharges will also provide opportunities to enhance water quality and infiltration practices. The proposed stormwater management improvements will provide runoff reduction, water quality treatment for the 90 percent rainfall event, stream channel protection, and attenuate peak rates of runoff for the 10- and 100-year storms as required by NYSDEC SPDES General Permit No. GP-0-15-002.

3D. VEGETATION AND WILDLIFE

The refined proposed plan will not alter the natural resource on the project site from the conditions that were analyzed in the DEIS.

3E. HISTORIC AND ARCHEOLOGICAL RESOURCES

As discussed in the DEIS, the refined proposed plan will not substantially alter the historic and archaeological resources on the project site from the conditions that were analyzed in the DEIS. As presented in the DEIS, OPRHP determined that the Proposed Project will have “no adverse effect” on the existing buildings.

3F. INFRASTRUCTURE AND UTILITIES

The refined proposed plan would not substantially alter the infrastructure and utilities on the project site from the conditions that were analyzed in the DEIS.

WATER

The Town of Ossining’s Consulting Engineer has advised that the existing water system has adequate capacity to serve the estimated demand of 30,800 gpd from the Proposed Project (see Appendix B in the DEIS). In addition, representatives of the Village of Ossining Department of Public Works and Town’s Consulting Engineer (see Appendix B in the DEIS), reported that proposed water system improvements that are being engineered in connection with the Proposed Project will further improve the function and reliability of the Town/ Village water system in the vicinity of the Project Site.

The Proposed Project will be connected to a new 8” water main to be installed by the Ossining Water Department as part of the water system improvements. The water main will cross the Project Site in a 10’ wide easement that will be dedicated to the Village of Ossining. A private service line will be connected to the new 8” water main to serve the proposed building.

As further described in Chapter 3.F of the DEIS, “Infrastructure and Utilities,” and based upon consultation with Town representatives, since water demands of the Proposed Project can be met with or without the proposed improvements, no significant adverse impacts are anticipated to the Ossining Water Department.

SEWER

Sewage will be conveyed to the Ossining Wastewater Treatment Plant. The Ossining Treatment Plant treats an average of approximately 4.1 million gallons of wastewater per day (MGD) and has a permitted flow of 7.0 MGD monthly average. An 8” sanitary sewer line exists along the east property line of the Project Site. A connection is proposed to the existing 8” sewer line at an existing manhole between First and Second Avenues to serve the new building. As requested by representatives of the Village of Ossining Department of Public Works and Town of Ossining Consulting Engineer, a video inspection was performed of the existing 8” sanitary line along the site’s east property line, and the line was cleaned in connection with performing the video.

Westchester County has advised that the existing wastewater treatment plant has adequate capacity to serve the increase of 16,615 gpd from the Proposed Project (see Appendix B in the DEIS). As further described in Chapter 3.F of the DEIS, “Infrastructure and Utilities,” it is the Applicant’s conclusion that no significant adverse impacts are anticipated to the Ossining Wastewater Treatment Plant or sanitary sewer lines.

ENERGY AND TELEPHONE SERVICE

The refined proposed plan will not alter the energy or telephone service on the project site from the conditions that were analyzed in the DEIS.

3G. LAND USE COMPREHENSIVE PLAN ZONING AND COMMUNITY CHARACTER

LAND USE

The 17.9-acre Project Site is comprised of approximately 16.69 acres situated within a residential neighborhood in the Town of Ossining, and a small portion (1.24 acres) within a residential neighborhood in the Village of Ossining. The Project Site comprises the former Stony Lodge Hospital grounds, formerly used as a psychiatric treatment hospital for adolescents. The former Stony Lodge Hospital (closed since 2012) provided residential care for 61 children at a time on a two-week rotation (600 children annually) with a support staff of approximately 200 persons in three shifts (morning shift, early evening shift, and midnight shift). There are nine existing buildings on the Town portion of the property. The oldest building, also known as the Main Building (circa 1868) stands at the top of the hill. Other buildings include the North, East, West and South Buildings, a garage, the Maintenance Building, the Administration Building, and the Recreation Room (a former garage close to residential neighbors). Additionally, a small pump house and access road is located within the Village portion of the property.

The Proposed Project will change the use on the Project Site from a long-standing institutional use to a multifamily residential use. In the applicant’s opinion, the change in land use is compatible with surrounding residential land uses. Eliminating the accessory buildings and constructing one newer building on the central portion of the Project Site will present a change but will not adversely impact surrounding land uses as the new development will be on the interior of the Project Site, well screened from most views from surrounding areas, including abutting residential homes. The routine activities of future residents of River Knoll will be no different from the routine activities of residents of the surrounding neighborhood. Vehicular circulation will be directed to Croton Dam Road, which previously carried traffic associated with Stony Lodge Hospital.

The visual character of the Project Site will be similar as the proposed building will also be located on the top of the Project Site and will be buffered from surrounding properties by dense existing and proposed vegetation. However, instead of the three-story Main Hospital building being surrounded by nine accessory buildings, the proposed River Knoll building will be only one three-story residential structure located at the top of a hill—in the same general area as the former Main Hospital building. The proposed building will be larger than the existing Main Hospital building, but the removal of the accessory buildings will allow the land area in which these buildings are located to be replaced with a much larger permanently landscaped buffer between the proposed residential building and the adjacent residential neighborhoods on all four sides of the property.

PUBLIC POLICY

As discussed in the DEIS, the Town of Ossining adopted a Comprehensive Plan Update on December 15, 2015. Within the Comprehensive Plan, the following policies are applicable to the redevelopment of the Stony Lodge Hospital into a multi-family residence and new residential multifamily zoning district:

"Preserve and conserve existing open space, acquire new properties for preservation and recreation, and protect the trees, water supply and watersheds, steep slopes, viewsheds, scenic resources, wildlife habitats, and other significant environmental assets to the community" (Environmental Resources Chapter).

"Preserve the quality, character, and stability of neighborhoods within the Town… make a wide range of housing opportunities available to members of the community… and require suitable buffer areas for non-residential uses and properties abutting neighborhoods and residential areas" (Residential Chapter).

"Cooperate in efforts to make a wide range of housing opportunities available to members of the community" (Residential Chapter).

"Promote development and redevelopment to be consistent with the current scale and historic character of the community… (and) preserve residential neighborhoods and protect environmental resources" (Future Development and Redevelopment Chapter).

It is within the section entitled "Future Development and Redevelopment" that the Town may choose to clarify and expand the following policy to address more specifically density limits, buffer maintenance, and open space protection:

"The Town should be open to an analysis of the zoning of the underutilized and non-conforming Stony Lodge Hospital property in order for this property to be adaptively reused or redeveloped in a manner that is feasible and which protects surrounding neighborhoods and environmental resources to the maximum extent practicable."

ZONING

The majority of the Project Site (16.65 acres) is zoned One-Family Residence (R-15) in the Town of Ossining. This district is an R-15 District with a 15,000 square foot minimum lot size. A small 1.2-acre portion of the Project Site is located in the Village of Ossining and is zoned S-50. This is a Single-Family Residence District with a 5,000 square foot minimum lot size. Multifamily uses are not permitted as-of-right in either district. Permitted, conditional, and accessory uses on the Project Site in the R-15 district are consistent with and listed under the zoning regulations pursuant to §200-7: R-40 "One-Family Residence District." Permitted uses are one-family detached dwellings, not to exceed one dwelling on each lot, in addition to limited agricultural operations and municipal structure uses. The permitted uses by special permit upon approval by the Board of Appeals are places of worship, educational or general medical care institutions, public utility rights-of-way, annual membership clubs, one-story temporary structures for agricultural display, and cemeteries.

The Proposed Project will require a MF-2 (Multifamily Residence 2) zoning district be adopted to accommodate the use and the site would be re-mapped from the One-Family Residence (R-15) District to the proposed MF-2 District. Multifamily housing would be permitted in the proposed MF-2 district by the Planning Board as a conditional use subject to the following:

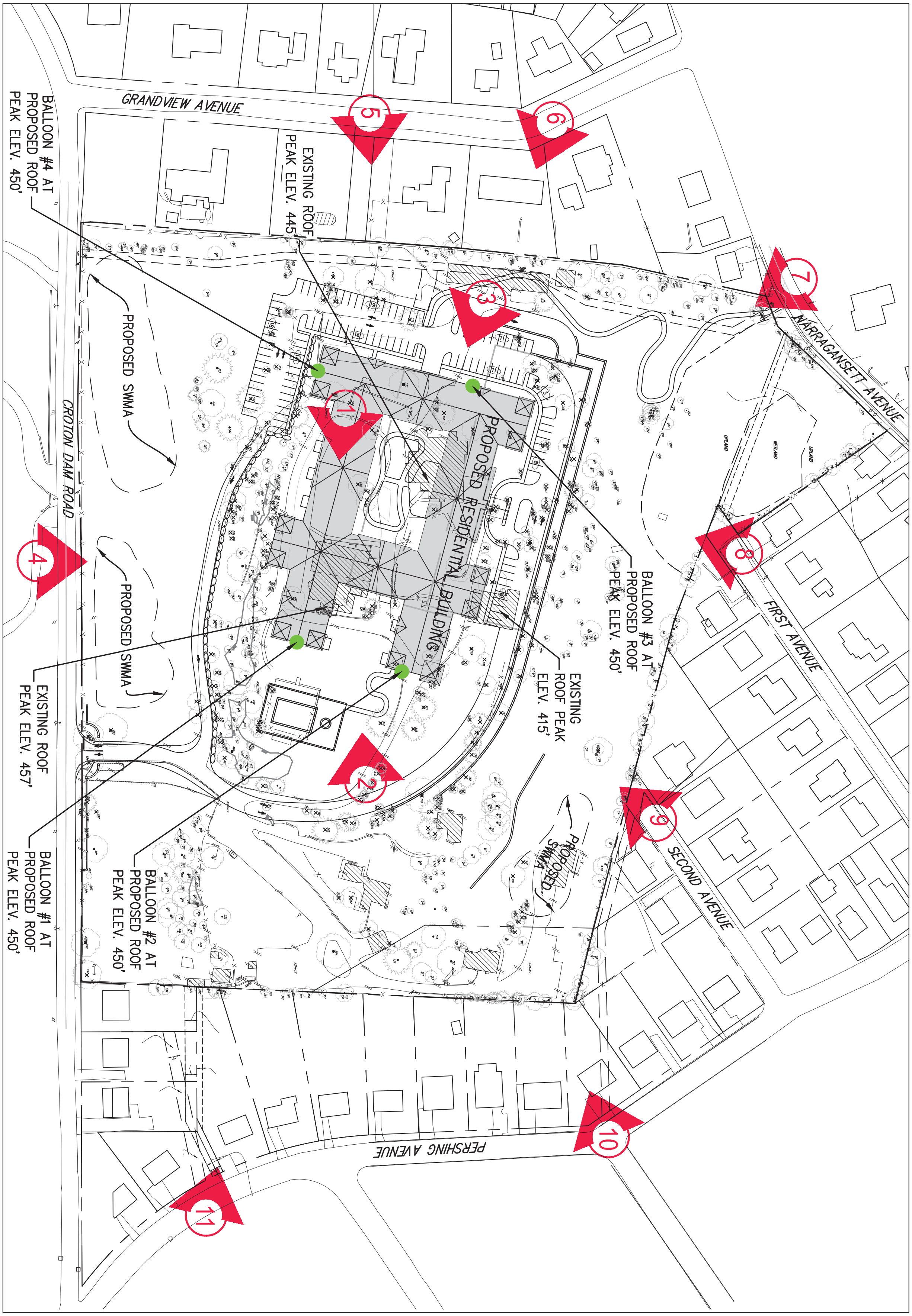
- Enabling more undeveloped permanent open space as the proposed, new residential community will be placed at the center of the Premises;
- Preserving more mature stands of trees;
- Maintaining the scenic meadow along the entire frontage of Croton Dam Road as well as the expansive meadow on the easterly side of the premises;
- Allowing for the addition of sizeable new green buffer areas protecting adjacent homeowners along the northerly and southerly boundaries of the Premises;
- Minimizing internal roadways, infrastructure, and impervious surfaces for roads and parking, as well as minimizing excavation that would otherwise disrupt the terrain in a manner that would necessitate tree removal; and
- Producing a fiscally beneficial change to the Premises improving revenue generation for the Town, Village and School District

The potential impact of adopting the proposed MF-2 Zoning District on other areas of the Town will be at the discretion of the Town Board to consider whether or not to entertain rezoning of a candidate site covering 10 acres or more within the Town of Ossining. There are few undeveloped 10-acre sites within the Town. However, there may be underutilized and tax-exempt religious or institutional uses of 10 acres that may be interested in having their property to be redeveloped as a multifamily housing site. If this were to occur, an applicant would need to petition the Town Board and the Town Board would need to agree to consider the petition to rezone to the proposed MF-2 zoning district.

COMMUNITY CHARACTER

Balloon Test

On June 22, 2018 a balloon test was performed to identify the maximum height of the proposed building roof and to approximate the height of the Proposed Project. The four balloons used for this test were 100-gram meteorological balloons with an un-inflated diameter of 13.8”, a standard inflated diameter of 36” and a burst diameter of 52”. The balloons were secured to the ground utilizing 1/2” x 2” x 36” wooden stakes and braided nylon mason’s line. The balloons were filled with helium from a compressed helium tank. The balloon locations were chosen to best represent the roof peak height along the outer edge of the proposed building, as depicted in **Figure 2-1: Balloon Test Figure**.



RIVER KNOLL	
40 CROTON DAM ROAD	TOWN OF OSSINING, NEW YORK

BALLOON TEST
FIGURE **2-1**

DATE: 7/9/2018 JMC PROJECT: 15064

FIGURE: BTF-1 SCALE: 1" = 120'

120 BEDFORD RD
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JMC

15064–FIGURES.dwg; BALLOON FIGURE.tab

Balloon #1 was placed at the proposed roof peak location nearest to Croton Dam Road in the existing lawn.

Balloon #2 was placed at the proposed roof peak, nearest to Second Avenue, adjacent to the existing driveway.

Balloon #3 did not allow for the placement of Balloon #3 exactly at the roof peak location nearest First Avenue due to dense vegetation. Therefore, it was placed as closely to the peak location as possible in the existing lawn on the edge of the vegetation, but still was at the exact height of the Proposed Project.

Balloon #4 was affixed to an existing chain link fence at the location of the proposed roof peak nearest to Croton Dam Road and Grandview Avenue.

To calculate the length of string needed to set the balloons at the proper height at each location, the proposed roof elevation was established by determining building height compared to the proposed finished floor elevation (FFE). The two drawings used were JMC drawing SP-3 “Grading Plan”, dated 2/15/2017, for the proposed finished floor elevation (FFE), and Minno & Wasko drawing “Site Sections”, dated 11/28/2017, for the building height from the FFE to the roof peak.

Based on this information, the roof peak elevation was determined to be approximately 450’. The length of each string was calculated based on the difference between the proposed roof peak elevation and the elevation at which the stake was placed based on the existing topographic information. For example, the elevation where the stake was set for Balloon #1 was approximately 408. The proposed roof peak (450’) – balloon size (3’) – existing elevation (408’) = string length (39’).

For the purposes of this balloon test, photographs were taken as shown in **Figure 2-2: Balloon Test Photographs**. The photos start within the site and then progress to the surrounding areas. For reference and comparison, the Figure also indicates the elevations of the existing roof peaks, ranging from 415’ to 457’ and the location each balloon was placed. While on the site, existing topography, vegetation, and buildings made it impossible to see all four balloons at once. It should be noted that the existing Main Building contributed to the visual blockage as it has a higher roof peak elevation than the proposed building’s roof peak elevation by 7’. None of the balloons were visible from outside the site, primarily because of existing vegetation. A substantial amount of the existing tree buffer is proposed to remain. All the photographs taken outside the site are aimed towards the proposed building.

Photograph No. 1
Taken from an existing parking area on site looking south. In this image, two balloons are visible, though slightly obscured by existing vegetation, and the existing main building is shown between them. From the perspective of this photo, the balloons are well below the peak of the existing roof. The existing roof peak is approximately 7’ higher than the proposed roof peak. The existing tree buffer, much of which will remain, is above the proposed roof.

Photograph No. 2
Taken from the existing driveway on site looking north towards both the proposed building location and the existing main building. As shown, the site in this location was previously developed with an existing building, driveway, and grassy slope.

Photograph No. 3
Panorama taken from the north side of the site facing south near the existing garage. Two balloons are visible from this vantage point and are clarified in the image by arrows. Balloon #3 (left in the photo) is actually lower than the existing building shown in the photo, although it looks higher due to the perspective. The balloon seen on the right is below the existing tree line.

Photograph No. 4
Panorama taken from Croton Dam Road looking east into the site. The balloons are not visible from this vantage point.

Photograph No. 5
Taken from Grandview Avenue looking south into the site. The balloons are not visible from this vantage point.

Photograph No. 6
Taken from Grandview Avenue looking south into the site. The balloons are not visible from this vantage point.

Photograph No. 7
Taken from Narragansett Avenue looking west into the site. The balloons are not visible from this vantage point.

Photograph No. 8
Taken from First Avenue Looking northwest into the site. The balloons are not visible from this vantage point.

Photograph No. 9
Taken from Second Avenue looking northwest into the site. The balloons are not visible from this vantage point.

Photograph No. 10
Taken from Pershing Avenue looking north into the site. The balloons are not visible from this vantage point.

Photograph No. 11
Taken from Pershing Avenue looking northeast into the site. The balloons are not visible from this vantage point.

Balloon Test Photographs
Figure 2-2

River Knoll
40 Croton Dam Road
Ossining, NY
July 9, 2018
JMC Project 15064

BALLOON TEST SITE PHOTOGRAPHS

DESCRIPTION:	Looking South
LOCATION:	On Site

Photo No. 1

DESCRIPTION:	Looking North Towards Proposed Building Location
LOCATION:	On Site

Photo No. 2

Balloon Test Photographs
Figure 2-2

River Knoll
40 Croton Dam Road
Ossining, NY
July 9, 2018
JMC Project 15064

BALLOON TEST SITE PHOTOGRAPHS

DESCRIPTION:	Looking South Toward Proposed Building Location
LOCATION:	On Site

Photo No.
3

DESCRIPTION:	Looking East Toward Proposed Building Location
LOCATION:	Croton Dam Road

Photo No.
4

Balloon Test Photographs
Figure 2-2

River Knoll
40 Croton Dam Road
Ossining, NY
July 9, 2018
JMC Project 15064

BALLOON TEST SITE PHOTOGRAPHS

DESCRIPTION:	Looking South Toward Proposed Building Location
LOCATION:	Grandview Avenue

Photo No.
5

DESCRIPTION:	Looking South Toward Proposed Building Location
LOCATION:	Grandview Avenue

Photo No.
6

Balloon Test Photographs
Figure 2-2

River Knoll
40 Croton Dam Road
Ossining, NY
July 9, 2018
JMC Project 15064

BALLOON TEST SITE PHOTOGRAPHS
PAGE 4 OF 6

DESCRIPTION:	Looking West Toward Proposed Building Location	Photo No. 7
LOCATION:	Narragansett Avenue	

DESCRIPTION:	Looking Northwest Towards Proposed Building Location	Photo No. 8
LOCATION:	First Avenue	

Balloon Test Photographs
Figure 2-2

River Knoll
40 Croton Dam Road
Ossining, NY
July 9, 2018
JMC Project 15064

DESCRIPTION:	Looking Northwest Towards Proposed Building Location
LOCATION:	Second Avenue

Photo No.
9

DESCRIPTION:	Looking North Towards Proposed Building Location
LOCATION:	Pershing Avenue

Photo No.
10

Balloon Test Photographs
Figure 2-2

River Knoll
40 Croton Dam Road
Ossining, NY
July 9, 2018
JMC Project 15064

BALLOON TEST SITE PHOTOGRAPHS

DESCRIPTION:	Looking Northeast Towards Proposed Building Location
LOCATION:	Pershing Avenue

Photo No.
11

In summary, the proposed building will be obscured by the existing vegetation that will be preserved when looking into the site from all surrounding roadways. It is important to note that a majority of the Proposed Project is occurring on land that is currently the location of the existing yet defunct former Stony Lodge Hospital buildings and is designed to work with the existing topography. Finally, new landscaping will provide additional long-term screening.

Photo-simulations

In response to requests made during the public review of the DEIS, the Applicant provided a revised photo-simulation of the Proposed Project as shown in **Figure 2-3: Revised Photo Simulation** prepared from a vantage point on Grandview Avenue, a surrounding roadway to the north of the Project Site, in order to accurately depict the viewpoint, vegetation, and view of the Proposed River Knoll Project (see Chapter 3.G). The DEIS includes views of the Project Site from each vantage point, to consist of simulations of summer views, winter views, and nighttime views that are provided in Figure 3.G-4b through Figure 3.G-4g. Views of the Project Site from the different vantage points studied will stay relatively similar to current views. During the summer, the dense foliage will continue to have the existing visual buffer, mostly hiding the proposed building from the surrounding neighborhoods. During the off-leaf months, the Proposed Project will be more visible than during the on-leaf season. The Proposed Project would be visible during the winter months along Croton Dam Road, Narragansett Avenue, 1st Avenue, and 2nd Avenue through existing and proposed vegetation. The Project Site would continue to not be visible from Pershing Avenue and Grandview Avenue. Low intensity and dark-sky compliant lighting will be for security and wayfinding. Minimal decorative down-lighting will be provided at the entrance to the site.

Based on the analysis contained in Chapter 3.G of the DEIS, it is the Applicant's opinion that no significant adverse impacts to community character would result from the Proposed Project. While the proposed building would be partially visible from select locations in the study area, most of those views would be shielded by existing or proposed vegetation. During winter months, views of the proposed building would be greater, but distance and angles of view would limit most views. Furthermore, reuse of the existing hospital property into a multifamily property is consistent with the Town's Comprehensive Plan and would represent a similar land use to the existing hospital.

Revised Photo Simulation
Figure 2-3

3H. TRAFFIC AND TRANSPORTATION

The Traffic Impact Study (TIS) that was presented in the DEIS (see Appendix G in the DEIS) was amended with the following five intersections being evaluated:

- Intersection of Pershing Avenue and Narragansett Avenue
- Intersections of Pershing Avenue and smaller offshoot roads – specifically, First Avenue and Second Avenue
- Intersection of Pine Avenue and Narragansett Avenue
- Intersection of Dale Avenue where Routes 133 and 134 merges – the Washington School area.

The TIS identifies other planned or proposed development in the immediate vicinity as part of the future without the Proposed Project (“No Build”). That analysis also includes trip generation from the former Stony Lodge Hospital operation.

Intersection capacity analysis computed based on the Build Volumes indicate that the intersections will operate at the same or better levels of service as projected for the No Build Volumes with recommended improvements. Projected operations with the Proposed Project are further described and shown in Chapter 3.H, “Traffic and Transportation.”

A sight distance analysis was conducted for the proposed driveway. The sight distance was based on an 85th percentile speed of 43 mph in both directions along Croton Dam Road. The 85th percentile speed was determined by a speed study. The existing decorative walls would be relocated outside of the intersection sight line. Based on the plan and the relocated decorative walls, the intersection sight distance is accommodated for the proposed driveway.

The original TIS that was included in the Expanded Environmental Assessment (EEAF) and submitted to the Town in 2015 for the Proposed Project, identified signal timing improvements to manage the additional trips that would be generated from the Proposed Project mitigated the Proposed Project’s traffic impacts. However, to improve local traffic conditions, and in talks with neighbors, the Project Sponsor independently investigated the possibility of improvements to the intersection of NY 9A and Croton Dam Road. Discussions were held with Town officials on potential improvements to address this existing congestion issue. As such, in November 2016 the Project Sponsor submitted preliminary plans to NYSDOT for a right turn lane on both Croton Dam Road approaches and recommended to reduce the existing 150 second cycle length to 110 seconds. This cycle change will improve the delay experienced by vehicles due to the long cycle length. The review of this improvement by NYSDOT was positively received and will continue concurrent with the SEQRA process. The proposed improvements at the intersection of NY 9A and Croton Dam Road will be a benefit to the community to improve an existing condition. The recommended right turns along the Croton Dam Road approaches are depicted on JMC Figure CHP-1, “Conceptual Highway Improvement Plan,” which is contained within Appendix B of the TIS (Appendix G in the DEIS).

3I. COMMUNITY FACILITIES

SCHOOLS

According to the analysis presented in Chapter 1 the Proposed Project would likely add approximately 16 students within the Ossining Union Free School District (OUFSD). As presented in Chapter 1, this estimate is based on a survey of comparable multi-family rental projects in the region that have been designed to attract young professionals and empty nesters. Projects with fee-ownership, 3+ bedrooms, townhomes, or projects marketed to seniors were not included in the survey.

It should be noted that if the site were to be developed with the current R-15 zoning, somewhere between 30 and 35 single family homes could be developed in either a conventional or clustered layout – see Chapter 5 in the DEIS. These single-family homes would likely generate between 26 and 30 school age children – more than that expected from a project similar to River Knoll.

The applicant is aware that the OUFSD is concerned with current enrollment growth and the programming and space constraints being experienced by the district, and the impact additional students will have on the quality of the educational programs in the OUFSD. In addition, the applicant recognizes that even though the school tax obligation from River Knoll will exceed the cost to educate the school age children likely to live at River Knoll, there are taxing allocations and labor negotiations that are outside of the scope of this application. It should be noted that over the past three years, the applicant has discussed potential impacts of the additional school children in cooperation with school district officials. An outcome of these discussions was a commitment by the applicant to a 'community benefit contribution' of $350,000 – over and above what will be paid in school taxes – for the district to use towards enhancing school programs and facilities. Moreover, the applicant will continue to cooperate with the school district to support the educational programs that have contributed to the success of the school district. This contribution is memorialized in an agreement between the OUFSD and the Project Sponsor, dated September 29, 2016 (see Appendix D).

OPEN SPACE AND RECREATION

The existing buildings on the site are closed, and the site is not accessible to the public for recreation purposes. The Proposed Project will offer numerous recreational amenities to residents of River Knoll including a fitness center for residents with state-of-the-art exercise equipment, a yoga studio, a club room providing gathering areas and billiards and a Wi-Fi equipped library, and a "dog spa" providing a range of pet care, walking and sitting services. Outdoor amenities will include a swimming pool for residents, an outdoor kitchen for private entertaining, extensive landscaping, a dedicated dog walk, and a walkway to Veterans Memorial Park. Based upon the number and quality of recreational amenities to be provided, it is the Applicant's opinion that the Proposed Project will provide its residents with ample on-site recreation amenities and meet its demand for recreational needs.

It can be expected that many of the residents at River Knoll will be existing Town/Village residents looking to downsize within the local area. Nonetheless, River Knoll residents would likely participate in Town recreation programs and leagues as well as the many recreation facilities that will be provided on-site. In addition, River Knoll residents will be able to enjoy the passive use of the open space and trails and walkways that will be part of the site programming. If all 373 River Knoll residents were new to the Town, this would result in less than one percent increase in population entitled to use Town recreational programs and facilities. Based upon the technical analysis contained in Chapter 3.J, "Fiscal Impacts," it is the Applicant's conclusion that the taxes projected to be generated by the Proposed Project will be sufficient to cover the additional costs.

EMERGENCY SERVICES

The Proposed Project will include 188 residential units. Demand for emergency services will be comparable to similar residential developments elsewhere in the community. In contrast, the former Stony Lodge Hospital was a frequent and disproportionate user of emergency services. Based upon technical analysis contained in Chapter 3.I, "Community Facilities," and correspondence from emergency service providers, it is the Applicant's conclusion that no significant adverse impacts to emergency services are anticipated.

3J. FISCAL IMPACTS

Due to the conversion from an almost vacant lot to a residential use, the Proposed Project will increase in total assessed value from approximately $2,493,500 to $27,500,000 for the total Project Site (including both the Town and Village parcels) to result in an approximately 90.9 percent increase in Full Market Valuation (or an increase of $25,006,500). As of 2016, the Taxable Assessed Valuation of a property equates to it 100% of its Full Market Valuation. Thus, tax revenue will increase by 94.6 percent (or an increase of $26,027,175) from 2016 conditions when a 5.95 percent equalization rate was in effect as opposed to the 100% assessment revaluation.

Taxes collected for municipal demands include Town-wide, unincorporated Town, Ambulance District, refuse, light, fire, Town-wide Water District, Ossining school, and library taxes. Currently, the Project Site generates a total of $95,418 for these services, and once constructed Based on the analysis contained in Chapter 3.J, “Fiscal Impacts,” it is the Applicant’s conclusion that the property enhanced by the Proposed Project will generate $1,048,469 or a 90.9 percent increase; more than the costs for the additional population from the Proposed Project.

The Proposed Project is anticipated to generate approximately 373 residents, of which approximately 16 will be students enrolled in the OUFSD. According to the OUFSD 2018-2019 Proposed School Budget, it is projected that approximately 5,226 pupils will be enrolled in the school district in the 2018-2019 school year, a 3.48 percent increase from the prior 2017-2018 school year. Given the estimated 16 students generated by the Proposed Project, this would represent an approximate 0.31 percent increase in the student population for the 2018-2019 school year. Projected net tax revenue growth to the Town of Ossining, Village of Ossining, and Ossining Union Free School District will exceed costs, and will offset additional costs for providing emergency services and educating new school-age children that may reside at River Knoll. While it is the conclusion of the Applicant that the property taxes that will be generated from the Proposed Project will be sufficient to cover the per student educational costs, the Applicant has agreed to an additional contribution of $350,000 that will be used by the District to enhance programming and facility needs.

3K. CONSTRUCTION IMPACTS

As stated in the DEIS, the construction period for the Proposed Project is expected to last approximately 18 months (months 11-18 of construction cycle will largely focus on work internal to the building with less noise generation). As discussed in Chapter 3.K, “Construction,” implementation of an Erosion and Sediment Control Plan, Best Practices, and construction management techniques would minimize any potential temporary construction-related impacts. A Landscape Plan will be implemented after construction of the Proposed Project to return disturbed areas to their previous condition or an improved state. Based on the technical analysis contained in Chapter 3.K, “Construction,” it is the Applicant’s conclusion that construction of the Proposed Project will not result in any significant adverse impacts.

4. ADVERSE ENVIRONMENTAL IMPACTS

The refined proposed plan will not alter the adverse environmental impacts of the project site from the conditions that were analyzed in the DEIS.

5. ALTERNATIVES

As presented in Chapter 1, the applicant prepared seven (7) additional alternatives were requested using the lot and dimensional regulations for the R-5 and R-15 zoning districts but making the layouts more compact to preserve the front meadow and other wide swaths of open space on the site. The additional alternatives are both single family, townhomes, and multi-family units located in the area of the proposed 188-unit building. The seven additional alternatives are:

- Alternative Ba: Single-family Cluster Development using R-15 Zoning District – 35 homes
- Alternative Bb: Combination single family and townhome Clustered Development using R-15 Zoning District - Layout Density – 53 residential units (25 single family homes and 28 townhomes)
- Alternative Da: Clustered Layout using R-5 Zoning District – 73 single family homes
- Alternative Db: Combination single family and townhome Clustered Layout using R-5 Zoning District – 86 residential units (58 single family homes and 28 townhomes)
- Alternative Ea: Multi-family Developments based upon Existing Multifamily Zone – 150 residential units (125 market rate units + 20% density bonus = 25 units (15 below market rate + 10 market rate))
- Alternative Fa: Multifamily Dwelling Developments at Eight Dwelling Units per Acre – 160 residential units (133 market rate units + 20% density bonus = 27 units (16 below market rate + 11 market rate))
- Alternative G: Combination R-5 and R-15 Cluster – 42 townhomes

The number of school children estimated for the Community Facilities assessment of each additional alternatives was derived from Chapter 1, “Description of Refined Project” **Table 1-8: Comparable Development**s and DEIS Chapter 5: Alternatives public school age children multipliers.

The fiscal impacts of each additional alternative According to local sources, the median sales price of single-family homes in the Town of Ossining is approximately $413,000 or $244/square foot. Applying this median value to the alternatives, the assessed value of the development is approximated. The assessed value per lot has been assigned proportionally to the size of each lot.

Table 2-2: Comparison of Alternatives

DEIS Analysis Area	Proposed Project	Alternative Ba – R15C	Alternative Bb – R15C (TH)	Alternative Da – R5C	Alternative Db – R5C (TH)	Alternative Ea – MF Zone	Alternative Fa – MF w 8 DUs per acre	Alternative G – R5 & R15 Clustered Zone (TH)
Project Description	188 multifamily units, including 19 affordable units in one building. 373 residents.	35 single-family lots. 128 residents.	25 single-family lots and 28 townhouses. 92 residents under the single-family home options and 47 residents (1BR)/65 residents (2BR) under the townhouse option.	73 single-family lots. 268 residents.	58 single-family lots and 28 townhouses. 316 residents under the single-family home option and 47 residents (1BR)/65 residents(2BR) under the townhouse option.	150 multifamily units in 1 building, including 15 affordable units. 275 residents under the multifamily option.	160 multifamily units in 1 building, including 16 affordable units. 315 residents under the multifamily option.	42 townhouses. 70 residents (1BR)/97 residents (2BR) under the townhouse option.
Wetlands	Wetland and wetland buffer will not be disturbed	Direct disturbance to wetland for stormwater management. Wetland buffer disturbance for new road and 35 house lots.	Direct disturbance to wetland for stormwater management. Wetland buffer disturbance for new road.	Direct disturbance to wetland for stormwater management. Wetland buffer disturbance for new road.	Direct disturbance to wetland for stormwater management. Wetland buffer disturbance for new road.	Direct disturbance to wetland for stormwater management. Wetland buffer disturbance for new road.	Direct disturbance to wetland for stormwater management. Wetland buffer disturbance for new road.	Direct disturbance to wetland for stormwater management. Wetland buffer disturbance for new road.
Soils and Topography	5.3 acres, or 56% of steep slope (>15%) disturbance on-site, or 30% of total Project Site.	Significantly greater steep slopes disturbance than Proposed Project.	Significantly greater steep slopes disturbance than Proposed Project.	Significantly greater steep slopes disturbance than Proposed Project.	Significantly greater steep slopes disturbance than Proposed Project.	Significantly greater steep slopes disturbance than Proposed Project.	Significantly greater steep slopes disturbance than Proposed Project.	Significantly greater steep slopes disturbance than Proposed Project.
Site Disturbance	Approximately 61 percent of the site will be disturbed by construction. *	Approximately 100% would be disturbed by construction. *	Approximately 100% would be disturbed by construction. *	Approximately 100% would be disturbed by construction. *	Approximately 100% would be disturbed by construction. *	Approximately 59% would be disturbed by construction. *	Approximately 59% would be disturbed by construction. *	Approximately 65% would be disturbed by construction. *
Stormwater Management	New stormwater management to improve water quality.	New stormwater management would improve water quality.	New stormwater management would improve water quality.	New stormwater management would improve water quality.	New stormwater management would improve water quality.	New stormwater management would improve water quality.	New stormwater management would improve water quality.	New stormwater management would improve water quality.
Vegetation and Wildlife	13.65 ac of green space will be preserved and enhanced. Significant amount of contiguous buffer with habitat value to be maintained. No impact to threatened or endangered species.	Significantly more site disturbance than Proposed Project. Majority of the Project Site would need to be revegetated. Lawn and green space would not be contiguous and would have less habitat value. No impacts to threatened or endangered species.	Significantly more site disturbance than Proposed Project. Majority of the Project Site would need to be revegetated. Lawn and green space would not be contiguous and would have less habitat value. No impacts to threatened or endangered species.	Significantly more site disturbance than Proposed Project. Majority of Project Site would need to be revegetated. Lawn and green space would not be contiguous and would have less habitat value. No impacts to threatened or endangered species.	Significantly more site disturbance than Proposed Project. Majority of Project Site would need to be revegetated. Lawn and green space would not be contiguous and would have less habitat value. No impacts to threatened or endangered species.	Significantly more site disturbance than Proposed Project. Majority of the Project Site would need to be revegetated. Lawn and green space would not be contiguous and would have less habitat value. No impacts to threatened or endangered species.	Significantly more site disturbance than Proposed Project. Majority of Project Site would need to be revegetated. Lawn and green space would not be contiguous and would have less habitat value. No impacts to threatened or endangered species.	Significantly more site disturbance than Proposed Project. Majority of Project Site would need to be revegetated. Lawn and green space would not be contiguous and would have less habitat value. No impacts to threatened or endangered species.

DEIS Analysis Area	Proposed Project	Alternative Ba – R15C	Alternative Bb – R15C (TH)	Alternative Da – R5C	Alternative Db – R5C (TH)	Alternative Ea – MF Zone	Alternative Fa – MF w 8 DUs per acre	Alternative G – R5 & R15 Clustered Zone (TH)
Historic and Archaeological Resources	No impact to historic resources. SHPO to determine if further assessment of impacts to archeological resources is needed.	No impact to historic resources. SHPO to determine if further assessment of potential impacts to archeological resources is needed.	No impact to historic resources. SHPO to determine if further assessment of potential impacts to archeological resources is needed.	No impact to historic resources. SHPO to determine if further assessment to potential impacts to archeological resources is needed.	No impact to historic resources. SHPO to determine if assessment to potential impacts to archeological resources is needed.	No impact to historic resources. SHPO to determine if further assessment to potential impacts to archeological resources is needed.	No impact to historic resources. SHPO to determine if further assessment to potential impacts to archeological resources is needed.	No impact to historic resources. SHPO to determine if further assessment to potential impacts to archeological resources is needed.
Infrastructure and Utilities	Adequate services available to support Proposed Project.	Adequate services available to support this Alternative.	Adequate services available to support this Alternative.	Adequate services available to support this Alternative.	Adequate services available to support this Alternative.	Adequate services available to support this Alternative.	Adequate services available to support this Alternative.	Adequate services available to support this Alternative.
Land Use, Zoning, and Public Policy	Zoning amendment required. Proposed use consistent with Comprehensive Plan.	Consistent with zoning and not consistent with Comprehensive Plan.	Consistent with zoning and Comprehensive Plan.	Zoning amendment required. Not consistent with Comprehensive Plan.	Zoning amendment required. Not consistent with Comprehensive Plan.	Zoning amendment required. Not consistent with Comprehensive Plan.	Zoning amendment required. Consistent with Comprehensive Plan.	Zoning amendment required. Not consistent with Comprehensive Plan.
Traffic	96 AM and 121 PM peak trips.	34 AM and 41 PM peak trips.	26 AM and 29 PM peak trips in single-family option; 14 AM and 16 PM peak trips in townhome option.	61 AM and 79 PM peak trips.	60 AM and 68 PM peak trips in single-family option; 15 AM and 18 PM peak in townhome option.	77 AM and 100 PM peak trips under the multifamily option.	82 AM and 106 PM peak trips under the multifamily option.	20 AM and 24 PM peak trips.
Off-site road improvement	Yes Improvements To Route 9A and Croton Dam Road. Improvements to the LOS	No improvement to LOS	No improvement to LOS	No improvement to LOS	No improvement to LOS	No improvement to LOS	No improvement to LOS	No improvement to LOS
Community Facilities	Estimated 16 school children. $350,000 community benefits fund.	Estimated 30 school children. No community benefit fund.	Estimated 22 school children under the single-family option, plus estimated 4 school children under the townhouse option. No community benefit fund.	Estimated 63 school children. No community benefit fund.	Estimated 50 school children under the single-family option, plus estimated 4 school children under the townhouse option. No community benefit fund.	Estimated 13 school children under the multifamily option. No community benefit fund.	Estimated 13 school children under the multifamily option. No community benefit fund.	Estimated 21 school children. No community benefit fund.

DEIS Analysis Area	Proposed Project	Alternative Ba – R15C	Alternative Bb – R15C (TH)	Alternative Da – R5C	Alternative Db – R5C (TH)	Alternative Ea – MF Zone	Alternative Fa – MF w 8 DUs per acre	Alternative G – R5 & R15 Clustered Zone (TH)
Fiscal	Total tax revenues generated estimated as $1.05 million ($682,843 in taxes to OUFSD). School taxes generated will exceed costs associated with the increase in school children to the OUFSD. In addition, $350,000 community benefits fund proposed.	Total tax revenues generated estimated as $556,441 ($358,927 in taxes to OUFSD). School taxes generated would not cover costs associated with the increase in school children to the OUFSD. However, no community benefit fund.	Total tax revenues generated estimated as $842,610 ($543,519 in taxes to OUFSD). School taxes generated will exceed costs associated with the increase in school children to the OUFSD. No community benefit fund.	Total tax revenues generated estimated as $1.2 million ($748,620 in taxes to OUFSD). School taxes generated would not cover costs associated with the increase in school children to the OUFSD. However, no community benefit fund.	Total tax revenues generated estimated as $1.9 million ($881,936 in taxes to OUFSD). School taxes generated would not cover costs associated with the increase in school children to the OUFSD. However, no community benefit fund.	Total tax revenues generated estimated as $1.9 million ($1.2 million in taxes to OUFSD). School taxes generated will exceed costs associated with the increase in school children to the OUFSD. No community benefits fund.	Total tax revenues generated estimated as $2 million ($1.3 million in taxes to OUFSD). School taxes generated will exceed costs associated with the increase in school children to the OUFSD. No community benefits fund.	Total tax revenues generated estimated as $667,729 ($430,713 in taxes to OUFSD). School taxes generated will exceed costs associated with the increase in school children to the OUFSD. However, no community benefits fund.

DEIS Analysis Area	Proposed Project	Alternative Ba – R15C	Alternative Bb – R15C (TH)	Alternative Da – R5C	Alternative Db – R5C (TH)	Alternative Ea – MF Zone	Alternative Fa – MF w 8 DUs per acre	Alternative G – R5 & R15 Clustered Zone (TH)
Construction	Site cut-and-fill would balance.	Site cut-and-fill would balance.	Site cut-and-fill would balance.	Site cut-and-fill would balance.	Site cut-and-fill would balance.	Site cut-and-fill would balance.	Site cut-and-fill would balance.	Site cut-and-fill would balance.
Adverse Environmental Impacts that Cannot Be Avoided	No significant adverse impacts that cannot be avoided.	Adverse impacts to steep slopes and wetlands.	Adverse impacts to steep slopes and wetlands.	Adverse impacts to steep slopes and wetlands.	Adverse impacts to steep slopes and wetlands.	No significant adverse impacts that cannot be avoided.	No significant adverse impacts that cannot be avoided.	Adverse impacts to steep slopes and wetlands.
Irreversible and Irretrievable Commitment of Resources	Land and building materials would be irreversibly and irretrievably committed. However, no significant adverse impacts anticipated.	Land and building materials would be irreversibly and irretrievably committed. However, no significant adverse impacts anticipated.	Land and building materials would be irreversibly and irretrievably committed. However, no significant adverse impacts anticipated.	Land and building materials would be irreversibly and irretrievably committed. However, no significant adverse impacts anticipated.	Land and building materials would be irreversibly and irretrievably committed. However, no significant adverse impacts anticipated.	Land and building materials would be irreversibly and irretrievably committed. However, no significant adverse impacts anticipated.	Land and building materials would be irreversibly and irretrievably committed. However, no significant adverse impacts anticipated.	Land and building materials would be irreversibly and irretrievably committed. However, no significant adverse impacts anticipated.
Growth-Inducing Impacts	No significant adverse growth-inducing impacts anticipated.	No significant adverse growth-inducing impacts anticipated.	No significant adverse growth-inducing impacts anticipated.	No significant adverse growth-inducing impacts anticipated.	No significant adverse growth-inducing impacts anticipated.	No significant adverse growth-inducing impacts anticipated.	No significant adverse growth-inducing impacts anticipated.	No significant adverse growth-inducing impacts anticipated.
Effects on the Use and Conservation of Energy Resources and Solid Waste Management	New building would be designed with green building technology to reduce energy consumption.	New single-family homes would not be as energy efficient as the design considered for the Proposed Project Site.	New townhouses would not be as energy efficient as the design considered for the Proposed Project Site.	New single-family homes would not be as energy efficient as the design considered for the Proposed Project Site.	New townhouses would not be as energy efficient as the design considered for the Proposed Project Site.	New multifamily units would not be as energy efficient as the design considered for the Proposed Project. Site.	New multifamily units would not be as energy efficient as the design considered for the Proposed Project. Site.	New townhouses would not be as energy efficient as the design considered for the Proposed Project. Site.

Note: * Calculation of site disturbance to construct the alternative. Such disturbance includes the removal of trees and green habitat, excavation, installation of new roads, infrastructure, storm water systems and the footprint of the proposed alternative structures and parking areas.

6. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The Proposed Project will remove 237 trees and will regrade portions of the site. As shown in **Table 2-3**, there will be a net increase of 1.32 acres of impervious surface. The Proposed Project will enable the protection and preservation of the rest of the natural habitat, open space, and significantly forested areas within the Town and Village of Ossining. The steepest wooded habitat will remain untouched. The existing wetland and wetland buffer within the Town and Village of Ossining will remain unaltered.

Natural and manmade resources will be expended in the construction and operation of the Proposed Project. These natural resources include the use of land and energy. The use of land is the most basic of irretrievably committed resources, as the development of the new building and associated parking areas, walkways and driveways require the commitment of land for the Proposed Project. The actual building materials used in the construction of the Proposed Project (wood, steel, concrete, glass, etc.) and energy, in the form of gas and electricity, consumed during the construction and operation of the Proposed Project by the various mechanical systems (heating, hot water, and air conditioning) will also be irretrievably committed to this particular undertaking. It is the Applicant's conclusion that none of these impacts are considered significant.

Table 2-3: Project Site Calculations

Parameter	Existing		Proposed with Town Property Only		Proposed with Town and Village Property	
Lot Area (S.F./A.C.)	779,182	17.9	725,252	16.7	779,182	17.9
Number of Units	N/A		188		188	
Lot Area Per Dwelling Unit (S.F.)	N/A		3,858		4,145	
Min. Lot Width (Feet)	N/A		979.5(1)		979.5(1)	
Min. Lot Depth (Feet)	N/A		665.5		641.8	
Min. Yards for Building (Feet)						
Front	138.1		241		241	
One Side	0.3		140.5		140.5	
Both Sides	14.4		454.6		553.8	
Rear	46.7		248.8		265.3	
Max. Building Coverage (%)	3.08		9.96		9.27	
Max. Building Coverage (S.F./A.C.)	23,999	0.55	72,235	1.66	72,230	1.66
Max. Building Height (Feet/Stories)	N/A		40/3(2)		40/3(2)	
Min. Parking (9' x 18' Spaces) (1.8 per DU)	112		338		338	
Min. Yards for Parking Lots (Feet)						
Front	253		212.6		212.6	
Side	3		53.8		53.8	
Rear	35		192.4		208.5	
Total Site Disturbance (S.F. / A.C.)	N/A		463,950	10.7	477,600	11
Percent Site Disturbance	N/A		64%		61%	
Percent Change			N/A			
Impervious Surface (S.F./A.C.)	127,044	2.92	184,668	4.24	184,668	4.24
Percent Impervious Surface	16%		25%		24%	
Increment (Existing vs. Proposed)			57,624	1.32	57,624	1.32
Increment share of Project Site			7.40%		7.40%	
Percent Change			45%		45%	
Open Space (Pervious Surfaces)	N/A		540,584	12.4	594,514	13.7
Percent Open Space	N/A		75%		76%	
Percent Change			N/A			
Forested Area Disturbance (S.F./A.C.)	N/A		60,700	1.39	61,700	1.42
Percent Forested Area Disturbance	N/A		8%		8%	
Percent Change			N/A			

1 Measured at front of building.
2 Provided by Minno &Wasko and measured from the finished floor grade to the mean height between the eave and ridge of the roof.

7. GROWTH-INDUCING IMPACTS

As presented in the DEIS, the Proposed Project will likely have 373 residents, which could increase the Town's population by 0.99 percent. A portion of the residents likely to reside at River Knoll will be local residents looking to down-size and stay in the community, and a portion may be new residents to the Town. Additionally, if other large undeveloped or underdeveloped parcels in the Town were to petition the Town Board to rezone their site to the proposed MF-2 zoning, additional new development would bring new residents to the Town that would increase its population. It should be noted that this scenario is speculative, and the Town Board would retain its discretion to consider whether applying the proposed MF-2 zoning is appropriate and in an area that could be adequately provided Town services. It is the Applicant's conclusion that a population increase of 0.99 percent is negligible. Further, it is the Applicant's conclusion that local businesses and services will be beneficially impacted by future residents of River Knoll because they will shop in local stores and avail themselves of local services.

8. EFFECTS ON USE AND CONSERVATION OF ENERGY RESOURCES AND SOLID WASTE MANAGEMENT

As presented in the DEIS, River Knoll will be designed to meet or exceed the NYS Energy Conservation Code (ECC), which requires the use of energy efficient products in all new construction. Based on the energy conservation measures and designs that will be incorporated in the construction of River Knoll, the Proposed Project will conserve and manage energy demands in a state-of-the-art manner—significantly in excess of existing conditions—and will not pose any significant adverse impacts for energy demand/consumption.

Chapter 3: Comments and Responses

I. INTRODUCTION

This Final Environmental Impact Statement (FEIS), addresses comments that were made on the Draft EIS (DEIS), either presented verbally at the Public Hearing held on April 4, 2018 or provided in writing through May 16, 2018. This includes all comments made by the public or their representatives, public officials, and interested and involved agencies.

The DEIS, prepared on behalf of Glenco LLC, (the Applicant), analyzed the potential environmental impacts of the proposed zoning action and the Proposed Project. This chapter summarizes the substantive verbal and written comments submitted on the DEIS. Similar comments in terms of subject or technical points are grouped together in correlation with the chapters of the DEIS and the commenters are noted in parentheses after the comment. Some comments have been paraphrased, with careful attention to ensure that the substance of the comment is preserved. Full transcripts of public testimony and complete correspondence from which these summaries are drawn can be found in **Appendix A**.

II. LIST OF ORGANIZATIONS AND INDIVIDUALS WHO COMMENTED ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

1. Norma V. Drummond, Acting Commissioner, Westchester County Planning Board, written comments dated March 30, 2018 (N.V. Drummond)
2. David Stolman, Michael Galante, Marilyn Timpone-Mohamed, and Steven Cipolla, Frederick P. Clark Associates, Inc. (“Town Planner”), written comments received July 11, 2017, January 16 & 17, 2018, and April; 4, 2017 (D. Stolman, M Galante, M. Timpone-Mohamed, and S. Cipolla); Substantive Review Memo received May 16, 2018 (D. Stolman, M Galante, and M. Timpone-Mohamed)
3. Katherine Zalantis, Esq. and Daniel Patrick, Esq., Silverberg Zalantis LLP (“Town Attorney”), written comments received April 5, 2017, July 11, 2017, January 16, 2018, and February 6, 2018 (K. Zalantis and D. Patrick)
4. Dana Levenberg, Town Supervisor, Town of Ossining Town Board, written comments received June 6, 2018 (D. Levenberg)
5. Raymond Sanchez, Superintendent, Ossining Union Free School District, written comments dated July 11, 2018 (R. Sanchez)
6. Mitzi Elkes, Chairperson, Town of Ossining Environmental Advisory Committee, written comments dated June 25, 2018 (M. Elkes)
7. Dan Ciarcia, President, Ciarcia Engineering, P.C. (“Consulting Engineer to the Planning Board”), written comments received April 5, 2017, January 17, 2018, and July 11, 2017 (D. Ciarcia)
8. Anne Darelius, PE, NYSDOT, written comments received October 31, 2016 (A. Darelius)
9. Jack Reilly, 23 Claremont Road, verbal comments received April 4, 2018 (J. Reilly)
10. John Leslie, resident on Dale Avenue, verbal comments received April 4, 2018 (J. Leslie)
11. Bob Calente, 13 Feeney Road, verbal comments received April 4, 2018 (B. Calente)

12. Ray Santucci, 29 Grandview Avenue, verbal comments received April 4, 2018 (R. Santucci)
13. Nancy Kennedy, 22 Croton Dam Road, verbal comments received April 4, 2018 (N. Kennedy)
14. Aaron Spring, 64 Meadow Road, verbal comments received April 4, 2018 (A. Spring)
15. Rocco Trapasso, Jr., 43 Pershing Avenue, verbal comments received April 4, 2018 (R. Trapasso, Jr.)
16. Charles Callahan, 22 Oakbrook Road, verbal comments received April 4, 2018 (C. Callahan)
17. Henry Grossman, resident, verbal comments received April 4, 2018 (H. Grossman)
18. David Whitlinger, resident, verbal comments received April 4, 2018 (D. Whitlinger)
19. Jess Vecchiarelli, 94 Locust Road, verbal comments received April 4, 2018 (J. Vecchiarelli)
20. Maria Caruso, resident, verbal comments received April 4, 2018 (M. Caruso)
21. Karen Palmieri, resident on Grandview Avenue, verbal comments received April 4, 2018 (K. Palmieri)
22. Lou Castronova, resident on Narragansett, verbal comments received April 4, 2018 (L. Castronova)
23. Juan Bedoya, 4 Birchbrook Road, local resident verbal comments received April 4, 2018 (J. Bedoya)
24. Marianne Lattin, 4 Dewars Court, verbal comments received April 4, 2018 and written comments received May 14, 2018 (M. Lattin)
25. Alex Vallone, 11 Birchwood Road, verbal comments received April 4, 2018 (A. Vallone)
26. Caroline Curvan, 11 Hawkes Avenue, verbal comments received April 4, 2018 (C. Curvan)
27. Joanne Gelsi, resident, emailed comments received April 5, 2018 (J. Gelsi)
28. Donna Sharrett, resident, emailed comments received April 9, 2018 (D. Sharrett)
29. George and Bertha Seitz, 6 Cherry Hill Circle, written comments received April 18, 2018 (G. and B. Seitz)
30. Donna and Noel Markham; Kathy Lapine, resident, emailed commented received May 7, 2018 (D. and N. Markham; K. Lapine)
31. Richard Damiano, resident, written comments received May 8, 2018 (R. Damiano)
32. Eiko Inoue, resident, emailed comments received May 14, 2018 (E. Inoue)
33. William M. Pool Owens, resident, written comments received May 14, 2018 (W.M. Pool Owens)
34. Bernadette DeAngelis, resident, emailed comments received May 15, 2018 (B. DeAngelis)
35. Colleen Donnelly, resident, emailed comments received May 15, 2018 (C. Donnelly)

III. COMMENTS AND RESPONSES

Chapter 2: Project Description (and General Comments)

Comment 2-1: The EAF states there will be no impact on open space and recreation. With 370 parking spaces and 188 units, what will Veterans Park be like? On the weekends? (J. Reilly)

Response 2-1: *The residents of River Knoll will have access to 14 acres of open space on the Project Site including on-site recreation amenities. Greenspace will be protected by way of perpetual easements to ensure natural, landscaped buffers for the neighborhoods adjacent to the Proposed Site. River Knoll residents will also have an array of on-site recreational amenities such as a fitness center with state-of-the-art exercise equipment, a yoga studio, a club room providing gathering areas, billiards, and Wi-Fi equipped library areas, a "dog spa", swimming pool, an outdoor kitchen for private entertaining, extensive landscaping, and a dedicated dog walk. The residents of River Knoll will also be able to utilize Veterans Memorial Park via a walkway that will link these open space areas. The River Knoll Management Association (RKMA) will manage and protect on-site recreation and open space areas. The potential impact to municipal recreation facilities will be mitigated by an estimated $682,843 property and school tax obligation, based on 2018 Property Tax Rates.*

Comment 2-2: I think it needs to be scaled down. Again, you're like a giant in a small – a giant puzzle piece that just doesn't fit in that area of the town. (J. Reilly)

Response 2-2: *Comment noted. The Proposed Project is designed to adaptively reuse a site that has been historically distinct and different from the surrounding single-family neighborhood. Stony Lodge Hospital was a Hospital for the Mentally Ill with up to 61 residents and 250 staff. The main hospital building was concentrated at the top of the site and surrounded with surface parking lots. Nine accessory buildings, each with surface parking area were further located throughout the property. River Knoll has been designed to remove the accessory buildings and surface parking areas entirely and replace the former main hospital building with a single residential building with subsurface parking. The remaining buildings and their surface parking areas will be removed and replaced with landscaping. Consequently, the single residential building with underground parking in the area of the former main hospital building will allow for greatly expanded green space around the entire site.*

Comment 2-3: We don't have the financial ability, the expertise law-wise or real estate-wise to fight a multimillion dollar corporation That is what you're here for. To help the community and help us. (Trapasso, 4/04/18)

Response 2-3: *The Town is represented by professional planners, traffic engineers, and land use attorneys to ensure that the community is adequately served. The Town's consultants have advised the Town Board and Planning Board on the environmental review process (SEQRA), and have reviewed the methodology, data input, and conclusions from each and every study contained in the DEIS.*

The town's consultants are listed below along with a brief description of each consultant from the respective website:

Silverberg Zalantis LLP - Town Attorney

- *New York municipal law lawyers that handle cases involving real estate developments, complex commercial transactions, and eminent domain actions. Core areas of practice include zoning, land use, municipal, and real estate law to provide transactional, litigation and appellate services.*

Frederick P. Clark Associates – Town Planner

- *Planning consulting practice that focuses on municipal and county planning and the development of implementing regulations, as well as traffic and environmental services. The firm has a commitment to assist in shaping and guiding community growth while protecting the environment.*

Ciarcia Engineering – Consulting Engineer to the Planning Board

- *Licensed professional engineering firm specialized in evaluating and designing many types of facilities during all phases of construction. The firm has extensive experience with investigation and troubleshooting for all types of buildings and work site elements.*

Comment 2-4: This impact is going to be horrendous and all of these studies have to be taken with a grain of salt because who is paying for the studies This is about statistics. You can slant them any way you wish. (Grossman, 4/xx/18)

Response 2-4: *As noted in Response 2-3 above, the data and studies provided by the applicant to the Town have been reviewed by the Town's professional consultants. In many cases, the studies have been modified and/or expanded at the request of the Town so that the Town Planning Board, acting as Lead Agency, can conduct the 'hard look' required by SEQRA to make a determination that the studies are complete in content and adequacy, and meet the intent of the Scope that was adopted by the Planning Board. In some cases, the Planning Board has requested further clarification and/or detail regarding potential adverse impacts, and those responses are contained in Chapters 1 and 2 of this FEIS.*

Comment 2-5: To put a large building in a community of single-family homes, surrounded by a wooded area is just – it is wrong. I am imploring, I am begging this board, please don't do this to our community. (Palmieri, 4/xx/18)

Response 2-5: *Comment noted. The Proposed Project is designed to adaptively reuse a site that has been historically distinct from the surrounding single-family neighborhood. For 91 years, Stony Lodge Hospital was a Hospital for the Mentally Ill providing acute care inpatient services for up to 61 residents and 250 staff. The hospital buildings were concentrated at the top of the site and surrounded by open space. As such,* *River Knoll has been designed to reduce the land use pattern of the former hospital, at the same time increasing the open space as noted in Response 2-2.*

Comment 2-6: I don't want this project. I am just like everybody else, but I think the thing that would seal the deal is we get an impartial party to conduct the traffic and do the sewage assessment. (L. Castronova, 4/xx/18)

Response 2-6: *Comment noted. The data, methodology and findings from the studies included in the DEIS were based on a scope that was developed and adopted by the Planning Board, as lead agency. The studies were reviewed by the Town's professional planning, engineering, and legal consulting staff, and found to be complete. See also Response to Comment 2-3.*

Comment 2-7: If they are catering to empty nesters, they are going to have two cars. Now in the two bedrooms, they will have three cars. And what about the visitors. So that is – it doesn't belong in the area it is. (L. Castronova, 4/xx/18)

Response 2-7: *As noted above, the proposed River Knoll project is situated on a site that was, up until 2012, a Hospital for the Mentally Ill for up to 61 acute care inpatients and 250 support staff. 376 parking spaces will be provided within the single building on the site for residents and their guests. The proposed parking meets the Town's parking requirements. It should be noted that approximately 125 surface parking spaces were located on-site for the former Stony Lodge Hospital – 25 of these parking spaces were located within 10-20 feet of the property line with another 40-50 parking spaces within 100 feet of the property line. These parking spaces will be removed and will be replaced with a landscape buffer.*

Comment 2-8: The narrative on page 2-4 states that the Proposed Action would "protect the expansive and beautiful meadows." However, approximately two-thirds of the meadow located along the Croton Dam Road frontage of the property would be disturbed by grading and the creation of steep slopes, and installation of stormwater management facilities. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 2-8: *Construction of River Knoll will require portions of the site to be temporarily disturbed, including the meadow along Croton Dam Road. First, creating a safe access drive will require that the existing driveway be widened. Second, as previously noted, currently the site provides no stormwater management – neither for water quality nor water quantity- stormwater runs off the site unimpeded. To manage stormwater for the Proposed Project – that is to capture and treat runoff for improved water quality and to reduce the rate and volume of runoff, the site will need to be temporarily disturbed to install stormwater infrastructure – including within the front meadow. Finally, removing existing surface parking areas and out-buildings that are located adjacent to several residential neighbors and within the perimeter of the site, will also require the site to be temporarily disturbed. However, upon completion of River Knoll, the areas of the site that were temporarily disturbed will have been restored with existing and new native vegetation and a* *contiguous green perimeter will be provided along the Croton Dam frontage to be protected in perpetuity.*

Comment 2-9: Although the proposed multi-family building would be located within the area of the site that was developed with hospital buildings, that area is the high point of the property. The concept plan would require the removal of 2 to 15 feet of the ridge to accommodate the large multi-family building, which is a significant impact that includes the relocation of 2,500 cubic feet of the excavated material off-site. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 2-9: *The proposed building is being located in the previously developed portion of the site, generally in the location of the existing Main Building, North Building and East Building which are on the hilltop. The proposed building has been designed to work with the site topography as the levels of the building step down from south to north. The proposed building has a footprint of 113,600 square feet, of which 72,400 square feet will be in "cuts" ranging from 1 to 15 feet deep and 41,200 square feet is in "fills" ranging from 1 to 23 feet deep. The height and breadth of the hill will remain intact. A section equal to the residential building's footprint will be excavated to allow for a below grade parking structure, and the first floor of the residential building will be at the existing elevation of the hill. There will not be any vantage point from any surrounding property would indicate a lowering of the ridge.*

Comment 2-10: The FEIS should provide more information regarding the operation of the "jitney" service to the Croton and Ossining Metro-North rail stations. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 2-10: *The Jitney will consist of a [10] passenger microvan that will operate during the morning and evening commutes, at hours determined by the demand of the residential tenants of the project.*

Comment 2-11: The last sentence of the third paragraph states, "As calculated from Figure 3.C-2, approximately 6.55 acres of the Project Site could be considered open space." The FEIS should explain how the 6.55 acres was calculated and which areas of the site were included in the calculation. It appears from the figure that large, open, vegetated areas of the existing site may not have been included in the calculation. The FEIS should provide the acreages for all the site categories shown in the figure and the total area of the site that is not covered by parking lots, roads or buildings. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 2-11: *The 6.55 Acres in Figure 3.C-2 (Green Hatch) was determined by the areas of the site that would not be affected (Undisturbed) by the existing structures and roads. The yellow hatched areas (7.33 Acres), while still pervious open vegetated areas, are impacted (Disturbed) by storm water runoff, human interaction, etc. Together, the total pervious coverage of the site is 13.88 acres consisting of lawn space and vegetated/wooded areas. Therefore, the total existing open space at the Project Site is calculated to be approximately 6.55 acres.*

Comment 2-12: Components of the Proposed Project in the DEIS indicates that impervious surface coverage on the site would increase by 57,624 square feet from 127,044 square feet (2.92 acres) currently to 184,668 square feet (4.24 acres) with the proposed project. The table also shows that the total open space (pervious surfaces) on the site after construction of the proposed project would be 540,584 square feet (12.41 acres). The FEIS should explain how this is possible given that elsewhere in the section the total open space currently on the site was calculated to be 6.55 acres and the project would increase the impervious surfaces on the site. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 2-12: *The correct number for pervious surfaces is 594,514 (not 540,584 which is the area of open, pervious space in the Town only). The breakdown of building area and pavement is:*

- *Pavement: 103,048 existing / 112,441 proposed*
- *Building: 23,996 existing / 72,227 proposed*
- *Total Impervious: 127,044 existing / 184,668 proposed*

While the impervious surfaces have increased by 57,624 sf (1.3 acres; 7.4% of total site area), the expanse the developed area of the site has reduced significantly as the proposed singular building is centered in the middle of the property versus the ten existing hospital buildings which are spread out over roughly 50-60% of the site.

Comment 2-13: I share the same concerns about the potential for the proposed project to negatively impact our entire community with increased traffic, added burden to our at-capacity schools, and our environmental resources, as stated by the public and as addressed in the Town's Comprehensive Plan. The project size should be significantly reduced. However, an adequately scaled down version of the proposal which includes a Conservation Easement with Maintenance Plan could be beneficial to our town. (D. Sharrett)

Response 2-13: *Comment noted. See Response to Comment 3J-5 regarding a discussion of impacts the Proposed Project would generate for OUFSD; Response to Comment 3H-1 regarding the Traffic Impact Study results which identified no significant adverse traffic impacts; and finally, see Response to Comment 3A-1 and 3D-2 as it relates to analyses conducted to address environmental resources.*

Comment 2-14: There is absolutely no reason or need for the building of a 188-unit, multi-family complex in the middle of a single-family home residential area. The reason we live here is because we desire to live some distance from more populous areas and room to breathe. There is hardly any open space remaining in Ossining that has not been exploited by developers; there is little land left in Ossining that has not been developed. As a life-long Ossining resident, the building of a multi-family housing complex in a single-family neighborhood is not a critical need, but rather a method for builders to exploit communities for their own profit. The developers are determined to create a demand where no demand exists. Why not build single-family homes in a single-family home zone? (M. Lattin)

Response 2-14: *See Response to Comment 2-1 and 2-2.*

As noted in the DEIS, Stony Lodge Hospital has been closed since 2012. As such, the Project Site is underutilized and displays the need for considerable deferred maintenance. This institutional Hospital use predates most of the single-family homes in surrounding neighborhood and the Proposed Project is a residential use that will be highly complementary to the neighboring residences. This proposal describes a residential use that is intended to repurpose the property with a use in keeping with its neighbors, an attractive architectural design using Hudson Valley vernacular, and a concerted emphasis by the sponsors of River Knoll to situate the building at the center of the large 17.89-acre site and, thereby, maximize the green buffer to protect the view shed of surrounding neighbors.

Comment 2-15: The increased number of residence (including their associates and other family members) form the 188 units would affect the park due to higher volume of usage, foot traffic, trash, equipment and facilities (bathrooms) upkeep and repairs. There is the potential of increased illegal activity in the park especially after dark which would impact the safety of the surrounding single-family residence. Will there be an increase in the surveillance and patrol by the Ossining Police department of Vets Park especially at night? (W. M. Pool Owens)

Response 2-15: *See Response to Comment 2-2 for discussion of former use of Project Site by the Stony Lodge Hospital where usage of the publicly-accessible Veterans Memorial park would have been likely by the staff and residents of the facility. The Ossining Police Department did not believe there would be any need for additional security at Veterans Memorial Park.*

Comment 2-16: The Developer is imposing his personal taste on the style of the apartment in a community that is single-family dwellings of ranch, split level, colonial style. Where is the market study data to support the following:

a. Why does it have to be Adirondack style that requires more costly materials (beam, overhangs, etc. per the Developers comments)?

b. There is a demand for luxury apartments of this style, size and cost fit and is desired in Ossining

c. Empty Nesters want this type of luxury apartment (most empty nester move south to lower cost areas)

d. Empty Nesters want to stay in the current area and rent places at "market rates" (higher rent than a mortgage)

(W. M. Pool Owens)

Response 2-16: *As requested, a Market Assessment was completed for River Knoll by RCLCO Real Estate Advisors on June 26, 2018 to assess the supply-demand conditions in the marketplace and the impact that the Proposed Project will have on the rental market. Key findings of the assessment include indications of healthy occupancy* *paired with a strong rental rate growth to reflect potential pent-up demand following the recession beginning in 2010, indicative of market recovery. According to the supply-demand analysis for the Primary Market Area (PMA), the demand for new market-rate multifamily apartment units will outpace the supply, given the current 5-year housing pipeline and demand projections. The PMA is defined as the area from which a majority of renters at River Knoll will emanate from; in this case, the northwestern portion of Westchester County, bounded by I-684 to the east, and just cutting north of Tarrytown to the south. Therefore, strong occupancy rates will be sustained by sufficient market demand.*

Demographically, the Project Site is located in Westchester County, an affluent suburb of New York City with a number of high-growth employment areas in addition to those residents employed within NYC. According to the Market Assessment, 39.1% of households in Ossining and 54.6% of the PMA earn greater than $100,000, as of 2017. Thus, the Market Assessment determined that audience groups of young professionals, mature professionals and empty nesters would be the likely target audiences for River Knoll. Furthermore, according to 2012-2016 American Community Survey 5-Year Estimates, in comparison with Westchester County, both the Town and Village of Ossining, NY have a greater share of household income allocated towards gross monthly rent; those residents in the Town of Ossining who allocate 35% or more of their household income towards the cost of rent is 53.6%, compared with 55.52% in the Village of Ossining, and 46.3% in Westchester County.[1] Market-rate rental units would range from $2,100 for a one-bedroom to $2,700 for a two-bedroom unit, which is less than 35% of those 39.1% of households in Ossining earning greater than $100,000 annually.

Comment 2-17: I am writing because I am greatly concerned about the Project at the Stony Lodge site, i.e. heavy traffic, safety environment, tax, etc. (E. Inoue)

Response 2-17: *See Response to Comment 3H-1 regarding the Traffic Impact Study conducted for the Project Site. See Response to Comment 3H-6 which addresses questions pertaining to safety issues related to traffic concerns. Furthermore, the Fiscal Impacts chapter of the DEIS, as well as Responses to Comments in this document for Chapter 3J: Fiscal Impacts, addresses comments related to both property and school tax assessments to determine any impacts as a result of the Proposed Project.*

Comment 2-18: Objections to the proposed 188 apartment entity on the vacant Stony Lodge site can/could be easily overcome by the builder's "fixes", to their benefit. They stand ready to devise facile answers to any/all objections. What they cannot so easily change is the texture of the are from middle class single family homes to a large dense apartment building and any accompanying out-buildings. (B. DeAngelis)

Response 2-18: *See Response to Comment 2-2.*

[1] 2012-2016 American Community Survey 5-Year Estimates, US Census

Comment 2-19: Prior to living at my present address I lived at The Woods condominium development. At minimum, every unit there had two car spaces and that was not enough. Residents constantly overflowed to Visitor parking, which then limited that parking, especially on the weekends. Knowing that, it is highly unlikely that 346 parking spaces will accommodate the needs of 188 units so I doubt that the traffic impacts estimated by Glenco are accurate. (C. Donnelly)

Response 2-19: *River Knoll will be attractive to a very different market demographic from The Woods. First, The Woods is a condominium/townhouse multi-family project where residents own their unit, and River Knoll will be for renters. Second, The Woods are primarily 2-bedroom/3bathroom with units ranging in size from 1400 square feet to almost 1900 square feet. River Knoll will be one- and two-bedroom units, with units ranging in size from 850 to 1,500 square feet. Finally, the parking that will be provided at River Knoll meets the code requirements for the Town.*

Nonetheless, it should be noted that with the increase in ride sharing, Uber availability and eventually autonomous vehicles, the trend for car ownership will continue to decline. Urban planners and transportation planners are forecasting a continued decrease in car ownership for these types of projects.

Comment 2-20: Have the Town of Ossining Environmental Advisory Committee provided written comments on the proposed project. (D. Levenberg)

Response 2-20: *Comments from the Town of Ossining Environmental Advisory Committee are included in this Response to Comments chapter of the FEIS.*

Comment 2-21: Have the Ossining Fire Department provide updated comments on the DEIS. (D. Levenberg)

Response 2-21: *Request for Information letters were submitted to municipal agencies within the Village and Town of Ossining most recently on June 19, 2018. As of a June 26, 2018 phone call with the Ossining Fire Department, it was noted that all requests to municipal agencies have been forwarded to the Town Clerk's office for response. A letter acknowledging receipt was received from the Town Clerk on June 19, 2018.*

Comment 2-22: We are supportive of the proposed application since it would add multi-family housing and increase the Town's supply of affordable AFFH with 19 additional AFFH units. (N.V. Drummond)

Response 2-22: *Comment noted.*

Comment 2-23: We are supportive of these two elements of the proposal which will serve to connect the new residents to nearby amenities without their needing to drive to them. (N.V. Drummond)

Response 2-23: *Comment noted.*

Comment 2-24: The draft EIS does not contain a discussion concerning solid waste or recycling. The Town should require the applicant to verify that there will be sufficient space to accommodate the storage needs for recyclables under the expanded County recycling program. (N.V. Drummond)

Response 2-24: *Solid waste and recycling facilities will be incorporated on each floor for residents with convenient pick up in the garage for the project.*

Comment 2-25: The Town of Ossining, including the Town Board, is a strong proponent of green technology and infrastructure. The Applicant should explore additional ways to incorporate green technology into the project, including but not limited to providing solar panels, electric car charging stations and other carbon offsets. (D. Levenberg)

We encourage the applicant to consider incorporating as much green building technology as possible into the proposed development. We also recommend that the applicant consider providing a bicycle storage room for tenants. (N.V. Drummond)

Response 2-25: *As discussed in Chapter 1, the applicant will be incorporating a broad range of green technologies into River Knoll. Many of these technologies will be required by contemporary building codes, and other green technologies, such as solar panels and the use of grey water for irrigation will be considered both good business decisions and enhanced marketing. During the design development stage of the Proposed Project, solar energy solutions may be incorporated to power common area elements such as corridors, lobbies, vestibules, leasing offices, etc. Green features will also include on-site bike storage, a bike repair bench, and similar biking accommodations.*

Comment 2-26: As documented in the DEIS, its maps, and as confirmed on our site walk on April 21, 2016, over fifty percent of this property is comprised of moderate, very and extremely steep slopes. Even though a majority of these slopes exist outside the footprint of the proposed structure, this proposed project will potentially disturb nearly 60% of these existing steep slopes. A reduced foot print is recommended to minimize proposed project disturbance and maximize the protection and preservation of the existing natural resources. (M. Elkes)

Response 2-26: *Comment noted. See Response to Comment 2-2.*

Chapter 3A: Wetlands

Comment 3A-1: Wetland remediation should also be required. (D. Sharrett)

Response 3A-1: *As noted in the DEIS, site inspections were conducted by qualified wetland biologists on September 14, 2015 and April 21, 2017 to confirm either the presence or absence of on-site wetlands. The inspections confirmed the presence of one small wetland in the northeast corner of the Project Site ("Wetland A"), in the depression of the landscape, though no vernal pool habitat was identified on-site. In accordance with federal and Town of Ossining wetland regulations, the small herbaceous wetland was delineated on-site on September 14, 2015; it is 0.277* *acres in size and serves as a means of stormwater drainage for the Property Site and adjacent properties. No disturbance would occur as part of the Proposed Project within a 100-foot buffer around the wetland, in accordance with the Ossining Town Code, Chapter 105: Freshwater Wetlands, Watercourses, and Water Body Protection (§105-3B). As such, the area is expected to remain as maintained lawn with some woody patches. It is the Applicant's conclusion that construction and operation of the Proposed Project would not adversely impact wetlands or the buffer area within the Project Site. Therefore, no wetland mitigation is required as part of the Proposed Project. A Stormwater Pollution Prevention Plan (SWPPP) with Erosion & Sediment Control (ESC) measures will be utilized to prevent stormwater runoff and other non-point source pollution from impacting wetlands on the Project Site or within the vicinity. The SWPPP and ESC ensure a zero influx of road and lawn chemical runoff into the wetland or buffer area.*

Chapter 3B: Soils, Topography (Steep Slopes), and Geology

Comment 3B-1: More information regarding the potential for blasting, ripping or chipping to remove rock and the impacts of these activities during construction of the Proposed Project should be provided in the FEIS. In addition, the potential for on-site rock processing should be provided and discussed. The impacts and mitigation proposed for all these activities should be provided. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3B-1: *DEIS Chapter 3.B describes on-site soils, slopes, and topography to discuss the potential impact of the Proposed Project. Table 3.B-3 Earthwork Summary estimates the quantity of earthwork that would account for excavated material that will remain on-site as part of re-grading the Project Site for the Proposed Project. Rock material excavated at the Project Site would be processed into item No. 4 and used on-site as compacted fill underneath the building foundations, roadways, and other fill areas. There would be approximately 2,500 cubic yards of export, or approximately 125 trucks. Given the approximate four-month excavation timeframe, this would equate to approximately one or two truckloads per day. T To prepare the Project Site for development, all surface materials to include topsoil, surface vegetation, concrete, asphalt, etc. would be removed from the planned building areas. The existing fill at the Project Site is not acceptable bearing material for the new building foundations and floor slab, and as such it would be stripped, excavated, and replaced with new compacted fill. During the stripping operation, the topsoil may be stockpiled for use in the landscape areas or removed from the Project Site.*

According to the findings of the geotechnical investigation, to develop the Project Site, bedrock removal would need to be excavated. To excavate the rock, the use of hydraulic hammer and blasting would be required to achieve the proposed grades in certain areas. Blasting operations would be overseen and monitored by a seismologist using a seismograph to measure the maximum peak particle velocity to ensure that predetermined limits are not exceeded (Geotechnical Report, DEIS Appendix C). Prior to construction, a Blasting Management Plan would be prepared and provided to the Town by the blasting contractor for the Proposed Project, in accordance with New York State Regulations and the Explosive Materials Code, NFPA No. 495, National Fire Prevention Association.

Additionally, all blasting should adhere to the provisions of 29 CFR Ch. XVII Section 1910.109 for explosives and blasting agents and to all local requirements. Prior to any blasting work, a licensed professional engineer would be retained to perform a detailed pre-blast survey and a notice would be sent to all residential and commercial property owners within a 300-foot radius of the blast area at least 48 hours before blasting operations. Where the Geotechnical Investigation recommends removing rock, a hydraulic hammer would be utilized to chip and break the rock apart without the use of blasting.

Excavated rock from the Project Site would be used as fill material should the material conform to the required gradation. It is not to be used as backfill directly against concrete walls or utilities, or where it would interfere with the installation of foundations or utilities. It is expected that most of the rock excavated at the Project Site would be too large for use as compacted fill in structural areas and would therefore be processed through a crusher for suitable fill material.

The impacts of rock ripping, chipping, and blasting are ground vibrations in the immediate vicinity of the ripping and chipping machinery and potential fly-off rock fragments in the immediate vicinity of the ripping and chipping operation. Although there is not much to de done in terms of mitigation of ground vibrations, mitigation measures can be conducted for fly-off rock fragments to consist of personal protective equipment for machine operators.

Comment 3B-2: The potential location of new stormwater facilities on the site within the Village or the Town of Ossining should be reconciled and discussed. Further, any approvals needed from the Village should be identified in the FEIS. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3B-2: *Stormwater facilities will be installed on land within the Town only. The only disturbance to land within the Village may be the removal of non-operational pump house located adjacent to Croton Dam Road. A small amount of grading may be required to remove the pump house. A permit for the grading and re-landscaping of the area around the pump house would be requested from the Village.*

The following table was included in the DEIS and amended herein to provide an inclusive list of the permits and authorizations potentially required by the Town and Village of Ossining. Additional permits and/or agencies may be identified at a later date.

Approval Required	Government Facility
Comprehensive Plan, Zoning Map and Text Amendments	Town Board
Sewer District Extension	Town Board
Conditional Use and Subdivision Approval	Town Planning Board
Wetland Permit	Town Planning Board
Steep Slope Permit	Town Planning Board
Tree Removal Permit	Town Planning Board
Site Plan Approval	Town Planning Board
Health Department Subdivision Approval	Westchester County Health Department
New York State Department of Environmental Conservation (NYSDEC) Stormwater Permit	NYSDEC
Water Supply Approval and Demolition Permit	Village of Ossining
Highway Work Permit	NYS Department of Transportation
Referral Required	
§239-m Referral	Westchester County Department of Planning
Town Board	Town of Ossining Departments and Boards
Planning Board	Town of Ossining Departments and Boards
Highway Department	Town of Ossining Departments and Boards
Environmental Advisory Board	Town of Ossining Departments and Boards

Comment 3B-3: The EAC disputes the DEIS calculation of the level of disturbance to steep slopes on this project site. The impact of this proposed project to the existing steep slopes is nearly double the actual amount cited in the report.

Reference page 3.B-3 of the DEIS, in the section titled “Steep Slopes”, the report states: “Steep slope disturbance accounts for approximately 5.3 acres of steep slope (>15 percent slope) or 30% of the site.”

The total acreage of steep slope, is 9.5 acres (not 17.9 acres); therefore, the percent of steep slope that will be disturbed is nearly 60% (5.3/9.5)(100), not 30% of the site. These cited inaccuracies potentially misrepresent the extent of steep slope disturbance and should be corrected in the report. The EAC highly recommends minimal disturbance to the steep slopes on this site and a reduction of the scope of the project. A more detailed explanation should also be provided in the DEIS to clarify how these slopes are intended to be altered and destroyed. As is documented in our Town Code, the removal of steep slopes aggravates erosion, causes irreversible damage to the landscape, disturbs natural habitats, and intensifies runoff. Furthermore, the EAC disagrees with the statement in the DEIS, “Construction on slopes will be minimized to the extent practicable, preserving the largest stretch of steep slope located just west of the proposed building.” Clarification from the applicant should be requested. (M. Elkes)

Response 3B-3: *In response to this comment from the EAF, the applicant has provided a revised table in Chapter 1. The table summarizes slope disturbance as calculated on the entire site, and disturbance to slopes 15% and greater – defined within the Town’s Code as ‘steep slopes.’*

See Response to Comment 3B-1 for discussion regarding slope disturbance on-site a result of construction and related mitigation activities following a required steep slope permit from the Town of Ossining. Construction on slopes will be minimized to the extent practicable, preserving the largest stretch of steep slope located just west of the proposed building. After construction, all constructed slopes will conform to Town Engineering requirements to ensure safety and stability. The alignment of roadways within the Project Site will follow natural topography.

Chapter 3C: Stormwater Management and Subsurface Water

Comment 3C-1: There will be 300-plus parking spots put up there. I live on the bottom of a hill and every time there is a heavy rain that water floods down Croton Dam Road, makes a turn and comes down my driveway and rips up the patio. I think when you put up 300 parking spaces that the blacktop will not suck that water up; it has to go someplace and it will go right down Croton Dam Road. (R. Trapasso)

Response 3C-1: *Currently, there is neither a formal collection system nor organized treatment system to treat stormwater runoff from the former Stony Lodge Hospital site of any kind.*

Stormwater runs off untreated and discharges untreated directly off-site towards the surrounding neighborhoods and streets, particularly along the southern edge of the property. This condition will be alleviated as River Knoll will be designed with a Stormwater Management Plan that will collect and convey runoff into a new and engineered on-site stormwater system. The proposed drainage system will include conventional and green infrastructure stormwater practices, such as infiltration basins with forebays and stormwater planters. The impact of the proposed system will provide a reduction in runoff, provide water quality treatment, and attenuate peak rates of runoff for the 10-and 100- year storms as required by NYSDC SPDES General Permit No. GP-0-15-002.

Chapter 3D: Vegetation and Wildlife

Comment 3D-1: The Town of Ossining Environmental Advisory Committee (EAC) should be solicited to comment on the DEIS, and the FEIS should contain the EAC's comments. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3D-1: *The comment memo from the EAC is included and responded to herein.*

Comment 3D-2: The FEIS should provide a discussion of the impacts related to the removal of mature trees and plant materials from natural and landscaped areas of the site and the proposed mitigation for the impacts. New wooded buffers and plantings should be comprised of locally native non-invasive trees, shrubs and ground covers to replace habitat for foraging animals and to improve the diversity of native plants on the site. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3D-2: *An arborist will be engaged during the preparation of construction documents to identify individual trees to be protected from construction activities, and the specific* *technique for providing protective measures, i.e., fencing etc. In addition, the applicant recognizes that protecting as many trees as possible enhances the appearance of the project – and increases market appeal. To that end, the applicant will designate an area on the project site where mature trees can be balled for replanting. In addition, the proposed plants and meadows will be mostly native species with low watering demands, as opposed to introducing non-native, invasive species. Those areas designated for stormwater management will be planted with a combination of wet site tolerant seed mix (i.e. Sedges, Carex, Bulrush, New England Aster) live herbaceous plants (i.e. plus/one-gallon containers of Joe Pye Weed, Switchgrass, Blue Flag), and native shrubs and trees (i.e. Viburnum, Shadblow Serviceberry, Grey Dogwood, River Birch). The upland meadow along Croton Dam Road will be planted with an upland wildflower mix (i.e. Creeping Fescue, Goldenrod, False Indigo, New England Aster, Black Eyed Susan, Little Bluestem, Milkweed). The existing perimeter green buffer will retain healthy trees within undisturbed areas for preservation; selective removals and pruning will occur to help promote the health and growth of trees to remain, and enhancement of the buffer will occur with the addition of woodland fringe plantings consisting of small trees and shrubs (i.e. Flowering Dogwood, Redbud, Viburnum, Witch Hazel). New green buffer areas will be a mix of shade trees, evergreens, flowering trees and shrubs (i.e. Red Maple, Red Oak, Bicolor Oak, Sweetgum, Spruce, Fir, Great Western Cedar, Viburnum, Inkberry).*

Comment 3D-3: The Tree Preservation Plan document in the file is barely legible and should be made available larger. The information on this document differs from the information on Table 3D/9-1. As example, but not limited to: "dogwood" is listed only on the "Tree Abbreviation" chart on the TPP, and "Hackberry, Ce/tis occidentalis" is only listed on Table 3D/9-1. Trees are also too generally identified to afford a complete assessment to the environmental impacts of the proposed project. As ex: "maple" could describe the invasive Norway Maple, non-native Japanese Maple, or native Sugar or Red Maples. "Deciduous" is also not a reasonable identification. (D. Sharrett)

Response 3D-3: *Comment noted. Full sized and more legible landscaping drawings are available for viewing in the Planning Department. The corrections noted in the comment will made to the landscaping documents.*

Comment 3D-4: The following should be required from the applicant with ample time for the public and boards to review prior to designating the DEIS as Final: 1) A reasonably legible Tree Preservation Plan; 2) An accurate and complete Tree Preservation Plan, which in addition to DBH should include accurate botanical Latin names in addition to the common names, as well as tree health and condition; 3) An additional document that lists separately the trees proposed to remain and those proposed to be removed; 4) A tree replacement plan to compensate for at least 50% of the tree biomass loss as required in the Town of Ossining Tree Protection Code (§ 183-12.G.) A complete "I-Tree" assessment should be required for any proposal with tree loss of this magnitude. Note: 231 of the 702 existing trees are proposed to be removed; 5) Verification of submitted materials by the Town’s Tree Warden (D. Sharrett)

With respect to the trees existing and proposed to be removed, the current plan is illegible. We respectfully request a legible Tree Preservation Plan utilizing a readable font size, with a separate illustration site plan. (M. Elkes)

Response 3D-4: *As noted above, full sized and more legible copies of the landscaping plan are available in the Planning Department, and on request from the applicant. The plans include a complete tree survey with species, size, and health of tree. Included on the plans are notes where the trees are to be removed or protected.*

Comment 3D-5: A permanent Conservation Easement obtained through the Westchester Land Trust with a supporting permanent Maintenance Agreement must be required to guarantee that adjacent residential properties will have permanent buffers and screening, and to protect against any consequential and/or future deleterious environmental impacts from the proposed project to the Town's eco-services provided by trees and the wetland such as but not limited to, shade, storm water retention, erosion prevention, oxygen production and carbon sequestration. At least 8 of the 16.2 acres should be placed into a Conservation Easement, to include the entire steep slope and ravine along Croton Dam Road, the entire wetland existing in both the Town and Village of Ossining, and at a least 50' wide area along the length of the remaining perimeter of the subject property.

The applicant's desired zoning variance should not be granted unless a Conservation Easement and Maintenance Agreement are required. Should the applicant back out of the project after the zoning variance has been granted, the public will have little recourse against future proposals, using the Parth Knolls project as an example. (D. Sharrett)

Response 3D-5: *The applicant will coordinate with the Village and Town of Ossining to put the perimeter buffer within a Conservation Easement with an appropriate third-party entity to ensure protection from future disturbance in perpetuity.*

See Response to Comment 3G-1 with discussion pertaining to the creation and preservation of a permanently landscaped buffer created as a result Proposed Project and consistent with those principles from the updated 2015 Town of Ossining Comprehensive Plan.

Comment 3D-6: The illustrated buffer/screening areas for adjacent residences in the applicant's proposal merely illustrate, at best, what currently exists but in no way reflects the reality of future conditions. The existing tree inventory will be quickly depleted by tree loss due to age, disease and insect pressures, warming temperature trends, and increasingly unpredictable and more frequent extreme weather events. The buffer/screening areas must be permanently protected and maintained, to include an ongoing diverse tree planting plan, invasive plant species removal, and deer fencing. Without these requirements the current and future adjacent residential property owners will not be guaranteed that an effective buffer/screening will always exist. (D. Sharrett)

Response 3D-6: *See Response to Comment 3D-2 and 3G-1.*

Comment 3D-7: Pursuant to §183-10 Permit Application Process, A.(7), the tree removal plan should conform to our Town Code to clearly identify the existing tree locations with removal designations where applicable. Referencing the Code, the location of all existing and proposed, disturbed trees shall be identified (to an accuracy of one foot) and indicating their species, their diameter (DBH) and their health status. The EAC requests that botanical Latin be used to identify trees in addition to the common names, and that the Town's Tree Warden verify the Tree Removal Plan, amended as described. (M. Elkes)

Response 3D-7: *See Response to Comment 3D-4.*

Chapter 3E: Historic and Archaeological Resource

NO COMMENTS RECEIVED.

Chapter 3F: Infrastructure

Comment 3F-1: Sewage is a major league situation. I understand from my previous attendance that surveys were done and it was concurred that everything is fine and the sewage is going to be all taken care of. It is going to be able to accept the volume of the 100 some-odd units. I haven't seen anything on the internet, anything else or the studies. I would like to see the reports; who did the studies and what were their credentials. (Callahan, 4/xx/18)

Response 3F-1: *As required by the Town in the scoping outline for the project, an analysis of the capacity and condition of the sewer system was required, and it was included in the DEIS, Chapter 3.F-3. This analysis entailed confirming that there is capacity at the Ossining Wastewater Treatment Plant, and that the anticipated demand for wastewater from the 188 units at River Knoll can be accommodated. The Town's Consulting Engineer has advised that the existing wastewater treatment plant has adequate capacity to serve the anticipated 30,800 gallons per day (gpd) from the Proposed Project.*

Additionally, according to Town of Ossining Meeting Minutes from June 14, 2016, the Town Board authorized the establishment of Capital Project 2198, titled Sanitary Sewer Improvements-Croton Dam and Kitchawan Road, for sewer main relocation and new manholes.

Comment 3F-2: Have Town Engineer and Town Consulting Engineer review the Applicant's proposed plans related to water supply and related documentation to confirm that there is sufficient capacity for the proposed project and there are not anticipated to be any significant adverse impacts from the proposed project. (D. Levenberg)

Response 3F-2: *According to Ciarcia Engineering, P.C., acting as the consulting engineer to the Town Planning Board, their review was focused on utilities and stormwater management. The Proposed Project was also reviewed by the Village of Ossining Water Department, and they confirmed that the Village has adequate capacity to serve the project. It should be noted that the DEIS cites the amount of water* *supplied by the Village Water Department as 1.3 billion gallons per day. The correct flow is approximately 3.8 million gallons per day.*

Comment 3F-3: Have Town Engineer and Town Consulting Engineer review the Applicant's proposed plans related to sewer discharge and related documentation to confirm the Applicant's position that there are not anticipated to be any significant adverse impacts from the proposed project. (D. Levenberg)

Response 3F-3: *According to Ciarcia Engineering, P.C., sewage flow projections are appropriate for the proposed use. The Town Highway Department manages the sewage collection system. The applicant has been advised that there were no downstream capacity issues.*

Comment 3F-4: How can the Developer ensure that the sewer system will support the number of residence usage of an aged system and prevent the re-occurrence of the downhill health hazard backup to the manhole in front of my home? (W.M. Pool Owens)

Response 3F-4: *See Response to Comment 3F-1.*

Comment 3F-5: At several meetings I have attended people have expressed concerns about the various municipal services, e.g., water, sewage, etc. being stressed, yet I do not recall these concerns being addressed. (C. Donnelly)

Response 3F-5: *See Response to Comment 3F-1 and Response to Comment 3F-2 regarding the available capacity in the existing sewer system and adequate water capacity for utilities and stormwater management, respectively, as it pertains to the demand generated by River Knoll.*

Comment 3F-6: Provide further discussion and clarification of the conservation easement. (D. Levenberg)

Response 3F-6: *As stated above, the applicant will coordinate with the Town and the Village of Ossining to place the green open space around the perimeter of the site into a Conservation Easement with an appropriate third-party entity.*

Comment 3F-7: The draft EIS states that the proposed apartment building would generate a wastewater flow of 38,000 gallons per day (gpd), which is an increase of 16,615 gpd over the former wastewater flow when the hospital was operating. This increased flow will add to the volume of the sewage flow requiring treatment at the Ossining Water Resource Recovery Facility operated by Westchester County. As a matter of County Department of Environmental Facilities' policy, the final EIS should specifically include the identification of mitigation measures that will offset the projected increase in flows through reductions in inflow/infiltration (I&I) at a ratio of three for one for market rate units and ratio of one for one for affordable AFFH units. In particular, the final environmental impact statement should provide specific details on how implementation of these improvements is to be accomplished. For example, will the applicant be required to place funds into a dedicated account for I&I work based on a per gallon cost of removal of flow through I&I? How will I&I projects be identified? Who will conduct the work and in what timeframe?

The County Planning Board further recommends that the Town implement a program that requires inspection of sewer laterals from private structures for leaks and illegal connections to the sewer system, such as from sump pumps. These private connections to the system have been found to be a significant source of avoidable flows. (N.V. Drummond)

Response 3F-7: *The applicant will continue to coordinate with the Town and the Village to facilitate whatever sewer improvements are needed.*

Chapter 3G: Land Use, Comprehensive Plan, Zoning and Community Character

Comment 3G-1: No impact on the community and the character of the neighborhood? Look all around at the zoning map; single-family homes. It is like – River Knolls, a nice concept but you’re in it for the money and not for the benefit of the community. (J. Reilly)

Response 3G-1: *As previously noted, the ‘character’ of the former Stony Lodge Hospital has historically been in contrast to the single-family neighborhoods that surround the site. River Knoll will change the use on the Project Site from an institutional use that provided acute inpatient psychiatric care for up to 61 patients and 250 support staff to a more conventional residential use. Similar to the Stony Lodge Hospital, River Knoll will provide a single building in the same general area as the existing hospital building. In contrast to the former Stony Lodge Hospital, the ten (10) accessory buildings will be removed and replaced with an expanded landscaped buffer. Furthermore, River Knoll is consistent with those principles from the updated 2015 Town of Ossining Comprehensive Plan which includes the following: to preserve and conserve existing open space; preserve the quality, character, and stability of neighborhoods within the Town; cooperate in efforts to make a wide range of housing opportunities available to community residents; and promote development and redevelopment that conforms with existing community character to ultimately serve the general welfare of the community.*

Comment 3G-2: The FEIS should address the amendment to the Town's Comprehensive Plan which would be needed to specifically recommend the residential density of the proposed MF-2 zoning for the subject property. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3G-2: *The applicant acknowledges that an amendment may be preferred by the Town Board to clarify that the proposed use, proposed zoning, and the proposed density for the site. This amendment would expand and clarify that the amendment concerning the site that was included in the Comprehensive Plan Update, adopted in 2015. The amendment will need to be cognizant of other candidate properties within the Town that could be eligible for a changing in use.*

Comment 3G-3: The DEIS discussion relating to how the project complies with the stated policy to preserve natural resources and in particular ridge lines implies that cutting into a ridge line to locate the proposed building, which would cut into and expose bedrock, is preservation of a natural resource. Cutting into the ridge line to create a flat area for a very large building does not preserve the ridge line or the underlying bedrock and the FEIS should address this. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3G-3: *See Response to Comments 2-8 and 3B-1. The hill upon which the existing hospital building sits is already flat given that there are Hospital buildings and parking areas existing on it. The height and breadth of the hill will not be altered.*

Comment 3G-4: The FEIS should provide a visual assessment of the property and the surrounding neighborhood that includes photos of existing conditions and digital renderings of the same viewpoints with the proposed project constructed for comparison. The renderings in the DEIS do not accurately depict the viewpoints, vegetation and views in the post construction renderings. New photo renderings of all after-construction views (including night views) that have changed viewpoints, extraneous vegetation, and altered existing buildings should be provided in the FEIS. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3G-4: *In addition to the photograph simulations provided in the DEIS, a revised photo-simulation of the Proposed Project was prepared for the FEIS from the vantage point of Grandview Avenue, a surrounding roadway to the north of the Project Site. It is the opinion of the Applicant that the revised rendering of the proposed River Knoll project from Grandview Avenue accurately depicts the views of the Proposed Project from surrounding roadways. The development would not be visible either during the summer months, when dense foliage coverage obstructs any potential views, nor during the winter months when foliage is dormant.*

Comment 3G-5: In DEIS Chapter 3.G, a statement reads, "In consultation with the Town, it was determined that the most appropriate zoning mechanism to enable the Proposed Project to be developed consistent with the Town's overall planning goals of environmental protection of a large underutilized site will be a new zoning district, the Multifamily Residence 2 (MF-2) District." We question the veracity of this statement. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3G-5: *The decision as to the most appropriate zoning mechanism was made by the applicant after it was determined, in the opinion of the applicant, that there was no existing zoning district that would permit the kind of development envisioned for the site. This decision by the applicant was made subsequent to discussions with representatives from the town. Nonetheless, the purpose and intent, permitted uses and the proposed lot and bulk regulation were included in a petition submitted by the applicant.*

Comment 3G-6: Table 3.G-1 provides the bulk regulations of the proposed zoning. A complete bulk table for the conceptual site plan should be provided for comparison with the requirements of the proposed zoning district. The FEIS should address the future disposition of the residential density permitted by the proposed MF2 District which exceeds the 188 units in the proposed conceptual plan. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3G-6: *A complete bulk regulations table is included below for comparison of the Proposed Project with the requirement of the existing and proposed zoning districts.*

	R-15 Requirements	Proposed MF-2 Zoning	Proposed Project in Town	Proposed Project in Village
Minimum Requirements				
Lot areas (sf)	15,000	10 acres	16.65 acres (725,274 sf)	1.24 acres (54,014 sf)
Lot width (feet)	90	50 (row or attached dwelling); 250 (multiple)	979.5*	0
Lot depth	120	250	665.5	0
Front Yard (feet)	30	200	241	0
1 side yard (feet)	14	100	140.5	0
Both side yards (feet)	30	200	454.6	0
Rear yard (feet)	32	100	248.8	0
Livable floor area per dwelling unit (square feet)	850	850 (row or attached) 700 (multiple, for 1 or more bedrooms)	850 (one-bedroom) 1,150 (two-bedroom)	-
Maximum Permitted				
Stories	2 ½	3	3	0
Height (feet)	35	50	40	0
Building coverage (percent)	25	12	9.96	0

*Measured at front of building

Comment 3G-7: The Applicant should provide an inventory of all of the other undeveloped or underdeveloped sites in the Town that would meet the criteria for application of the proposed zoning. The FEIS should address the eligibility of other properties to be rezoned to the proposed Multi-Family 2 (MF2) zoning, and the cumulative impact of such growth inducement. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3G-7: *As part of the Comprehensive Plan Update, adopted in 2015, large parcels of land were identified as either open space, underdeveloped, or underutilized. The parcels noted on the open space map include several religious and non-profit owned sites. In fact, the DEIS included an analysis of a hypothetical parcel that could apply for a rezoning. Nonetheless, it is unknown to the applicant, and outside the scope of this SEQRA process to identify which site(s), if any at all, would be inclined to take advantage of the proposed new zoning text. However, most (if not all) parcels of land identified in the Comprehensive Plan lack adequate utility infrastructure to accommodate a type of development similar to the Proposed Project.*

Comment 3G-8: The FEIS should provide a discussion of how the requirements of the new zoning would mitigate the impacts created by the change of use. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3G-8: *As there is no zoning district in the Town to accommodate a project such as River Knoll, the proposed zoning was designed to be a new multi-family zoning district that will permit the kind of envisioned on this unique site. The proposed MF-2 zoning district will permit multifamily housing as a conditional use subject to approval by the Planning Board. Goals and conditions of the district will include:*

- *Enabling more undeveloped permanent open space as the proposed, new residential community will be clustered to the center of the Premises;*
- *Preserving more mature stands of trees;*
- *Maintaining the scenic meadow along the entire frontage of Croton Dam Road as well as the expansive meadow on the easterly side of the Premises;*
- *Allowing for the addition of sizeable new green buffer areas protecting adjacent homeowners along the northerly and southerly boundaries of the Premises;*
- *Minimizing internal roadways and extensive infrastructure that will require more impervious surfaces and increased excavation, disrupting the terrain in a manner that also will necessitate tree removal; and*
- *Producing a fiscally beneficial change to the Premises improving revenue generation for the Town, Village, and School District.*

Comment 3G-9: It doesn't make sense to say that the proposal is compatible with the surrounding community and then ask for a zoning change. (G. and B. Seitz)

Response 3G-9: *See Response to Comment 3G-1 and 3G-5.*

Comment 3G-10: I have lived on Second Ave. for nearly 50 years, raised three children and consider this neighborhood a great place to raise kids. Ossining would be better served if the developers would build one-family homes and maintain the present zoning. (R. Damiano)

Response 3G-10: *See Response to Comment 3G-1 regarding conformance of River Knoll with existing community character, and Response to Comment 5-1 regarding discussion of 11 development alternatives analyzed in the DEIS.*

Comment 3G-11: The picture views provided by the Developer are misleading. The pictures were taken at angles (chapter 3G) to imply that the apartment structure will not be noticeably visible from the rest of the community. As I am walking Croton Dam Road. Pershing and Narragansett the current buildings are very visible. The same would be true of the apartment complex with four floors. Where are the realistic pictures for the site? (W. M. Pool Owens)

Response 3G-11: *The singular building of the Proposed Project has been purposely designed to be, minimally, seven (7) feet lower than the existing Main Hospital Building. While there will likely be various oblique views of River Knoll from Croton Dam Road, or Narragansett, First, or Second Avenues, there is not likely to be any view of the Proposed Project from Pershing and Grandview. In the areas that River Knoll will be viewable, the applicant believes the design will be appealing and a large improvement over the current aged Hospital structures that display considerable deferred maintenance.*

Comment 3G-12: The area surrounding the proposed development is a "community". Residences work hard to maintain their property, create a haven of peace, serenity, privacy and safety for their families. This property is in a single-family zone and should not be reduced to a commercial invasion by someone who does not live in the community. The community should not be victimized by rezoning the property for this massive undertaking in our backyards. (W. M. Pool Owens)

Response 3G-12: *See Response to Comment 3G-1.*

Comment 3G-13: Please don't change the zoning, keep our community quiet and peaceful to protect our lives and children. (E. Inoue)

Response 3G-13: *See Response to Comment 3G-1.*

Comment 3G-14: Since the entire surrounding area is zoned for single family homes, allowing an apartment complex of any type, most especially one with 188 units, would destroy the suburban character and aesthetic of the entire surrounding area. (C. Donnelly)

Response 3G-14: *See Response to Comment 3G-1.*

Comment 3G-15: Who will benefit from this zoning change other than the developer? (C. Donnelly)

Response 3G-15: *As per the DEIS, the proposed MF-2 zoning district will provide the Town with an alternate zoning tool that could provide for a greater concentration of development to preserve the maximum amount of open space, protect natural resources, and enable the Town to expand the diversity of housing available to its residents. Arguably, the Town lacks a diversity of housing as almost all housing is either small or medium-lot single-family homes, townhouses or senior housing configurations.*

Comment 3G-16: The Town Board requests that, to the extent feasible, the Applicant do a balloon test to simulate the proposed height of the structure; that the Town Board be notified in advance of the balloon test being done; and that the results of the balloon test, including photographs, be included in the FEIS. (D. Levenberg)

Response 3G-16: *A balloon test was conducted June 22, 2018. The results of the test, including photographs to simulate the views of River Knoll from adjacent and surrounding roadways, are included in Chapter 2 of the FEIS.*

Comment 3G-17: As the Town Board will be charged with considering the zone change proposed by the Applicant, the Town Board has a vested interest and obligation to ensure that this zoning is appropriate for the proposed property and that it meets the needs of the community, including housing needs. To that end, the Town Board requests that the Applicant produce a market study that evaluates the following:

- Empirical data to demonstrate sufficient demand for this project, both in the short-term and long-term, and the saturation point for this type of housing. Data should be specifically identified.
- The Applicant indicated that the primary market for the propose development is “empty-nesters.” The market study should include a discussion of demographics of what types of people would be interested in this type of housing, and specifically the Applicant’s proposed development, as well as focus on the demand for this type of housing from residents in the greater-Ossining community.
- The Town Board also wants to see how this proposed project would impact local economic development and community outreach. To this end, the Applicant should provide any data, information or analysis available to assess the extent to which these types of developments contribute to local businesses and the degree of disposable income the anticipated residents would have to do so.
- The Applicant should also identify mechanisms to encourage residents to be active participants in Town activities, invest time and resources in the Town community and frequent local Town establishments; and what, if anything, the Applicant proposes to do to encourage such behavior for this proposed project.
- To the extent feasible, the Applicant should analyze the Harbor Square and Avalon developments and determine (1) how many of those residents were previously residing in the Ossining area and (2) how do those developments impact local businesses and contribute to commercial revitalization in Ossining.

(D. Levenberg)

Response 3G-17: *The Applicant retained RCLCO Real Estate Advisors to prepare a Market Assessment for River Knoll. The market study is discussed in Chapter 1 and included as Appendix X in this FEIS.*

Comment 3G-18: The Applicant is proposing a new floating zone (MF-2) that the DEIS indicates could be applied to other properties in the Town. Provide an analysis of what those properties are, what zones they are currently in, what their current uses are and what the development potential under the new zoning would be or these properties. (D. Levenberg)

Response 3G-18: *See Response to Comment 3G-7.*

As noted in the DEIS, the potential impact of adopting the proposed MF-2 Zoning District on other areas of the Town will be at the discretion of the Town Board to consider whether or not to entertain rezoning of a candidate site covering 10 acres or more within the Town of Ossining. There are few undeveloped 10-acre sites within the Town, although there may be underutilized and tax-exempt religious or institutional uses of 10 acres whose ownership may be interested in having their property redeveloped as a multifamily housing site. However, it is questionable if any of these sites have access to municipal utilities to enable development as contemplated by the MF-2 Zone. The developed portion would typically be concentrated in the center of the site surrounded by open space. For such a parcel to be redeveloped based on their existing one-family zoning district would mean a conventional or clustered single family residential subdivision that would increase the intensity of use on the site, remove vegetation, reduce the large area of open *space surrounding the site, and alter the views of the site. The proposed MF-2 zoning district would provide the Town with an alternate zoning tool that could provide for a greater concentration of development in order to preserve the maximum amount of open space, protect natural resources, and enable the Town to expand the diversity of housing available to its residents.*

Comment 3G-19: The new proposed zoning (MF-2) appears to be a conditional use with approval by the Planning Board. However, this approval is not included on the list of required approvals on page 1-3 of the DEIS. The Applicant should either amend the list accordingly or explain the reason for the omission. In addition, the chart of required approvals includes subdivision approval. The Applicant should clarify why the proposed project would require subdivision approval. (D. Levenberg)

Response 3G-19: *Comment noted, and a correction was made to the table identifying permits and approvals.*

Chapter 3H: Traffic and Transportation

Comment 3H-1: Did anybody stop or ride down Dale Avenue behind a school bus and watch 25 kids get off at a time? (J. Reilly)

Response 3H-1: *The traffic counts were conducted during the hours associated with school bus traffic. River Knoll will generate approximately 32, 43, and 24 net additional total vehicle trips during the peak weekday AM, PM, and Saturday midday hours, respectively. The peak hours are estimated to be weekday mornings between 7:15 and 8:15 AM, weekday afternoons between 4:30 and 5:30 PM, and weekends between 10:30 and 11:30 AM. At signalized intersections, traffic flow conditions are assessed by calculating the Level of Service (LOS), where "A" denotes the best condition and "F" denotes the worst condition. To determine LOS, the average amount of vehicle delay is computed for each approach to the intersection, as well as the overall intersection. Specifically, Dale Avenue and Pine Avenue were assessed, and it was determined that the LOS stays the same between the existing conditions and future conditions with the Proposed Project.*

Based on the capacity analysis of the Future without River Knoll and Future with River Knoll, there would be no significant degradation of traffic LOS, and no significant adverse traffic impacts, at each of the studied intersections as a result of the Proposed Project with proposed improvements.

Comment 3H-2: When the traffic study was done, what time of the year was it done because if it was done in the summer sometime and it didn't necessarily take into effect the school year. I want to make sure it wasn't done on the weekend. (J. Leslie)

Response 3H-2: *The traffic counts that were used in the traffic study were collected on Thursday, September 29, 2016, between the hours of 6:00-10:00 AM and 3:00-7:00 PM, and on Saturday October 15, 2016, between the hours of 9:00 AM and 1:00 PM to consider traffic generated during the school year during both a weekday and weekend period.*

Comment 3H-3: I don’t know the exact figure of how many more cars they said it would increase trips, but reading traffic surveys and studies, most of them are about 30 percent off the amount of trips (Santucci, 4/xx/18)

Response 3H-3: *The data that was collected and the methodology used for the traffic study was based on actual data collected at similar facilities was reviewed by the Town’s traffic consultant. The Town’s traffic consultant found that the traffic study included in the DEIS was complete and met that required by the adopted scoping document.*

Comment 3H-4: Anytime you improve a road, studies show that if you put turning lanes in like they are talking about, it increases traffic as well because of convenience. (Santucci, 4/xx/18)

Response 3H-4: *The concept of induced demand relates to traffic patterns and options for drivers to take various travel routes to get to their destination. This concept typically relates to the addition of travel lanes on a highway and not turning lanes. Within the vicinity of the project, there are not many alternative routes available for vehicles to travel to their destination. The proposed addition of the turning lanes at the intersection of NY 9A and Croton Dam Road will not significantly alter travel patterns of the traveling public.*

Comment 3H-5: What about the noise that I will hear from all these vehicles? (Santucci, 4/xx/18)

Response 3H-5: *Noise as it relates to traffic typically is associated with truck traffic and not passenger vehicles. The proposed River Knoll project will not generate substantial truck traffic. The previous Stony Lodge Hospital on the site generated emergency vehicle trips (i.e. ambulances) which produced noise with their sirens.*

Comment 3H-6: The school buses needless to say go up and down constantly, as they should, and that in turn causes more traffic backup. I am concerned that we are not taking into consideration the safety of the traffic. (Kennedy, 4/xxx/18)

Response 3H-6: *As mentioned in Response to Comment 3H-2, the study considers traffic related to schools and school buses. Regarding safety, the study considers the accident history within the study area. An accident analysis was provided in the study which reviewed accidents from 2009 to 2017. The installation of the proposed right turn lanes will reduce the number of accidents as documented by the Federal Highway Administration (FHWA). It is estimated that the installation of right turn lanes will reduce all accident types at the signalized intersection of NY 9A and Croton Dam Road by 8% percent based on FHWA documentation.*

Comment 3H-7: I looked at the traffic impact statement and believe me that statement was almost too good to be true. I don’t think it is valid. I think it is a fallacy and I think it is designed to make the developers look great. (Trapasso, 4/xx/18)

Response 3H-7: *The Traffic Impact Study (TIS) for River Knoll was prepared using the methodology developed by the Institute for Traffic Engineers (ITE) and this methodology was reviewed by the Town's professional traffic engineering consultant. The Town's consulting traffic engineer found the study to accurately reflect existing traffic conditions, the future traffic conditions in the study if River Knoll were not built, and the traffic conditions in the study area if River Knoll were to be built. The TIS concluded that with improvements to the existing traffic signals, the additional traffic from River Knoll would result in levels of service comparable to the re-occupancy of the Stony Lodge Hospital.*

In addition, in response to concerns raised by neighbors regarding congestion at the intersection of Croton Dam Road and NY 9A the applicant is working with New York State Department of Transportation (NYSDOT) to provide a right-turn lane on both Croton Dam Road approaches to NY 9A. This improvement will reduce the existing 150 second cycle length to 110 seconds – thus providing significant improvements to this intersection.

Comment 3H-8: Traffic is going to be abominable. Route 9A takes me one minute to get there. From 9A to the Taconic Parkway, it takes another 20 minutes. This type of traffic and this type of volume from the impact it will create, it is going to put another or at least no less than 30-45 minutes on my commute. That is just not me. That is including school traffic. (Callahan, 4/xx/18)

Response 3H-8: *See Response to Comment 3H-7.*

Comment 3H-9: The FEIS should contain all pertinent correspondence from the NYSDOT as well as the conclusion(s) reached by the NYSDOT regarding the matter concerning the Traffic Impact Study (TIS) findings pertaining to proposed signal timing improvements. The FEIS should also address whose responsibility it will be to fund all improvements specified and whose responsibility it will be to physically implement all said improvements. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3H-9: *NYSDOT reviewed the January 8, 2018 Highway Work Permit Stage 1 Resubmission and provided an email response of their review which has been included in this FEIS. The email from Anne Darelius, PE of the NYSDOT is dated February 6, 2018. The email states that the "(NYSDOT) Traffic and Safety (Group) is comfortable that the proposed mitigations adequately address the impacts this project will create. Please ensure that the Right Turn Lane and Signal Timing Mitigations (at the intersection of NY 9A and Croton Dam Road) are included in the final project." The NYSDOT has told the Applicant to proceed with Stage 2 of the Highway Work Permit which involves the preparation of design drawings for the proposed improvements within the State's right-of-way. The proposed improvements at the intersection of NY 9A and Croton Dam Road will be funded and constructed by Glenco, LLC. Proposed signal timing changes are typically implemented by the NYSDOT for their state-owned traffic signals and Glenco will coordinate with the NYSDOT regarding the proposed signal timing modifications.*

Comment 3H-10: This number of units would add at least 300+ more vehicles on Croton Dam Road daily. Egress from Cherry Hill Circle now is very difficult and dangerous. Anyone who has had the occasion to travel Croton Dam Road on both side of 9A in the morning or after school or evening commute can testify to the large volume of traffic. (G. and B. Seitz)

Response 3H-10: *See Response to Comment 3H-1 and 3H-7.*

Comment 3H-11: This housing project involves approximately 188 rental units which will add an additional 400 plus cars using our community roads and estimated 400-500 additional children in our school system. (D. and N. Markham; K. Lapine)

Response 3H-11: *See Response to Comment 3H-1 and 3I-1.*

Comment 3H-12: In addition, a train shuttle is not a solution, there is no guarantee that the residents will be using mass transportation like the train rather than car commuting. It is most likely cars will be the majority travel convenience during the week and weekends. At present, Junction 134, six days a week during rush hours (3pm to 7pm), traffic is bumper to bumper, backed up½ mile to Grace Lane in New Castle. Under these circumstances, we have to wait endlessly to leave our driveway and it takes ten minutes to reach the light at the intersection of Junction 134 and 9A (One 18 wheel truck is equivalent to six car lengths alone.) (D. and N. Markham; K. Lapine)

Response 3H-12: *See Response to Comment 3H-1 and 3H-7. In addition, the parking that will be provided meets the code requirements for the Town. However, with the increase in ride sharing, Uber availability and eventually autonomous vehicles, the trend for car ownership will continue in a downward trend. Urban planners and transportation planners are predicting a continued decrease in car ownership for these types of projects.*

Comment 3H-13: Not only will it impact the school system which is already overcrowded, but the traffic issue. Trying to get through the intersections of Croton Dam Rd., Hawkes Ave. and 9A, during commuter hours, is a nightmare at best. (R. Damiano)

Response 3H-13: *See Response to Comment 3I-1 regarding potential impacts of the River Knoll on the OUFSD.*

See Response to Comment 3H-7 regarding the TIS for River Knoll and proposed improvements that address these stated concerns.

Comment 3H-14: In addition, there are school age children waiting for the school buses at Lincoln and Lee, Lincoln and Third, Lincoln and Second and Lincoln and First Avenues. Lincoln and Narragansett Ave. is a safer intersection and residents of River Knolls will find that out and traffic will be increased on Lincoln Ave. (R. Damiano)

Response 3H-14: *See Response to Comment 3H-1.*

Comment 3H-15: As a concerned resident, I commented on a particular traffic issue that will only get worse should this project come to fruition, as well as the underlying reason for the Applicant's building request. Pershing Avenue is located just south of the proposed River Knolls project. The residents living on and immediately nearby this street include both children and elderly (including my parents), there is also a licensed home daycare facility. This street is currently a high-speed (in excess of 30 MPH) thoroughfare for many. I have seen taxis violating mandatory school bus stops, as well as other vehicles using higher than appropriate speed to get from Croton Dam Road to Narragansett Avenue. Considering the current overwhelming traffic situation in both the Town and Village of Ossining, I can only expect an increase in traffic as a "short-cut" on this route. (M. Lattin)

Response 3H-15: *See Response to Comment 3H-1.*

As noted in the DEIS, the LOS table in the TIS summarizes the Levels of Service, delays and volume-to-capacity for the existing (2016), No Build (2022), and Build (2022) conditions. The TIS evaluated changes in traffic associated with River Knoll at nine intersections. As shown in the summary table provided in Appendix G of the DEIS, the overall LOS at the intersection of Croton Dam Road and Pershing Avenue with Cherry Hill Circle stays the same between the existing and the 2022 Build year, while, at most, the additional intersections analyzed would experience minor increases in delays with the development of River Knoll.

Comment 3H-16: The traffic study does not address the impact of cutover traffic from Croton Dam Rd to Narragansett to get to 9A south. Traffic currently speeds up and down Narragansett Avenue and it is difficult to get out of the driveway now. I have to put on my car flashing light to ease out of my driveway. Will speed bumps be installed along Narragansett Avenue in various intervals to slow the traffic speed? (W.M. Pool Owens)

Response 3H-16: *See Response to Comment 3H-1.*

As noted in the DEIS, the TIS evaluated the unsignalized intersection at Croton Dam Road and Narragansett Avenue, Results of the analysis determined that the LOS stays the same between existing conditions and the 2022 Build year used for analysis, or the year in which River Knoll would be fully occupied.

Comment 3H-17: Will pedestrian crosswalks be setup at various intersections to mitigate fatalities (children walk & cross on Narragansett to access school buses and Vets Park)? (W.M. Pool Owens)

Response 3H-17: *As noted in the DEIS and based on the traffic counts conducted for the TIS, there is not a significant number of bicyclists or pedestrians at the studied intersections. Furthermore, the potential adverse impact of increased traffic upon the safety of pedestrians and bicyclists would be minimized by implementing the proposed traffic mitigation measure which include proposed infrastructure and signal timing improvements pending before NYSDOT such as constructing a right turn lane on both Croton Dam Road approaches to NY 9A, and reducing the existing 150 second cycle length to 110 seconds. The findings of the TIS concluded that these improvements would significantly improve the traffic conditions at the intersection* *of Croton Dam Road and NY 9A to ultimately reduce congestion and related traffic issues.*

Comment 3H-18: Why doesn't the traffic study include the impact of delivery truck (FED EX, UPS, USPS) to the 188 unit apartments for on-line shopping that most apartment dwellers use? (W.M. Pool Owens)

Response 3H-18: *While Stony Lodge Hospital was in operation until closing in 2012, delivery trucks, including large multi-axle trucks, traveled to the Project Site daily with food, supplies, and deliveries from FedEx and UPS. As noted in the DEIS, Stony Lodge Hospital facility housed up to 61 residents and 250 staff to produce constant traffic necessary to maintain operations at the facility that included both residential and institutional uses. River Knoll would provide serve a single use as a residential housing development designed to appeal to active seniors, empty nesters whose children may be off to college and who want to scale down to simpler living, young families without children, and young professionals.*

Comment 3H-19: Additionally, the roads in the immediate area cannot accommodate current traffic, let alone the influx of traffic that an apartment complex of 188 units will bring from the residents, as well as their visitors, deliveries and various service providers. It is unlikely that the estimated number of cars for the complex, estimated by Glenco, is accurate. (C. Donnelly)

Response 3H-19: *See Response to Comment 3H-7.*

Comment 3H-20: Glenco's offer to add a right turn lane at Croton Dam Road at 9A to reduce morning congestion is superfluous. Drivers already create their own right turn lane at the intersection, but it does little, if anything to alleviate the congestion. (C. Donnelly)

Response 3H-20: *See Response to Comment 3H-6.*

Comment 3H-21: The Applicant should conduct additional traffic analysis comparable to what is described in Chapter 3.H(B) of the DEIS at the following roads/intersections:

- Intersection of Pershing Avenue and Narragansett Avenue
- Intersections of Pershing Avenue and smaller offshoot roads – specifically, First Avenue and Second Avenue
- Intersection of Pine Avenue and Narragansett Avenue
- Intersection of Dale Avenue where Routes 133 and 134 merge – the Washington School area

(D. Levenberg)

Response 3H-21: *As requested, a supplementary Traffic Impact Study (TIS) was conducted on the additional four intersections. The findings of the traffic study are presented in FEIS Chapter 1 and 2, and the TIS is included herein as Appendix C.*

Comment 3H-22: Provide any written comments/communications to and from New York State Department of Transportation regarding the project and the implementation of the proposed mitigation measures identified in the DEIS. (D. Levenberg)

Response 3H-22: *See Response to Comment 3H-9.*

Comment 3H-23: The Applicant should provide an explanation for why this proposed project is anticipated to have a lower utilization of vehicles. At the Town Hall meeting, Mr. Vetromile indicated that there is anticipated to be a lower utilization of vehicles. However, the proposed project is not a transit-oriented development like some of the other projects Mr. Vetromile referenced, like in Tuckahoe. The Town Board, therefore, requests that the Applicant provide an explanation of the basis of this expectation and why it applies to the proposed project in its proposed location. (D. Levenberg)

Response 3H-23: *As noted in the DEIS, the projected traffic associated with the proposed 188-unit River Knoll redevelopment is based on vehicle trip information published by ITE in its publication, "Trip Generation Manual, 9th Edition." In Chapter 3H, "Traffic and Transportation", Table 3.H-1 shows the traffic volumes associated with the re-occupancy of the previous hospital land use and the proposed residential land use, as well as the net change in traffic volumes between them. The redevelopment will result in approximately 32, 43, and 24 net additional total trips during the peak weekday AM, PM, and Saturday midday hours, respectively.*

Public transportation is not available in the vicinity of the project site. Consequently, the Proposed Project will accommodate its residents with a jitney shuttle bus to and from the Ossining and/or Croton train station in order to alleviate traffic during AM and PM peak.

With regards to school bus routes, the Project Sponsor will work with the school district to make whatever modifications are necessary to ensure safe pick and drop off of students during and post construction. Based on discussions with the Ossining Union Free School District Department of Transportation, there are no existing school bus stops nearby for the proposed redevelopment. School bus service will need to be provided to the proposed redevelopment via a new school bus stop along an existing bus route. A location will be identified to pick up school children in consultation with the school district, most likely along Croton Dam Road at its intersection with the proposed site driveway.

Comment 3H-24: State who will bear the financial burden of the proposed traffic infrastructure improvements identified in the DEIS as part of the proposed project; who will be responsible for undertaking, coordinating and executing those proposed improvements; and how the traffic improvements will be implemented and the timing of such improvements in connection with the permitting/approval process. (D. Levenberg)

Response 3H-24: *It will be the responsibility to obtain permits and fund the proposed traffic improvements identified in the DEIS as part of the proposed project.*

See Response to Comment 3H-9.

Comment 3H-25: The Town's traffic consultants should review the Applicant's traffic analysis and determine if said analysis is sufficient to assess the potential impacts to traffic from the proposed project and whether they agree with the Applicant's conclusions regarding the impacts on traffic set forth in the DEIS. (D. Levenberg)

Response 3H-25: *See Response to Comment 3H-7.*

Chapter 3I: Community Facilities

Comment 3I-1: When all these groups keep coming in, I believe Mr. Sanchez and the school board want the community to be educated, but the existing infrastructures are not enough. (J. Leslie)

Response 3I-1: *The applicant has been coordinating with Mr. Sanchez and other administrators in the school district to mitigate any potentially adverse impacts the estimated 16 school age children that might be living at River Knoll. It is estimated that River Knoll will generate $682,843 in revenue-based income for Ossining Schools, based on 2018 Property Tax Rates. The cost to educate the estimated 16 school age children is approximately $313,025, based on the OUFSD Proposed Budget for 2018-2019. In addition to the $682,843 in school taxes, the applicant has agreed to contribute $350,000 to a community benefit fund towards enhancing school programs and facilities. The $350,000 will be in addition to the school tax obligation for the project.*

Comment 3I-2: I remember when they were putting up the projects across on the corner of 9A. And the builder said then that its impact on the schools would be very little; that they were doing it as a high income, and there would be few children in the units. Do you know today the school bus goes up into that unit and comes out half full. So the impact is significant and I believe the impact on the school district with these 188 units will be significant. (B. Celente)

Response 3I-2: *See Response to Comment 3I-1.*

Comment 3I-3: The schools are already overcrowded. We don't have the room for the students we already have. And we don't have the money to continue to house and educate additional students (A. Spring)

Response 3I-3: *See Response to Comment 3I-1.*

Comment 3I-4: Somebody made a statement that the superintendent of schools said in a letter that we will be overwhelmed by this type of structure, by this type of project (C. Callahan)

Response 3I-4: *See Response to Comment 3I-1.*

Comment 3I-5: I have been through this before. They found out that in a one-mile stretch to get to Dobbs Ferry hospital from 9A, which is a normal three- minute drive, it would take an emergency vehicle 45 minutes to get from the location from where the patient had to be transported from. That in and of itself tells me that this is not a good idea at all; not only does it change the structure of the community; it impacts the people in their one house – one home. (C. Callahan)

Response 3I-5: *See Response to Comment 3H-7.*

Comment 3I-6: I am going to give you a little more information on the school that was prepared by Boise Demographics in November 2017. (D. Whitlinger)

Response 3I-6: *Comment noted. The full report prepared by the Commenter was provided to the Planning Board at the Public Hearing. A copy is available to view in the Planninag Department.*

The applicant recognizes that potential school impacts from the Proposed Project is one of the most significant issues raised by Town officials, the school board, and the community. In response to these heightened concerns, the applicant began a dialogue with school district officials in 2015. The dialogue included obtaining input on school capacity issues, capital improvement plans/needs, school generation rates from comparable projects, and strategies for mitigating potential impacts on the school district. As stated above it is estimated that River Knoll will generate $682,843 in taxes for Ossining Schools. In addition to the $682,843 in school taxes that will come from the Proposed Project, the applicant has agreed to contribute an additional $350,000 to a community benefit fund towards enhancing school programs and facilities. This $350,000 is over and above the tax obligation for the project.

Comment 3I-7: I would like everybody to take a look at more comparable apartment buildings, like 25 State Street and the rental buildings to see how many students come out of those apartment buildings because I think those are the more practical numbers than what are reflected in the reports. I don't think Westerly Avalon is comparable. (M. Caruso)

Response 3I-7: *The multi-family building at 25 State Street, also known as The Red Lion, was constructed in 2012 with financing that restricts its occupancy based on income eligibility. The amenities are limited to interior appliances, Consequently, neither the residential product, market orientation nor the demographics are comparable to the Proposed Project.*

Comment 3I-8: The Applicant should continue to attempt to secure letters from any and all community services which have not responded to the Applicant's requests for comments to-date. Further, responses from 2015 and 2016 may no longer be accurate or relevant; the Applicant should attempt to obtain updated responses. The requests for information should specifically ask what impact, if any, the proposed project would have, as well as what impact the project would have upon the service provider's ability to provide services in general. Such additional responses should be included in the FEIS. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3I-8: *Correspondence was sent to municipal service provides. Copies of the correspondence is included in Appendix D, and responses are reported in Chapter 1 and 2.*

Comment 3I-9 The Ossining School District should be solicited to comment on the following in the DEIS: the projected school-age children estimates, the fiscal analysis relative to the School District, the mitigation measures provided by the project, and the actual impact of the project on the District. The FEIS should contain the School District's comments. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3I-9: *See Response to Comment 3I-1.*

Comment 3I-10: The Rutgers University Center for Urban Policy Research (CUPR) school-age children factors used in the DEIS are from 2006 and have not been updated. The FEIS should address whether and to what extent said factors are still valid. Further, the analysis in the FEIS should endeavor to include additional relevant school-age children data. (D. Stolman, M Galante, and M. Timpone-Mohamed)

It is the Board's understanding that the Rutgers study has not been updated since 2006 and that the actual number of students generated from condominiums/apartments is larger than set forth in the Rutgers study. The Town Board would like to see additional analysis on this issue that provides a more robust and accurate basis for the student enrollment projections than what is set forth in the DEIS. In furtherance of this comment, the Town Board is aware of a study that looked specifically at the number of students in Ossining. The Town Board will make that information available to the Applicant as soon as possible, which the Applicant should consider and, to the extent it is determined to be reliable and relevant, incorporate into the additional analysis on this issue. (D. Levenberg)

Response 3I-10: *The applicant concurs that the Rutgers Study is outdated and does not reflect current data. As was provided in the DEIS and supplemented herein are the actual number of school age children living in comparable highly amenitized rental projects in the suburban Westchester market being marketed towards young professionals and empty nesters. A complete table of comparable projects, their location, and the number of school age children living in the units is provided in Chapter 1 of the FEIS.*

The applicant is aware that the school district is undertaking a comprehensive study concerning school enrollment, programming, and physical capacity constraints. The Superintendent of Schools agreed to provide the Town and applicant once the study is complete.

Comment 3I-11 The make-up of the Proposed Project contains 92 two-bedroom rental units and 96 one-bedroom rental units. The developer projects that the project will only yield an additional 29 school aged children. The accuracy of these projections is questionable for multiple reasons, including the costs used by the developer and the methodology employed to project the number of students. The District asserts that the methodology utilized by the developer does not accurately project the number of school aged students generated from the Proposed Project. More specifically, the DEIS applies a method for enrollment projection circulated by the

Rutgers University Center for Urban Policy. The study was published in 2006 using data from the 2000 census and has not been updated since. Effectively, the DEIS is relying upon population data from the 1990s to estimate the impact that the Proposed Project will have on enrollment in 2018 and beyond. Such data does not capture the socioeconomic climate and demographics of Ossining as it exists today. Notably, Ossining has witnessed a significant increase of multi-family developments in recent years, a trend that has been a major factor in the District's review of the application of the Rutgers study and its reliability to project the number of students for projects such as the Proposed Project. The District submits that updated analyses should be required for projects of this nature or alternatively, measures implemented to protect the District if the projections are inaccurate. (R. Sanchez)

Response 3I-11: *See Responses to Comment 3I-1 and Comment 3I-10.*

Comment 3I-12: Our own School Superintendent, Ray Sanchez, spoke to the Board stressing that in the high school they are using the stage as a reading classroom and that the addition of the project and the following Harbor Square- 188 units, Avalon- 168 units, Hudson Steppe- 188 units [and] Parth Knolls- 53 units will add 785 residential units in less than 5 years. Causing overcrowding, more staff, more parking, and additional related services all adding to an inevitable school tax increase. (G. and B. Seitz)

Response 3I-12: *See Response to Comment 3I-1.*

Comment 3I-13: A maximum addition of 26 school age children is unrealistic. (C. Donnelly)

Response 3I-13: *See Response to Comment 3I-1.*

Comment 3I-14: The School District should provide written comments on the proposed project. These comments should include a discussion of the $350,000 community benefit payment from the Applicant as proposed in the DEIS and how that money will be used to mitigate the potential impacts from the increase in student enrollment from the proposed project. (D. Levenberg)

Response 3I-14: *Comments were received from Ray Sanchez, OUFSD Superintendent, and are responded to herein. Regarding the $350,000 community benefit payment offered by the applicant – in addition to the school taxes - an agreement was entered into between the Applicant and the OUFSD to contribute $350,000 to address programming and capital needs of the school district. As a result of this agreement, the OUFSD agreed that the donation is a "sufficient, adequate and appropriate mitigation payment to comprise full and complete offset of any and all impacts to the District arising out of, or in connection with the Project". A copy of the signed agreement is included herein as Appendix D.*

Comment 3I-15: Provide clarification on where the Applicant got the information regarding the student enrollment from the Avalon development. (D. Levenberg)

Comment 3I-15: *Per the DEIS, School Generation Rates for Nearby Developments were derived from identifying the number of school age children at a specific development according to the Avalon Development Company. Thus, based on the number of residential units, a ratio can be calculated to estimate the number of school age children the Proposed Project would generate.*

Chapter 3J: Fiscal Impacts

Comment 3J-1: You come across as if you're going to give the school district a payment, that is what you said last night. You didn't tell us how much or if there is going to be a pilot on this project. (J. Reilly)

Response 3J-1: *River Knoll will be responsible for $682,843 annually to the Ossining Union Free School District (OUFSD). This tax obligation is based on data from the OUFSD for the 2018-2019 School Year and assumes that River Knoll would generate approximately 16 school aged children. According to the OUFSD comments on the DEIS, the cost to educate those children is to be based upon the most recent Non-Resident Tuition Report published by the New York State Education Department. The annual net cost for an Ossining UFSD mainstreamed K-6 student is $14,195 and $13,770 for a 7-12 grade student; the annual net cost for those students in K-6 special education classrooms is $60,708 and $60,283 for a 7-12 grade student. Thus, the average blended net cost per student is $13,982.50 for mainstreamed students and $60,495.50 for those students in special education classrooms, annually. Consequently, the annual total cost to educate 16 students is approximately $313,025.*

The Applicant is not suggesting that the $369,818 increment between the total cost to educate and the project generated revenue serves as a windfall for the OUFSD. The Applicant is aware of those issues facing the OUFSD, such as tax cap limits and labor negotiations, which prevent the district from receiving the entirety of the tax revenue generated by the Proposed Project, though these issues are not within the scope of study for a FEIS. As an example of the Applicant's willingness to cooperate with the school district to contribute to its continued success, the Applicant has voluntarily offered, and the school district has accepted, a payment of $350,000 to be utilized for school programs and capital improvements. The agreement between OUFSD and Glenco Group, LLC was memorialized as of September 29, 2016.

Comment 3J-2: Our school district cannot even think of putting another bathroom in without expanding the footprints of the existing facilities we have. How are we going to deal with those 22-27 new students your project will bring in? (J. Reilly)

Response 3J-2: *See Response to Comment 3I-1.*

Comment 3J-3: I know for certain that the people who are sending their kids to school from those apartments will not be paying a fair share either. (Celente, 4/xx/18)

Response 3J-3 *See Response to Comment 31-1.*

Comment 3J-4: **T**hese condos are not going to be paying their fair share, and who will have to make up for that is the single-family homes. (A. Spring, 4/xx/18)

Response 3J-4: *River Knoll will not be a condominium project but a rental project. The current tax obligation for the property in 2018 is approximately $95,418, according to 2018 Property Tax Rates for the Town and Village of Ossining. This is based on an assessed valuation of $2,493,500. Once the site is converted from an institutional use to a residential use, it is estimated that the Full Market Valuation of the property will increase to $27,500,000 - an increase of $25,006,500. All in all, the taxes that will be paid to the Town, Village, County, and School District are estimated to be $1,048,469. This is in comparison with the current $95,418 in taxes currently being paid.*

Comment 3J-5: The DEIS states “that the Proposed Project will not result in any significant adverse impacts to the OUFSD." The District does not agree and respectfully submits that the following calculation accurately measures the baseline of the potential impact of educating the number of students estimated by the developer to be added to the District. According to the most recent Non-Resident Tuition Report published by the New York State Education Department, which is used and relied upon by school districts and governmental entities throughout the State of New York to determine the annual cost for students at each school district, the annual net cost for an Ossining UFSD "regular" K-6 student is $14,195 and $13,770 for a 7-12 grade student. The annual net cost for a K-6 "student with disabilities" is $60,708 and $60,283 for a 7-12 grade student.2 Currently, twelve percent (12%) of the K-12th grade student population are special education students. Applying this percentage to the proposed number of students generated from the Proposed Project (as estimated by the developer) results in an increase of 25.52 new regular students and 3.48 new special education students. The average blended net cost for a K-12 regular education student is $13,983.00 and the net cost for 25.52 regular students equals $356,846.16. The average blended net cost for a K-12 special education student is $60,495.50 and the net cost for 3.48 students with disabilities is $210,524.34. Accordingly, the total cost to educate 29 students, if such projection were to be accurate (which the District maintains that it is not), is $567,370.50 in today's net cost. It is likely that these costs will increase annually. Even if the developer's calculations in the DEIS were accurate ($561.788.001, a modification to the number of special education students and/ or the number of students will far exceed the costs/benefits projected by the developer. At a minimum, measures should be put in place to keep the District whole. (R. Sanchez)

I confirmed with Superintendent Sanchez that our cost to educate each student is approximately above $20,000 per child. So if we are going off their number, then we are looking at 29.8 children that they estimate will be joining our already at capacity schools. This group has offered to pay the school district $350,000, but that is nowhere near covering the amount of students that would be entering this school district based on their numbers which is closer to $580,000. (J. Vecchiarelli)

Response 3J-5: *For the past three years, the applicant has been coordinating with the Superintendent of Schools, Mr. Sanchez and other administrators in the school district to mitigate any potentially adverse impacts the estimated 16 school age* *children that might be living at River Knoll. It is estimated that River Knoll will generate $682,843 in taxes for Ossining Schools.*

In addition to the $682,843 in school taxes that will be the obligation of the applicant, the applicant has worked with the school district to agree to contribute $350,000 to a community benefit fund towards enhancing school programs and facilities.

Comment 3J-6: The FEIS should contain a market analysis which addresses the demand in the subject market for the proposed housing type and amenities (i.e., high-end rental apartments). (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3J-6: *As requested, the applicant commissioned a market analysis to address the market demand for a residential project such as River Knoll. A summary of the study is included in Chapter 1 of this FEIS and the complete study is in Appendix E.*

Comment 3J-7: The Town Assessor should be asked to review the accuracy of the Fiscal Impacts chapter of the DEIS and the FEIS should include the Assessor's comments. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3J-7: *As requested, the applicant met with the Town's Assessor and reviewed the basis for the fiscal analysis. It was the opinion of the Assessor that the $26 million value was too low and the Full Market Value should be increased. Consequently, the applicant increased the estimate of the Full Market Value to $27.5 million. A table showing the revised taxes estimated to be generated is included in Chapter 1 of this FEIS.*

Comment 3J-8: Because the developer contends that the District receives the total taxes paid on the development as "new revenue," estimated in the DEIS to be $662,522, the developer estimates that the Proposed Project will result in a windfall to the District. It does not. This inaccuracy relates to the limitations placed on the District under the Tax Cap, which restricts increases in the school tax levy to 2% or the rate of inflation, whichever is lower.3 Contrary to the DEIS, the District does not receive a stream of new tax revenue from the Proposed Project. The DEIS projected new tax revenue to the District in the amount of $662,522 does not take into consideration the legal requirements and budgetary operations that apply to school systems in the State of New York. (Even if the calculations contained in the DEIS were accurate, it would not account for the significant costs to be incurred by the District identified herein). Accordingly, under the scenarios applied in the DEIS, the District does not receive new revenue from the Proposed Project and in fact, the District is negatively impacted as a result. The District and the developer have worked together in the past to address prior concerns and, moving forward, the District hopes for the same level of cooperation, in the interest of protecting our community and our school system. (R. Sanchez)

Response 3J-8: *As presented in Chapters 1 and 2, River Knoll will be a rental residential community that will be marketed to and will appeal to young professionals and empty nesters. Comparable projects in comparable school districts in the area suggest that the number of school aged children likely to live at River Knoll will be 16 students – significantly lower than if this were to be a for-sale residential community. Projects* *with fee-ownership, 3+ bedrooms, or townhomes typically generate significantly more school aged children.*

The applicant is aware that the OUFSD is concerned with current enrollment growth and the programming and space constraints currently being experienced by the district, and the impact additional students will have on the quality of the educational programs in the OUFSD. In addition, the applicant recognizes that even though the school tax obligation from River Knoll will exceed the cost to educate the school age children likely to live at River Knoll, there are taxing allocations and labor negotiations that are outside of the scope of this application. It should be noted that over the past three years, the applicant has discussed potential impacts of the additional school children in cooperation with school district officials. An outcome of these discussions was a commitment by the applicant to a 'community benefit contribution' of $350,000 – over and above what will be paid in school taxes – for the district to use towards enhancing school programs and facilities. This contribution is memorialized in an agreement between the OUFSD and the Project Sponsor, dated September 29, 2016 (see Appendix D).

Comment 3J-9: Building capacity levels pose yet another real concern. As the Planning Board is aware, any increase of school aged children to the already crowded schools may require the immediate alteration and expansion of District facilities, a costly and timely endeavor. With the District's facilities already at, or near full capacity, the potential impact of a residential development such as the Proposed Project will likely result in the need for additional space. Additional space, or modification to existing space to accommodate an influx of students, does not come without cost and could result in the elimination of existing instructional and educational programs. The costs associated with school construction are significant. Ultimately, the costs of construction will be borne by the taxpayers and any reduction to programs will result in lost opportunities for the students, which can never be fully quantified.

While the District certainly welcomes new students and every opportunity to enrich the lives of the youth in our school system, it can only do so within the confines of its existing infrastructure or plan new facility construction at a cost as set forth above. Since 2007, District enrollment has increased by 963 students (almost 25%). Gains are projected to continue during the next ten years, with an increase of 414 students expected by 2027. The increase of school aged children projected from the Proposed Project will add to these projections. The District is currently grappling with the loss of valuable outdoor space by virtue of accommodating this ever-increasing enrollment. The loss of outdoor space also impacts educational opportunities and has a direct impact on the welfare and well-being of the students. All of the foregoing results in additional costs to the District and unintended consequences, including loss of programs and/ or an increase in taxes for the residents. While the developer has been very receptive to the District's concerns regarding these potential costs, the updates to the DEIS since the agreement was reached between the District and the developer may warrant additional mitigation measures to keep the District whole. The District respectfully submits that for all of the above reasons, the DEIS must be modified to reflect a more accurate enrollment projection/ calculation. The District and its community would face significant challenges if no additional mitigation measures are implemented. (R. Sanchez)

Response 3J-9: *See Response to Comments 3J-5 and 3J-8.*

Comment 3J-10: Costs to the school system do not end with the per-pupil cost analysis as inferred from the DEIS. In addition to the costs associated with projected school aged children, the District may be faced with additional costs for "breakage"; i.e. where the students generated require the employment of additional teachers/ staff in terms of salary and benefits. Class size is governed by the terms of a collective bargaining agreement. Accordingly, the District cannot simply modify class size to accommodate an influx of students. Increased staffing would be required and essential to maintain the caliber of the educational programs offered by the District (R. Sanchez)

Response 3J-10: *See Response to Comments 3J-5 and 3J-8.*

Comment 3J-11: The increase in services required for the 188 units would affect the property and school taxes for homeowners. How will the increase in taxes be allocated? (W. M. Pool Owens)

Response 3J-11: *See Response to Comment 3J-1.*

Comment 3J-12: Placing an apartment building in the midst of single family homes will adversely affect the property values of those homes, just as it had done in other areas. People invest a great deal of money in their homes and would not invest the same amount if the neighborhood view is marred by an apartment building complex. (C. Donnelly)

Response 3J-12: *As discussed in the DEIS, the redevelopment of the Project Site to multifamily housing from Stony Lodge Hospital, closed as of 2012, will serve to conform the land use with that of the surrounding residential community, ultimately providing an attractive residential development that will be professionally managed and will enhance the property values of its surrounding neighbors instead of remaining underutilized and unoccupied.*

Comment 3J-13: Another key concern is the burden this will place on the school system and the resulting additional tax burden that will be placed on homeowners. As it is, owners of single family homes pay more than their fair share in taxes since Ossining has a substantial amount of condominium owners whose taxes are calculated at considerably less than fair market value. Adding an apartment complex will exacerbate the situation further. (C. Donnelly)

Response 3J-13: *See Response to Comment 3J-4 regarding the property tax obligations for River Knoll in comparison with its existing underutilized condition.*

See Response to Comment 3J-5 regarding the Applicant's active coordination with the Superintendent of OUFSD for the tax revenue generated by River Knoll to the school system as well as the additional voluntary payment from the Applicant to the school system.

Chapter 3K: Construction Impacts

Comment 3K-1: A draft construction management plan required by the Scope should be provided in the FEIS. The information included in the DEIS does not provide the potential best management practices and logistic plans in a construction management plan that would accomplish the goals described in the DEIS. The draft construction management plan should address all potential construction activities (including blasting), other rock removal activities and on-site rock processing and handling. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3K-1: *As stated in the DEIS Chapter 3.K, "Construction Impacts", the Proposed Project will have a construction schedule of approximately 18 to 21 months beginning with site preparation, and then followed by the demolition of the existing Stony Lodge Hospital buildings. Full build-out of the Proposed Project will occur over a single phase. The sequencing of trades will initially focus on project staging; demolition of the existing hospital buildings; excavation for the building footprint, roads and parking areas; and the commencement of foundation footings and walls. Subsequently the superstructure, mechanicals, interiors, and finishes will follow. Subsequent to the adoption of the Proposed Zoning, a detailed Construction Management Plan will be prepared to Town specifications as part of the site plan review process.*

Logistic plans for constructions activities include Table 3.K-1 which provides a summary in tabular form of likely construction impacts phase. All construction activities will be conducted in compliance with existing regulations, including local day and hour construction limitations. Consistent with Section 130-6.C(1) of the Town Code, construction will only take place between the hours of 8:00 am and 8:00 pm Monday through Friday and occasionally between 9:00 am and 5:00 pm on Saturdays, Sundays, and holidays. Construction access will be via the existing site driveway off of Croton Dam Road. Construction will be sequenced in such a manner, so that, as areas are disturbed, they will immediately be protected with erosion and sediment controls. The number of workers on-site during construction will vary, but on average, 30 workers per day would be expected at the site. During the peak construction period, approximately 9 months, as many as 40 workers could be at the site.

For discussion of potential construction activities to include blasting, other rock removal activities, and on-site rock processing and handling based on the findings of the geotechnical investigation, see Response to Comment 3B-1. This will also be included in the detailed Construction Management Plan prepared for the Town.

Comment 3K-2: The FEIS should provide and discuss the specific guarantees to be utilized to ensure the correction of damage caused by construction, and the continued maintenance of facilities. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3K-2: *Per the Towns Code 168-12 "Performance Guarantees", the applicant will be responsible for paying for and or correcting and damage caused by construction as stated below:*

A. Construction completion guarantee will ensure the full and faithful completion of all land development activities related to compliance with all conditions set forth by the Town in its approval of the stormwater pollution prevention plan, *the Town may require the applicant or developer to provide, prior to construction, a performance bond, cash escrow, or irrevocable letter of credit from an appropriate financial or surety institution which guarantees satisfactory completion of the project and names the Town as the beneficiary. The security shall be in an amount to be determined by the Town based on submission of final design plans, with reference to actual construction and landscaping costs. The performance guarantee shall remain in force until the surety is released from liability by the Town, provided that such period shall not be less than one year from the date of final acceptance or such other certification that the facility(ies) have been constructed in accordance with the approved plans and specifications and that a one-year inspection has been conducted and the facilities have been found to be acceptable to the Town. Per annum interest on cash escrow deposits shall be reinvested in the account until the surety is released from liability.*

B. Maintenance guarantee Where stormwater management and erosion and sediment control facilities are to be operated and maintained by the developer or by a corporation that owns or manages a commercial or industrial facility, the developer, prior to construction, may be required to provide the Town with an irrevocable letter of credit from an approved financial institution or surety to ensure proper operation and maintenance of all stormwater management and erosion control facilities both during and after construction and until the facilities are removed from operation. If the developer or landowner fails to properly operate and maintain stormwater management and erosion and sediment control facilities, the Town may draw upon the account to cover the costs of proper operation and maintenance, including engineering and inspection costs

Comment 3K-3: A draft construction management plan should be provided and the practices and elements of the construction management plan that would mitigate impacts should be discussed. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 3K-3: *See Response to Comments 3K-1 and 3K-2.*

Chapter 4: Adverse Environmental Impacts That Cannot Be Avoided

NO COMMENTS RECEIVED.

Chapter 5: Alternatives

Comment 5-1: I got the sense that the developer isn’t really interested in the alternatives. Also, the way they had presented them, there was a question as to whether or not this planning board would ever even approve them. Is there a way to see something that would be a more realistic alternative to what is being presented – if it were single family development, a bunch of single-family homes in the meadow area on Croton Dam Road. (M. Caruso)

Response 5-1: *As required in the adopted scope for reviewing potentially adverse impacts, the Applicant designed, conceptually engineered, and analyzed the impacts of 11 different land use scenarios and site layouts. The 11 alternatives were designed* *to meet the lot and bulk regulations of the particular zoning district and/or the constraints identified in the adopted scoping outline. Each alternative was graphically depicted and analyzed against each of the same impact categories required for the Proposed Project. In addition to the analysis in Chapter 5, a comparative summary was created in the Executive Summary, beginning on page 1-19.*

In addition, the Town Board and the Planning Board requested an additional seven alternatives be developed with increased contiguous open space. These alternatives are presented in Chapter 1 and their impacts summarized in Chapter 2.

Comment 5-2: The R-15 and R-5 clustered development alternatives in the DEIS use standard-sized lots. The R-15 and R-5 cluster alternatives should be more compact and realistic relative to what the Planning Board might mandate. These alternatives should be townhouse projects with buildings located in the area of the proposed 188-unit building, as opposed to the current sprawling single-family detached subdivision layouts which do not preserve the front meadow and other wide swaths of open space on the site. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 5-2: *As requested, revised alternatives for a clustered development in the R-15 and R-5 district have been prepared. They are presented in Chapters 1 and 2.*

Comment 5-3: The alternatives of an active-adult age-restricted project (i.e., 55 and older) and a more senior project (i.e., 62 or 65 and older) should be included in the FEIS. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 5-3: *While it would be feasible to create an exclusive 55+ River Knoll community with any of the alternatives, it would severely restrict the market area, increase the length of time for occupancy, and would increase holding and operation costs. As previously stated, River Knoll is being designed for a market dominated by young professionals and empty nesters. It is this market that studies show there is a pen-up demand for highly amenitized luxury rental units. The market for River Knoll is fully described in the recent RCLCO Market Assessment, dated July 12, 2018, and included in Appendix E.*

Comment 5-4: Certain of the layouts have two project roadways intersecting with Croton Dam Road and others have one. In order to compare "apples to apples," and unless there is a good reason to do otherwise, all of the layouts should be the same as the proposed project in terms of vehicular access in the FEIS. (D. Stolman, M Galante, and M. Timpone-Mohamed)

Response 5-4: *As requested, revised alternatives have been prepared by the Applicant and their individual layouts are included in Chapter 1 of the FEIS.*

Comment 5-5: After last night's meeting about River Knoll, it is obvious residents are against the proposed development. I do hope the board recognizes this and does not proceed.

What other options are there for developing the property which would protect the sewers, traffic, schools, and the peace of the neighborhoods? (J. Gelsi)

Response 5-5: *See Response to Comment 5-1.*

Comment 5-6: Would the single-family houses be allowed to be built on the total of the property including the green space and the wetlands as indicated in ALL of the drawings provided? (W. M. Pool Owens)

Response 5-6: *As noted in the DEIS, if the Project Site were developed with any of the Alternative uses evaluated, much of the proposed greenspace would be eliminated or at least significantly reduced. Redevelopment of this former institutional property by River Knoll will bring new residents to the Town who will provide additional economic activity through new demand for commercial services, restaurants, stores, health and medical services, and more.*

Comment 5-7: Would the Town Board allow use of green space and wetland use? (W. M. Pool Owens)

Response 5-7: *As previously stated, the large perimeter buffer will be placed in a Conservation Easement with an appropriate third-party entity. The details of the easement will be coordinated with the Town and the Village as a condition of site plan approval.*

Comment 5-8: The smaller 150-apartment alternative is shown as a negative impact to the property. It is the same, centralized shape and design as the proposed 188 units, which is 38 units (20%) less. How can a lesser size complex have a negative impact that a larger sized complex? It should have at least a 20% lesser impact. (W. M. Pool Owens)

Response 5-8: *Per the DEIS, each Alternative presented detailed analyses to determine the presence or absence of significant adverse impacts across various technical areas in accordance with SEQRA and its implementing regulations (6 NYCRR Part 617). Alternative Ea consists of 150 dwelling units in one building with a similar configuration as River Knoll and would result in significantly greater vegetation and wildlife disturbances than River Knoll. Since this alternative would locate a stormwater basin within the on-site herbaceous wetland to ultimately disturb the wetland and wetland buffer, it would present a negative impact to natural resources whereas River Knoll would not disturb the wetland.*

Comment 5-9: Provide a more realistic design of Alternative B (Cluster Development under R-15 zoning) and Alternative D (Cluster Development under R-5 zoning) utilizing clustering principles in order to preserve more open space. For instance, providing a more compact design with townhomes at the top of the hill. (D. Levenberg)

Response 5-9: *As requested, revised cluster alternatives have been prepared and are presented in Chapters 1 and 2 of the FEIS to include a comparison table of the various analyses areas in order to assess the potential benefits or adverse impacts associated with each design.*

Comment 5-10: Explore the feasibility of a potential use of the proposed development as an exclusively 55 and over community. (D. Levenberg)

Response 5-10: *While it would be feasible to create an exclusive 55+ River Knoll community, it would severely restrict the market area, increase the length of time for occupancy, and would increase holding and operation costs. As previously stated, River Knoll is being designed for a market dominated by young professionals and empty nesters. It is this market that studies show there is a pent-up demand for highly amenitized luxury rental units. See also Response to Comment 5-10.*

Comment 5-11: Alternatives E and F each contemplate two different options. However, they are each only represented by one column in the Alternatives chart. Each different design for Alternatives E (E.a and E.b) and F (F.a and F.b) should have their own column so that the potential benefits/impacts associated with each design can be properly assessed. (D. Levenberg)

Response 5-11: *See Response to Comment 5-9.*

Comment 5-12: At the Town Hall meeting Mr. Vetromile indicated that because of the costs associated with all of the high-end amenities being proposed as part of the project, if there was a reduction in the number of units it would impact the Applicant's ability to provide the community benefits proposed for the project – specifically, traffic infrastructure improvements and a $350,000 contribution to the School District. The Applicant should explore an alternative where there are fewer amenities so as to allow for some community benefits under Alternatives E and F and discuss what those community benefits would be. (D. Levenberg)

Response 5-12: *The "extraordinary costs" to build and market River Knoll can be loosely placed into two categories: (a). those extraordinary project costs necessary to attract the target demographic necessary to market the Proposed Project, and (b) various "exactions" – either on-site or off-site.*

Extraordinary Project Costs - The design of River Knoll involves a complex set of programming and design considerations necessary to attract the contemplated market that River Knoll is seeking to appeal to. Some of the more salient requirements are secured and well-lighted garage parking, elevator access, a high level of amenities (i.e. fitness center, yoga studio, dog spa, function rooms), outdoor pool, thoughtful landscaping including a central courtyard with a "Zen Garden", costly Adirondack architecture, and individual units with wood flooring, stainless appliances, washer/dryer, and many other premium features. In addition, there are staff operating costs to manage these amenities. If amenities are removed from the project, the market perception begins to shift whereby it can become viewed as a more modest quality project and, in turn, market demand and rental rates suffer. As rental rates are lowered, so is the market value of the project. The spectacular topography of the Stony Lodge Hospital site provides a rare opportunity to build a beautiful building and it would be a wasted opportunity to build a less than exceptional structure. The surrounding community of homes will benefit from the up-scale market perception of River Knoll project and market values will strengthen.

On-Site Exactions – River Knoll will be burdened with costs not directly tied to the construction and marketing of the building. The obvious ones include the project's need to comply with the Town's requirement to provide nineteen (19) affordable units which operate at a significant deficit relative to the cost to build these units. Their operating deficit must be subsidized by the market rate units and, very roughly, it takes two or more market-rate units to support the deficit caused by the below-market rate unit.

Off-Site Exactions – River Knoll has undertaken (independently and with no request by the Town) to work with NYSDOT to improve the intersection of Route 9A and Croton Dam Road. The undertaking is time-consuming and very expensive and will cost the project upward of $1.0 million to design, process and construct. Additionally, the applicant will continue to cooperate with the OUFSD Superintendent, his staff and members of the School Board (once again independently and with no request from the Town or District). An example of the cooperation the applicant has exhibited is an agreement which is shown in Appendix D, to make direct mitigating payments which the District will use to improve and/or expand classrooms or other facilities.

Chapter 6: Irreversible and Irretrievable Commitment of Resources

NO COMMENTS RECEIVED.

Chapter 7: Growth Inducing Impacts

NO COMMENTS RECEIVED.

Chapter 8: Effects on the Use and Conservation of Energy Resources and Sold Waste Management

NO COMMENTS RECEIVED.

Appendix A
DEIS Public Hearing Transcript

TOWN BOARD, TOWN OF OSSINING
STATE OF NEW YORK
---------------------------------------X
In the Matter of the Application of:

STONY LODGE HOSPITAL, INC.
and GLENCO GROUP LLC
For an amendment to the Zoning Code of the Town of Ossining to:

(1) Establish a new zoning district to be known as the MF2 (Multifamily Residence 2) District; and (2) Re-Map the Subject Premises commonly known as "Stony Lodge Hospital" situated at 51 Croton Dam Road, Ossining, New York, which Premises are designated on the Tax Assessment Map of the Town of Ossining as Section 1, Plate 4, Block 13, Lot 2 and Section 1, Plate 4-C, Block 30, Lot 1 from the R-15 (One Family Residence) District into the MF2 (Multifamily Residence 2) District.

Joseph G. Caputo
Community Center
95 Broadway
Ossining, New York

DATE: April 4, 2018
TIME: 7:54 p.m.

B E F O R E:

CHING WAH CHIN, CHAIRMAN
JIM BOSSINAS, Board Member
GARETH HOUGHAM, Board Member

ALSO PRESENT:

KATHERINE ZALANTIS, Esq., Town Attorney
DAVID H. STOLMAN, Town Planner
DANIEL A. CIARCIA, Town Engineer
SANDY ANELLI, Planning Board Secretary

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THE CHAIRMAN: Good evening.

This is the Town of Ossining Planning Board for April 4, 2018.

We will go around the table to introduce ourselves.

MR. HOEFLICH: Marc Hoeflich, board member.

MR. HOUGHAM: Gareth Hougham, planning board member.

MR. BOSSINAS: Jim Bossinas, board member.

MR. STOLMAN: David Stolman, town planner.

MS. ZALANTIS: Katherine Zalantis, town attorney.

MR. CIARCIA: Daniel Ciarcia, consulting engineer to the planning board.

MS. ANELLI: Sandy Anelli, secretary to the planning board.

THE CHAIRMAN: The item on the agenda tonight is the River Knolls, 40 Croton Dam Road, Draft Environmental Impact Statement,

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DEIS, public hearing.

We are opening for comments, but before we start I would like to note that since there seems to be so many people that we keep our time reasonably within limits here.

Hopefully, each person can take about four minutes to speak. If you start hearing the same comments made, please make a statement that you agree with whoever spoke before about whichever topic you wish, rather than going into the exact same details.

The other thing that we want to point out here is that we would like to make -- if the board would like to consider that the town board has requested that the period for public comment on this DEIS be extended until May 16, 2018.

Could I have a resolution from the board whether or not to

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support that; the written comments?

MR. HOEFLICH: I will motion that I agree with that.

MR. HOUGHAM: Second.

THE CHAIRMAN: Any objections?

MR. BOSSINAS: No.

THE CHAIRMAN: So that the public is aware, we are extending the public written comments until May 16, 2018.

So even if you don't get to speak today or if you haven't had a chance to write something for us to consider, you have time until May 16, to submit that in writing. And anything submitted in writing will also be addressed by the applicant.

Any questions about that?

AUDIENCE: How would that be submitted, the comments in writing?

MS. ANELLI: You can send it to the Building Department, the Town of Ossining Building

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Department.

AUDIENCE: It is not online?

MS. ANELLI: Yes. We have an e-mail on the main website townofossining.com. You can go to the planning board and there is a place to send in comments or you can just e-mail it directly to our department or mail it or drop it off.

AUDIENCE: Thank you.

MS. ANELLI: Our e-mail is Building Department, but it is abbreviated, it's BLDGDEPT@TownofOssining.com.

AUDIENCE: Thank you.

THE CHAIRMAN: Is the applicant present today?

MR. NULL: Yes.

THE CHAIRMAN: Do you have any comments?

MR. NULL: Yes. I want to give a brief summary if I could.

My name is William Null. I

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am a member of the firm of Cuddy & Feder. I am here on behalf of the applicant Glenco Group LLC and Stony Lodge Hospital, Inc.

As you said correctly, Mr. Chairman, this is a public hearing and the draft environmental impact statement which has been available in the library and other locations in a hard copy and online since early March when it was accepted by the planning board.

The purpose of the hearing is to get comments on the DEIS, and any issues raised in connection therewith.

I know your consultants may comment on this, but the purpose is primarily to give comments on the issues as they are detailed in the DEIS and to provide other information if possible.

It is really not on the -- whether somebody wants or doesn't

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want the application as presented.

We are looking to try to be able to take the comments and respond to the comments in what is called an FEIS, the final environmental impact statement.

There needs to be substantive comments responding to your statements and questions tonight. So we look forward to getting the public input and responding to the comments.

Historically for people to know, the initial application which includes a petition to amend the zoning ordinance was submitted in November 2015 to the town board. The planning board declared itself to be the lead agency for the environmental review of this matter, and that is what is occurring here today. The planning board is the agency that is conducting this hearing.

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As I said, the DEIS was accepted by the planning board in early March.

As probably most of you know, the premises is approximately 17.9 acres, just a little under 18 acres, most of which is in the Town of Ossining. 16.65 acres where the Town of Ossining formed a quarter acres are within the Village of Ossining.

So the proposed development here is to demolish the Stony Lodge Psychiatric Hospital. It is a 61-bed private psychiatric hospital for children and adolescents that opened in 1927, and replace it with 169 market rate units and 19 -- what are called below market rate BMR units under the town code.

We are looking to develop the areas that were occupied by buildings on the site, so that we reserve the large meadow area along

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Croton Dam Road.

Hopefully -- we don't have plans here but all the detailed plans are available, including the alternatives and analyses are set forth in that DEIS.

And I encourage people to look at that information. It was developed under the guidance and direction of the planning board and the town's consultants.

There is a lot of information there, including traffic that responded to comments that many of you raised during the DEIS scoping session, when questions were raised about locations to analyze traffic, or other issues to bring up.

The portion of the premises that are wholly within the Town of Ossining, and are the subject of the petition to amend the zoning code are matched in the R-15 one-family residence district.

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We are looking to amend that to establish an MF2 residence district that would enable us to develop it as mentioned for the number of units indicated.

That includes a 10 percent required affordable housing component. That is generally the outline.

I don't know if any of you have any other facts or circumstances you want me no mention. But I want people to generally understand what the application is to the extent any of you are not fully familiar.

Thank you.

THE CHAIRMAN: Does the board have any comments at this time?

MR. BOSSINAS: No.

THE CHAIRMAN: The staff?

MR. STOLMAN: No.

THE CHAIRMAN: Who is first on the list?

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MS. ANELLI: The first is Jack Reilly.

MR. REILLY: My name is Jack Reilly. I am a lifelong resident of Ossining. I live at 23 Claremont Road.

I had a chance to look at the document EAF part 2. I was at the library last night and heard the presentation made to the town.

There are many people here and so I don't want to take too much time, but some of the things that doesn't sit well with me is that EAF part 2 report.

One thing says there will be no impact on open space and recreation. Sorry. 370 parking spaces, 188 more units. What is Veterans Park going to be like? What kind of weekend traffic are you going to bring in there, that's one.

Transportation, did anybody

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stop or ride down Dale Avenue behind a school bus, and watch 25 kids get off at a time?

Imagine some of those new residents, everyone knows how long they will have to wait when those buses are dropping off and picking up kids. It is just a thought.

No impact on the community and the character of the neighborhood? Look all around at the zoning map; single-family homes. It is like -- River Knolls, a nice concept but you're in it for the money and not for the benefit of the community.

You come across as if you're going to give the school district a payment, that is what you said last night. You didn't tell us how much or if there is going to be a pilot or is there a pilot on this project.

Our school district cannot

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even think of putting another bathroom in without expanding the footprints of the existing facilities we have.

How are we going to deal with those 22 to 27 new students your project will bring in?

The Phelps project will bring in and the Snowden Avenue project will bring in, and others that are on the planning board.

So I will let my neighbors add to some of the arguments, but these are my concerns. I think it needs to be scaled down. Again, you're like a giant in a small -- a giant puzzle piece that just doesn't fit in that area of the town. Thank you.

MS. ANELLI: John Leslie.

THE CHAIRMAN: One of the board members has noted that you should really be directing your comments to the board.

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MR. LESLIE: John Leslie, Dale Avenue.

I have two comments or questions related to the environmental impact and then just one statement to tag along with Mr. Reilly.

The first is I didn't read what is available in the library, so this may have been covered, but I just wanted to put it in your craw just in case it wasn't.

When the traffic study was done, I was -- I am just curious to know at what time of the year was it done, because if it was done in the summer sometime and it didn't necessarily take into effect the school year, I want to make sure; and that it wasn't done on the weekend.

Strangely enough when I went up Hawkes Avenue today, I saw those traffic monitoring cables and my

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wife made the comment: They are out now. Do you think that is for the River Knolls project? So they are doing it when the kids are off on a vacation this week? That's the kind of thing that just bounces around in your head.

The second thing was a comment that I had when this was initially proposed last year.

There have been numerous backups in the sewer line in front of Conte's.

My belief is that the existing sewer line that runs along Dale Avenue is of an already, as it stands, a lesser size that could comfortably -- diameter-wise that could comfortably handle the existing load.

I look at this historically because when all the condos were put up across 9A that certainly increased the load on the lines

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going down Dale Avenue.

So I wanted to know, with -- I would just think common sense would say, we are adding another however many people and the increase in waste coming through there; the lines may have been bigger for the new condos, but when they funnel down into what I am imagining is a smaller existing line on Dale Avenue, it just doesn't work.

So it will impact the underground infrastructure and I want to make sure that everything will be fine. Okay. I don't know, because they may take care of what they can do on their end, but what is down in the village may have some undue -- unforeseen consequences that you guys will have to deal with or the town or village has to deal with.

My other comment, to tag

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along with Mr. Reilly, is that when all these groups keep coming in, I know that -- I believe Mr. Sanchez and the school board, you know, they want the community to -- the education, but as he said -- to increase the education but as he said the existing structures are not enough.

I will say that at some point in time no matter what is being offered by this outfit that we can expect to see a school bond coming along not far behind.

So -- it will keep going up with all these other projects that Mr. Reilly has raised.

Thank you.

THE CHAIRMAN: As a note, the document has been in public view and there is still time for the public to go and examine it and make written comments.

So if you have not had a

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chance to look at it and you're merely planning to make a generalized statement that doesn't necessarily address anything -- or may have been already covered by the statement. Please consider you're taking up time from your other neighbors who may want to speak.

Thank you. Next.

MS. ANELLI: Bob Celente.

MR. CELENTE: My name is Bob Celente. I live at 13 Feeney Road. I have been a resident for over 40 years.

I remember when they were putting up the projects across on the corner of 9A. And the builder said then that its impact on the schools would be very, very little; that they were doing it as a high income, and there would be few children in the units.

Do you know today the school

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bus goes up into that unit? And they come out half full? So the impact is significant and I believe the impact on the school district with these 188 units will also be significant. Thank you.

I was a school business administrator for 40 years in New York State, and I know for certain that the people who are sending their kids to school from those apartments will not be paying a fair share either.

MS. ANELLI: Ray Santucci.

MR. SANTUCCI: My name is Ray Santucci. I live at 29 Grandview Avenue. I look right over into the meadow. My house is on the corner, right on Croton Dam Road.

They conducted this traffic survey, and I don't know the exact figure of how many more cars they said it would increase trips, but reading on traffic surveys and

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studies that have been done, most of them are wrong. They are actually -- they don't account for -- they are about 30 percent off; the amount of trips.

What I am saying is what about the noise that I will hear from all these vehicles?

Also, anytime you improve a road, studies also show that if you put those turning lanes in like they are talking about doing, it actually increases traffic as well because of convenience. People love convenience, so you will gain more.

Well, what am I going to do, listen to cars all day long? That is all I have to say, but I don't want to hear that noise.

MS. ANELLI: Nancy Kennedy.

MS. KENNEDY: My name is Nancy Kennedy. I live at 22 Croton Dam Road, and I have been a

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resident of Ossining for over 40 years.

As Mr. Santucci indicated, I am right on Croton Dam Road. I have yet to be able to successfully get out of my driveway without having near collision with cars that are already trafficking there.

The school buses needless to say go up and down constantly, as they should, and that in turn causes more traffic backup.

I am concerned that we are not taking into consideration the safety of the traffic. I would rather see that than the flow, you know.

We can always manage to say yes, it is flowing properly but can we say it's flowing safely?

That is a major concern. There are young children. There are people that want -- I am sure even residents that will be in here

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that have children that want to secure a safe transit for their families and children. That is a major concern. I would like to have that addressed. Thank you.

MS. ANELLI: Aaron Spring.

MR. SPRING: Aaron Spring, 64 Meadow Road.

I am just going to reiterate what Mr. Celente was talking about as far as the schools.

The schools are already overcrowded. We don't have the room for the students we already have. And we don't have the money to continue to house and educate additional students.

These condos are not going to be paying their fair share, and who will have to make up for that is the single-family homes.

And I am sick and tired hearing every day from people that they have to either downsize, move out of the community. They paid off their house and now they can't afford to live here simply because of the taxes.

We know that the shortfall and the lack of financial funding that we will get from these condos or these apartments is going to land on the single-family homes and on the single-family homeowners. Enough is enough. It is too expensive as is, and we don't need a downsizing. We just don't need this project at all. That is all I have to say.

MS. ANELLI: Rocco Trapasso.

MR. TRAPASSO: Rocco Trapasso, Jr., from 43 Pershing Avenue.

I lived there in that spot for the last 39 years. I watched the condos go up across 9A, and I have seen the traffic impact that they have had.

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And I don't think that the 188 units that are going to be put up here on the Stony Lodge property are going to be any less.

I looked at the traffic impact statement and believe me, that statement was almost too good to be true, folks. I don't know how anybody else felt about it.

I don't think it is valid. I think it is a fallacy and I think it is designed to make the developers look great, like a lot of the other things that go into the impact statements.

One other thing I would like to say, too, I know Mr. Reilly had alluded to it.

There will be 300-plus parking spots put up there.

I live on the bottom of a hill and every time there is a heavy rain that water floods down Croton Dam Road, makes a turn,

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comes down my driveway and rips up the patio.

I think when you put up 30 units -- 300 parking spaces that the blacktop will not suck that water up; it has to go someplace, and it will go right down Croton Dam Road.

One other thing, too, that doesn't affect the impact but me and the rest of the people that are here, we don't have the financial ability, the expertise law-wise or real estate-wise to fight a multimillion dollar corporation.

That is what you're here for. To help the community and help us. If you can do it, we would appreciate it. Thank you.

MS. ANELLI: Charles Callahan.

MR. CALLAHAN: Good evening to my friends and neighbors in the audience, and distinguished members

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of the panel.

Most of the situations have been discussed not at length. However, I agree with all of them, and this is the reason why.

Sewage is a major, major league situation.

I understand from my previous attendance at meetings that surveys were done and it was concurred that, well, everything is fine and the sewage is going to be all taken care of. It is going to be able to accept the volume of 100 some-odd units.

I haven't seen anything on the internet, anything else or the studies. However, I would like to see the reports on it; who did the studies and what their credentials were; number one, because it will be overwhelming.

In this neighborhood, it is residential, single-family houses

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that have been already established by my previous speakers.

Second, traffic is going to be abominable. I travel one and-a-half hours, okay, each way to and from my work. Route 9A, it takes me one minute to get there. From 9A to the Taconic Parkway, it takes another 20 minutes.

This type of traffic and this type of volume from the impact that it will create, it is going to put another or at least no less than 30 to 45 minutes on my commute. That is just not me. That is including school traffic. And this is five days a week.

We are not talking about the weekends. Weekends aren't important in this regard.

Schools, that has been discussed. If I recall, somebody had made a statement that the superintendent of schools and --

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don't quote me on this. I am vague on this -- it was a long time ago, months ago. But somebody stood up on the panel and said, somebody from the school district, whether it is the superintendent or somebody in a supervisory capacity said, no. The letter said we will be overwhelmed by this type of structure; by this type of project.

With that being said, last but not least life safety is the utmost number one priority to all of us. Okay.

In the event of all this traffic in the morning or in the afternoon with people coming home from work, if there is an emergency in my neighborhood --

I am sorry. I didn't identify myself. I am Charles Callahan. I am from 22 Oakbrook Road. I am a 30-second drive and a one-minute walk.

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I have been through this, coming from the Town of Dobbs Ferry. Ardsley made this same mistake. They did all of this structure and buildings and co-ops and everything else.

If they found out that in a one-mile stretch to get to Dobbs Ferry hospital from 9A, which is a normal three-minute drive, it would take an emergency vehicle 45 minutes to get from the location from where the patient had to be transported from to Dobbs Ferry Hospital.

That in and of itself tells me that this is not a good idea at all; not only does it change the structure of the community; does it impact the people in their one house -- one home.

Although I have only been here a year and-a-half, okay, I moved away from this environment

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and came here because Ossining was the type of community and the neighborhood that I moved into was desirable. This will just change that complexion completely and for the worse, gentlemen/ladies, not for the better.

Money is not an issue here. I understand that these people have, you know, objectives and all well and good; this is America and that is what we are here for -- am I done?

But here is my point, last but not least, this project has to be shut down.

MS. ANELLI: Henry Grossman.

MR. GROSSMAN: My name is Henry Grossman. I am a lifelong resident of Ossining.

I was born here. I went to school here. We made a larger high school, a middle school while I was in high school.

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At this point I have to say this is a terrible idea. I have to agree with everybody that came here before me.

And I feel that as was said previously, this impact is going to be horrendous and all of these studies, they really have to be taken with a grain of salt because who is paying for the studies? This is about statistics. You can slant them any way you wish.

I mean if you went to court and they call in expert witnesses, you're definitely going to pay people that put things in their favor and do it very well, even if they have to lie.

I am sorry. That is the way I feel. This is absolutely wrong. And as a resident, I feel betrayed because 25 years ago, I bought my single-family home which was surrounded by other single-family

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homes. It was zoned for single-family homes.

If you pass this, I will say that you are betraying every single person in this room.

MS. ANELLI: David Whitlinger.

MR. WHITLINGER: I am going to try to send -- give you a little more information on the school stuff. So I will hand these out before I grab the microphone.

The first slide I have for you, this was prepared by Boise Demographics in November 2017.

What you see here is the growth of the school system since 2007. So from 2007 at about 4000 students, you see the line that's drawn there, to 2017. That was in the last five years that that was done. That data actually does not include pre-K and does not include any future projections.

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So everything to the right of that line does not include anything having to do with new housing structure. That is just using a growth curve.

What is interesting about this data, in which the demographer and I are now I'm trying to figure out, is that all of that growth has been essentially a flat housing structure.

So if you look at the U.S. census data in 2007, 2017; the number of housing units is between 11,000 and 10,500. In some years it went down, but we grew by over 1,000 students in that time period.

The hypotheses is that there was a large number of one and two-bedroom housings built in the 2007 time frame. It was never anticipated that those would be school age children structures. Because the families would move out

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of there and move into homes.

That didn't happen. All of those structures became school-age children structures. In addition, to that all of the places in Ossining were multifamily dwellings could be built, is what happened.

So what we have here is not an increase in the housing stock, but an increase in the number of school-age children that are living in the existing housing stock.

So we have multiple children in single bedroom and multiple children in two-bedroom housing. That was not anticipated.

The Boise Demographic, if you look at it, doesn't believe there is a flattening of this curve. If you talk to the school board and you talk to Ray Sanchez, they will tell you emphatically we are already past capacity.

Let's look at the next slide.

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If you look at this slide, this shows what a class size should be. There is a policy column as well as an aspirational goal column.

If you look in the middle of the slide there is a column that says the average class size, where it's the current rate. You can see in several cases we are already past the class size from policy and we are well past in some cases the aspirational goal.

It is not hard to take another 100 students into this school system and blow these numbers out of the water.

I will tell you that the school system believes that they don't have the authority to say no. They don't have the authority to turn away any student which we appreciate. They should never do that.

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They are there to educate all of Ossining, but they have no authority to stop the growth of the students. That authority lies with you and with the town board.

If somebody is going to protect our school system it has to be you. It has to be the town board.

Turn the next page, please.

Here you will see, this is the data from last year where the Ossining high school and the middle schools are just represented here.

You will see where the projected numbers and where the difference lies; 90 kids. They projected a number that was off by 90 students. That is almost four classrooms' worth of kids.

There are no more classrooms to be built. You can't put anymore classrooms into our school system.

What does that mean? That

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means increasing the class size and our students are now already in some cases in class sizes of 26 and 27 in the high school. That is unacceptable for many of the residents here.

If you look at the study, the study that they have produced for you, that the developers produced for you, they have given you two different numbers.

One of the numbers, they used the Rutgers model. Demography will tell you the Rutgers model is from 2006; it uses data from 2006. It doesn't come close to representing what Westchester actually looks like.

If you just move over one line in the model, you go from a multiplier that they have used of about .18 to a multiplier of .74. You double or triple the number of the students that will come out of

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this development. There is absolutely no reason to believe the numbers they produced for you.

The demography from Boise will confirm that.

Lastly, I would like to implore you, this data is available. The school system has the addresses of all of the students and the number of students that come from every address. The Building Department has the addresses of all of the residents.

We have privately FOIL'd this data in order to build a database in order to prove to you where all of this growth is coming from, but that study needs to be done in order for you to make a good, intelligent decision about how to objectively plan for the growth of our community.

If you keep adding more students to the school system, it

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breaks. It has to be a 30 or 40 million dollar building built. It breaks. That can't happen.

You guys need to do what you're here to do is to protect the school system. We need the decision time to do that. So let us build the database. Let us present the data to you, and then let us have a conversation about what is reasonable growth and when it is time to build a new school or not but don't approve this project or any other building project until we do that work.

The school system will fail, and it is on you and it is on the town board.

MS. ANELLI: Jess Vecchiarelli.

MR. VECCHIARELLI: Hello everybody. My name is Jess Vecchiarelli. I live at 94 Locust Road. I have two children in the

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district, they are four and six-years-old. I know most of my neighbors are aware of this.

The Ossining Union Free School District is the least funded school district in all of New York State. Out of 700 schools that receive foundation funding, we are number 700. 699 other schools receive our tax dollars.

Governor Cuomo kept us at this rate last week when he announced his budget.

Today I confirmed with Superintendant Sanchez that our cost to educate each student is approximately above $20,000 per child.

So if we are going off of their numbers, which I think David just proved are inaccurate, then we are looking at 29.8 children that they estimate will be joining our already at capacity schools.

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This group has offered to pay the school district $350,000, but that is nowhere near covering the amount of students that would be entering into this school district based on their numbers which is closer to $580,000.

So if for some reason this goes through, I would expect that there would be a significant more impact and cost given to our schools to support the needs.

As I said and as everybody else has said, we are at capacity. It is a very real situation. We are not getting funding from the state. We need funding from anybody that is trying to move in here and build because our schools need to be supported, and good schools make people want to live here and it makes for great communities.

When our schools deteriorate,

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then our whole community is in trouble. Thank you.

MS. ANELLI: Marisa Caruso.

MS. CARUSO: My name is Marisa Caruso. Good evening.

I think Dave and Jess have it covered in terms of my question on the studies for the school enrollment increases.

More realistically or practically, I would like everybody to take a look at more comparable apartment buildings, like 25 State Street and the rental buildings that are -- I don't know if they are called Linden Terrace, but they are the brick buildings that are behind Linden Terrace -- so to see how many students come out of those apartments buildings because I think those are the more practical numbers than what are reflected in the reports.

There is a lot of reference

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to Westerly in Avalon as comparables, but I don't think the demographics of Ossining in the majority is Westerly Avalon or even the proposed project. I just don't think it fits the area.

The second question I had was with regard to the alternatives that are presented in this plan because I got the sense last night at the library meeting that the developer isn't really interested in those alternatives. That was just my takeaway from the meeting.

Also, the way he had presented them, there was a question as to whether or not this planning board would ever even approve them.

So is there a way to see something that would be a more realistic alternative to what is being presented because I understand there were -- if it were

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to be a single-family development, a bunch of single-family homes in the meadow area on Croton Dam Road, is that something that would realistically be approved by this planning board or is that just the developer's vision?

Those would be my requests to see something that would actually come in front of you for approval versus what the developer's vision might be. Thank you.

MS. ANELLI: Karen Palmieri.

MS. PALMIERI: Good evening to members of the board and to my neighbors behind me.

My name is Karen Palmieri. I live in the Town of Ossining on Grandview Avenue.

First, I will say that based on what I have read of the documents, I wholeheartedly and completely support and reiterate everything I heard here tonight.

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That is part one.

Part 2 I will add, 18 years ago I moved here from New York City. I moved into a single-family home in a town with a single-family zone.

The reason I did that is I wanted to get away from noise pollution, traffic, sound -- you know the pollution that comes from those things -- you can do all the studies you want and this has already been said earlier, but numbers can be made to do whatever they want as well.

We know why we love the Town of Ossining. We know why we love our community.

To put a large building in a community of single-family homes, surrounded by a wooded area is just -- it is wrong. I am imploring, I am begging this board, please don't do this to our community. Please

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don't do this.

This is not Ossining. It will forever change what our community is, and why we all love it.

I mean again I grew up in New York City. There are places for buildings with 188 units, but the former parcel of Stony Lodge Hospital is not the place for it. Please consider everything you're hearing here tonight.

Everything you heard at the library, everything that comes in via the -- and via whoever will bring in communication by the written word. Thank you so much.

MS. ANELLI: Lou Castronova.

MR. CASTRONOVA: My name is Lou Castronova. Most of the points I was going to bring up were already addressed.

I moved here from New Jersey 30 years ago. I grew up in a town

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where everybody knew everybody and the families they raised their kids, and everybody knew everyone in town. So it was a community.

When I came to Ossining, I had the same feeling and that is why we moved here.

I live on Narragansett Avenue. When they come out and 9A is going to be backed up, they are going to make a right onto Narragansett and it will be a raceway.

I back out of my driveway and they crest the hill and they are moving at least at 40 miles an hour.

So when the people know that that is the way to go, they will be going down through the whole community. They will go down all the way through Narragansett to get on 9A and avoid the traffic.

I would ask -- I don't want

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this project. I am just like everybody else, but I think the thing that would seal the deal is we get an impartial party to do the -- to conduct the traffic and do the sewage assessment.

Anybody that brings -- it is like when you buy a house and the guy serves up the house inspector; guess what the house passes with flying colors. Okay.

I really don't want that. Not that I don't trust them. I would feel more comfortable and I think the residents would, too.

You have to remember also one other thing. If they are catering to these -- I guess, empty nesters, they are going to have two cars.

Now in the two bedroom, they will have three cars. And what about the visitors, when this beautiful place they want to come and visit. Okay.

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So that is -- it doesn't belong in the area it is. Build all you want. All the other projects are not in residential areas. Period. That is all I have to say.

MS. ANELLI: Could you sign in, please.

Next is Mr. Bedoya, Juan Bedoya.

MR. BEDOYA: I am a resident at 4 Birchbrook Road.

My father he is not here because he is very tired tonight. He lives in 37 Pershing Avenue. And my sister also owns her home, and she lives on Lincoln.

And none of us -- the three of us own our own houses here, and we don't want that project here because we don't want the single families.

Because we know if we bring more people into the community, we

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would like single families but our school system can't take it. We are already the lowest funded; our classrooms are 28 or 30. I can say that because I am a teacher at the high school and I know that.

We are not thinking in the future. If our school system fails, nobody will want to come to Ossining and our homes, the prices will go down. Our taxes will not decrease.

Also, we are building something that's a new project; it is not using energy renewal, no solar panels, no wind.

This is a new project, but we should be thinking of the future. Oil is not the future. That is all I have to say.

We are a welcoming community but we want it done the right way, and thinking about the future of Ossining not about how much money

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we can make in the short-term.

MS. ANELLI: Next is Marianne Lattin.

MS. LATTIN: I know there was some discussion raised about the traffic study, and I just wanted to add something to it that I didn't hear, and that has to do with the train station.

I commute into Manhattan on a daily basis. I live at 4 Dewars Court which is a cul-de-sac off Feeney Road.

Rocco mentioned the school buses. There are several school buses that travel down Croton Dam Road and also within Dale Avenue. There is one stop that takes at least five minutes; it is on the corner of Dale and Marble. It takes at least five minutes for about 30 to 40 kids to get on the school bus. I assume it is middle school.

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When I started working in Manhattan over 30 years ago. It took me maybe five minutes to get to the train station. I can't even go down Dale Avenue.

The light at Dale and Croton at this point, it takes -- maybe you can get five or six cars through. Then you have another light at the bottom of Clinton Avenue and Croton Avenue.

Then forget about trying to get down Croton Avenue because there is so much traffic. Then just getting down Main Street; there is another light at the bottom of Main Street.

If you get stuck there, now that you can make a left turn on Spring Street, that backs up traffic even more because there is not a right lane to go around the cars making the left.

That was a really bad

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decision that someone made. It was horrible. I just think it is very dangerous, but in any event the parking situation at the train station from my understanding there is a waiting list.

So not only has that parking lot been extended over the years, there is also permit parking only going up off Water Street. The bottom of it is where the old water department was. I don't really know what the name of that street is. There is also permit only parking on Water Street.

I wanted to address the fact that -- there is actually an article that was in the Real Deal which is a real estate -- I don't know if it is just a magazine but I got it off the internet.

I just wanted to share a couple of things. It says:

"Some millennials in search

of affordable rents within commuting distance to Manhattan have exhausted their options to the west, east and south and are now looking north past The Bronx to Westchester County.

"Developers have taken note."

So the article goes on and talks about ten or more different developments that are currently underway along, I would say, there is some in Tarrytown, Tuckahoe, there is several. There is even a paragraph in here -- sorry. I have to find it.

THE CHAIRMAN: Any documents you want to submit, submit them to the Building Department.

MS. LATTIN: I plan to. I am going to put this in writing.

It just says:

"Also planned for Ossining is River Knolls, a project developed by Glenco Residential that is also

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a 188-unit building."

Now this was written in January 2017.

"Glen Vetromile" -- and I apologize if I am not pronouncing that correctly -- "a managing partner says that the firm has about 500 billion dollars in projects underway in Westchester.

"A second project is a proposed three-phase 750 units obscure project adjacent to the Mount Vernon West Train Station," blah, blah, blah.

So I just wanted to make that point about if there is an expectation that people are moving -- planning to move to Westchester from Manhattan and commute, that will definitely have an impact, a major impact not just at 9A and 134 but throughout the entire village on a daily basis.

Then the other issue I just

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wanted to mention was were our municipal services taken into consideration as part of the study. I know it is an environmental study, but it still will have a taxing effect on our police force; on our DPW, and on other services, the Sanitation Department.

And I just want to know, has that been taken into account also?

I will put my comments in writing and submit them. Thank you.

MS. ANELLI: Alex Vallone.

MR. VALLONE: My name is Alex Vallone. I live at 11 Birchwood Road. This area is zoned for single-family residents, correct? Anything more? Two families, three families, four families at the most; is that right?

MR. HOUGHAM: Single only.

MR. VALLONE: So if we are a single-family community and we are

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going to make an exception, right, wouldn't that exception want to benefit the community? I think you're hearing from the community now that this exception should not be granted because the community doesn't want it. It is that easy.

It is an exception that shouldn't be granted because the community who elected the board doesn't want it.

Are we here to benefit three gentlemen outside this community, so they could put money in their pocket? In the overall it will take money out of our community's pockets and our children's education.

I am here 40 years. I just think it is unfair to upset the community over one project where they are the ones that will benefit and not us and our children.

THE CHAIRMAN: No other

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comments?

Just to make sure, are there any other comments?

The time for written comments is extended to May 16.

MS. ANELLI: Caroline Curvan.

MS. CURVAN: I live at 11 Hawkes Avenue.

I have a little experience having gone through the Parth Knolls project. That was approved by this board.

At that time I also -- I want to -- well, I wanted to bring up a couple of things.

One thing that I had read, that was when I first spoke for the 87 Hawkes Avenue. It was the Ossining town code, specifically paragraph 55-8A, in considering the application to the Architectural Review Board which is, of course, provided to all the members of the town board -- which of course you

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know but I am just saying this for the people in the room:

In considering an application, the Architectural Review Board shall take into account the natural and manmade features of the site and its surroundings, and the character of the zoning district and its peculiar suitability for particular purposes with a view to conserving existing values and encouraging the most appropriate use of land.

I looked at the respective Ossiningdot.com website which I understand is a website for River Knolls. They are talking about using an Adirondack vernacular for this development.

I wanted to continue with the town code that says:

"The Architectural Review Board may disapprove any application, provided that the ARB

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finds the project as proposed would be so detrimental to the desirability and property values so as to cause striking dissimilarity, visual discord or inappropriateness in general or with respect to other structures located on the same street."

So I am not even talking about the size of 188 units. I am talking about the vernacular, the architectural vernacular. And I would like to say it is inappropriate.

THE CHAIRMAN: Are there any other comments?

Hearing none we will close the oral public portion of the hearing.

Again, the public is welcome to submit written comments up until May 16. Of course, even the comments today will be addressed by the applicant, and those responses

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will be in public on the website as well.

Anything else?

MR. STOLMAN: There will be a final environmental impact statement.

The applicant will be responding to all of the substantive comments that have been received orally and in writing in the final statement which will be a public document. It will be on the town's website, at the Building Department and at the library.

AUDIENCE: But there was at least one or two comments that I heard that can't be addressed by the applicant. It needs to be addressed by the board. Will they also be covered?

MR. STOLMAN: The final is the planning board's document. They are the lead agency. The applicant is going to take a shot

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at drafting it, but ultimately it will be the board's document and the board will be assured that all of the answers are accurate. So the board will be weighing in on whatever has been asked of the board.

AUDIENCE: What about if they don't accept all the changes?

MR. STOLMAN: What changes?

AUDIENCE: Any changes that we brought up tonight.

MR. STOLMAN: Ultimately, it is not this board's decision as to whether we build this project or not. It is the town board's decision.

AUDIENCE: It is recommended by you guys. You have to approve the zone.

MR. STOLMAN: No. This board is going through the environmental review process, and it is going to make sure that the final

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environmental impact statements --

THE CHAIRMAN: Let's stop for a moment.

(Recess taken.)

MR. STOLMAN: Can you hear me now?

MR. NULL: Yes.

MR. STOLMAN: This board is the lead agency with respect to the environmental review process.

This board will make sure that all of the substantive comments that have been received are responded to appropriately in the final environmental impact statement.

Subsequent to that, the board is going to draft a finding statement which will be a distillation of the final environmental impact statements. And it will make its decision to the town board, the legislative body.

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AUDIENCE: When does that happen?

MR. STOLMAN: Later on.

AUDIENCE: When, when?

MR. STOLMAN: We couldn't say.

AUDIENCE: 2018, 2019?

THE CHAIRMAN: You need to all come up and speak clearly. The court reporter can't hear you.

Everybody has to understand the initial issues brought up. So when the applicant responds you will know what the --

Who was speaking?

MR. NULL: Is this still the DEIS comment period? Or are these questions related to what happens after it?

Because I want to make sure that you intend to close the public comment period that you resolve to do so and then these questions follow, but it makes the record very confusing for it to seem as if we need to respond to everything they are asking.

THE CHAIRMAN: If they are not substantive, you won't need to respond to them. If they are procedural questions, you don't have to respond to them.

We are trying to address the concerns of the public right now.

MR. NULL: I am fully supportive of that. I just wanted the clarity, and you provided that.

THE CHAIRMAN: One person at a time.

MR. SPRING: Aaron Spring, 64 Meadow Road.

Does the board have the power to stop this project if they don't rezone? Will this project be stopped? You said the board has to decide whether they are going to rezone.

My question is if the board

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decides not to rezone, does the project get stopped?

THE CHAIRMAN: You're talking about the town board now?

MR. SPRING: I'm sorry, the planning board.

You have the ability to zone, right?

MR. STOLMAN: No, no absolutely not.

I will restate the question.

Does the planning board have the power to stop this project?

MR. STOLMAN: No, not really. It is a decision of the legislative body. The legislative body is the town board. The town board either rezones the property or doesn't. This board has no legislative -- no rezoning power whatsoever.

MR. SPRING: But you make the recommendation?

MR. STOLMAN: Yes.

MR. SPRING: When will we

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know what the decision is?

MR. STOLMAN: This has been going on since 2015 it is 2018 now. It is hard to say how long it will take to finish the environmental review of this project.

It all depends on how good the final environmental impact statement is that the applicant drafts; how many reiterations there are of that document it could take a year, it could take more than a year, it could take less than a year. It is hard to say.

MR. LESLIE: John Leslie.

I just want to -- when this -- when your final report is submitted to the town board for consideration, I assume it is going to take into account this firm's attempt to address the concerns that have been put forth tonight.

But I would hope that somewhere in your report to the

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town board, unless they are watching it on TV, I would like to make sure that it is conveyed to them the tone of this audience; the residents -- the surroundings in and amongst where this will be planted because it is very clear that the audience is strongly not in favor of this, even if they make attempts to address this.

As regards to that somebody mentioned a $350,000 donation to the school board, the school district, I would think that these guys would come -- they low ball it.

So they are probably expecting to pay a little bit more, but I don't think we should be fooled by that because we are in it for the long term because we live here.

These guys, as has been said and rightly so, they want to make a

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living but please not at our expense.

Certainly, if something will be done in this community, not up in this neck of the woods right now. I don't wish this on anybody in any neck of the woods in this community, because I don't want to see us become a community that is choked beyond what we already hold.

MS. PALMIERI: Karen Palmieri. I have a simple question, that I think many of us in this audience might share.

The town board is the legislative, if I'm understanding what you're saying.

So here is a question: Will the town board have a public hearing before they make any decisions that are concrete about this?

MR. STOLMAN: Yes.

MS. PALMIERI: When will that

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be?

MR. STOLMAN: Eventually.

THE CHAIRMAN: We don't control the town board.

MS. PALMIERI: I understand. That is really why we are here. We are here because, yes, the environmental is a big part of this but at the end of the day we want to make sure we do everything we can to stop this project. Thank you.

MR. NULL: I want to say one thing about timing, if I may.

THE CHAIRMAN: If you want to.

MR. NULL: Everybody seems to be focused on timing. The town board will have a public hearing after the FEIS is accepted --

AUDIENCE: That is presumptuous.

MR. NULL: I am trying to put the timing in context for you. It

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would happen after the FEIS is completed and accepted. Then it is up to the town board on when to set the public hearing on the zoning.

AUDIENCE: How would you feel if we were building this next to where you live? Right. Didn't think so.

MR. NULL: This isn't about me.

THE CHAIRMAN: Any other comments?

MS. CARUSO: Maybe just a clarification or some clarification for everybody here also on the process.

Why do we go through environmentals and alternatives on this project when it is not currently zoned?

I guess just a better understanding on why the process is that we are not looking at the zoning issue before the

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environmental?

We have comprehensive plans for zoning, correct? Isn't that what dictates the zoning, isn't that something else that we consult you on?

Just an understanding of the process; why didn't it go to the town board for a zoning review before it went to the stage of environmentals?

MR. STOLMAN: Because the town board is trying to gather together as much information as it possibly can.

There is a process called the New York State-Environmental Quality Review Act, SEQRA, which requires we go through this process before the town board makes any sorts of decision.

So they are trying to gather as much information as they can, fiscal information -- purely

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environmental --

MS. CARUSO: But aren't decisions about the zoning made via the comprehensive plans that we follow in the town?

MR. STOLMAN: Yes. There would have to be a change to the comprehensive plan as well.

MS. CARUSO: All right.

MS. LATTIN: I think where there is some confusion -- this is Marianne Latin.

The study that we are discussing now and the comments made tonight, those will be addressed by this organization. And then if that next document is accepted, that is the final version.

It is not whether or not it is approved or people agree with it, it is whether or not it contains all the information that it has to contain to satisfy -- is

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it this group or the town board?

THE CHAIRMAN: It is a separate step.

MS. LATTIN: Just for clarification purposes, this group, the planning board, your role is to review any applications for --

MR. STOLMAN: In terms of the environmental review, which is what we are doing right now, the DEIS and the FEIS, this board is the lead agency.

So it is up to this board as the lead agency to decide when and if the final environmental impact statement is accurate.

MS. LATTIN: Assuming that after all these issues have been addressed, you decide that it is acceptable in that form; it is the final form, what is the next step?

MR. STOLMAN: After that it is for this board to draft and adopt a finding statement. A

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finding statement is sort of a distillation of the draft and final environmental statements.

MS. LATTIN: That is one piece of the entire process?

MR. STOLMAN: Yes.

MS. LATTIN: So then where does the zoning piece come in, the request to change the zoning laws -- the zoning regulations from a single family --

MR. STOLMAN: As the applicant's attorney said very well, after the final environmental impact statement is accepted by this board and after this board drafts a finding statement, it goes back to the town board.

Then there will be another report required of this board as the planning board by the zoning law, which is a report on the zoning per se, the zoning itself.

That will be a second report.

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The first report is the finding statement.

The second report will be a memo, basically, regarding the zoning map change and the zoning text change with this planning board's recommendation as to what the town board should do.

MS. LATTIN: You would recommend whether or not the existing zoning law should be changed to accommodate a multifamily dwelling in the Town/Village of Ossining?

MR. STOLMAN: Correct.

MS. LATTIN: That is really your decision -- that would be your recommendation, whether yea or nay?

THE CHAIRMAN: It would only be a recommendation.

The town board would act.

MS. LATTIN: I understand that you don't have the final decision. You have done your work;

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you have looked at everything that you're responsible for and now it goes to the town board.

Is there anything that the community as a whole could do, given the fact that there is not a hell of a lot of support for this project?

THE CHAIRMAN: I don't think we are entitled to give you legal advice.

MS. LATTIN: I am not asking for legal advice. This is not the first time --

THE CHAIRMAN: It is always good that a community expresses itself to us.

As you know the members of this board are also your neighbors.

MR. LATTIN: That is why I am asking. I appreciate this. I am not here to give anybody here a hard time. I would like that everybody else here feels the same

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way that I do. Because you're all members of the community, and you probably feel the same way that many of us feel because you have to live in this town.

THE CHAIRMAN: Understand we are constrained by what we are allowed to do.

MR. LATTIN: I understand. I wanted to make it clear what the next steps were, because I think that that is something that a lot of folks here are unaware of, whether they don't read -- I mean I am ignorant, equally guilty of that.

THE CHAIRMAN: It is highly recommended if you wish to make -- influence the board to really read the document that has been provided by the applicant, see that you can have thorough and detailed comments that can be addressed properly.

MS. LATTIN: Agreed. Thank

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you very much.

THE CHAIRMAN: We will take a break for the court reporter.

(Recess taken.)

MR. BURTON: My name is Joe Burton. I just need to clarify my own mind on the whole process.

You're the lead agency of the DEIS. You gain all this information that you have now, everything that was input from now until May 16; you then put together your report?

THE CHAIRMAN: Yes.

MR. STOLMAN: The document that will be prepared is called the FEIS.

MR. BURTON: It is the final report?

MR. STOLMAN: No. The final report of the SEQRA process. That will be a finding statement that the planning board will draft and adopt. Then it goes back to the

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town board.

MR. BURTON: The town board then takes your information, information from the public as the public hearing which is posted. There is no secret, it is posted that there is a public hearing coming up on this at a town board meeting, et cetera, et cetera.

They then gain all this information from yours/theirs and they make their decision.

If they make a decision not to rezone, everything is done, it is dead on the project.

THE CHAIRMAN: Right.

MR. BURTON: If they make a decision to rezone it, it then comes back to this board to approve everything that is put in; what goes up; how many units there are and how many parking spaces there are and how many elevators there are?

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Am I correct on that?

MR. STOLMAN: Yes. There would be a site plan approval.

MR. BURTON: Right. That could take a project of seven stories to four stories; couldn't it?

MS. ZALANTIS: This is getting speculative.

MR. BURTON: Excuse me. You can take four stories and make it two?

THE CHAIRMAN: Why would you want to have this board make decisions like that rather than --

MR. BURTON: I am asking the question that it goes full circle.

THE CHAIRMAN: Remember this planning board is administrative. We can only work within the constraints of what the code and the town board tells us we are able to do.

MR. BURTON: But you have

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final approval on what --

THE CHAIRMAN: Only within whatever the code tells us we can do.

MR. STOLMAN: If the planning board has prior to that come to -- I am not saying the planning board is done this way or that way, but if it comes to a conclusion that there is no visual -- no significant adverse visual impact from the project proposed, later on it would be probably impossible to change it from the height it is proposed to some lesser height.

MR. BURTON: That is the question that people keep on shouting out, then what --

MR. STOLMAN: It depends what conclusions are reached during the environmental review process.

MR. BURTON: Then it still comes back here for final approval of what goes up?

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MR. STOLMAN: Yes. For site plan approval.

MR. BURTON: Right, but the site plan approval can be changed or altered?

MR. STOLMAN: There is some latitude.

MR. BURTON: It can be changed? That is what I want to know.

You have your final approvals of what is built?

THE CHAIRMAN: Don't call it final approval. That is really -- it really obscures what you're trying to get at which is where you can influence and change the decision-making process.

Once this planning board has come to conclusions about the facts, we have to operate within those facts.

So we have already decided that four stories doesn't impact

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anything. Then I can't go back -- we can't go back later on and say now we demand it to be two.

MR. BURTON: So the picture that is on that there is going to go up? You have already approved --

MS. ZALANTIS: Nothing has been approved. We haven't finished the SEQRA process yet. We are in the middle of the SEQRA process.

MR. BURTON: I keep on asking the question, can things be changed and I keep getting "I don't know" "maybe." Can things be changed once the --

THE CHAIRMAN: I will ask you a better question. Why are you asking whether we can change it at a later stage, if you can change it before it gets to us?

MR. BURTON: I don't understand that question. I can't change anything.

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THE CHAIRMAN: Well --

MR. BURTON: I was trying to clarify things because it seemed to get confused on where everything was going.

You were taking all our information and then it was just the town was going to just approve or deny. But that is not the fact.

All your information is then put into a report that goes to the town, your environmental study.

THE CHAIRMAN: And the town makes the decision.

MR. BURTON: Again, yes, it is not a secret decision. It is well publicized that we are having a board meeting like this one tonight except for the town board.

But after that decision is made, it comes back to your table, right?

THE CHAIRMAN: Only in a limited sense, not in the same

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manner as --

MS. ZALANTIS: And it depends what the decision is.

MR. BURTON: Yes, that's true. If one decision kills everything, then it doesn't come back to us.

THE CHAIRMAN: Even if it comes back to us, even "if" it comes back to us, we can only operate in a limited sense once the decision is made by the town board and the previous findings. You don't want it to get to that stage, if that's your intent.

AUDIENCE: They have a very limited sense. You have to give them the recommendation --

MR. JAIN: Sameer Jain, 11 Pheasant Ridge Road. I have a couple of questions here. Number one was maybe the faster one, hopefully.

The questions that are being

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posed here as well as that you will receive online are the written questions, will they be posted somewhere and be available for public viewing before the 16th of May which is the deadline or will they be made available afterwards?

MR. STOLMAN: They will be contained in the final environmental impact statement.

MR. JAIN: But we won't be able to see what other people are asking?

MR. STOLMAN: You can go to the planning board office and see what has come in.

MR. JAIN: Thank you for spending so much time to help us understand the process.

If I understand from the questions asked earlier, it seems there are two processes here, an environmental impact study that you will write about and then report on

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whether or not to rezone the area; is that correct? Or is that just one document?

MR. STOLMAN: They are two reports.

MR. JAIN: Thank you. I did catch that.

MR. STOLMAN: You caught it very well, and I failed to mention it earlier.

There is the finding statement which is regarding environmental review, and then there is a report which is provided for in the zoning law.

The zoning law says the planning board is supposed to write a report back to the town board or has the opportunity to do that, regarding the zoning map change that is proposed in the new zone, the text that is proposed.

MR. JAIN: What goes into that second report about changing

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the zoning laws? Will there be a public hearing on that?

MR. STOLMAN: No. But it will be discussed at an open session. It is a --

MR. JAIN: What goes into that?

MR. STOLMAN: There are various considerations that the planning board is supposed to address. I don't have the code with me. If you look at the zoning code under amendments, it specifies it.

MR. JAIN: So you are saying you have a pretty pre-set set of steps that you need to follow to decide whether the property can be rezoned; is that essentially what you're saying?

MS. ZALANTIS: We don't rezone. We make a recommendation.

MR. JAIN: There is a very clear process that you need to

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follow to decide whether you rezone the property or not. Okay.

MR. STOLMAN: So what the zoning law says in Section 200-52A is that --

MR. JAIN: I am not going to read it.

MR. STOLMAN: -- "In making such report on a proposed amendment, the planning board shall make inquiry and determination concerning the items specified below that for a text change and for a map change."

MR. JAIN: Okay. You think there is no opportunity for the community to give feedback into that process of whether or not to -- the recommendations for whether or not to rezone the property?

MR. STOLMAN: It remains to be seen --

MR. JAIN: Because I think a lot of the questions over here are

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about whether or not we should rezone the property.

It seems to me that is one of the big decisions to be made over here and a round of public feedback on that aspect may not be unwarranted.

MR. STOLMAN: There is no requirement for a public hearing per se. The planning board may or may not take input with respect to that report.

MR. JAIN: Okay. Got it.

For the environmental report, can you give some sense of -- this is a very open-ended question.

What are the set of -- is there a set of -- what are the scenarios or examples, can you give some examples under which you would recommend not to --

MR. STOLMAN: No.

MR. JAIN: Okay. Thank you.

MR. MARKHAM: I am Noel

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Markham. I was impacted by Springton and the Woods. Now when they went up the sewers started backing up. I was impacted with Springton and with the Woods.

I am on I guess the east side, northeast side of 9.

The sewer system won't hold it. We have to check valves coming into our basements because they keep on backing up.

Traffic is totally ridiculous. On rush hour from 9A back past Minkel is bumper to bumper. You have to let the trucks come down there now.

When I first moved up here, they were never on the road. I have been here for 40 years. Now we got tractor-trailers 24 hours a day.

You have the impact from GE down here with the helicopters. They are allowed to come 20 times a

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month. This isn't a rural area anymore; you're putting us in downtown Manhattan next to an airport. You can build a highway.

186 units you are going to have 2 or 300 cars. The only way to get to the Taconic, is straight across 9A and up 134. You're not talking about one or two cars, you're talking about 50, 60 cars at rush hour every single day.

Coming up from Croton, you can't make the turn. Even if you put the traffic light up there and you put the arrow, you get one tractor-trailer there and you're backed up into the lane coming south.

God forbid somebody will get killed there. There have already been two or three fatalities on 134 itself.

You have to make a recommendation to the planning

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board for the town, correct?

This impact statement here, you put a recommendation for that. I am sure that weighs quite a bit for them to change the zoning.

Now if you don't listen to the constituents that have you up here that live in this development that don't want it, fool on you. That is not right. We live here.

You live in the community, not right where it is being impacted. Go over there. Buy a house in that development. Move into that development.

MR. STOLMAN: Why are you looking at me?

MR. MARKHAM: I am looking at everybody. I mean, listen to everybody that's been here tonight, nobody wants this. All you have to do is vote no. That is it. It is finished.

MR. TRAPASSO: Rocco

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Trapasso. I am still not clear on something.

If this report is not accepted by you, what happens then? Do you still present it to the town board, and then they have to make a determination?

MR. STOLMAN: What --

MR. TRAPASSO: Easy question.

MR. STOLMAN: Which report?

MR. TRAPASSO: The environmental -- the report that you're talking about that has been approved.

MR. STOLMAN: Rocco, it is not a matter of approving the document or not. We are going to --

MR. TRAPASSO: -- accept it.

MR. STOLMAN: If it goes too many iterations back and forth between the planning board, the planning board can take it over and write it itself.

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MR. TRAPASSO: What can they take over?

MR. STOLMAN: The --

MR. TRAPASSO: Has it been accepted? Or you're telling me it has been accepted, and it is on its way forward?

MR. STOLMAN: The draft has been accepted.

MR. TRAPASSO: And you completed everything?

THE CHAIRMAN: The draft is for you to go and respond to.

MR. TRAPASSO: For me to take a look at that, I won't be able to do it. I am not a lawyer like the gentleman here.

MR. HOUGHAM: I was going to hold my comments until later.

First, I want to thank the community for coming out and sharing a lot of really thoughtful comments; I really appreciate that. It brings nuance to some of the

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things that we have been thinking about, of course.

The main thing I want to say is that you should really try to take a look at this document. There is a lot of good information. It is very clear, and it answers a lot of the questions that you have been asking.

Specifically, if you don't have a lot of time, stop by the library, take a look at it and open it to -- I will give you the page, chapter 5, page 26 and what it does is it presents in table form, all of the potential impacts, all of the things you have been talking about and compares the impact of this project to the impact of the other alternatives that have been considered; two of which are alternatives for the current zoning.

So projects that could come

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in more or less as of right, are being compared. In some cases you might be surprised to find how they compare; single family for an R-15 zoning.

So it is important for you to remember as a community that it is not this project or open park land, open fields. It is this project or some other project that will come.

Another project that will come inevitably could at least be the R-15 as of right project which in some ways compare very favorably, sometimes better sometimes worse depending on the impact that you're looking at.

So take a look at that table, it answers a lot of questions.

MR. TRAPASSO: I want to add one thing to what you're saying.

As far as looking at what else could go in there and everything like that, that is what

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you guys are for. You guys are to make that determination what can or can't or should or shouldn't go in there for us, for the community. Am I correct? Am I right or wrong, you're supposed to do this for us?

THE CHAIRMAN: That is why you're giving us comments.

MR. TRAPASSO: But you're hired to work for the community.

THE CHAIRMAN: Yes. We can only operate under the rules we are given.

MR. TRAPASSO: I understand that. And you need to help the community out.

THE CHAIRMAN: That is one consideration.

MR. TRAPASSO: It is one consideration, but it is a prime consideration.

THE CHAIRMAN: We are not elected.

MR. TRAPASSO: But you are

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appointed because people feel that you have the integrity to do things for the village and for the people that should be done and make it right and worthwhile.

THE CHAIRMAN: Thank you.

MR. TRAPASSO: I am hoping that is the case. If I am wrong, we will all find out pretty soon, I am sure.

MS. ANELLI: Rick Skelton.

MR. SKELTON: Good evening. It is way past my bedtime. My name is Rick Skelton. I live at 80 Croton Dam Road. I have a couple of questions.

Really, I am a numbers person and I agree with everything that everybody has to say.

My primary concern is that I used to live in Yonkers and we moved from Yonkers to Ossining about a year and-a-half ago. We specifically moved into a

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single-family zone because Ossining was just developing, and they kept adding projects exactly like this.

I remember we lived right at the Greystone train station and they put up a nice fancy building and it blocked the hell out of my view of the Hudson. That was my reason for moving because I wasn't going to pay $3,000 for rent and not be able to see the Hudson River.

We moved up here about a year and-a-half ago and starting in September, we actually enrolled our daughter in Brookside.

Now, I drop off that early drop-off 7:00 in the morning, I can't go down 9A. I have to go the back-way through Grace because you can't get on to 9A at 6:45 in the morning. The traffic is unbelievable.

I didn't get to read

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everything because I -- my neighbor Noel he called me this morning, so I got to at least read the traffic study.

If anybody in this audience read the traffic study it is BS. It is complete BS. There is no way it takes two minutes, a car turns every two minutes. That is what it says. That is unbelievable.

But again, I did get an opportunity to look at this for the last 30 minutes or so when everybody was arguing, conversing.

We were looking at a market value of 24 million dollars, so the town will pick up taxes of 1.4 million dollars.

188 units, they said only 373 residents will be added to the community.

I would think that would be closer to 400 and they are saying that the number of students

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anticipated to be added from 373 residents is 29.

I only have one child but if you add 373 residents, how did you come up with 29 students?

Brookside is already overcrowded. And I hear from the rest of the audience that all of the other schools in this community are overcrowded.

In this proposal, they are saying $350,000 will be added to the school system.

Where is the rest of that going to come from?

School taxes will go up. It is a numbers game. This is the proposal they put out there.

What I would like to see is the proposal they put to the town board because in that proposal, it has to say how much residential income is going to be picked up by the community, whether it is a

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town, a village, et cetera.

That is what I really want to see. That is the one everybody in this room wants to see because otherwise why will we be proceeding with this project?

I want to see the real numbers, not these numbers. Just like that -- this mimics the traffic study. This is not real.

Have you ever made that left or right turn onto 9A?

MR. HOUGHAM: I am not arguing with you.

MR. SKELTON: Do you live in the community and take 9A?

MR. HOUGHAM: I am not arguing with you.

MR. SKELTON: This is really good. I could write it myself. I do fix. There are real numbers out there; real numbers. I also do real numbers. And then I make them into fiction.

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Somebody has to do the real numbers. There is a reason why we are here. There is a reason why this project is going to proceed, because somebody was given some real numbers, and if this is going to benefit, tell us what it is going to benefit.

Because right now what I see as a property owner who relocated to a single-family district. Now you will turn it into a multifamily district less than a mile from my home. So do I get to turn my house into a multifamily home?

My basement is finished. All I have to do is throw in a stove.

Thank you very much for your time.

MS. ANELLI: Ray Santucci.

MR. SANTUCCI: You were speaking about what they proposed as far as alternatives in that plan that they have given out. However,

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what they proposed is his vision of it, it is not what would really happen.

We were at the meeting last night and I believe it was you who was there who even said, what is on there where you see houses scattered about; I think in the R-15 it was 35 homes or something like that.

You will never get 35 homes on that property due to steep slope, wetlands and other factors. It is just not going to be possible for them to build something like that.

If you want to do something with the alternative plan that is in there, make it real; put what you could really put on that property. Okay. And show us the traffic and environmental impact then, because what you're showing us is not real. It is what you're

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-- it is a scare tactic to try to show everybody, look at how it will impact our community when in reality, no. That is not real.

Put what really needs to be there. You will probably get maybe if you're lucky, 15, 16 homes on there. That's what you'll get. Then they can pay real taxes with all that property. Then you will be much better off.

THE CHAIRMAN: Seeing no other public comments, we will close the oral portion of the public comments as of tonight.

Again, we remind the public that written comments can still be submitted throughout until May 16.

MR. STOLMAN: Do you want to entertain a resolution to close the public hearing?

THE CHAIRMAN: Yes.

Do I have to make a motion for that, closing the oral portion?

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MR. HOEFLICH: No.

MR. HOUGHAM: No.

THE CHAIRMAN: There doesn't appear to be one.

So we will keep this open?

MR. HOEFLICH: Yes.

MR. HOUGHAM: I want to make sure that -- I think we all want to make sure that everybody has taken the opportunity to speak their minds, and that they don't feel rushed.

MR. NULL: Mr. Chairman, with due respect with the comment period out another month for people to write and everybody in the room has spoken --

AUDIENCE: Please use the microphone.

MR. NULL: Mr. Chairman, with due respect --

THE CHAIRMAN: With due respect, counsel, did you count how many people there are on the board?

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Do you see that two people said not to?

MR. NULL: Yes, sir, I understand.

THE CHAIRMAN: How would I get a resolution?

MR. NULL: I want to address the board at this point because to have another night of a public hearing, when we had two and-a-half hours of a public hearing -- I am just asking the board to consider the fact that we had two and-a-half hours of public hearing with a very good turnout and a lot of comments and if we are going to continue -- if you will continue the public hearing, then everybody should know that the May 16th date is not a meaningful date because you will set the comment period after you close the public hearing with due respect. Because you can't have, theoretically, you cannot close the

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public hearing in May -- we are in April now -- and then continue, you need at least ten days for the comment period to continue.

MS. ZALANTIS: If the board is deciding not to close the public hearing, it should be adjourned to a date certain.

MR. HOUGHAM: I want to clarify that. I wasn't saying I didn't want to close the hearing tonight. I just wanted to -- what I was saying is I wanted to give a few more minutes for the audience to think if they wanted to add any further comments before we close the hearing.

MS. KENNEDY: I want to make a comment. My name is Nancy Kennedy. I commented before.

I just inquired that if I wanted to get one copy, a hard copy, of the report that is presented here. Some people have

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them, but not everyone. I would like a hard copy, and I understand that it has been provided by you.

Did you provide us with a hard copy of this report?

MR. NULL: This is up to the planning board, not me.

THE CHAIRMAN: They are available at the library.

MS. KENNEDY: For one individual? I can go and take it out? I want my own copy to take home and read it.

MS. ANELLI: Come and look at the Building Department --

THE CHAIRMAN: It is online.

MS. KENNEDY: I don't have the time to sit down and read it online.

MR. STOLMAN: Sandy, we can get a copy or make a copy, can't we?

MS. ANELLI: I can send it out to be copied, but then you

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would have to pay for the copier service.

MS. KENNEDY: I don't know why we can't get a copy. I have children, I have jobs.

MR. NULL: I am not sure whether there is one or two copies in the library.

Mr. Chairman, this document coupled with the appendices is the DEIS. This is what is online and available. It is fairly expensive to print it.

We delivered a number of copies to the town that were requested, and if we are asked to make multiple copies for anybody who asks, that is significantly more expensive.

I am not looking to be cheap here, but it was not a thing that we were asked to do. We provided what we were asked for.

If there is another one or

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two copies more for the library I am certainly happy to accommodate. We will try and do that, but it is up to the planning board.

THE CHAIRMAN: How many copies are there at the library?

MR. STOLMAN: I believe it is one --

MS. ANELLI: I believe it is one.

THE CHAIRMAN: Can the applicant provide two more copies for the library?

MR. NULL: We can arrange to do that.

MS. KENNEDY: Then I can take it home and mark it up.

MR. HOUGHAM: Maybe we can ask the library to designate one as a reference, so it doesn't go out.

MS. KENNEDY: How can I go about doing that? I want a copy to bring home.

THE CHAIRMAN: You mean to

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check out.

MS. KENNEDY: No. To take home and mark up.

THE CHAIRMAN: Then you have to buy one.

MS. KENNEDY: How much does it cost?

MR. VETROMILE: I have an extra copy. I will give it to you. I will send you one. Give me your address before I live, and I'll make sure that you get it.

MS. KENNEDY: I think it is rather cheap. I think we should all have a copy.

It is cheap of you because you're investing in a very high end --

MR. BOSSINAS: Address the board.

MR. HOUGHAM: Last call. Any further comments --

MS. ANELLI: Natalie Farina.

MS. FARINA: I am at 2 Downey

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Road.

Now that we have had a chance to comment on this environmental impact, from what I understand, these comments then get sent to the developer to try to address them in a revised environmental statement; is that true?

THE CHAIRMAN: Yes.

MS. FARINA: So who has the expertise to look at their response to see if in fact what we are looking at now really does address the questions that are being asked?

Will the superintendent get a chance to then look at the numbers in this revised document? Will we see when the traffic pattern or the traffic survey or the traffic study is being conducted?

How is it that you will know that you will be able to verify that the same people that produced this document will then provide you

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with an updated study that accurately answers the questions that we asked?

What will you use to determine the validity of this new survey, given that it is not being produced by anybody other than the developer whose desire it is to make this happen?

THE CHAIRMAN: I am not sure it requires a response.

MR. STOLMAN: In terms of traffic, we have a traffic division. I am the planner at this and have worked at this for 40 years.

Dan is the planning board consulting engineer. We have legal counsel.

MS. FARINA: Will we the public see that, in fact, you have addressed the questions that we have and satisfied us?

Will we have another chance

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to comment and say, hey, we took pictures we saw that rope was across the road when school was not in session, or that we saw that that rope was across the road when it was the summertime?

MR. STOLMAN: Every version of the environmental impact statement will be on file, and you can go there and -- I don't know if you need to FOIL the document -- is it is a FOIA request?

MS. ANELLI: No. You can just come in and look at it.

MR. STOLMAN: The public can look at all the versions of the FEIS.

MS. FARINA: So the superintendent's word will be superseded by what the developer is going to put out there in his revised statement?

THE CHAIRMAN: His words are his words.

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MS. FARINA: Shouldn't the superintendent's word supersede anything that gets put forward by the developer of this project?

MR. STOLMAN: The planning board has conferred with the superintendant before.

It certainly has the ability to confer with the superintendant again regarding the document.

MS. FARINA: Will that happen; shouldn't that happen?

MR. STOLMAN: I mean certainly the superintendent can be given a copy of --

MS. ZALANTIS: I think what you're asking is are there going to be substantive reviews of the studies.

The answer to the question is yes, there will be by the village's consultants -- I'm sorry, by the town's consultants.

MS. FARINA: Thank you.

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MR. LESLIE: John Leslie, I am back again.

Maybe I interpreted it wrong, but I will say it anyway. I just get the feeling that as you guys have a set of specs that you need to see that these guys have checked off correctly. If they haven't, somehow or other, they have to address that.

It just sounds like this -- to the extent that you guys approve their plans and then pass it on, and say it is ready for the town board to take a look at it, it almost seems like your hands are tied; that you -- I would say fulfill their obligations to meet this checklist, then you have to comply with your jobs as specified.

You keep saying you're bound by certain things; even though you may have your own personal feelings about something, you have a job to

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do.

How do I feel about that? On the one hand I respect the fact you have a job to do but on the other hand, I guess, it is up to the town board to listen to the public here.

We may not fully understand this process because you have been hammered with it a number of times tonight.

I hope somebody, even if it's not you guys, that you have to listen to the passion of the audience; that it is the town board that will ultimately get the message.

MR. HOUGHAM: Are there any further comments? Last comments?

Seeing none, I will make a motion to close the public hearing, the oral portion.

MR. HOUGHAM: Any seconds?

THE CHAIRMAN: I don't hear a second.

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We will wait.

MR. STOLMAN: You're going to close or adjourn?

Does somebody want to make a motion to adjourn it?

MR. BOSSINAS: I will make a motion to adjourn it.

MR. HOEFLICH: I will second that. Meaning we can continue to discuss this. We discussed 18 topics tonight.

The public has until May 16 to write their comments. When they write their comments, we the planning board would like to hear what the comments are written.

We also have 18 items here. The developer also has to address those 18 items and probably what other items are out there also which means that on May 16, there will be -- this thing hopefully will be marked up and read, saying that we accommodated this, this,

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this and this of the 18 items that were discussed tonight.

In addition to the questions that the public has, we as the planning board members will need time to read those documents, whether or not they are compiled into something a little more concise for us to make a logical decision? I don't know.

Am I right or wrong?

MR. STOLMAN: We are just talking about whether we continue this public hearing on another night. That is all.

THE CHAIRMAN: If we continue it, then we extend the time period all down the line.

MR. STOLMAN: The written comment period needs to be at least ten days following the close of the public hearing.

If, for example, you continued this public hearing on

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the 2nd of May, and closed the public hearing that night and ended the written comment period on the 16th that would comply with SEQRA.

If you had the public hearing earlier and had the written comment period go out to the 16th so that would give you even more time between the end of the public hearing and the -- if you just need to -- if the 16th is the end of the written comment period, you will have to hold the public -- if you continue the public hearing, it has to be at least ten days before then.

THE CHAIRMAN: Let's go, I need a motion to go into executive session. Can I have a motion to go into executive session?

MR. HOUGHAM: I second.

MR. HOEFLICH: I agree.

(Board is now in executive session; recess taken.)

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THE CHAIRMAN: Can I have motion to return back to public session?

MR. HOEFLICH: Yes.

MR. HOUGHAM: Second.

THE CHAIRMAN: No objections.

Anybody want to propose a motion for closing the oral portion of the public meeting?

MR. STOLMAN: Closing the public hearing?

THE CHAIRMAN: Yes, the oral portion.

MR. HOEFLICH: I will make a motion to do that.

MR. HOUGHAM: I will second it.

THE CHAIRMAN: Any objections? No objections.

So the public hearing oral portion is closed.

MR. STOLMAN: Yes.

The written portion is open until May 16.

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MR. HOUGHAM: Could we ask Sandy to repeat the e-mail address for e-mailing written comments.

MS. ANELLI: Yes. I can give you the e-mail address.

It's Building Department, and the words are abbreviated, BLDGDEPT@TownofOssining.com, no periods.

THE CHAIRMAN: Is there a link somewhere on the Town of Ossining website?

MS. ANELLI: Yes. If anybody wants to call our office, you can call and I can help take you through it, so you can find the whole document and all the other reports and projects.

MR. HOEFLICH: Give your telephone number.

MS. ANELLI: 762-8419 (914).

MR. STOLMAN: At the next meeting of the planning board, it will be an entirely different

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agenda, April 18.

THE CHAIRMAN: Can we ask the applicants to put two more copies in the library?

MR. NULL: Yes. Certainly we agree to that. Thank you.

THE CHAIRMAN: Motion to adjourn?

MR. BOSSINAS: I will make a motion.

MR. HOEFLICH: Second that.

THE CHAIRMAN: Any objections?

Thank you. Good night.

(Time noted: 10:45 p.m.)

C E R T I F I C A T E.

STATE OF NEW YORK)
: ss.
COUNTY OF NEW YORK)

I, BARBARA DRISCOLL a Notary Public within and for the State of New York, do hereby certify that the within is a true and accurate transcript of the proceedings taken on April 4, 2018.

I further certify that I am not related to any of the parties to this action by blood or marriage; and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 20th day of April, 2018.

Barbara Driscoll

____

BARBARA DRISCOLL

Appendix B
Balloon Test Report

On the morning of June 22, 2018 JMC performed a balloon test at 40 Croton Dam Road ("the site") between the hours of 10:00 am and 12:00 pm. The weather was sunny with very few clouds and the temperature was approximately 73 degrees Fahrenheit. The purpose of the test was to identify the maximum height of the proposed building roof and provide a rough idea of the massing of the building. The following information outlines the procedures followed in setting the location and elevations of the four balloons for the visual test.

The balloons used for this test were 100 gram meteorological balloons with an un-inflated diameter of 13.8", a standard inflated diameter of 36" and a burst diameter of 52". The balloons were secured to the ground utilizing 1/2" x 2" x 36" wooden stakes and braided nylon mason's line. The balloons were filled with helium from a compressed helium tank. The balloon locations were chosen to best represent the roof peak height along the outer edge of the proposed building, as depicted in Figure BTF-1.

Balloon #1 was placed at the proposed roof peak location nearest to Croton Dam Road in the existing lawn. Balloon #2 was placed at the proposed roof peak, nearest to Second Avenue, adjacent to the existing driveway. Dense vegetation and conflicts with existing trees did not allow for the placement of Balloon #3 exactly at the roof peak nearest to First Avenue. Therefore, it was placed as closely to the peak as possible in the existing lawn on the edge of the vegetation. Balloon #4 was affixed to an existing chain link fence at the location of the proposed roof peak nearest to Croton Dam Road and Grandview Avenue. To calculate the length of string needed to set the balloons at the proper height at each location, it was necessary to first establish the proposed roof elevation by determining building height compared to the proposed finished floor elevation (FFE). The two drawings used were JMC drawing SP-3 "Grading Plan", dated 2/15/2017, for the proposed finished floor elevation (FFE), and Minno Wasko drawing "Site Sections", dated 11/28/2017, for the building height from the FFE to the roof peak. Based on this information, the roof peak elevation is approximately 450'. The length of each string was calculated based on the difference between the proposed roof peak elevation and the elevation at which the stake was placed based on the existing topographic information. For example, the elevation where the stake was set for Balloon #1 was approximately 408. The proposed roof peak (450') – balloon size (3') – existing elevation (408') = string length (39').

For the purposes of visual analysis, a series of Site Photographs and a "Balloon Test Figure" are provided herewith indicating where the images were taken. The photos start within the site and then progress to the surrounding areas. For reference and comparison, the Figure also indicates the elevations of the existing roof peaks, ranging from 415' to 457' and the location each balloon was placed. While on the site, existing topography, vegetation, and buildings made it impossible to see all four balloons at once. It should be noted that the existing main building contributed to the visual blockage as it has a higher roof peak elevation than the proposed building's roof peak elevation by 7'. None of the balloons were visible from outside the site, primarily because of existing vegetation. A substantial amount of the existing tree buffer is proposed to remain. All the photographs taken outside the site are aimed towards the proposed building.

Photograph No. 1

Taken from an existing parking area on site looking south. In this image, two balloons are visible, though slightly obscured by existing vegetation, and the existing main building is shown between them. From the perspective of this photo, the balloons are well below the peak of the existing roof. The existing roof peak is approximately 7' higher than the proposed roof peak. The existing tree buffer, much of which will remain, is above the proposed roof.

Photograph No. 2

Taken from the existing driveway on site looking north towards both the proposed building location and the existing main building. As shown, the site in this location was previously developed with an existing building, driveway, and grassy slope.

Photograph No. 3

Panorama taken from the north side of the site facing south near the existing garage. Two balloons are visible from this vantage point and are clarified in the image by arrows. Balloon #3 (left in the photo) is actually lower than the existing building shown in the photo, although it looks higher due to the perspective. The balloon seen on the right is below the existing tree line.

Photo No. 4

Panorama taken from Croton Dam Road looking east into the site. The balloons are not visible from this vantage point.

Photo No. 5

Taken from Grandview Avenue looking south into the site. The balloons are not visible from this vantage point.

Photo No. 6

Taken from Grandview Avenue looking south into the site. The balloons are not visible from this vantage point.

Photo No. 7

Taken from Narragansett Avenue looking west into the site. The balloons are not visible from this vantage point.

Photo No. 8

Taken from First Avenue Looking northwest into the site. The balloons are not visible from this vantage point.

Photo No. 9

Taken from Second Avenue looking northwest into the site. The balloons are not visible from this vantage point.

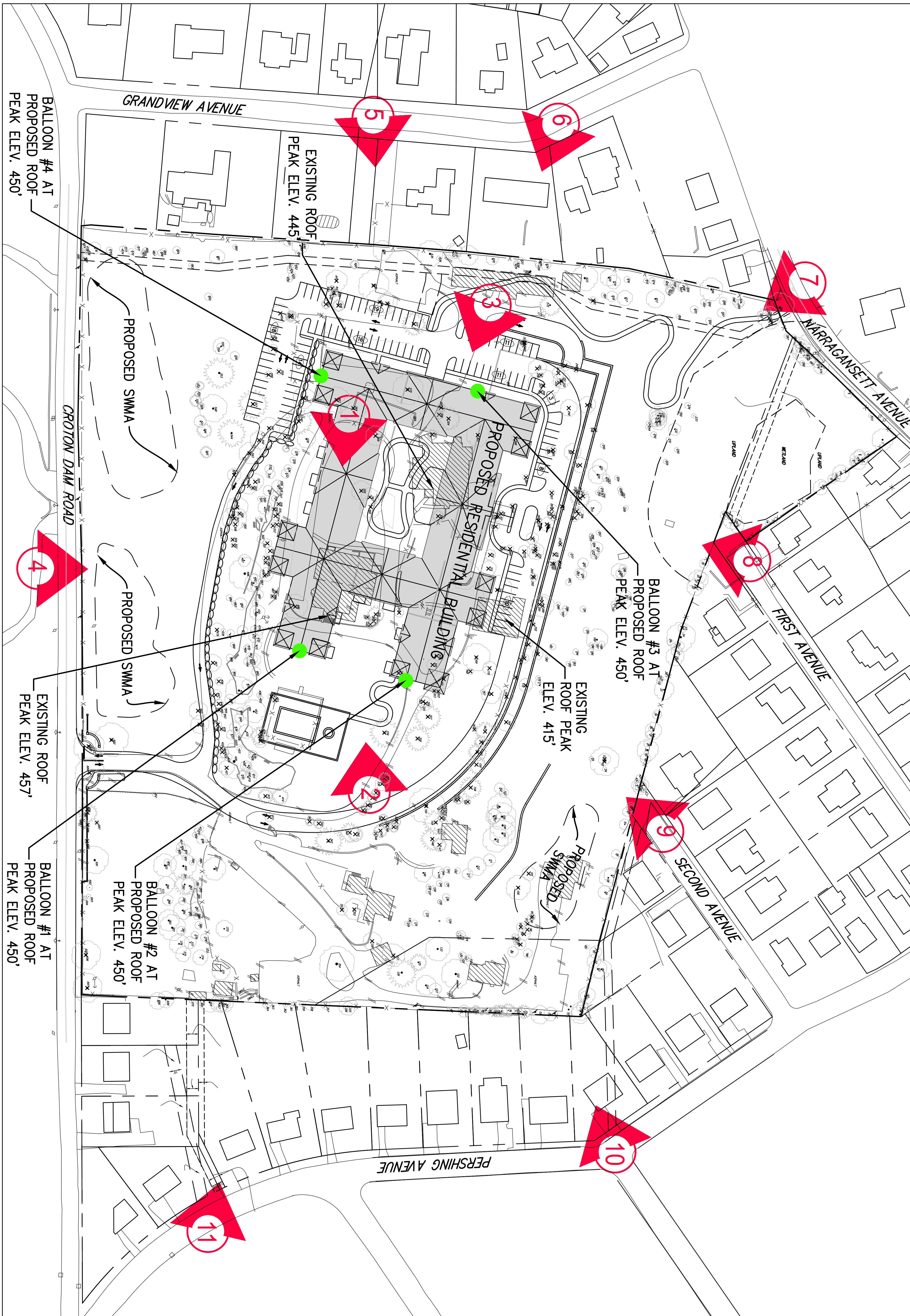
Photo No. 10

Taken from Pershing Avenue looking north into the site. The balloons are not visible from this vantage point.

Photo No. 11

Taken from Pershing Avenue looking northeast into the site. The balloons are not visible from this vantage point.

In summary, based on the visual test conducted, it is likely that the proposed building will be obscured by the existing vegetation to remain when looking into the site from the surrounding roadways. It is important to note that a majority of the proposed project is occurring on developed land and is designed to work with the existing topography. Finally, new landscaping is proposed to beautify the site and provide additional long-term screening.



RIVER KNOLL

40 CROTON DAM ROAD | TOWN OF OSSINING, NEW YORK

BALLOON TEST FIGURE

DATE: 7/9/2018 | JMC PROJECT: 15064

FIGURE: BTF-1 | SCALE: 1" = 120'

120 BEDFORD RD
ARMONK
NY 10504

(914) 273-5225
fax 273-2102

JMCPLLC.COM

JMC

15064-FIGURES.dwg; BALLOON FIGURE.tab

BALLOON TEST SITE PHOTOGRAPHS
PAGE 1 OF 6

DESCRIPTION:	Looking South
LOCATION:	On Site

Photo No.
1

DESCRIPTION:	Looking North Towards Proposed Building Location
LOCATION:	On Site

Photo No.
2

BALLOON TEST SITE PHOTOGRAPHS

DESCRIPTION:	Looking South Toward Proposed Building Location
LOCATION:	On Site

Photo No.
3

DESCRIPTION:	Looking East Toward Proposed Building Location
LOCATION:	Croton Dam Road

Photo No.
4

BALLOON TEST SITE PHOTOGRAPHS

DESCRIPTION:	Looking South Toward Proposed Building Location
LOCATION:	Grandview Avenue

Photo No.
5

DESCRIPTION:	Looking South Toward Proposed Building Location
LOCATION:	Grandview Avenue

Photo No.
6

BALLOON TEST SITE PHOTOGRAPHS

DESCRIPTION:	Looking West Toward Proposed Building Location
LOCATION:	Narragansett Avenue

Photo No.
7

DESCRIPTION:	Looking Northwest Towards Proposed Building Location
LOCATION:	First Avenue

Photo No.
8

BALLOON TEST SITE PHOTOGRAPHS

DESCRIPTION:	Looking Northwest Towards Proposed Building Location
LOCATION:	Second Avenue

Photo No.
9

DESCRIPTION:	Looking North Towards Proposed Building Location
LOCATION:	Pershing Avenue

Photo No.
10

BALLOON TEST SITE PHOTOGRAPHS

DESCRIPTION:	Looking Northeast Towards Proposed Building Location
LOCATION:	Pershing Avenue

Photo No.
11

Appendix C
Supplemental Traffic Analysis

July 13, 2018

Chairman Chin and Members of the Town of Ossining Planning Board
Town of Ossining
Building and Planning Department
101 Route 9A
Ossining, NY 10562

RE: JMC Project 15064
River Knoll
40 Croton Dam Road
Town of Ossining, NY

Supplemental Traffic Analysis

Dear Chairman Chin and Members of the Town of Ossining Planning Board:

In response to the Town of Ossining Town Board's commenter mentioned in their 06/06/2018 letter to the Town's Planning Board, we have prepared this supplemental traffic analysis for proposed River Knoll development at the above mentioned property. This analysis is provided to supplement the previously prepared traffic study for the project contained in the project's Draft Environmental Impact Statement (DEIS).

A. Existing Conditions

As previously mentioned in the DEIS, the subject property was formerly occupied by the Stony Lodge Hospital. Access to the property is provided via one site access driveway off Croton Dam Road. The site driveway provides one ingress and one egress lane.

Croton Avenue (NY 133) intersects Dale Avenue (NY 134) at a signalized intersection south of the project site. Croton Avenue northbound provides a left turn lane and a shared thru/right turn lane while Croton Avenue westbound provides a single lane approach with shared turning movements. Dale Avenue southbound provides a single lane approach with shared turning movements. The fourth leg of the intersection is Todd Place which is a one-way roadway away from the signalized intersection.

Pine Avenue intersects Narragansett Avenue at a "T"-type unsignalized intersection southeast of the project site. Both roadways provide a single lane approach to the intersection with shared turning movements. The Pine Avenue approach is controlled by a stop sign.

Pershing Avenue intersects Narragansett Avenue at a "T"-type unsignalized intersection east of the project site. Both roadways provide a single lane approach to the intersection with shared turning movements. The Pershing Avenue approach is controlled by a stop sign.

First and Second Avenues intersect Pershing Avenue at separate four-way unsignalized intersections east of the project site. All roadways provide a single lane approach to their intersections with shared turning movements. The First and Second Avenue approaches are controlled by a stop sign.

In order to assess existing traffic conditions in the vicinity of the site, traffic counts were conducted at the Croton Avenue and Dale Avenue intersection, the Pine Avenue and Narragansett intersection as well as Pershing Avenue intersections with First Avenue, Second Avenue and Narragansett Avenue. Weekday traffic counts were conducted on Thursday, June 21, 2018 at all the studied intersections. The counts were conducted from 6:00 - 10:00 AM as well as 3:00 – 7:00 PM. The intersections of Narragansett Avenue and Pershing Avenue were counted on Saturday, June 16, 2018 while the Narragansett Avenue and Pine Avenue intersection as well as the Pershing Avenue/First Avenue intersection and Pershing Avenue/Second Avenue were counted on Saturday, June 23, 2018. The Saturday counts were conducted from 9:00 AM to 1:00 PM. The counted volumes were reviewed to determine the peak weekday morning, weekday afternoon, Saturday hours. The peak weekday AM hour occurred from 7:00-8:00 AM, the peak weekday PM hour occurred from 5:00-6:00 PM, and the peak Saturday midday hour occurred from 12:00-1:00 PM. In discussions with the Town's traffic consultant, the existing volumes were increased by 5% to account for end of the school year traffic. The existing peak hour volumes with the 5% increase are shown on the attached Figures S-1 thru S-3.

Intersection capacity analyses were computed for the existing intersections utilizing Synchro software developed based on the methodologies of the Highway Capacity Manual, 6th Edition. Vehicular delays are identified as levels of service, which represent a range of average seconds delay per vehicle, with Level of Service A (less than or equal to 10 seconds) representing the shortest delays and level of service F being the longest delays (greater than 80 seconds). The intersection capacity analyses are shown on Tables 2S thru 4S.

The analyses indicate that the intersection of Croton Avenue and Dale Avenue with Todd Place operates at a level of service D during the peak weekday AM hour and a level of service C during the peak weekday PM and Saturday midday hours. The Dale Avenue approach to its intersection with Croton Avenue operates at a level of service F, C, and E during the peak weekday AM, weekday PM, and Saturday midday hours, respectively. The Croton Avenue westbound approach to its intersection with Dale Avenue operates at a level of service C during the peak weekday AM and a level of service D during the peak weekday PM and Saturday midday hours. All other movements at the studied intersections operate at a level of service B or better during the studied peak hours.

B. <u>No-Build Conditions</u>

The existing volumes were increased by a general growth rate of 1.0% percent per year compounded annually to the 2022 design year for completion and occupancy of the proposed development. This analysis incorporates traffic volumes associated with the proposed Parth Knoll, LLC residential development. The traffic volumes associated from the proposed Sunshine Children's Home & Rehabilitation Center in New Castle, the proposed Upper Westchester Muslim Society development in New Castle and the proposed Hudson Ridge Wellness Center development in Cortlandt will not generate substantial traffic volumes in the study area and have been considered as part of the general growth volumes. The other development volumes and the reoccupancy of the previous hospital use were added to the general growth volumes to project the 2022 No Build Volumes.

The capacity analyses indicate that the Dale Avenue approach at its intersection with Croton Avenue is projected to increase in delay from a level of service C under existing conditions to operate at a level of service D under the no-build condition during the peak weekday PM hour. During the peak Saturday midday hour, the Dale Avenue approach is projected to increase in delay from a level of service E under existing conditions to operate at a level of service F under the no-build condition The overall intersection of Dale Avenue and Croton Avenue is projected to increase in delay from a level of service C under existing conditions to operate at a level of service D under no build conditions during the peak Saturday midday hour. All other turning movements at the studied intersections under the no-build condition are projected to operate at the same levels of service as experienced under existing conditions during the studied peak hours.

Add text about accident analysis

C. <u>Build Conditions</u>

Traffic volumes generated by the proposed 188 apartment redevelopment are based on information published by the Institute of Transportation Engineers in its publication "Trip Generation Manual, 9th Edition". As depicted in Table 1 of the project's Traffic Study, the development is projected to result in approximately 32, 43, and 24 net additional total trips during the peak weekday AM, weekday PM and Saturday midday hours.

The projected site generated traffic was superimposed on the area intersections based on traffic volume data and consideration of the area roadways. Figures showing the site related traffic and intersection capacity analyses are attached. Adding the redevelopment related traffic minus the reoccupancy of the previous hospital use results in 2022 Build Volumes which reflect project volumes after the completion of the redevelopment.

As shown on Tables 2 and 3, the intersections with the proposed development will operate at the same levels of service as projected for the no build condition during the studied peak hours.

D. <u>Recommendations</u>

Regardless of the proposed application, the Town may want to implement traffic signal timing modifications at the intersection of Croton Avenue and Dale Avenue with Todd Place. Without the proposed development, the Dale Avenue approach to the intersection operates at a level of service F during the peak weekday AM and Saturday midday hours. We reviewed the intersection operations and analyzed a potential timing modification which could be implemented by the Town. The traffic signal timing modification involves reallocating 5 seconds of green time from the common Croton Avenue phase to the Dale Avenue phase during the peak weekday morning hour and peak Saturday midday hour. The intersection operations with this timing modification are depicted in Tables 2S and 4S. The traffic signal timing modification improves the overall intersection and Dale Avenue approach operations during the studied peak hours.

Sincerely,

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

Marc Petroro, PE, PTOE
Senior Project Manager

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TABLE 2S

INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR

INTERSECTION	APPROACH	LANE GROUP	2018 EXISTING			2022 NO BUILD			2022 BUILD		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
10. Croton Avenue & Dale Avenue with Todd Place (Signalized)	EASTBOUND	LEFT	0.17	8.3	A	0.19	8.4	A	0.19	8.4	A
		THRU	0.35	9.4	A	0.37	9.6	A	0.37	9.6	A
		COMPOSITE	-	9.2	A	-	9.3	A	-	9.3	A
	WESTBOUND	THRU/RIGHT	0.50	32.4	C	0.52	33.0	C	0.52	33.0	C
	SOUTHBOUND	LEFT/RIGHT	0.96	104.9	F	1.05	125.9	F	1.08	133.2	F
	INTERSECTION	COMPOSITE	-	37.0	D	-	42.5	D	-	44.6	D
10a.Croton Avenue & Dale Avenue with Todd Place (Signalized with Timing Modifications)	EASTBOUND	LEFT							0.20	10.0	B
		THRU							0.39	11.5	B
		COMPOSITE		N/A			N/A		-	11.1	B
	WESTBOUND	THRU/RIGHT							0.57	38.0	D
	SOUTHBOUND	LEFT/RIGHT							0.85	77.1	E
	INTERSECTION	COMPOSITE							-	34.5	C
11. Narragansett Avenue & Pine Avenue (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.12	10.9	B	0.13	11.1	B	0.13	11.4	B
	NORTHBOUND	LEFT/THRU	0.04	8.0	A	0.04	8.0	A	0.04	8.1	A
	SOUTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
12. Narragansett Avenue & Pershing Avenue (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.03	9.9	A	0.04	9.9	A	0.07	9.9	A
	NORTHBOUND	LEFT/THRU	0.00	7.6	A	0.01	7.7	A	0.00	7.7	A
	SOUTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
13. Pershing Avenue & First Avenue (Unsignalized)	EASTBOUND	LEFT/THRU/RIGHT	0.00	7.2	A	0.00	7.2	A	0.00	7.2	A
	WESTBOUND	LEFT/THRU/RIGHT	0.00	7.3	A	0.00	7.3	A	0.00	7.3	A
	NORTHBOUND	LEFT/THRU/RIGHT	0.00	9.2	A	0.00	9.3	A	0.00	9.4	A
	SOUTHBOUND	LEFT/THRU/RIGHT	0.01	9.1	A	0.01	9.2	A	0.01	9.3	A
14. Pershing Avenue & Second Avenue (Unsignalized)	EASTBOUND	LEFT/THRU/RIGHT	-	-	A	-	-	A	-	-	A
	WESTBOUND	LEFT/THRU/RIGHT	-	-	A	-	-	A	-	-	A
	NORTHBOUND	LEFT/THRU/RIGHT	0.00	8.3	A	0.00	8.4	A	0.00	8.5	A
	SOUTHBOUND	LEFT/THRU/RIGHT	0.00	9.0	A	0.00	9.2	A	0.00	9.2	A

Notes:

(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

(3) LOS represents level of service

TABLE 3S

INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR

INTERSECTION	APPROACH	LANE GROUP	2018 EXISTING			2022 NO BUILD			2022 BUILD		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
10. Croton Avenue & Dale Avenue with Todd Place (Signalized)	EASTBOUND	LEFT	0.26	9.4	A	0.30	10.0	B	0.31	10.2	B
		THRU	0.24	8.3	A	0.25	8.4	A	0.25	8.4	A
		COMPOSITE	-	8.7	A	-	9.1	A	-	9.1	A
	WESTBOUND	THRU/RIGHT	0.66	37.6	D	0.69	38.8	D	0.69	38.8	D
	SOUTHBOUND	LEFT/RIGHT	0.62	32.0	C	0.68	37.0	D	0.68	37.0	D
	INTERSECTION	COMPOSITE	-	25.2	C	-	26.7	C	-	26.7	C
11. Narragansett Avenue & Pine Avenue (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.09	10.8	B	0.10	11.1	B	0.10	11.2	B
	NORTHBOUND	LEFT/THRU	0.05	7.7	A	0.05	7.7	A	0.05	7.7	A
	SOUTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
12. Narragansett Avenue & Pershing Avenue (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.02	10.1	B	0.03	9.8	A	0.04	9.7	A
	NORTHBOUND	LEFT/THRU	0.02	7.5	A	0.02	7.5	A	0.02	7.5	A
	SOUTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
13. Pershing Avenue & First Avenue (Unsignalized)	EASTBOUND	LEFT/THRU/RIGHT	0.00	7.3	A	0.00	7.3	A	0.00	7.3	A
	WESTBOUND	LEFT/THRU/RIGHT	0.00	7.2	A	0.00	7.3	A	0.00	7.3	A
	NORTHBOUND	LEFT/THRU/RIGHT	0.01	8.8	A	0.01	8.9	A	0.00	9.0	A
	SOUTHBOUND	LEFT/THRU/RIGHT	0.01	8.8	A	0.01	8.9	A	0.01	8.9	A
14. Pershing Avenue & Second Avenue (Unsignalized)	EASTBOUND	LEFT/THRU/RIGHT	-	-	A	-	-	A	-	-	A
	WESTBOUND	LEFT/THRU/RIGHT	0.00	7.2	A	0.00	7.3	A	0.00	7.3	A
	NORTHBOUND	LEFT/THRU/RIGHT	0.00	9.2	A	0.00	9.3	A	0.00	9.4	A
	SOUTHBOUND	LEFT/THRU/RIGHT	0.00	8.9	A	0.00	9.0	A	0.00	9.0	A

Notes:
(1) V/C represents volume/capacity ratio
(2) Delay is average seconds delay per vehicle
(3) LOS represents level of service

TABLE 4S

INTERSECTION OPERATIONS-PEAK SATURDAY MIDDAY HOUR

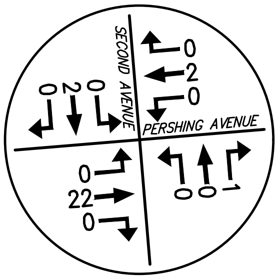
INTERSECTION	APPROACH	LANE GROUP	2018 EXISTING			2022 NO BUILD			2022 BUILD		
			V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)	V/C(1)	DELAY(2)	LOS(3)
10. Croton Avenue & Dale Avenue with Todd Place (Signalized)	EASTBOUND	LEFT	0.22	9.0	A	0.25	9.5	A	0.26	9.6	A
		THRU	0.29	8.8	A	0.30	8.9	A	0.30	8.9	A
		COMPOSITE	-	8.8	A	-	9.1	A	-	9.1	A
	WESTBOUND	THRU/RIGHT	0.67	37.6	D	0.69	38.8	D	0.69	38.8	D
	SOUTHBOUND	LEFT/RIGHT	0.78	73.7	E	0.86	84.0	F	0.86	84.6	F
	INTERSECTION	COMPOSITE	-	32.7	C	-	35.4	D	-	35.5	D
10a.Croton Avenue & Dale Avenue with Todd Place (Signalized with Timing Modifications)	EASTBOUND	LEFT							0.29	11.6	B
		THRU							0.32	10.6	B
		COMPOSITE		N/A			N/A		-	10.9	B
	WESTBOUND	THRU/RIGHT							0.76	45.6	D
	SOUTHBOUND	LEFT/RIGHT							0.69	60.8	E
	INTERSECTION	COMPOSITE							-	34.6	C
11. Narragansett Avenue & Pine Avenue (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.09	10.4	B	0.10	10.6	B	0.10	10.7	B
	NORTHBOUND	LEFT/THRU	0.02	7.6	A	0.02	7.6	A	0.02	7.6	A
	SOUTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
12. Narragansett Avenue & Pershing Avenue (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.03	9.9	A	0.05	10.6	B	0.06	10.4	B
	NORTHBOUND	LEFT/THRU	0.01	7.6	A	0.02	7.6	A	0.02	7.6	A
	SOUTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
13. Pershing Avenue & First Avenue (Unsignalized)	EASTBOUND	LEFT/THRU/RIGHT	0.00	7.2	A	0.00	7.3	A	0.00	7.3	A
	WESTBOUND	LEFT/THRU/RIGHT	0.00	7.2	A	0.00	7.3	A	0.00	7.3	A
	NORTHBOUND	LEFT/THRU/RIGHT	0.00	9.0	A	0.00	9.1	A	0.00	9.2	A
	SOUTHBOUND	LEFT/THRU/RIGHT	0.00	8.7	A	0.00	8.9	A	0.00	8.9	A
14. Pershing Avenue & Second Avenue (Unsignalized)	EASTBOUND	LEFT/THRU/RIGHT	0.00	7.3	A	0.00	7.3	A	0.00	7.3	A
	WESTBOUND	LEFT/THRU/RIGHT	-	-	A	-	-	A	-	-	A
	NORTHBOUND	LEFT/THRU/RIGHT	0.00	9.0	A	0.01	9.2	A	0.01	9.2	A
	SOUTHBOUND	LEFT/THRU/RIGHT	0.01	8.7	A	0.01	8.8	A	0.01	8.8	A

Notes:

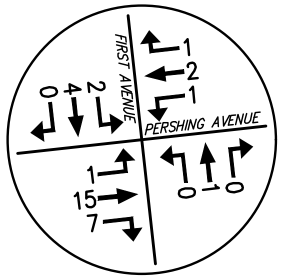
(1) V/C represents volume/capacity ratio

(2) Delay is average seconds delay per vehicle

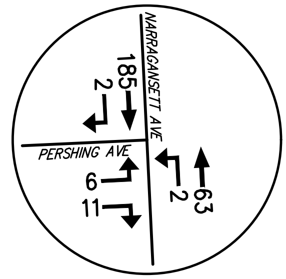
(3) LOS represents level of service



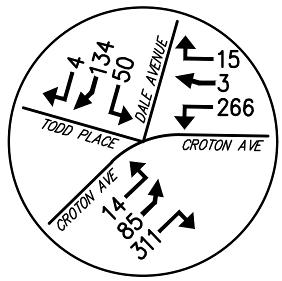
14 *PERSHING AVENUE & SECOND AVENUE*



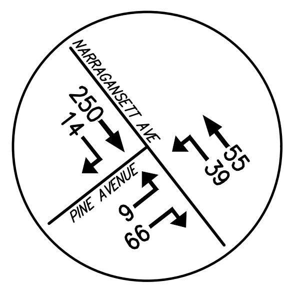
13 *PERSHING AVENUE & FIRST AVENUE*



12 *PERSHING AVENUE & NARRAGANSETT AVENUE*



10 *CROTON AVENUE, DALE AVENUE, & TODD PLACE*



11 *PINE AVENUE & NARRAGANSETT AVENUE*

RIVER KNOLL

40 CROTON DAM ROAD TOWN OF OSSINING, NEW YORK

2018 E□ISTING □OLUMES

PEAK WEEKDAY AM □OUR □7:00 - 8:00□

DATE: □□/□□/2018 JMC PROJECT: 15064

FIGURE: S-01 SCALE: 1" = 700'

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15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab

RIVER KNOLL

40 CROTON DAM ROAD — TOWN OF OSSINING, NEW YORK

2018 E□ISTING □OLUMES

PEAK WEEKDAY PM □OUR □5:00 - 6:00□

DATE: □□/□□/2018 — JMC PROJECT: 15064

FIGURE: S-02 — SCALE: 1" = 700'

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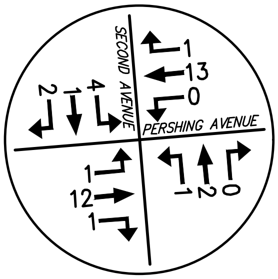
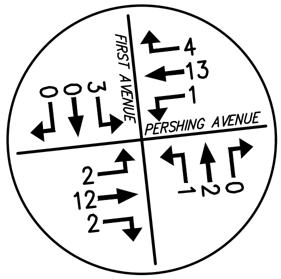
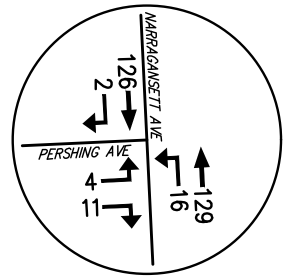
15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab



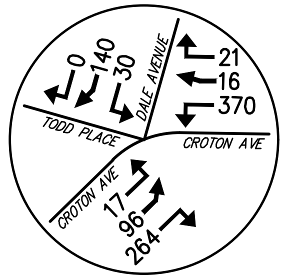


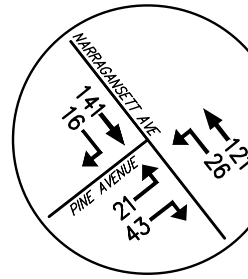


14 PERSHING AVENUE & SECOND AVENUE

13 PERSHING AVENUE & FIRST AVENUE

12 PERSHING AVENUE & NARRAGANSETT AVENUE





10 CROTON AVENUE, DALE AVENUE, & TODD PLACE

11 PINE AVENUE & NARRAGANSETT AVENUE

RIVER KNOLL

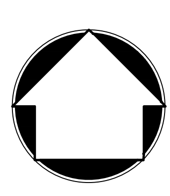
40 CROTON DAM ROAD TOWN OF OSSINING, NEW YORK

2018 E□ISTING □OLUMES

PEAK SATURDAY MIDDAY □OUR □12:00 - 1:00□

DATE: □□/□□/2018 JMC PROJECT: 15064

FIGURE: S-03 SCALE: 1" = 700'



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PEAK WEEKDAY AM □OUR

DATE: □□/□□/2018 — JMC PROJECT: 15064

FIGURE: S-04 — SCALE: 1" = 700'

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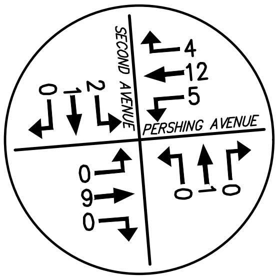
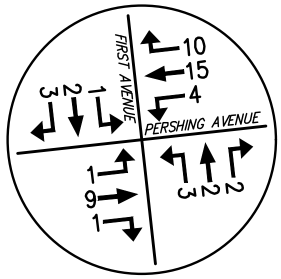
15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab



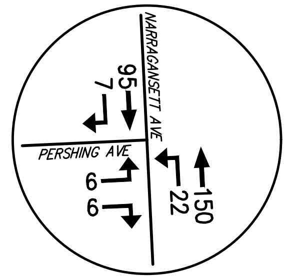
14

PERSHING AVENUE
& SECOND AVENUE



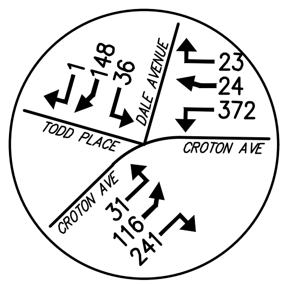
13

PERSHING AVENUE
& FIRST AVENUE



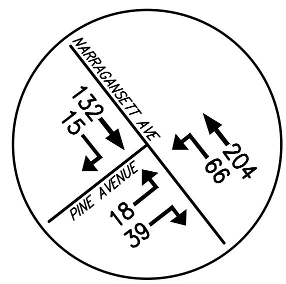
12

PERSHING AVENUE
& NARRAGANSETT AVENUE



10

CROTON AVENUE,
DALE AVENUE, &
TODD PLACE



11

PINE AVENUE
& NARRAGANSETT AVENUE

RIVER KNOLL

40 CROTON DAM ROAD TOWN OF OSSINING, NEW YORK

2022 GENERAL GROWT□ □OLUMES

PEAK WEEKDAY PM □OUR

DATE: □□/□□/2018 JMC PROJECT: 15064

FIGURE: S-05 SCALE: 1" = 700'

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2022 GENERAL GROWT□ □OLUMES

PEAK SATURDAY MIDDAY □OUR

DATE: □□/□□/2018 — JMC PROJECT: 15064

FIGURE: S-06 — SCALE: 1" = 700'

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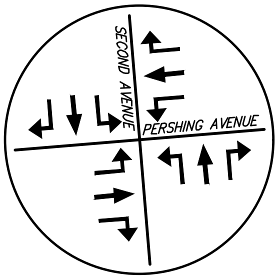
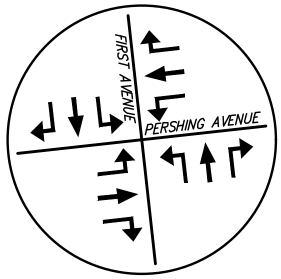
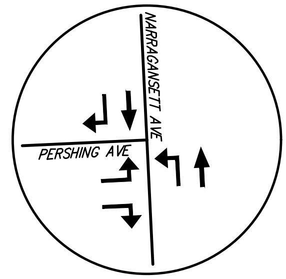
15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab





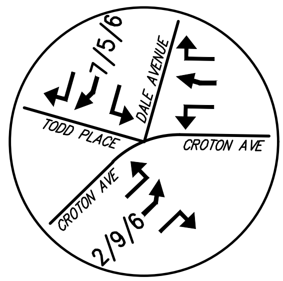


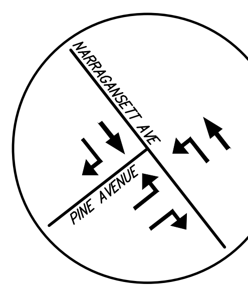
14 *PERSHING AVENUE & SECOND AVENUE*

13 *PERSHING AVENUE & FIRST AVENUE*

12 *PERSHING AVENUE & NARRAGANSETT AVENUE*

LEGEND: PEAK WEEKDAY AM HOUR / PEAK WEEKDAY PM HOUR / PEAK SATURDAY MIDDAY HOUR





10 *CROTON AVENUE, DALE AVENUE, & TODD PLACE*

11 *PINE AVENUE & NARRAGANSETT AVENUE*

RIVER KNOLL

40 CROTON DAM ROAD — TOWN OF OSSINING, NEW YORK

OT□ER DE□ELOPMENT □OLUMES

PART□ KNOLLS LLC

DATE: □□/□□/2018 — JMC PROJECT: 15064

FIGURE: S-07 — SCALE: 1" = 700'

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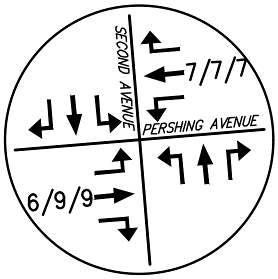
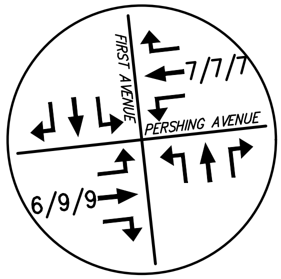
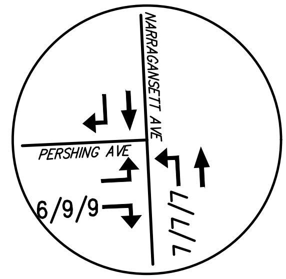
15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab



14 **PERSHING AVENUE & SECOND AVENUE**

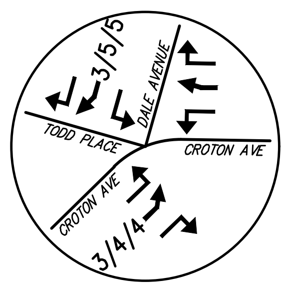


13 **PERSHING AVENUE & FIRST AVENUE**

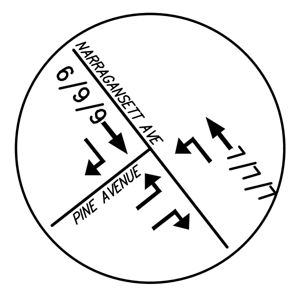


12 **PERSHING AVENUE & NARRAGANSETT AVENUE**

LEGEND: PEAK WEEKDAY AM HOUR / PEAK WEEKDAY PM HOUR / PEAK SATURDAY MIDDAY HOUR

10 **CROTON AVENUE, DALE AVENUE, & TODD PLACE**



11 **PINE AVENUE & NARRAGANSETT AVENUE**

RIVER KNOLL

40 CROTON DAM ROAD — TOWN OF OSSINING, NEW YORK

RE-OCCUPIED □OLUMES

DATE: □□/□□/2018 — JMC PROJECT: 15064

FIGURE: S-08 — SCALE: 1" = 700'

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15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab

RIVER KNOLL

40 CROTON DAM ROAD — TOWN OF OSSINING, NEW YORK

2022 NO BUILD VOLUMES

PEAK WEEKDAY AM HOUR (7:00 - 8:00)

DATE: □□/□□/2018 — JMC PROJECT: 15064

FIGURE: S-09 — SCALE: 1" = 700'

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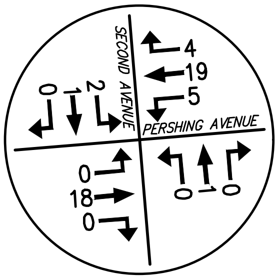
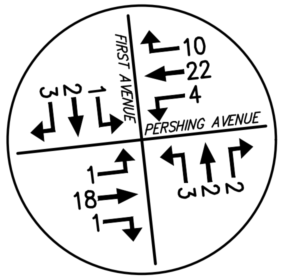
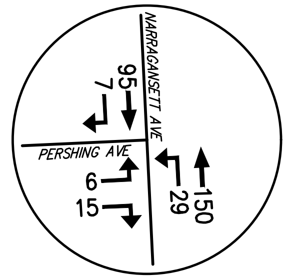
15064-TRAFFIC-FIG.dwg; SUPPLEMENTAL (8.5X11).tab



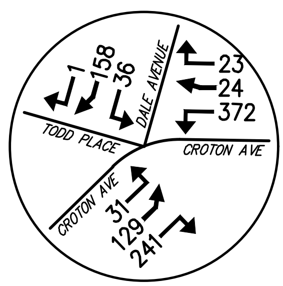
14 *PERSHING AVENUE & SECOND AVENUE*



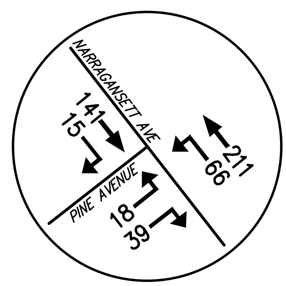
13 *PERSHING AVENUE & FIRST AVENUE*



12 *PERSHING AVENUE & NARRAGANSETT AVENUE*



10 *CROTON AVENUE, DALE AVENUE, & TODD PLACE*



11 *PINE AVENUE & NARRAGANSETT AVENUE*

RIVER KNOLL

40 CROTON DAM ROAD — TOWN OF OSSINING, NEW YORK

2022 NO BUILD □OLUMES

PEAK WEEKDAY PM □OUR □5:00 - 6:00□

DATE: □□/□□/2018 — JMC PROJECT: 15064

FIGURE: S-10 — SCALE: 1" = 700'

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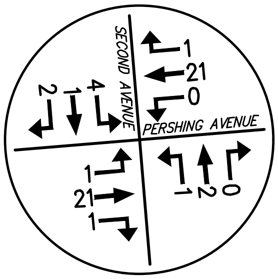
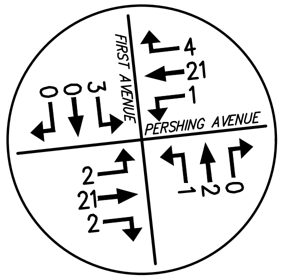
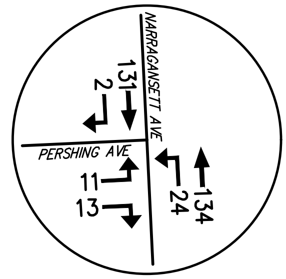
15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab



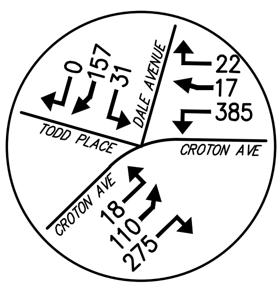


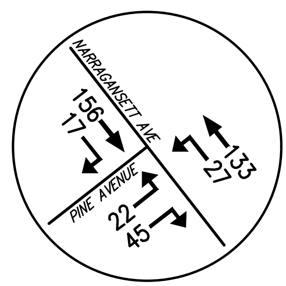


14 PERSHING AVENUE & SECOND AVENUE

13 PERSHING AVENUE & FIRST AVENUE

12 PERSHING AVENUE & NARRAGANSETT AVENUE





10 CROTON AVENUE, DALE AVENUE, & TODD PLACE

11 PINE AVENUE & NARRAGANSETT AVENUE

RIVER KNOLL

40 CROTON DAM ROAD — TOWN OF OSSINING, NEW YORK

2022 NO BUILD □OLUMES

PEAK SATURDAY MIDDAY □OUR □12:00 - 1:00□

DATE: □□/□□/2018 — JMC PROJECT: 15064

FIGURE: S-11 — SCALE: 1" = 700'

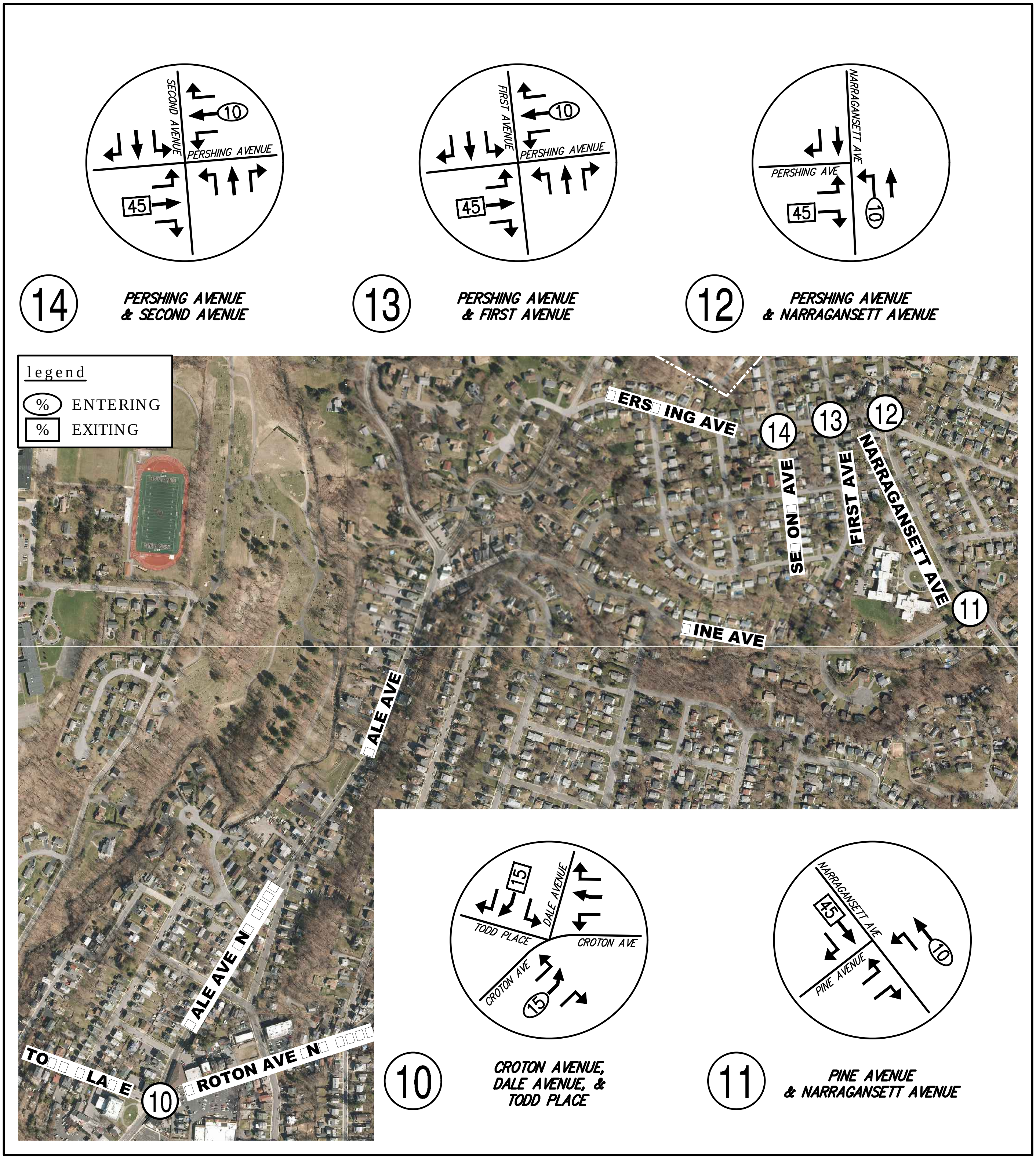
120 BEDFORD RD
ARMONK
NY 10504

(914) 273-5225
fax 273-2102

JMCPLLC.COM

JMC

15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab



RIVER KNOLL

40 CROTON DAM ROAD TOWN OF OSSINING, NEW YORK

PASSENGER VEHICLE PRIMARY TRIP DISTRIBUTIONS

DATE: □□/□□/2018 JMC PROJECT: 15064

FIGURE: S-12 SCALE: 1" = 700'

120 BEDFORD RD
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NY 10504

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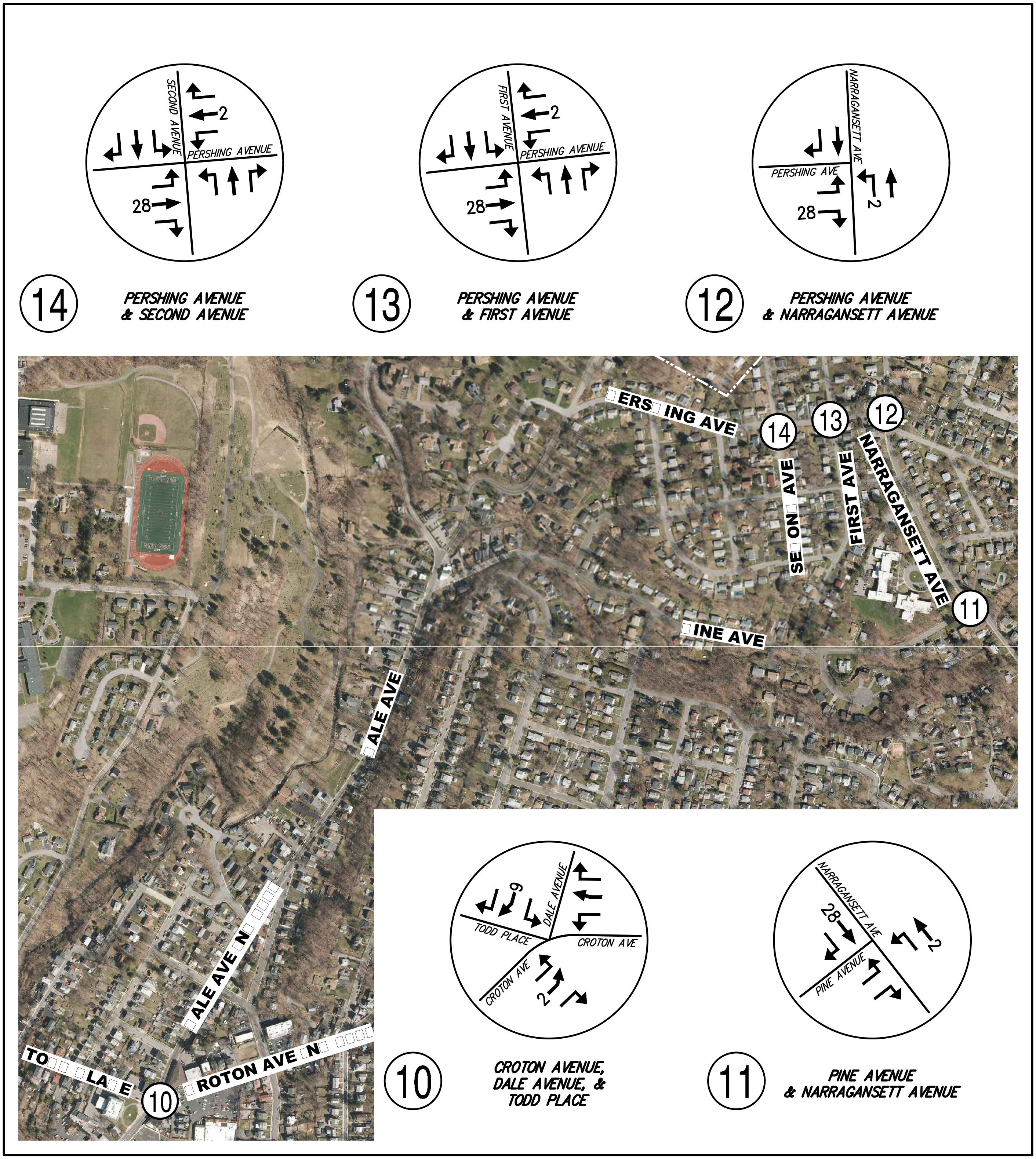

RIVER KNOLL

40 CROTON DAM ROAD TOWN OF OSSINING, NEW YORK

PASSENGER VEHICLE PRIMARY TRIP VOLUMES

PEAK WEEKDAY AM HOUR

DATE: / /2018 JMC PROJECT: 15064

FIGURE: S-13 SCALE: 1" = 700'

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ARMONK
NY 10504

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fax 273-2102

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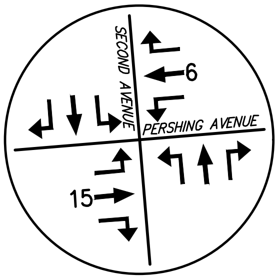
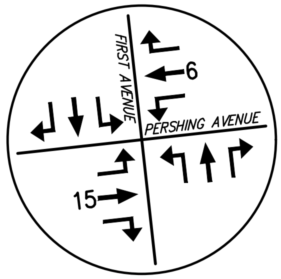
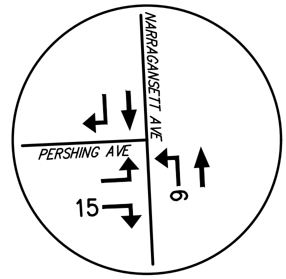
15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab



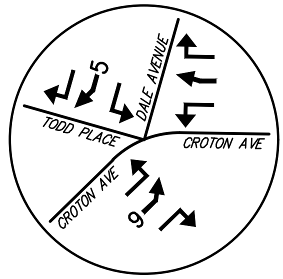


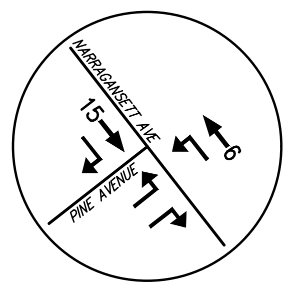


14 *PERSHING AVENUE & SECOND AVENUE*

13 *PERSHING AVENUE & FIRST AVENUE*

12 *PERSHING AVENUE & NARRAGANSETT AVENUE*





10 *CROTON AVENUE, DALE AVENUE, & TODD PLACE*

11 *PINE AVENUE & NARRAGANSETT AVENUE*

RIVER KNOLL

40 CROTON DAM ROAD TOWN OF OSSINING, NEW YORK

PASSENGER VEHICLE PRIMARY TRIP VOLUMES

PEAK WEEKDAY PM □OUR

DATE: □□/□□/2018 JMC PROJECT: 15064

FIGURE: S-14 SCALE: 1" = 700'

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ARMONK
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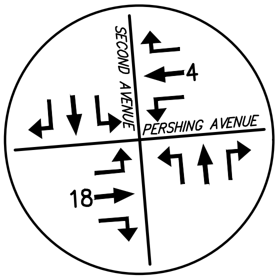
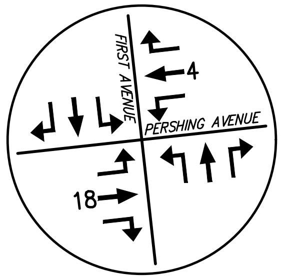
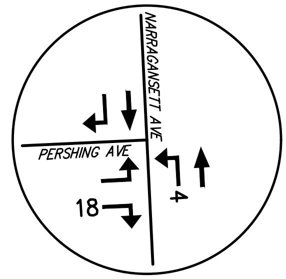


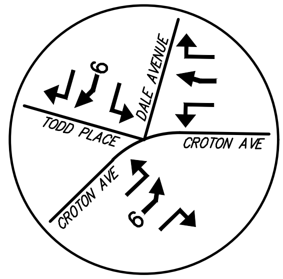
14 PERSHING AVENUE & SECOND AVENUE



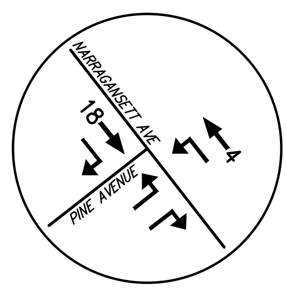
13 PERSHING AVENUE & FIRST AVENUE



12 PERSHING AVENUE & NARRAGANSETT AVENUE



10 CROTON AVENUE, DALE AVENUE, & TODD PLACE



11 PINE AVENUE & NARRAGANSETT AVENUE

RIVER KNOLL

40 CROTON DAM ROAD | TOWN OF OSSINING, NEW YORK

PASSENGER VEHICLE PRIMARY TRIP VOLUMES

PEAK SATURDAY MIDDAY OUR

DATE: / /2018 | JMC PROJECT: 15064

FIGURE: S-15 | SCALE: 1" = 700'

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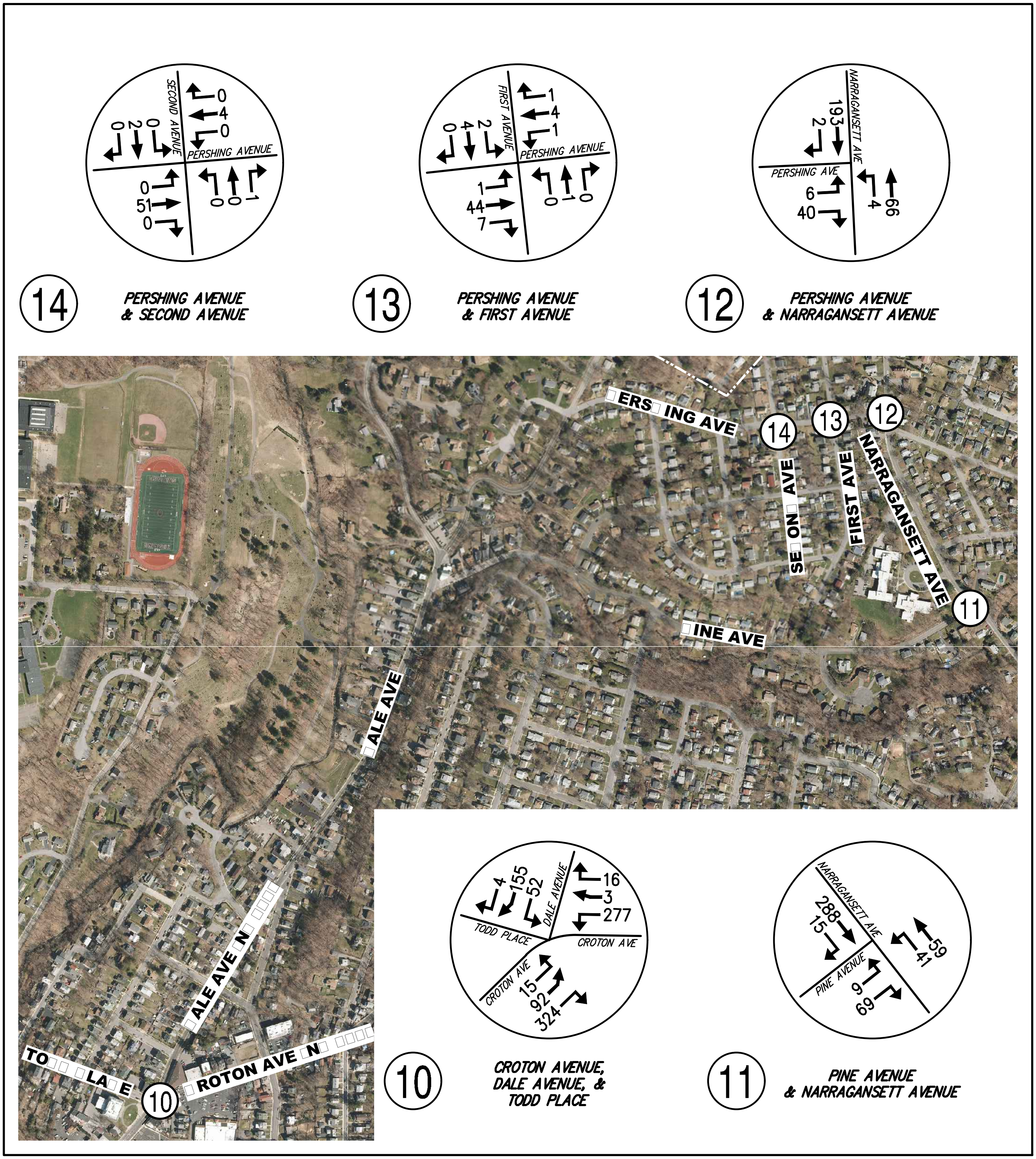
15064–TRAFFIC–FIG.dwg; SUPPLEMENTAL (8.5X11).tab



RIVER KNOLL

40 CROTON DAM ROAD | TOWN OF OSSINING, NEW YORK

2022 BUILD □OLUMES

PEAK WEEKDAY AM □OUR □7:00 - 8:00□

DATE: □□/□□/2018 | JMC PROJECT: 15064

FIGURE: S-16 | SCALE: 1" = 700'

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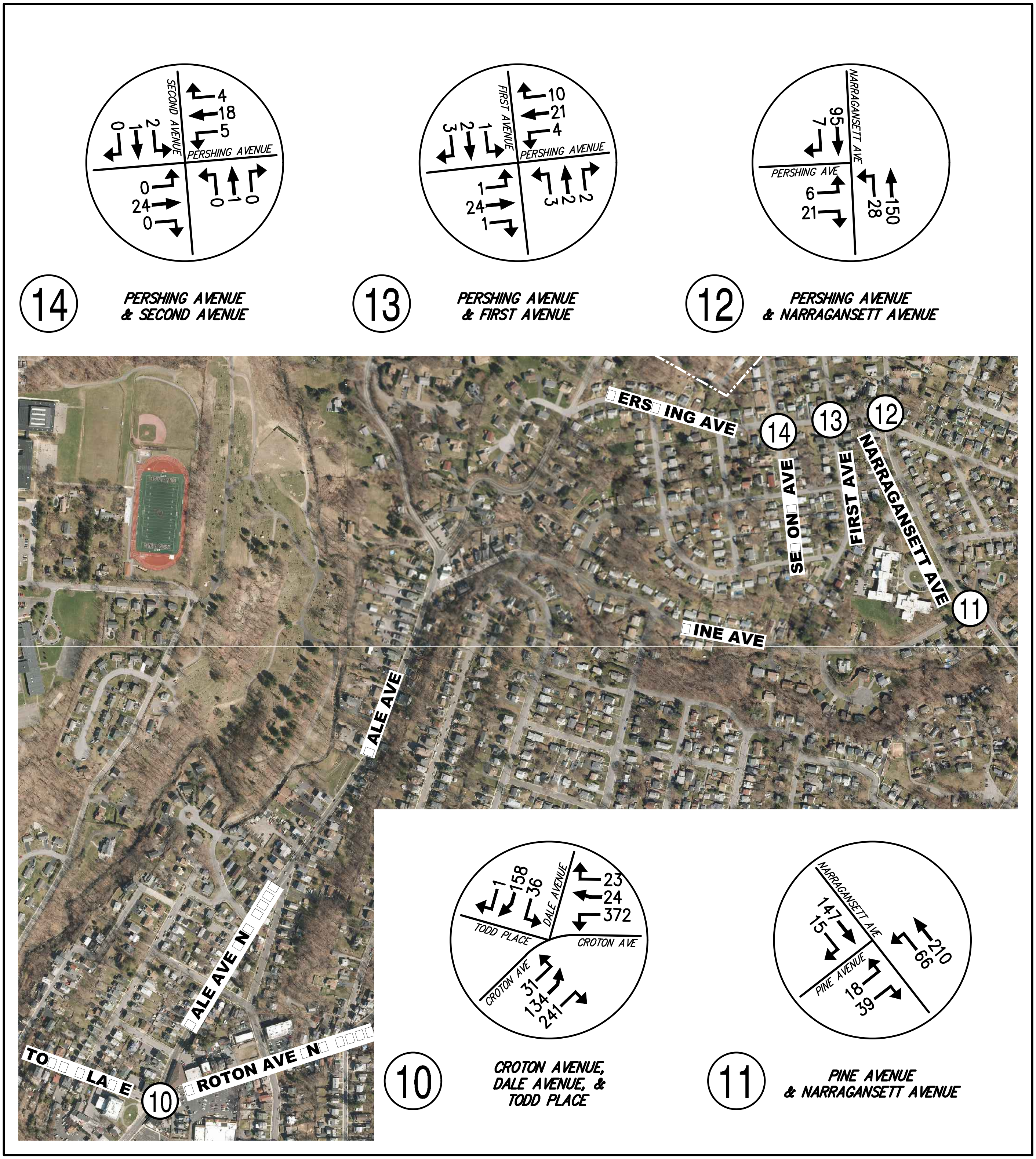

RIVER KNOLL

40 CROTON DAM ROAD | TOWN OF OSSINING, NEW YORK

2022 BUILD □OLUMES

PEAK WEEKDAY PM □OUR □5:00 - 6:00□

DATE: □□/□□/2018 | JMC PROJECT: 15064

FIGURE: S-17 | SCALE: 1" = 700'

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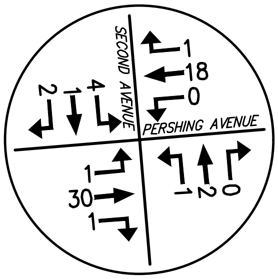
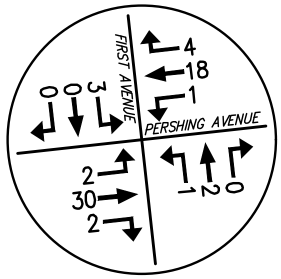
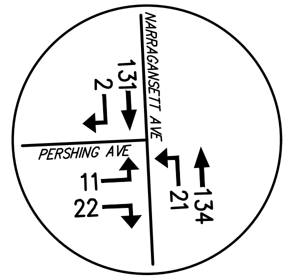
15064-TRAFFIC-FIG.dwg; SUPPLEMENTAL (8.5X11).tab



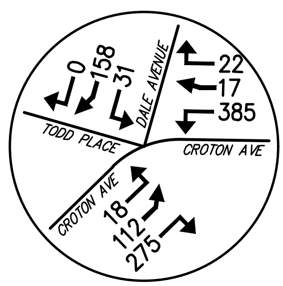
14 PERSHING AVENUE & SECOND AVENUE



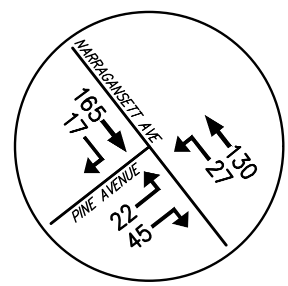
13 PERSHING AVENUE & FIRST AVENUE



12 PERSHING AVENUE & NARRAGANSETT AVENUE

10 CROTON AVENUE, DALE AVENUE, & TODD PLACE



11 PINE AVENUE & NARRAGANSETT AVENUE

RIVER KNOLL

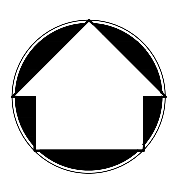
40 CROTON DAM ROAD — TOWN OF OSSINING, NEW YORK

2022 BUILD VOLUMES

PEAK SATURDAY MIDDAY HOUR (12:00 - 1:00)

DATE: [illegible]/[illegible]/2018 — JMC PROJECT: 15064

FIGURE: S-18 — SCALE: 1" = 700'



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NY 10504

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15064-TRAFFIC-FIG.dwg; SUPPLEMENTAL (8.5X11).tab

DATE:	6/21/2018
PERIOD:	6-10 AM & 3-7 PM

PEAK HOUR CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	15064
NAME:	Traffic Databank

TIME	CLASS	TOTAL INT. 10	TOTAL INT. 11	TOTAL INT. 13	TOTAL INT. 12	TOTAL INT. 14	TOTAL INT.	TOTAL INT.	TOTAL INT.	TOTAL
6:00 - 7:00 AM	TOTAL	585	189	24	98	14				910
	TRUCK									
6:15 - 7:15 AM	TOTAL	692	236	25	128	15				1,096
	TRUCK									
6:30 - 7:30 AM	TOTAL	796	315	28	178	20				1,337
	TRUCK									
6:45 - 7:45 AM	TOTAL	852	372	32	225	21				1,502
	TRUCK									
7:00 - 8:00 AM	TOTAL	840	412	32	256	22				1,562
	TRUCK									
7:15 - 8:15 AM	TOTAL	817	424	28	265	20				1,554
	TRUCK									
7:30 - 8:30 AM	TOTAL	761	413	33	260	27				1,494
	TRUCK									
7:45 - 8:45 AM	TOTAL	735	404	27	234	24				1,424
	TRUCK									
8:00 - 9:00 AM	TOTAL	757	398	24	219	24				1,422
	TRUCK									
8:15 - 9:15 AM	TOTAL	748	396	26	202	28				1,400
	TRUCK									
8:30 - 9:30 AM	TOTAL	724	373	23	188	22				1,330
	TRUCK									
8:45 - 9:45 AM	TOTAL	633	322	25	179	24				1,183
	TRUCK									
9:00 - 10:00 AM	TOTAL	618	265	26	162	24				1,095
	TRUCK									

3:00 - 4:00 PM	TOTAL	708	389	41	237	27				1,402
	TRUCK									
3:15 - 4:15 PM	TOTAL	709	392	46	245	35				1,427
	TRUCK									
3:30 - 4:30 PM	TOTAL	733	404	47	267	34				1,485
	TRUCK									
3:45 - 4:45 PM	TOTAL	759	413	51	278	33				1,534
	TRUCK									
4:00 - 5:00 PM	TOTAL	817	406	43	258	30				1,554
	TRUCK									
4:15 - 5:15 PM	TOTAL	860	410	44	258	21				1,593
	TRUCK									
4:30 - 5:30 PM	TOTAL	898	415	43	250	23				1,629
	TRUCK									
4:45 - 5:45 PM	TOTAL	900	430	45	260	27				1,662
	TRUCK									
5:00 - 6:00 PM	TOTAL	909	432	48	263	28				1,680
	TRUCK									
5:15 - 6:15 PM	TOTAL	892	443	45	267	32				1,679
	TRUCK									
5:30 - 6:30 PM	TOTAL	866	415	43	256	30				1,610
	TRUCK									
5:45 - 6:45 PM	TOTAL	867	385	38	240	28				1,558
	TRUCK									
6:00 - 7:00 PM	TOTAL	844	373	31	239	25				1,512
	TRUCK									

DATE:	6/21/2018		JOB NO:	15064
PERIOD:	6-10 AM & 3-7PM		NAME:	Traffic Databank
LOCATION:	Croton Avenue, Dale Avenue, & Todd Place		INT #:	10

CALCULATIONS - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
6:00 - 6:15 AM	TOTAL	36	12	0	0	17	0				1		35	101	3	2	4	1	10	
	TRUCK	2											2							
6:15 - 6:30 AM	TOTAL	53	15	2	3	21	3				0		28	125	1	1	4	1	7	
	TRUCK	1	1										2							
6:30 - 6:45 AM	TOTAL	62	16	2	0	24	6		1		3		45	159	3	2	2		7	
	TRUCK	1				1			1				2							
6:45 - 7:00 AM	TOTAL	62	23	3	1	36	5				7		63	200	4	3	5	7	19	
	TRUCK	3									1		2							
7:00 - 7:15 AM	TOTAL	80	21	1	1	31	12				2		60	208	2	2	4	11	19	
	TRUCK	4	2				1						2							
7:15 - 7:30 AM	TOTAL	77	29	3	0	39	8				6		67	229	2	7	9		18	
	TRUCK	7		1		2							6							
7:30 - 7:45 AM	TOTAL	79	18	4	3	33	11				4		63	215	1	5	3		9	
	TRUCK	5				6							9							
7:45 - 8:00 AM	TOTAL	60	13	5	0	25	17				2	3	63	188		3	5		8	
	TRUCK	6	1										5							
8:00 - 8:15 AM	TOTAL	73	19	2	0	18	14				1	2	56	185		2	2		4	
	TRUCK	15	1			1						1	7							
8:15 - 8:30 AM	TOTAL	57	12	1	0	29	7	1			2	1	63	173		5	11		16	
	TRUCK	8	2			1							5							
8:30 - 8:45 AM	TOTAL	75	11	1	0	23	7				0	1	71	189	1	2	6	5	14	
	TRUCK	11	1			2	1						7							
8:45 - 9:00 AM	TOTAL	68	13	2	1	43	7				1	2	73	210	1	2	6	5	14	
	TRUCK	18	4			3							6							
9:00 - 9:15 AM	TOTAL	63	14	3	1	21	6				0	1	67	176		6	3	2	11	
	TRUCK	4				1	1						2							
9:15 - 9:30 AM	TOTAL	37	10	3	0	23	3				2	1	70	149	1	4	3	6	14	
	TRUCK	1											5							
9:30 - 9:45 AM	TOTAL	54	21	1	1	29	3				2	1	53	165	2	2	1	1	6	
	TRUCK	2			1								2							
9:45 - 10:00 AM	TOTAL	38	13	2	0	17	1				3	2	52	128	3	5	5	3	16	
	TRUCK	3	2	1		1						1	2	10						

3:00 - 3:15 PM	TOTAL	60	22	0	0	22	6				4	2	68	184	6	5	14	12	37	
	TRUCK	9	4			1						1	5							
3:15 - 3:30 PM	TOTAL	55	19	2	1	19	3				5	1	70	175	8	14	20	4	46	
	TRUCK	5	2			2					1		7							
3:30 - 3:45 PM	TOTAL	63	18	3	2	23	6				5	1	67	188	15	3	17	9	44	
	TRUCK	7	1	1			1						7							
3:45 - 4:00 PM	TOTAL	46	20	2	0	31	0				0	0	62	161	5	2	5	6	18	
	TRUCK	4	1										2							
4:00 - 4:15 PM	TOTAL	56	19	3	0	31	12				4	4	56	185		1	4	2	7	
	TRUCK	3				1					1		4							
4:15 - 4:30 PM	TOTAL	59	17	1	1	40	7				4	6	64	199	5	3	4	4	16	
	TRUCK	2				5					1		2							
4:30 - 4:45 PM	TOTAL	65	21	0	0	43	8				5	2	70	214	1	4	8	4	17	
	TRUCK	3											1							
4:45 - 5:00 PM	TOTAL	45	17	4	2	36	8				6	4	97	219	9		8	1	18	
	TRUCK	1				1					1		5							
5:00 - 5:15 PM	TOTAL	55	24	6	0	37	7	1			4	1	93	228	1	6	9	4	20	
	TRUCK	3	1			1		1				1	2							
5:15 - 5:30 PM	TOTAL	70	22	8	1	33	6				3	7	87	237	6	11	10	6	33	
	TRUCK	0				1					1		8							
5:30 - 5:45 PM	TOTAL	46	35	5	0	29	8				10	8	75	216	3	3	2	2	10	
	TRUCK	0									1		2							
5:45 - 6:00 PM	TOTAL	50	25	10	0	36	12				4	6	85	228	1	1	2	3	7	
	TRUCK	2											1							
6:00 - 6:15 PM	TOTAL	46	25	7	1	37	8				6	5	76	211	5	6	17	13	41	
	TRUCK	3				1							2							
6:15 - 6:30 PM	TOTAL	49	19	4	3	45	2				4	5	80	211	3	5	6	5	19	
	TRUCK	0				1							2							
6:30 - 6:45 PM	TOTAL	46	20	8	0	38	3				2	3	97	217	8	5	15	9	37	
	TRUCK	0											3							
6:45 - 7:00 PM	TOTAL	52	14	4	1	37	5				1	3	88	205	4	4	7	10	25	
	TRUCK	1											1							

1: Croton Ave NB - Right
2: Croton Ave NB - Thru
3: Croton Ave NB - Left
4: Dale Ave SB - Right
5: Dale Ave SB - Thru
6: Dale Ave SB - Left

7: Todd Pl EB - Right
8: Todd Pl EB - Thru
9: Todd Pl EB - Left
10: Croton Ave WB - Right
11: Croton Ave WB - Thru
12: Croton Ave WB - Left

A: Cross Croton Ave S of INT
B: Cross Dale Ave North of INT
C: Cross Todd Pl West of INT
D: Cross Croton Ave East of INT

DATE:	6/21/2018	JOB NO:	15064
PERIOD:	6-10 AM & 3-7PM	NAME:	Traffic Databank
LOCATION:	Croton Avenue, Dale Avenue, & Todd Place	INT #:	10

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
6:00 - 7:00 AM	TOTAL	213	66	7	4	98	14		1		11		171	585	11	8	15	9	43	
	TRUCK	3%	2%	0%	0%	1%	0%		100%		9%		5%							0.73
6:15 - 7:15 AM	TOTAL	257	75	8	5	112	26		1		12		196	692	10	8	15	19	52	
	TRUCK	4%	4%	0%	0%	1%	4%		100%		8%		4%							0.83
6:30 - 7:30 AM	TOTAL	281	89	9	2	130	31		1		18		235	796	11	14	20	18	63	
	TRUCK	5%	2%	11%	0%	2%	3%		100%		6%		5%							0.87
6:45 - 7:45 AM	TOTAL	298	91	11	5	139	36				19		253	852	9	17	21	18	65	
	TRUCK	6%	2%	9%	0%	6%	3%				5%		8%							0.93
7:00 - 8:00 AM	TOTAL	296	81	13	4	128	48				14	3	253	840	5	17	21	11	54	
	TRUCK	7%	4%	8%	0%	6%	2%				0%	0%	9%							0.92
7:15 - 8:15 AM	TOTAL	289	79	14	3	115	50				13	5	249	817	3	17	19		39	
	TRUCK	11%	3%	7%	0%	8%	0%				0%	20%	11%							0.89
7:30 - 8:30 AM	TOTAL	269	62	12	3	105	49	1			9	6	245	761	1	15	21		37	
	TRUCK	13%	6%	0%	0%	8%	0%	0%			0%	17%	11%							0.88
7:45 - 8:45 AM	TOTAL	265	55	9		95	45	1			5	7	253	735	1	12	24	5	42	
	TRUCK	15%	9%	0%		4%	2%	0%			0%	14%	9%							0.97
8:00 - 9:00 AM	TOTAL	273	55	6	1	113	35	1			4	6	263	757	2	11	25	10	48	
	TRUCK	19%	15%	0%	0%	6%	3%	0%			0%	17%	10%							0.90
8:15 - 9:15 AM	TOTAL	263	50	7	2	116	27	1			3	5	274	748	2	15	26	12	55	
	TRUCK	16%	14%	0%	0%	6%	7%	0%			0%	0%	7%							0.89
8:30 - 9:30 AM	TOTAL	243	48	9	2	110	23				3	5	281	724	3	10	6	8	27	
	TRUCK	14%	10%	0%	0%	5%	9%				0%	0%	7%							0.86
8:45 - 9:45 AM	TOTAL	222	58	9	3	116	19				5	5	196	633	4	14	13	14	45	
	TRUCK	11%	7%	0%	33%	3%	5%				0%	0%	8%							0.75
9:00 - 10:00 AM	TOTAL	192	58	9	2	90	13				7	5	242	618	6	17	12	12	47	
	TRUCK	5%	3%	11%	50%	2%	8%				0%	20%	5%							0.88

3:00 - 4:00 PM	TOTAL	224	79	7	3	95	15				14	4	267	708	34	24	56	31	145	
	TRUCK	11%	10%	14%	0%	3%	7%				7%	25%	8%							0.94
3:15 - 4:15 PM	TOTAL	220	76	10	3	104	21				14	6	255	709	28	20	46	21	115	
	TRUCK	9%	5%	10%	0%	3%	5%				14%	0%	8%							0.94
3:30 - 4:30 PM	TOTAL	224	74	9	3	125	25				13	11	249	733	25	9	30	21	85	
	TRUCK	7%	3%	11%	0%	5%	4%				15%	0%	6%							0.92
3:45 - 4:45 PM	TOTAL	226	77	6	1	145	27				13	12	252	759	11	10	21	16	58	
	TRUCK	5%	1%	0%	0%	4%	0%				15%	0%	4%							0.89
4:00 - 5:00 PM	TOTAL	225	74	8	3	150	35				19	16	287	817	15	8	24	11	58	
	TRUCK	4%	0%	0%	0%	5%	0%				16%	0%	4%							0.93
4:15 - 5:15 PM	TOTAL	224	79	11	3	156	30	1			19	13	324	860	16	13	29	13	71	
	TRUCK	4%	1%	0%	0%	4%	0%	100%			11%	8%	3%							0.94
4:30 - 5:30 PM	TOTAL	235	84	18	3	149	29	1			18	14	347	898	17	21	35	15	88	
	TRUCK	3%	1%	0%	0%	2%	0%	100%			11%	7%	5%							0.95
4:45 - 5:45 PM	TOTAL	216	98	23	3	135	29	1			23	20	352	900	19	20	29	13	81	
	TRUCK	2%	1%	0%	0%	2%	0%	100%			13%	5%	5%							0.95
5:00 - 6:00 PM	TOTAL	221	106	29	1	135	33	1			21	22	340	909	11	21	23	15	70	
	TRUCK	2%	1%	0%	0%	1%	0%	100%			10%	5%	4%							0.96
5:15 - 6:15 PM	TOTAL	212	107	30	2	135	34				23	26	323	892	15	21	31	24	91	
	TRUCK	2%	0%	0%	0%	1%	0%				9%	0%	4%							0.94
5:30 - 6:30 PM	TOTAL	191	104	26	4	147	30				24	24	316	866	12	15	27	23	77	
	TRUCK	3%	0%	0%	0%	1%	0%				4%	0%	2%							0.95
5:45 - 6:45 PM	TOTAL	191	89	29	4	156	25				16	19	338	867	17	17	40	30	104	
	TRUCK	3%	0%	0%	0%	1%	0%				0%	0%	2%							0.95
6:00 - 7:00 PM	TOTAL	193	78	23	5	157	18				13	16	341	844	20	20	45	37	122	
	TRUCK	2%	0%	0%	0%	1%	0%				0%	0%	2%							0.97

1: Croton Ave NB - Right
2: Croton Ave NB - Thru
3: Croton Ave NB - Left
4: Dale Ave SB - Right
5: Dale Ave SB - Thru
6: Dale Ave SB - Left

7: Todd Pl EB - Right
8: Todd Pl EB - Thru
9: Todd Pl EB - Left
10: Croton Ave WB - Right
11: Croton Ave WB - Thru
12: Croton Ave WB - Left

A: Cross Croton Ave S of INT
B: Cross Dale Ave North of INT
C: Cross Todd Pl West of INT
D: Cross Croton Ave East of INT

DATE:	6/21/2018	JOB NO:	15064
PERIOD:	6-10 AM & 3-7 PM	NAME:	Traffic Databank
LOCATION:	Narragansett Avenue & Pine Avenue	INT #:	11

CALCULATIONS - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
6:00 - 6:15 AM	TOTAL	3	2	0	15	11	2							33						
	TRUCK	1																		
6:15 - 6:30 AM	TOTAL	2	1	2	16	6	2							29						
	TRUCK																			
6:30 - 6:45 AM	TOTAL	6	1	0	37	13	0							57		1			1	
	TRUCK																			
6:45 - 7:00 AM	TOTAL	3	6	6	37	16	2							70						
	TRUCK																			
7:00 - 7:15 AM	TOTAL	8	6	3	48	13	2							80						
	TRUCK	1			1															
7:15 - 7:30 AM	TOTAL	9	9	4	64	19	3							108		1			1	
	TRUCK		2		1		1													
7:30 - 7:45 AM	TOTAL	18	12	5	64	12	3							114						
	TRUCK	1				1														
7:45 - 8:00 AM	TOTAL	17	10	1	62	19	1							110						
	TRUCK		1		3	1														
8:00 - 8:15 AM	TOTAL	9	8	1	48	23	3							92						
	TRUCK	1	2																	
8:15 - 8:30 AM	TOTAL	11	3	5	54	23	1							97						
	TRUCK	1	1	2	3															
8:30 - 8:45 AM	TOTAL	8	15	6	42	32	2							105		3			3	
	TRUCK				4	3	1													
8:45 - 9:00 AM	TOTAL	18	10	3	42	27	4							104						
	TRUCK	1			1	2														
9:00 - 9:15 AM	TOTAL	15	16	3	32	21	3							90						
	TRUCK		1		1															
9:15 - 9:30 AM	TOTAL	18	5	4	33	10	4							74		1			1	
	TRUCK	2																		
9:30 - 9:45 AM	TOTAL	20	3	0	20	10	1							54						
	TRUCK	1																		
9:45 - 10:00 AM	TOTAL	20	2	1	18	6	0							47		1			1	
	TRUCK				1									1						

3:00 - 3:15 PM	TOTAL	31	11	1	31	15	5							94		2			2	
	TRUCK				1	3														
3:15 - 3:30 PM	TOTAL	39	15	8	30	10	2							104		3			3	
	TRUCK	3	2	1	2	2														
3:30 - 3:45 PM	TOTAL	33	17	6	18	10	3							87		2			2	
	TRUCK	1		1	1	2	1													
3:45 - 4:00 PM	TOTAL	43	12	5	29	10	5							104						
	TRUCK	3		1																
4:00 - 4:15 PM	TOTAL	34	19	3	33	7	1							97						
	TRUCK	1			1	1														
4:15 - 4:30 PM	TOTAL	52	19	5	30	6	4							116						
	TRUCK	2			1	1														
4:30 - 4:45 PM	TOTAL	37	14	9	28	5	3							96	1				1	
	TRUCK																			
4:45 - 5:00 PM	TOTAL	45	10	0	28	13	1							97						
	TRUCK					1														
5:00 - 5:15 PM	TOTAL	49	18	3	27	3	1							101		1			1	
	TRUCK	2	1		1															
5:15 - 5:30 PM	TOTAL	47	17	4	34	12	7							121		1			1	
	TRUCK	2			1															
5:30 - 5:45 PM	TOTAL	46	14	4	34	10	3							111						
	TRUCK				1															
5:45 - 6:00 PM	TOTAL	45	11	2	26	10	5							99		1			1	
	TRUCK	3			1															
6:00 - 6:15 PM	TOTAL	35	21	10	32	9	5							112						
	TRUCK		1																	
6:15 - 6:30 PM	TOTAL	38	16	2	25	12	0							93						
	TRUCK																			
6:30 - 6:45 PM	TOTAL	24	5	2	29	18	3							81						
	TRUCK	1																		
6:45 - 7:00 PM	TOTAL	33	12	7	23	9	3							87						
	TRUCK																			

1: Narragansett NB - Thru
2: Narragansett NB - Left
3: Narragansett SB - Right
4: Narragansett SB - Thru
5: Pine Ave EB - Right
6: Pine Ave EB - Left

7:
8:
9:
10:
11:
12:

A: Cross Narragansett S of INT
B: Cross Pine West of INT
C:
D:

DATE:	6/21/2018	JOB NO:	15064
PERIOD:	6-10 AM & 3-7 PM	NAME:	Traffic Databank
LOCATION:	Narragansett Avenue & Pine Avenue	INT #:	11

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
6:00 - 7:00 AM	TOTAL	14	10	8	105	46	6							189		1			1	0.68
	TRUCK	7%	0%	0%	0%	0%	0%													
6:15 - 7:15 AM	TOTAL	19	14	11	138	48	6							236		1			1	0.74
	TRUCK	5%	0%	0%	1%	0%	0%													
6:30 - 7:30 AM	TOTAL	26	22	13	186	61	7							315		2			2	0.73
	TRUCK	4%	9%	0%	1%	0%	14%													
6:45 - 7:45 AM	TOTAL	38	33	18	213	60	10							372		1			1	0.82
	TRUCK	5%	6%	0%	1%	2%	10%													
7:00 - 8:00 AM	TOTAL	52	37	13	238	63	9							412		1			1	0.90
	TRUCK	4%	8%	0%	2%	3%	11%													
7:15 - 8:15 AM	TOTAL	53	39	11	238	73	10							424		1			1	0.93
	TRUCK	4%	13%	0%	2%	3%	10%													
7:30 - 8:30 AM	TOTAL	55	33	12	228	77	8							413						0.91
	TRUCK	5%	12%	17%	3%	3%	0%													
7:45 - 8:45 AM	TOTAL	45	36	13	206	97	7							404		3			3	0.92
	TRUCK	4%	11%	15%	5%	4%	14%													
8:00 - 9:00 AM	TOTAL	46	36	15	186	105	10							398		3			3	0.95
	TRUCK	7%	8%	13%	4%	5%	10%													
8:15 - 9:15 AM	TOTAL	52	44	17	170	103	10							396		3			3	0.94
	TRUCK	4%	5%	12%	5%	5%	10%													
8:30 - 9:30 AM	TOTAL	59	46	16	149	90	13							373		1			1	0.89
	TRUCK	5%	2%	0%	4%	6%	8%													
8:45 - 9:45 AM	TOTAL	71	34	10	127	68	12							322		1			1	0.77
	TRUCK	6%	3%	0%	2%	3%	0%													
9:00 - 10:00 AM	TOTAL	73	26	8	103	47	8							265		2			2	0.74
	TRUCK	4%	4%	0%	2%	0%	0%													

3:00 - 4:00 PM	TOTAL	146	55	20	108	45	15							389		7			7
	TRUCK	5%	4%	15%	4%	16%	7%												0.94
3:15 - 4:15 PM	TOTAL	149	63	22	110	37	11							392		5			5
	TRUCK	5%	3%	14%	4%	14%	9%												0.94
3:30 - 4:30 PM	TOTAL	162	67	19	110	33	13							404		2			2
	TRUCK	4%	0%	11%	3%	12%	8%												0.87
3:45 - 4:45 PM	TOTAL	166	64	22	120	28	13							413	1				1
	TRUCK	4%	0%	5%	2%	7%	0%												0.89
4:00 - 5:00 PM	TOTAL	168	62	17	119	31	9							406	1				1
	TRUCK	2%	0%	0%	2%	10%	0%												0.88
4:15 - 5:15 PM	TOTAL	183	61	17	113	27	9							410	1	1			2
	TRUCK	2%	2%	0%	2%	7%	0%												0.88
4:30 - 5:30 PM	TOTAL	178	59	16	117	33	12							415	1	2			3
	TRUCK	2%	2%	0%	2%	3%	0%												0.86
4:45 - 5:45 PM	TOTAL	187	59	11	123	38	12							430		2			2
	TRUCK	2%	2%	0%	2%	3%	0%												0.89
5:00 - 6:00 PM	TOTAL	187	60	13	121	35	16							432		3			3
	TRUCK	4%	2%	0%	3%	0%	0%												0.89
5:15 - 6:15 PM	TOTAL	173	63	20	126	41	20							443		2			2
	TRUCK	3%	2%	0%	2%	0%	0%												0.92
5:30 - 6:30 PM	TOTAL	164	62	18	117	41	13							415		1			1
	TRUCK	2%	2%	0%	2%	0%	0%												0.93
5:45 - 6:45 PM	TOTAL	142	53	16	112	49	13							385		1			1
	TRUCK	3%	2%	0%	1%	0%	0%												0.86
6:00 - 7:00 PM	TOTAL	130	54	21	109	48	11							373					
	TRUCK	1%	2%	0%	0%	0%	0%												0.83

1: Narragansett NB - Thru
2: Narragansett NB - Left
3: Narragansett SB - Right
4: Narragansett SB - Thru
5: Pine Ave EB - Right
6: Pine Ave EB - Left

7:
8:
9:
10:
11:
12:

A: Cross Narragansett S of INT
B: Cross Pine West of INT
C:
D:

DATE:	6/21/2018	JOB NO:	15064
PERIOD:	6-10 AM & 3-7 PM	NAME:	Traffic Databank
LOCATION:	Pershing Aveue & First Avenue	INT #:	13

CALCULATIONS - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
6:00 - 6:15 AM	TOTAL					3	1		2			2		8						
	TRUCK											1								
6:15 - 6:30 AM	TOTAL					1			1					2	2			2	4	
	TRUCK																			
6:30 - 6:45 AM	TOTAL					1		3	1		1			6						
	TRUCK																			
6:45 - 7:00 AM	TOTAL					2			5			1		8	2				2	
	TRUCK																			
7:00 - 7:15 AM	TOTAL					2		5	2					9						
	TRUCK																			
7:15 - 7:30 AM	TOTAL								5					5			3		3	
	TRUCK																			
7:30 - 7:45 AM	TOTAL		1			1	2	1	2	1		1	1	10	2				2	
	TRUCK							1												
7:45 - 8:00 AM	TOTAL					1		1	4		1	1		8	2			1	3	
	TRUCK																			
8:00 - 8:15 AM	TOTAL					1		2	2					5	1	1			2	
	TRUCK																			
8:15 - 8:30 AM	TOTAL			1					5			4		10	1	1		3	5	
	TRUCK								1			2								
8:30 - 8:45 AM	TOTAL					1			1			2		4						
	TRUCK											1								
8:45 - 9:00 AM	TOTAL			1					4					5						
	TRUCK																			
9:00 - 9:15 AM	TOTAL			2				2	1			2		7						
	TRUCK																			
9:15 - 9:30 AM	TOTAL					1		1	2	1		2		7				1	1	
	TRUCK																			
9:30 - 9:45 AM	TOTAL	1							2			2	1	6						
	TRUCK																			
9:45 - 10:00 AM	TOTAL								1			4	1	6						
	TRUCK																			

3:00 - 3:15 PM	TOTAL					1		1	1			3		6					
	TRUCK																		
3:15 - 3:30 PM	TOTAL	1										6	1	8		3	1		4
	TRUCK											2							
3:30 - 3:45 PM	TOTAL	1						2	3			2	1	9	1	1	1	7	10
	TRUCK							1				1							
3:45 - 4:00 PM	TOTAL				1		1		3	2	3	8		18				3	3
	TRUCK								1			1							
4:00 - 4:15 PM	TOTAL								4		2	5		11					
	TRUCK																		
4:15 - 4:30 PM	TOTAL			1	1	1					3	3		9					
	TRUCK																		
4:30 - 4:45 PM	TOTAL	1	1			1	1		1	1	2	4	1	13					
	TRUCK																		
4:45 - 5:00 PM	TOTAL			1		3	1	1	1			2	1	10					
	TRUCK																		
5:00 - 5:15 PM	TOTAL	1	1				1		1		4	3	1	12					
	TRUCK																		
5:15 - 5:30 PM	TOTAL			1	1					1	2	2	1	8			1	1	2
	TRUCK																		
5:30 - 5:45 PM	TOTAL					1		1	5		3	4	1	15					
	TRUCK																		
5:45 - 6:00 PM	TOTAL	1	1	2	2	1			3			2	1	13				2	2
	TRUCK																		
6:00 - 6:15 PM	TOTAL			1		1	1		1			5		9					
	TRUCK																		
6:15 - 6:30 PM	TOTAL								2		1	3		6				1	1
	TRUCK																		
6:30 - 6:45 PM	TOTAL				1	1		1	2	2		3		10					
	TRUCK											1							
6:45 - 7:00 PM	TOTAL					1			1			4		6					
	TRUCK																		

1: First Ave NB - Right
2: First Ave NB - Thru
3: First Ave NB - Left
4: First Ave SB - Right
5: First Ave SB - Thru
6: First Ave SB - Left

7: Pershing Ave EB - Right
8: Pershing Ave EB - Thru
9: Pershing Ave EB - Left
10: Pershing Ave WB - Right
11: Pershing Ave WB - Thru
12: Pershing Ave WB - Left

A: Cross 1st Ave south of INT
B: Cross 1st Ave north of INT
C: Cross Pershing west of INT
D: Cross Pershing east of INT

DATE:	6/21/2018	JOB NO:	15064
PERIOD:	6-10 AM & 3-7 PM	NAME:	Traffic Databank
LOCATION:	Pershing Aveue & First Avenue	INT #:	13

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
6:00 - 7:00 AM	TOTAL					7	1	3	9		1	3		24	4			2	6	
	TRUCK					0%	0%	0%	0%		0%	33%								0.75
6:15 - 7:15 AM	TOTAL					6		8	9		1	1		25	4			2	6	
	TRUCK					0%		0%	0%		0%	0%								0.69
6:30 - 7:30 AM	TOTAL					5		8	13		1	1		28	2		3		5	
	TRUCK					0%		0%	0%		0%	0%								0.78
6:45 - 7:45 AM	TOTAL		1			5	2	6	14	1		2	1	32	4		3		7	
	TRUCK		0%			0%	0%	17%	0%	0%		0%	0%							0.80
7:00 - 8:00 AM	TOTAL		1			4	2	7	13	1	1	2	1	32	4		3	1	8	
	TRUCK		0%			0%	0%	14%	0%	0%	0%	0%	0%							0.80
7:15 - 8:15 AM	TOTAL		1			3	2	4	13	1	1	2	1	28	5	1	3	1	10	
	TRUCK		0%			0%	0%	25%	0%	0%	0%	0%	0%							0.70
7:30 - 8:30 AM	TOTAL		1	1		3	2	4	13	1	1	6	1	33	6	2		4	12	
	TRUCK		0%	0%		0%	0%	25%	8%	0%	0%	33%	0%							0.83
7:45 - 8:45 AM	TOTAL			1		3		3	12		1	7		27	4	2		4	10	
	TRUCK			0%		0%		0%	8%		0%	43%								0.68
8:00 - 9:00 AM	TOTAL			2		2		2	12			6		24	2	2		3	7	
	TRUCK			0%		0%		0%	8%			50%								0.60
8:15 - 9:15 AM	TOTAL			4		1		2	11			8		26	1	1		3	5	
	TRUCK			0%		0%		0%	9%			38%								0.65
8:30 - 9:30 AM	TOTAL			3		2		3	8	1		6		23				1	1	
	TRUCK			0%		0%		0%	0%	0%		17%								0.82
8:45 - 9:45 AM	TOTAL	1		3		1		3	9	1		6	1	25				1	1	
	TRUCK	0%		0%		0%		0%	0%	0%		0%	0%							0.89
9:00 - 10:00 AM	TOTAL	1		2		1		3	6	1		10	2	26				1	1	
	TRUCK	0%		0%		0%		0%	0%	0%		0%	0%							0.93

3:00 - 4:00 PM	TOTAL	2			1	1	1	3	7	2	3	19	2	41	1	4	2	10	17	
	TRUCK	0%			0%	0%	0%	33%	14%	0%	0%	21%	0%							0.57
3:15 - 4:15 PM	TOTAL	2			1		1	2	10	2	5	21	2	46	1	4	2	10	17	
	TRUCK	0%			0%		0%	50%	10%	0%	0%	19%	0%							0.64
3:30 - 4:30 PM	TOTAL	1		1	2	1	1	2	10	2	8	18	1	47	1	1	1	10	13	
	TRUCK	0%		0%	0%	0%	0%	50%	10%	0%	0%	11%	0%							0.65
3:45 - 4:45 PM	TOTAL	1	1	1	2	2	2		8	3	10	20	1	51				3	3	
	TRUCK	0%	0%	0%	0%	0%	0%		13%	0%	0%	5%	0%							0.71
4:00 - 5:00 PM	TOTAL	1	1	2	1	5	2	1	6	1	7	14	2	43						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%							0.83
4:15 - 5:15 PM	TOTAL	2	2	2	1	5	3	1	3	1	9	12	3	44						
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%							0.85
4:30 - 5:30 PM	TOTAL	2	2	2	1	4	3	1	3	2	8	11	4	43			1	1	2	
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%							0.83
4:45 - 5:45 PM	TOTAL	1	1	2	1	4	2	2	7	1	9	11	4	45			1	1	2	
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%							0.75
5:00 - 6:00 PM	TOTAL	2	2	3	3	2	1	1	9	1	9	11	4	48			1	3	4	
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%							0.80
5:15 - 6:15 PM	TOTAL	1	1	4	3	3	1	1	9	1	5	13	3	45			1	3	4	
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%							0.75
5:30 - 6:30 PM	TOTAL	1	1	3	2	3	1	1	11		4	14	2	43				3	3	
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%							0.72
5:45 - 6:45 PM	TOTAL	1	1	3	3	3	1	1	8	2	1	13	1	38				3	3	
	TRUCK	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	0%							0.73
6:00 - 7:00 PM	TOTAL			1	1	3	1	1	6	2	1	15		31				1	1	
	TRUCK			0%	0%	0%	0%	0%	0%	0%	0%	7%								0.78

1: First Ave NB - Right
2: First Ave NB - Thru
3: First Ave NB - Left
4: First Ave SB - Right
5: First Ave SB - Thru
6: First Ave SB - Left

7: Pershing Ave EB - Right
8: Pershing Ave EB - Thru
9: Pershing Ave EB - Left
10: Pershing Ave WB - Right
11: Pershing Ave WB - Thru
12: Pershing Ave WB - Left

A: Cross 1st Ave south of INT
B: Cross 1st Ave north of INT
C: Cross Pershing west of INT
D: Cross Pershing east of INT

DATE:	6/21/2018	JOB NO:	15064
PERIOD:	6-10 AM & 3-7 PM	NAME:	Traffic Databank
LOCATION:	Pershing Avenue & Narragansett Avenue	INT #:	12

CALCULATIONS - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
6:00 - 6:15 AM	TOTAL	3	2		8	2	2							17						
	TRUCK		1																	
6:15 - 6:30 AM	TOTAL	4			11	1								16						
	TRUCK																			
6:30 - 6:45 AM	TOTAL	3		1	20	2								26						
	TRUCK																			
6:45 - 7:00 AM	TOTAL	5		1	29	4								39						
	TRUCK																			
7:00 - 7:15 AM	TOTAL	11			34	1	1							47						
	TRUCK	1			1															
7:15 - 7:30 AM	TOTAL	13			48	4	1							66	1	1			2	
	TRUCK	1			2															
7:30 - 7:45 AM	TOTAL	18		2	48	3	2							73						
	TRUCK	1																		
7:45 - 8:00 AM	TOTAL	18	2		46	2	2							70						
	TRUCK				4															
8:00 - 8:15 AM	TOTAL	10		2	43	1								56						
	TRUCK	1		1																
8:15 - 8:30 AM	TOTAL	6	3		46	4	2							61						
	TRUCK	1	1		5		1													
8:30 - 8:45 AM	TOTAL	8		1	37		1							47						
	TRUCK	1		1	4															
8:45 - 9:00 AM	TOTAL	21			31	3								55						
	TRUCK	1																		
9:00 - 9:15 AM	TOTAL	12		1	25	1								39						
	TRUCK	1			1															
9:15 - 9:30 AM	TOTAL	17	1	1	25	2	1							47						
	TRUCK	1																		
9:30 - 9:45 AM	TOTAL	17	3		15	3								38						
	TRUCK	1			1															
9:45 - 10:00 AM	TOTAL	14	3	2	18	1								38						
	TRUCK				1									1						

3:00 - 3:15 PM	TOTAL	28	2	2	24	2								58		1			1	
	TRUCK			1	1															
3:15 - 3:30 PM	TOTAL	31	2	3	21	1								58						
	TRUCK	2	1		2															
3:30 - 3:45 PM	TOTAL	23	3	2	14	3	1							46						
	TRUCK	1		1	1															
3:45 - 4:00 PM	TOTAL	36	8	2	25	2	2							75						
	TRUCK	3	1		1		1													
4:00 - 4:15 PM	TOTAL	26	6		30	1	3							66						
	TRUCK				2															
4:15 - 4:30 PM	TOTAL	46	3	3	28									80						
	TRUCK	2			2															
4:30 - 4:45 PM	TOTAL	21	6	2	25	2	1							57		1			1	
	TRUCK																			
4:45 - 5:00 PM	TOTAL	32	3		19	1								55		2			2	
	TRUCK																			
5:00 - 5:15 PM	TOTAL	33	7	1	22	1	2							66		1			1	
	TRUCK	1			1															
5:15 - 5:30 PM	TOTAL	39	6	2	25									72		2			2	
	TRUCK																			
5:30 - 5:45 PM	TOTAL	34	6	2	21	2	2							67		1			1	
	TRUCK																			
5:45 - 6:00 PM	TOTAL	31	1	2	19	3	2							58						
	TRUCK	1				1	1													
6:00 - 6:15 PM	TOTAL	29	4	1	34	1	1							70						
	TRUCK																			
6:15 - 6:30 PM	TOTAL	32	3	1	23	1	1							61						
	TRUCK																			
6:30 - 6:45 PM	TOTAL	19	2	1	27	1	1							51						
	TRUCK		1																	
6:45 - 7:00 PM	TOTAL	31	4		21	1								57						
	TRUCK																			

1: Narragansett Ave NB - Thru
2: Narragansett Ave NB - Left
3: Narragansett Ave SB - Right
4: Narragansett Ave SB - Thru
5: Pershing Ave EB - Right
6: Pershing Ave EB - Left

7:
8:
9:
10:
11:
12:

A: Narragansett north of INT
B: Pershing west of INT
C:
D:

DATE:	6/21/2018	JOB NO:	15064
PERIOD:	6-10 AM & 3-7 PM	NAME:	Traffic Databank
LOCATION:	Pershing Avenue & Narragansett Avenue	INT #:	12

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
6:00 - 7:00 AM	TOTAL	15	2	2	68	9	2							98						
	TRUCK	0%	50%	0%	0%	0%	0%													0.63
6:15 - 7:15 AM	TOTAL	23		2	94	8	1							128						
	TRUCK	4%		0%	1%	0%	0%													0.68
6:30 - 7:30 AM	TOTAL	32		2	131	11	2							178	1	1			2	
	TRUCK	6%		0%	2%	0%	0%													0.67
6:45 - 7:45 AM	TOTAL	47		3	159	12	4							225	1	1			2	
	TRUCK	6%		0%	2%	0%	0%													0.77
7:00 - 8:00 AM	TOTAL	60	2	2	176	10	6							256	1	1			2	
	TRUCK	5%	0%	0%	4%	0%	0%													0.88
7:15 - 8:15 AM	TOTAL	59	2	4	185	10	5							265	1	1			2	
	TRUCK	5%	0%	25%	3%	0%	0%													0.91
7:30 - 8:30 AM	TOTAL	52	5	4	183	10	6							260						
	TRUCK	6%	20%	25%	5%	0%	17%													0.89
7:45 - 8:45 AM	TOTAL	42	5	3	172	7	5							234						
	TRUCK	7%	20%	67%	8%	0%	20%													0.84
8:00 - 9:00 AM	TOTAL	45	3	3	157	8	3							219						
	TRUCK	9%	33%	67%	6%	0%	33%													0.90
8:15 - 9:15 AM	TOTAL	47	3	2	139	8	3							202						
	TRUCK	9%	33%	50%	7%	0%	33%													0.83
8:30 - 9:30 AM	TOTAL	58	1	3	118	6	2							188						
	TRUCK	7%	0%	33%	4%	0%	0%													0.85
8:45 - 9:45 AM	TOTAL	67	4	2	96	9	1							179						
	TRUCK	6%	0%	0%	2%	0%	0%													0.81
9:00 - 10:00 AM	TOTAL	60	7	4	83	7	1							162						
	TRUCK	5%	0%	0%	4%	0%	0%													0.86

3:00 - 4:00 PM	TOTAL	118	15	9	84	8	3							237		1			1	
	TRUCK	5%	13%	22%	6%	0%	33%													0.79
3:15 - 4:15 PM	TOTAL	116	19	7	90	7	6							245						
	TRUCK	5%	11%	14%	7%	0%	17%													0.82
3:30 - 4:30 PM	TOTAL	131	20	7	97	6	6							267						
	TRUCK	5%	5%	14%	6%	0%	17%													0.83
3:45 - 4:45 PM	TOTAL	129	23	7	108	5	6							278		1			1	
	TRUCK	4%	4%	0%	5%	0%	17%													0.87
4:00 - 5:00 PM	TOTAL	125	18	5	102	4	4							258		3			3	
	TRUCK	2%	0%	0%	4%	0%	0%													0.81
4:15 - 5:15 PM	TOTAL	132	19	6	94	4	3							258		4			4	
	TRUCK	2%	0%	0%	3%	0%	0%													0.81
4:30 - 5:30 PM	TOTAL	125	22	5	91	4	3							250		6			6	
	TRUCK	1%	0%	0%	1%	0%	0%													0.87
4:45 - 5:45 PM	TOTAL	138	22	5	87	4	4							260		6			6	
	TRUCK	1%	0%	0%	1%	0%	0%													0.90
5:00 - 6:00 PM	TOTAL	137	20	7	87	6	6							263		4			4	
	TRUCK	1%	0%	0%	1%	17%	17%													0.91
5:15 - 6:15 PM	TOTAL	133	17	7	99	6	5							267		3			3	
	TRUCK	1%	0%	0%	0%	17%	20%													0.93
5:30 - 6:30 PM	TOTAL	126	14	6	97	7	6							256		1			1	
	TRUCK	1%	0%	0%	0%	14%	17%													0.91
5:45 - 6:45 PM	TOTAL	111	10	5	103	6	5							240						
	TRUCK	1%	10%	0%	0%	17%	20%													0.86
6:00 - 7:00 PM	TOTAL	111	13	3	105	4	3							239						
	TRUCK	0%	8%	0%	0%	0%	0%													0.85

1: Narragansett Ave NB - Thru
2: Narragansett Ave NB - Left
3: Narragansett Ave SB - Right
4: Narragansett Ave SB - Thru
5: Pershing Ave EB - Right
6: Pershing Ave EB - Left

7:
8:
9:
10:
11:
12:

A: Narragansett north of INT
B: Pershing west of INT
C:
D:

DATE:	6/21/2018	JOB NO:	15064
PERIOD:	6-10 AM & 3-7 PM	NAME:	Traffic Databank
LOCATION:	Pershing Avenue & Second Avenue	INT #:	14

CALCULATIONS - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
6:00 - 6:15 AM	TOTAL								2			2		4						
	TRUCK											1								
6:15 - 6:30 AM	TOTAL																			
	TRUCK																			
6:30 - 6:45 AM	TOTAL					1			4					5	2				2	
	TRUCK																			
6:45 - 7:00 AM	TOTAL					1			3			1		5						
	TRUCK																			
7:00 - 7:15 AM	TOTAL	1							4					5						
	TRUCK																			
7:15 - 7:30 AM	TOTAL								5					5						
	TRUCK								1											
7:30 - 7:45 AM	TOTAL					2			3			1		6						
	TRUCK																			
7:45 - 8:00 AM	TOTAL								5			1		6		1			1	
	TRUCK																			
8:00 - 8:15 AM	TOTAL								3					3	2				2	
	TRUCK																			
8:15 - 8:30 AM	TOTAL				2		1	1	3			5		12	1			3	4	
	TRUCK								1			2								
8:30 - 8:45 AM	TOTAL								1			1	1	3						
	TRUCK												1							
8:45 - 9:00 AM	TOTAL			2		1			3					6						
	TRUCK																			
9:00 - 9:15 AM	TOTAL	1							2			4		7						
	TRUCK																			
9:15 - 9:30 AM	TOTAL					1			3				2	6				1	1	
	TRUCK																			
9:30 - 9:45 AM	TOTAL							1	2			2		5						
	TRUCK																			
9:45 - 10:00 AM	TOTAL		1						1			4		6						
	TRUCK																			

3:00 - 3:15 PM	TOTAL								1		1	2		4	1				1	
	TRUCK																			
3:15 - 3:30 PM	TOTAL										1	5		6						
	TRUCK											2								
3:30 - 3:45 PM	TOTAL	1							3			2		6	1				1	
	TRUCK								1			1								
3:45 - 4:00 PM	TOTAL								4		1	6		11		3		3	6	
	TRUCK								1			1								
4:00 - 4:15 PM	TOTAL						1	1	4		1	5		12						
	TRUCK																			
4:15 - 4:30 PM	TOTAL											5		5						
	TRUCK																			
4:30 - 4:45 PM	TOTAL								2			3		5						
	TRUCK																			
4:45 - 5:00 PM	TOTAL		1	1					3			3		8						
	TRUCK																			
5:00 - 5:15 PM	TOTAL		1									1	1	3						
	TRUCK																			
5:15 - 5:30 PM	TOTAL								1		1	3	2	7	1				1	
	TRUCK																			
5:30 - 5:45 PM	TOTAL					1	1		3			3	1	9	1		2		3	
	TRUCK																			
5:45 - 6:00 PM	TOTAL								2		3	3	1	9						
	TRUCK																			
6:00 - 6:15 PM	TOTAL							1	1			5		7						
	TRUCK																			
6:15 - 6:30 PM	TOTAL						1		1			3		5						
	TRUCK																			
6:30 - 6:45 PM	TOTAL			1					3		3			7						
	TRUCK																			
6:45 - 7:00 PM	TOTAL							1	1		1	3		6						
	TRUCK																			

1: Second Ave NB - Right
2: Second Ave NB - Thru
3: Second Ave NB - Left
4: Second Ave SB - Right
5: Second Ave SB - Thru
6: Second Ave SB - Left

7: Pershing Ave EB - Right
8: Pershing Ave EB - Thru
9: Pershing Ave EB - Left
10: Pershing Ave WB - Right
11: Pershing Ave WB - Thru
12: Pershing Ave WB - Left

A: Cross 2nd south of INT
B: Cross 2nd north of INT
C: Cross Pershing west of INT
D: Cross Pershing east of INT

DATE:	6/21/2018	JOB NO:	15064
PERIOD:	6-10 AM & 3-7 PM	NAME:	Traffic Databank
LOCATION:	Pershing Avenue & Second Avenue	INT #:	14

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
6:00 - 7:00 AM	TOTAL					2			9			3		14	2				2	
	TRUCK					0%			0%			33%								0.70
6:15 - 7:15 AM	TOTAL	1				2			11			1		15	2				2	
	TRUCK	0%				0%			0%			0%								0.75
6:30 - 7:30 AM	TOTAL	1				2			16			1		20	2				2	
	TRUCK	0%				0%			6%			0%								1.00
6:45 - 7:45 AM	TOTAL	1				3			15			2		21						
	TRUCK	0%				0%			7%			0%								0.88
7:00 - 8:00 AM	TOTAL	1				2			17			2		22		1			1	
	TRUCK	0%				0%			6%			0%								0.92
7:15 - 8:15 AM	TOTAL					2			16			2		20	2	1			3	
	TRUCK					0%			6%			0%								0.83
7:30 - 8:30 AM	TOTAL				2	2	1	1	14			7		27	3	1		3	7	
	TRUCK				0%	0%	0%	0%	7%			29%								0.56
7:45 - 8:45 AM	TOTAL				2		1	1	12			7	1	24	3	1		3	7	
	TRUCK				0%		0%	0%	8%			29%	100%							0.50
8:00 - 9:00 AM	TOTAL			2	2	1	1	1	10			6	1	24	3			3	6	
	TRUCK			0%	0%	0%	0%	0%	10%			33%	100%							0.50
8:15 - 9:15 AM	TOTAL	1		2	2	1	1	1	9			10	1	28	1			3	4	
	TRUCK	0%		0%	0%	0%	0%	0%	11%			20%	100%							0.58
8:30 - 9:30 AM	TOTAL	1		2		2			9			5	3	22				1	1	
	TRUCK	0%		0%		0%			0%			0%	33%							0.79
8:45 - 9:45 AM	TOTAL	1		2		2		1	10			6	2	24				1	1	
	TRUCK	0%		0%		0%		0%	0%			0%	0%							0.86
9:00 - 10:00 AM	TOTAL	1	1			1		1	8			10	2	24				1	1	
	TRUCK	0%	0%			0%		0%	0%			0%	0%							0.86

3:00 - 4:00 PM	TOTAL	1							8		3	15		27	2	3		3	8	
	TRUCK	0%							25%		0%	27%								0.61
3:15 - 4:15 PM	TOTAL	1					1	1	11		3	18		35	1	3		3	7	
	TRUCK	0%					0%	0%	18%		0%	22%								0.73
3:30 - 4:30 PM	TOTAL	1					1	1	11		2	18		34	1	3		3	7	
	TRUCK	0%					0%	0%	18%		0%	11%								0.71
3:45 - 4:45 PM	TOTAL						1	1	10		2	19		33		3		3	6	
	TRUCK						0%	0%	10%		0%	5%								0.69
4:00 - 5:00 PM	TOTAL		1	1			1	1	9		1	16		30						
	TRUCK		0%	0%			0%	0%	0%		0%	0%								0.63
4:15 - 5:15 PM	TOTAL		2	1					5			12	1	21						
	TRUCK		0%	0%					0%			0%	0%							0.66
4:30 - 5:30 PM	TOTAL		2	1					6		1	10	3	23	1				1	
	TRUCK		0%	0%					0%		0%	0%	0%							0.72
4:45 - 5:45 PM	TOTAL		2	1		1	1		7		1	10	4	27	2		2		4	
	TRUCK		0%	0%		0%	0%		0%		0%	0%	0%							0.75
5:00 - 6:00 PM	TOTAL		1			1	1		6		4	10	5	28	2		2		4	
	TRUCK		0%			0%	0%		0%		0%	0%	0%							0.78
5:15 - 6:15 PM	TOTAL					1	1	1	7		4	14	4	32	2		2		4	
	TRUCK					0%	0%	0%	0%		0%	0%	0%							0.89
5:30 - 6:30 PM	TOTAL					1	2	1	7		3	14	2	30	1		2		3	
	TRUCK					0%	0%	0%	0%		0%	0%	0%							0.83
5:45 - 6:45 PM	TOTAL			1			1	1	7		6	11	1	28						
	TRUCK			0%			0%	0%	0%		0%	0%	0%							0.78
6:00 - 7:00 PM	TOTAL			1			1	2	6		4	11		25						
	TRUCK			0%			0%	0%	0%		0%	0%								0.89

1: Second Ave NB - Right
2: Second Ave NB - Thru
3: Second Ave NB - Left
4: Second Ave SB - Right
5: Second Ave SB - Thru
6: Second Ave SB - Left

7: Pershing Ave EB - Right
8: Pershing Ave EB - Thru
9: Pershing Ave EB - Left
10: Pershing Ave WB - Right
11: Pershing Ave WB - Thru
12: Pershing Ave WB - Left

A: Cross 2nd south of INT
B: Cross 2nd north of INT
C: Cross Pershing west of INT
D: Cross Pershing east of INT

DATE:	Saturday 6/16/2018
PERIOD:	9:00AM-1:00PM

PEAK HOUR CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	15064
NAME:	JMC

TIME	CLASS	TOTAL INT. 12	TOTAL INT. 10A	TOTAL INT. 10B	TOTAL INT. 13	TOTAL INT. 14	TOTAL INT. 11	TOTAL INT.	TOTAL INT.	TOTAL
9:00 - 10:00 AM	TOTAL	200	757		33	6	233			1,229
	TRUCK									
9:15 - 10:15 AM	TOTAL	218	802	2	28	6	255			1,311
	TRUCK									
9:30 - 10:30 AM	TOTAL	225	808	2	30	9	270			1,344
	TRUCK									
9:45 - 10:45 AM	TOTAL	245	810	3	29	7	298			1,392
	TRUCK									
10:00 - 11:00 AM	TOTAL	254	803	3	25	9	305			1,399
	TRUCK									
10:15 - 11:15 AM	TOTAL	236	776	1	29	12	334			1,388
	TRUCK									
10:30 - 11:30 AM	TOTAL	244	819	1	29	13	349			1,455
	TRUCK									
10:45 - 11:45 AM	TOTAL	237	809		29	16	342			1,433
	TRUCK									
11:00 - 12:00 AM	TOTAL	238	824		31	16	344			1,453
	TRUCK									
11:15 - 12:15 AM	TOTAL	237	855		33	14	345			1,484
	TRUCK									
11:30 - 12:30 AM	TOTAL	247	874	1	29	14	358			1,523
	TRUCK									
11:45 - 12:45 PM	TOTAL	273	900	2	29	11	347			1,562
	TRUCK									
12:00 - 1:00 PM	TOTAL	267	912	2	33	12	350			1,576
	TRUCK									

DATE:	6/16/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	BO
LOCATION:	Narragansett Avenue and Pershing Avenue	INT #:	12

ENTER COUNT DATA ON THIS PAGE

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
9:00 - 9:15 AM	TOTAL					18	3		37		1		2							
	TRUCK								1											
9:15 - 9:30 AM	TOTAL					32	6		62	1	1		3							
	TRUCK																			
9:30 - 9:45 AM	TOTAL					53	6		81	3	2		6							
	TRUCK					2			1	1	1									
9:45 - 10:00 AM	TOTAL					74	6		106	5	2		7				4			
	TRUCK																			
10:00 - 10:15 AM	TOTAL					104	8		147	7	5		8				2			
	TRUCK																			
10:15 - 10:30 AM	TOTAL					128	8		169	10	7		8				2			
	TRUCK								1											
10:30 - 10:45 AM	TOTAL					154	14		197	12	9		10				5	1		
	TRUCK					1			1											
10:45 - 11:00 AM	TOTAL					175	15		226	12	14		12				1			
	TRUCK					1														
11:00 - 11:15 AM	TOTAL					201	19		253	14	16		12				4			
	TRUCK								1											
11:15 - 11:30 AM	TOTAL					228	20		278	15	17		16				3			
	TRUCK					1											1			
11:30 - 11:45 AM	TOTAL					250	22		311	16	18		16							
	TRUCK																			
11:45 - 12:00 PM	TOTAL					277	22		339	18	19		17							
	TRUCK					1														
12:00 - 12:15 PM	TOTAL					302	26		366	18	22		18				6			
	TRUCK					1			1											
12:15 - 12:30 PM	TOTAL					336	28		396	19	22		20							
	TRUCK								1											
12:30 - 12:45 PM	TOTAL					369	31		438	19	23		26				4			
	TRUCK								1											
12:45 - 1:00 PM	TOTAL					400	31		459	19	23		27				2			
	TRUCK																			

DATE:	6/16/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	BO
LOCATION:	Narragansett Avenue and Pershing Avenue	INT #:	12

CALCULATIONS - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
9:00 - 9:15 AM	TOTAL	0	0	0	0	18	3	0	37	0	1	0	2	61	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	1	0	0	0	0		0	0	0	0	0	
9:15 - 9:30 AM	TOTAL	0	0	0	0	14	3	0	25	1	0	0	1	44	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
9:30 - 9:45 AM	TOTAL	0	0	0	0	21	0	0	19	2	1	0	3	46	0	0	0	0	0	
	TRUCK	0	0	0	0	2	0	0	1	1	1	0	0		0	0	0	0	0	
9:45 - 10:00 AM	TOTAL	0	0	0	0	21	0	0	25	2	0	0	1	49	0	0	4	0	4	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:00 - 10:15 AM	TOTAL	0	0	0	0	30	2	0	41	2	3	0	1	79	0	0	2	0	2	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:15 - 10:30 AM	TOTAL	0	0	0	0	24	0	0	22	3	2	0	0	51	0	0	2	0	2	
	TRUCK	0	0	0	0	0	0	0	1	0	0	0	0		0	0	0	0	0	
10:30 - 10:45 AM	TOTAL	0	0	0	0	26	6	0	28	2	2	0	2	66	0	0	5	1	6	
	TRUCK	0	0	0	0	1	0	0	1	0	0	0	0		0	0	0	0	0	
10:45 - 11:00 AM	TOTAL	0	0	0	0	21	1	0	29	0	5	0	2	58	0	0	1	0	1	
	TRUCK	0	0	0	0	1	0	0	0	0	0	0	0		0	0	0	0	0	
11:00 - 11:15 AM	TOTAL	0	0	0	0	26	4	0	27	2	2	0	0	61	0	0	4	0	4	
	TRUCK	0	0	0	0	0	0	0	1	0	0	0	0		0	0	0	0	0	
11:15 - 11:30 AM	TOTAL	0	0	0	0	27	1	0	25	1	1	0	4	59	0	0	3	0	3	
	TRUCK	0	0	0	0	1	0	0	0	0	0	0	0		0	0	1	0	1	
11:30 - 11:45 AM	TOTAL	0	0	0	0	22	2	0	33	1	1	0	0	59	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:45 - 12:00 PM	TOTAL	0	0	0	0	27	0	0	28	2	1	0	1	59	0	0	0	0	0	
	TRUCK	0	0	0	0	1	0	0	0	0	0	0	0		0	0	0	0	0	
12:00 - 12:15 PM	TOTAL	0	0	0	0	25	4	0	27	0	3	0	1	60	0	0	6	0	6	
	TRUCK	0	0	0	0	1	0	0	1	0	0	0	0		0	0	0	0	0	
12:15 - 12:30 PM	TOTAL	0	0	0	0	34	2	0	30	1	0	0	2	69	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	1	0	0	0	0		0	0	0	0	0	
12:30 - 12:45 PM	TOTAL	0	0	0	0	33	3	0	42	0	1	0	6	85	0	0	4	0	4	
	TRUCK	0	0	0	0	0	0	0	1	0	0	0	0		0	0	0	0	0	
12:45 - 1:00 PM	TOTAL	0	0	0	0	31	0	0	21	0	0	0	1	53	0	0	2	0	2	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	

DATE:	6/16/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	BO
LOCATION:	Narragansett Avenue and Pershing Avenue	INT #:	12

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
9:00 - 10:00 AM	TOTAL					74	6		106	5	2		7	200			4		4	
	TRUCK					3%	0%		2%	20%	50%		0%							0.82
9:15 - 10:15 AM	TOTAL					86	5		110	7	4		6	218			6		6	
	TRUCK					2%	0%		1%	14%	25%		0%							0.69
9:30 - 10:30 AM	TOTAL					96	2		107	9	6		5	225			8		8	
	TRUCK					2%	0%		2%	11%	17%		0%							0.71
9:45 - 10:45 AM	TOTAL					101	8		116	9	7		4	245			13	1	14	
	TRUCK					1%	0%		2%	0%	0%		0%							0.78
10:00 - 11:00 AM	TOTAL					101	9		120	7	12		5	254			10	1	11	
	TRUCK					2%	0%		2%	0%	0%		0%							0.80
10:15 - 11:15 AM	TOTAL					97	11		106	7	11		4	236			12	1	13	
	TRUCK					2%	0%		3%	0%	0%		0%							0.89
10:30 - 11:30 AM	TOTAL					100	12		109	5	10		8	244			13	1	14	
	TRUCK					3%	0%		2%	0%	0%		0%				1		1	0.92
10:45 - 11:45 AM	TOTAL					96	8		114	4	9		6	237			8		8	
	TRUCK					2%	0%		1%	0%	0%		0%				1		1	0.97
11:00 - 12:00 AM	TOTAL					102	7		113	6	5		5	238			7		7	
	TRUCK					2%	0%		1%	0%	0%		0%				1		1	0.98
11:15 - 12:15 AM	TOTAL					101	7		113	4	6		6	237			9		9	
	TRUCK					3%	0%		1%	0%	0%		0%				1		1	0.99
11:30 - 12:30 AM	TOTAL					108	8		118	4	5		4	247			6		6	
	TRUCK					2%	0%		2%	0%	0%		0%							0.89
11:45 - 12:45 PM	TOTAL					119	9		127	3	5		10	273			10		10	
	TRUCK					2%	0%		2%	0%	0%		0%							0.80
12:00 - 1:00 PM	TOTAL					123	9		120	1	4		10	267			12		12	
	TRUCK					1%	0%		3%	0%	0%		0%							0.79

1:
2:
3:
4:
5: Narragasett Ave NB - Thru
6: Narragasett Ave NB - Right

7:
8: Narragasett Ave SB - Thru
9: Narragasett Ave SB - Right
10: Pershing Ave EB - Left
11:
12: Pershing Ave EB - Right

A:
B: Narragasett Ave South of INT
C: Pershing Ave West of INT
D: Narragasett Ave North of INT

DATE:	6/16/2018		JOB NO:	15064
PERIOD:	9:00AM-1:00PM		NAME:	RS
LOCATION:	Croton Avenue and Dale Avenue with Todd Place		INT #:	10A

ENTER COUNT DATA ON THIS PAGE

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
9:00 - 9:15 AM	TOTAL	1	33	0	8	64	0	3	4	2	12	69	0		2	3	2			
	TRUCK					3					2	1								
9:15 - 9:30 AM	TOTAL	2	64	0	13	120	0	5	7	5	27	124	0		3	1	2	1		
	TRUCK		1			2						3								
9:30 - 9:45 AM	TOTAL	3	82	0	20	199	0	9	9	5	40	205	0		4	4		4		
	TRUCK					2						3								
9:45 - 10:00 AM	TOTAL	5	110	0	28	262	0	16	16	9	54	257	0		2	2	3	2		
	TRUCK					1						2								
10:00 - 10:15 AM	TOTAL	7	148	0	38	334	0	21	19	11	86	334	0			1	3	8		
	TRUCK		1			1														
10:15 - 10:30 AM	TOTAL	8	168	0	41	405	0	25	23	15	102	388	0			1	3	4		
	TRUCK		1			2					2	2								
10:30 - 10:45 AM	TOTAL	8	199	0	47	471	0	30	25	18	116	468	0		10	7	7	5		
	TRUCK					1					1	2								
10:45 - 11:00 AM	TOTAL	8	215	0	52	544	0	31	25	20	132	533	0		4	4		8		
	TRUCK				1	3														
11:00 - 11:15 AM	TOTAL	9	247	0	60	629	0	37	29	22	158	583	0		6	3	6	13		
	TRUCK					3						2								
11:15 - 11:30 AM	TOTAL	9	289	1	66	716	0	43	34	29	179	628	0		10	3	2	5		
	TRUCK				3	3		1				2								
11:30 - 11:45 AM	TOTAL	10	315	1	77	779	0	48	38	34	194	695	0		2	2	6	5		
	TRUCK		1			2						3								
11:45 - 12:00 PM	TOTAL	12	341	1	80	851	0	52	39	38	218	751	1		3	16	3	9		
	TRUCK		3			2					1	4								
12:00 - 12:15 PM	TOTAL	12	380	2	87	958	0	52	42	42	244	809	1		6	6	6	11		
	TRUCK					3					1	4								
12:15 - 12:30 PM	TOTAL	12	419	2	98	1,056	0	60	47	45	261	867	1		8	13	6	20		
	TRUCK		2	1		1					1	3								
12:30 - 12:45 PM	TOTAL	12	450	2	105	1,139	1	65	50	47	282	937	1		13	13	1	15		
	TRUCK					2						1								
12:45 - 1:00 PM	TOTAL	12	474	5	109	1,203	1	72	54	54	309	1,002	1		5	14	1	9		
	TRUCK											2								

DATE:	6/16/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	RS
LOCATION:	Croton Avenue and Dale Avenue with Todd Place	INT #:	10A

CALCULATIONS - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
9:00 - 9:15 AM	TOTAL	1	33	0	8	64	0	3	4	2	12	69	0	196	2	3	2	0	7	
	TRUCK	0	0	0	0	3	0	0	0	0	2	1	0		0	0	0	0	0	
9:15 - 9:30 AM	TOTAL	1	31	0	5	56	0	2	3	3	15	55	0	171	3	1	2	1	7	
	TRUCK	0	1	0	0	2	0	0	0	0	0	3	0		0	0	0	0	0	
9:30 - 9:45 AM	TOTAL	1	18	0	7	79	0	4	2	0	13	81	0	205	4	4	0	4	12	
	TRUCK	0	0	0	0	2	0	0	0	0	0	3	0		0	0	0	0	0	
9:45 - 10:00 AM	TOTAL	2	28	0	8	63	0	7	7	4	14	52	0	185	2	2	3	2	9	
	TRUCK	0	0	0	0	1	0	0	0	0	0	2	0		0	0	0	0	0	
10:00 - 10:15 AM	TOTAL	2	38	0	10	72	0	5	3	2	32	77	0	241	0	1	3	8	12	
	TRUCK	0	1	0	0	1	0	0	0	0	0	0	0		0	0	0	0	0	
10:15 - 10:30 AM	TOTAL	1	20	0	3	71	0	4	4	4	16	54	0	177	0	1	3	4	8	
	TRUCK	0	1	0	0	2	0	0	0	0	2	2	0		0	0	0	0	0	
10:30 - 10:45 AM	TOTAL	0	31	0	6	66	0	5	2	3	14	80	0	207	10	7	7	5	29	
	TRUCK	0	0	0	0	1	0	0	0	0	1	2	0		0	0	0	0	0	
10:45 - 11:00 AM	TOTAL	0	16	0	5	73	0	1	0	2	16	65	0	178	4	4	0	8	16	
	TRUCK	0	0	0	1	3	0	0	0	0	0	0	0		0	0	0	0	0	
11:00 - 11:15 AM	TOTAL	1	32	0	8	85	0	6	4	2	26	50	0	214	6	3	6	13	28	
	TRUCK	0	0	0	0	3	0	0	0	0	0	2	0		0	0	0	0	0	
11:15 - 11:30 AM	TOTAL	0	42	1	6	87	0	6	5	7	21	45	0	220	10	3	2	5	20	
	TRUCK	0	0	0	3	3	0	1	0	0	0	2	0		0	0	0	0	0	
11:30 - 11:45 AM	TOTAL	1	26	0	11	63	0	5	4	5	15	67	0	197	2	2	6	5	15	
	TRUCK	0	1	0	0	2	0	0	0	0	0	3	0		0	0	0	0	0	
11:45 - 12:00 PM	TOTAL	2	26	0	3	72	0	4	1	4	24	56	1	193	3	16	3	9	31	
	TRUCK	0	3	0	0	2	0	0	0	0	1	4	0		0	0	0	0	0	
12:00 - 12:15 PM	TOTAL	0	39	1	7	107	0	0	3	4	26	58	0	245	6	6	6	11	29	
	TRUCK	0	0	0	0	3	0	0	0	0	1	4	0		0	0	0	0	0	
12:15 - 12:30 PM	TOTAL	0	39	0	11	98	0	8	5	3	17	58	0	239	8	13	6	20	47	
	TRUCK	0	2	1	0	1	0	0	0	0	1	3	0		0	0	0	0	0	
12:30 - 12:45 PM	TOTAL	0	31	0	7	83	1	5	3	2	21	70	0	223	13	13	1	15	42	
	TRUCK	0	0	0	0	2	0	0	0	0	0	1	0		0	0	0	0	0	
12:45 - 1:00 PM	TOTAL	0	24	3	4	64	0	7	4	7	27	65	0	205	5	14	1	9	29	
	TRUCK	0	0	0	0	0	0	0	0	0	0	2	0		0	0	0	0	0	

DATE:	6/16/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	RS
LOCATION:	Croton Avenue and Dale Avenue with Todd Place	INT #:	10A

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
9:00 - 10:00 AM	TOTAL	5	110		28	262		16	16	9	54	257		757	11	10	7	7	35	
	TRUCK	0%	1%		0%	3%		0%	0%	0%	4%	4%								0.92
9:15 - 10:15 AM	TOTAL	6	115		30	270		18	15	9	74	265		802	9	8	8	15	40	
	TRUCK	0%	2%		0%	2%		0%	0%	0%	0%	3%								0.83
9:30 - 10:30 AM	TOTAL	6	104		28	285		20	16	10	75	264		808	6	8	9	18	41	
	TRUCK	0%	2%		0%	2%		0%	0%	0%	3%	3%								0.84
9:45 - 10:45 AM	TOTAL	5	117		27	272		21	16	13	76	263		810	12	11	16	19	58	
	TRUCK	0%	2%		0%	2%		0%	0%	0%	4%	2%								0.84
10:00 - 11:00 AM	TOTAL	3	105		24	282		15	9	11	78	276		803	14	13	13	25	65	
	TRUCK	0%	2%		4%	2%		0%	0%	0%	4%	1%								0.83
10:15 - 11:15 AM	TOTAL	2	99		22	295		16	10	11	72	249		776	20	15	16	30	81	
	TRUCK	0%	1%		5%	3%		0%	0%	0%	4%	2%								0.91
10:30 - 11:30 AM	TOTAL	1	121	1	25	311		18	11	14	77	240		819	30	17	15	31	93	
	TRUCK	0%	0%	0%	16%	3%		6%	0%	0%	1%	3%								0.93
10:45 - 11:45 AM	TOTAL	2	116	1	30	308		18	13	16	78	227		809	22	12	14	31	79	
	TRUCK	0%	1%	0%	13%	4%		6%	0%	0%	0%	3%								0.92
11:00 - 12:00 AM	TOTAL	4	126	1	28	307		21	14	18	86	218	1	824	21	24	17	32	94	
	TRUCK	0%	3%	0%	11%	3%		5%	0%	0%	1%	5%	0%							0.94
11:15 - 12:15 AM	TOTAL	3	133	2	27	329		15	13	20	86	226	1	855	21	27	17	30	95	
	TRUCK	0%	3%	0%	11%	3%		7%	0%	0%	2%	6%	0%							0.87
11:30 - 12:30 AM	TOTAL	3	130	1	32	340		17	13	16	82	239	1	874	19	37	21	45	122	
	TRUCK	0%	5%	100%	0%	2%		0%	0%	0%	4%	6%	0%							0.89
11:45 - 12:45 PM	TOTAL	2	135	1	28	360	1	17	12	13	88	242	1	900	30	48	16	55	149	
	TRUCK	0%	4%	100%	0%	2%	0%	0%	0%	0%	3%	5%	0%							0.92
12:00 - 1:00 PM	TOTAL		133	4	29	352	1	20	15	16	91	251		912	32	46	14	55	147	
	TRUCK		2%	25%	0%	2%	0%	0%	0%	0%	2%	4%								0.93

1: Dale Ave SB - Right on Todd
2: Dale Ave SB - Right on Croton
3: Dale Ave SB - Left to Lot
4: Dale Ave SB - Left on Croton
5: Croton Ave SW - Thru
6: Croton Ave SW - Left to Lot

7: Croton Ave SW - Right on Dale
8: Croton Ave SW - Right on Todd
9: Croton Ave NE - Left on Todd
10: Croton Ave NE - Left on Dale
11: Croton Ave NE - Thru
12: Croton Ave NE - Right to Lot

A: Cross Todd Pl West is INT
B: Cross Dale Ave North of INT
C: Cross Croton Ave South of INT
D: Cross Croton Ave East of INT

DATE:	6/23/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	SK
LOCATION:	Narragansett Avenue & Pine Avenue	INT #:	11

ENTER COUNT DATA ON THIS PAGE

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
9:00 - 9:15 AM	TOTAL					12	5		11	2	4		8							
	TRUCK																			
9:15 - 9:30 AM	TOTAL					25	9		30	2	5		17				2			
	TRUCK					1			1											
9:30 - 9:45 AM	TOTAL					43	13		55	3	7		32							
	TRUCK					1														
9:45 - 10:00 AM	TOTAL					66	18		88	9	9		43							
	TRUCK																			
10:00 - 10:15 AM	TOTAL					87	21		108	12	10		59							
	TRUCK					1														
10:15 - 10:30 AM	TOTAL					109	26		133	14	10		66							
	TRUCK																			
10:30 - 10:45 AM	TOTAL					150	29		163	17	13		79							
	TRUCK																			
10:45 - 11:00 AM	TOTAL					189	34		192	20	17		86							
	TRUCK																			
11:00 - 11:15 AM	TOTAL					224	46		219	20	21		101							
	TRUCK								2											
11:15 - 11:30 AM	TOTAL					249	50		255	23	22		108				1			
	TRUCK									1							2			
11:30 - 11:45 AM	TOTAL					288	56		288	27	22		112				2			
	TRUCK																			
11:45 - 12:00 PM	TOTAL					330	66		314	29	27		116							
	TRUCK						1													
12:00 - 12:15 PM	TOTAL					358	70		351	35	33		129							
	TRUCK								1	1			1		1					
12:15 - 12:30 PM	TOTAL					388	79		380	41	40		137							
	TRUCK								1	1	2									
12:30 - 12:45 PM	TOTAL					412	86		411	44	42		145				1			
	TRUCK												1							
12:45 - 1:00 PM	TOTAL					445	91		448	44	47		157							
	TRUCK										1									

DATE:	6/23/2018	CALCULATIONS - DO NOT EDIT THIS SHEET	JOB NO:	15064
PERIOD:	9:00AM-1:00PM		NAME:	SK
LOCATION:	Narragansett Avenue & Pine Avenue		INT #:	11

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
9:00 - 9:15 AM	TOTAL	0	0	0	0	12	5	0	11	2	4	0	8	42	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
9:15 - 9:30 AM	TOTAL	0	0	0	0	13	4	0	19	0	1	0	9	46	0	0	2	0	2	
	TRUCK	0	0	0	0	1	0	0	1	0	0	0	0		0	0	0	0	0	
9:30 - 9:45 AM	TOTAL	0	0	0	0	18	4	0	25	1	2	0	15	65	0	0	0	0	0	
	TRUCK	0	0	0	0	1	0	0	0	0	0	0	0		0	0	0	0	0	
9:45 - 10:00 AM	TOTAL	0	0	0	0	23	5	0	33	6	2	0	11	80	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:00 - 10:15 AM	TOTAL	0	0	0	0	21	3	0	20	3	1	0	16	64	0	0	0	0	0	
	TRUCK	0	0	0	0	1	0	0	0	0	0	0	0		0	0	0	0	0	
10:15 - 10:30 AM	TOTAL	0	0	0	0	22	5	0	25	2	0	0	7	61	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:30 - 10:45 AM	TOTAL	0	0	0	0	41	3	0	30	3	3	0	13	93	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:45 - 11:00 AM	TOTAL	0	0	0	0	39	5	0	29	3	4	0	7	87	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:00 - 11:15 AM	TOTAL	0	0	0	0	35	12	0	27	0	4	0	15	93	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	2	0	0	0	0		0	0	0	0	0	
11:15 - 11:30 AM	TOTAL	0	0	0	0	25	4	0	36	3	1	0	7	76	0	0	1	0	1	
	TRUCK	0	0	0	0	0	0	0	0	1	0	0	0		0	0	2	0	2	
11:30 - 11:45 AM	TOTAL	0	0	0	0	39	6	0	33	4	0	0	4	86	0	0	2	0	2	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:45 - 12:00 PM	TOTAL	0	0	0	0	42	10	0	26	2	5	0	4	89	0	0	0	0	0	
	TRUCK	0	0	0	0	0	1	0	0	0	0	0	0		0	0	0	0	0	
12:00 - 12:15 PM	TOTAL	0	0	0	0	28	4	0	37	6	6	0	13	94	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	1	1	0	0	1		1	0	0	0	1	
12:15 - 12:30 PM	TOTAL	0	0	0	0	30	9	0	29	6	7	0	8	89	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	1	1	2	0	0		0	0	0	0	0	
12:30 - 12:45 PM	TOTAL	0	0	0	0	24	7	0	31	3	2	0	8	75	0	0	1	0	1	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	1		0	0	0	0	0	
12:45 - 1:00 PM	TOTAL	0	0	0	0	33	5	0	37	0	5	0	12	92	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	1	0	0		0	0	0	0	0	

DATE:	6/23/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	SK
LOCATION:	Narragansett Avenue & Pine Avenue	INT #:	11

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
9:00 - 10:00 AM	TOTAL					66	18		88	9	9		43	233			2		2	
	TRUCK					3%	0%		1%	0%	0%		0%							0.73
9:15 - 10:15 AM	TOTAL					75	16		97	10	6		51	255			2		2	
	TRUCK					4%	0%		1%	0%	0%		0%							0.80
9:30 - 10:30 AM	TOTAL					84	17		103	12	5		49	270						
	TRUCK					2%	0%		0%	0%	0%		0%							0.84
9:45 - 10:45 AM	TOTAL					107	16		108	14	6		47	298						
	TRUCK					1%	0%		0%	0%	0%		0%							0.80
10:00 - 11:00 AM	TOTAL					123	16		104	11	8		43	305						
	TRUCK					1%	0%		0%	0%	0%		0%							0.82
10:15 - 11:15 AM	TOTAL					137	25		111	8	11		42	334						
	TRUCK					0%	0%		2%	0%	0%		0%							0.90
10:30 - 11:30 AM	TOTAL					140	24		122	9	12		42	349			1		1	
	TRUCK					0%	0%		2%	11%	0%		0%				2		2	0.94
10:45 - 11:45 AM	TOTAL					138	27		125	10	9		33	342			3		3	
	TRUCK					0%	0%		2%	10%	0%		0%				2		2	0.92
11:00 - 12:00 AM	TOTAL					141	32		122	9	10		30	344			3		3	
	TRUCK					0%	3%		2%	11%	0%		0%				2		2	0.92
11:15 - 12:15 AM	TOTAL					134	24		132	15	12		28	345			3		3	
	TRUCK					0%	4%		1%	13%	0%		4%		1		2		3	0.92
11:30 - 12:30 AM	TOTAL					139	29		125	18	18		29	358			2		2	
	TRUCK					0%	3%		2%	11%	11%		3%		1				1	0.95
11:45 - 12:45 PM	TOTAL					124	30		123	17	20		33	347			1		1	
	TRUCK					0%	3%		2%	12%	10%		6%		1				1	0.92
12:00 - 1:00 PM	TOTAL					115	25		134	15	20		41	350			1		1	
	TRUCK					0%	0%		1%	13%	15%		5%		1				1	0.93

1:
2:
3:
4:
5: Narragarsett Ave NB - Thru
6: Narragarsett Ave NB - Left

7:
8: Narragarsett Ave SB - Thru
9: Narragarsett Ave SB - Right
10: Pine Ave EB - Left
11:
12: Pine Ave EB - Right

A: Cross Pine Ave East of INT
B: Cross Narragarsett South of INT
C: Cross Pine Ave West of INT
D: Cross Narragarsett North of INT

DATE:	6/23/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	RS
LOCATION:	First Avenue & Pershing Avenue	INT #:	13

ENTER COUNT DATA ON THIS PAGE

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
9:00 - 9:15 AM	TOTAL	0	2	0	0	1	0	1	0	0	0	4	1							
	TRUCK																			
9:15 - 9:30 AM	TOTAL	0	4	0	1	1	0	1	0	0	0	7	2							
	TRUCK																			
9:30 - 9:45 AM	TOTAL	0	8	0	1	1	0	3	0	0	0	9	3							
	TRUCK																			
9:45 - 10:00 AM	TOTAL	1	10	0	1	1	0	3	1	0	0	13	3							
	TRUCK																			
10:00 - 10:15 AM	TOTAL	1	10	0	1	1	0	6	1	0	0	14	3							
	TRUCK																			
10:15 - 10:30 AM	TOTAL	1	14	2	1	1	1	6	1	0	0	14	5							
	TRUCK																			
10:30 - 10:45 AM	TOTAL	1	18	2	1	1	1	6	2	1	0	15	6							
	TRUCK																			
10:45 - 11:00 AM	TOTAL	1	18	2	2	1	1	6	2	1	1	16	7							
	TRUCK																			
11:00 - 11:15 AM	TOTAL	1	24	2	3	1	1	6	2	1	1	17	7							
	TRUCK																			
11:15 - 11:30 AM	TOTAL	3	25	2	3	1	2	8	2	1	1	20	7							
	TRUCK																			
11:30 - 11:45 AM	TOTAL	3	30	2	3	1	3	8	2	1	1	22	7			1		1		
	TRUCK																			
11:45 - 12:00 PM	TOTAL	3	30	2	4	1	3	8	2	1	1	27	7							
	TRUCK																			
12:00 - 12:15 PM	TOTAL	3	32	2	5	1	3	9	2	1	3	31	7							
	TRUCK																			
12:15 - 12:30 PM	TOTAL	4	33	3	5	2	3	9	2	1	3	32	7							
	TRUCK																			
12:30 - 12:45 PM	TOTAL	4	37	3	5	3	3	10	2	1	3	33	8							
	TRUCK																			
12:45 - 1:00 PM	TOTAL	7	42	3	5	3	3	10	2	1	3	34	9							
	TRUCK																			

DATE:	6/23/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	RS
LOCATION:	First Avenue & Pershing Avenue	INT #:	13

CALCULATIONS - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
9:00 - 9:15 AM	TOTAL	0	2	0	0	1	0	1	0	0	0	4	1	9	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
9:15 - 9:30 AM	TOTAL	0	2	0	1	0	0	0	0	0	0	3	1	7	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
9:30 - 9:45 AM	TOTAL	0	4	0	0	0	0	2	0	0	0	2	1	9	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
9:45 - 10:00 AM	TOTAL	1	2	0	0	0	0	0	1	0	0	4	0	8	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:00 - 10:15 AM	TOTAL	0	0	0	0	0	0	3	0	0	0	1	0	4	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:15 - 10:30 AM	TOTAL	0	4	2	0	0	1	0	0	0	0	0	2	9	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:30 - 10:45 AM	TOTAL	0	4	0	0	0	0	0	1	1	0	1	1	8	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:45 - 11:00 AM	TOTAL	0	0	0	1	0	0	0	0	0	1	1	1	4	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:00 - 11:15 AM	TOTAL	0	6	0	1	0	0	0	0	0	0	1	0	8	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:15 - 11:30 AM	TOTAL	2	1	0	0	0	1	2	0	0	0	3	0	9	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:30 - 11:45 AM	TOTAL	0	5	0	0	0	1	0	0	0	0	2	0	8	0	1	0	1	2	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:45 - 12:00 PM	TOTAL	0	0	0	1	0	0	0	0	0	0	5	0	6	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
12:00 - 12:15 PM	TOTAL	0	2	0	1	0	0	1	0	0	2	4	0	10	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
12:15 - 12:30 PM	TOTAL	1	1	1	0	1	0	0	0	0	0	1	0	5	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
12:30 - 12:45 PM	TOTAL	0	4	0	0	1	0	1	0	0	0	1	1	8	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
12:45 - 1:00 PM	TOTAL	3	5	0	0	0	0	0	0	0	0	1	1	10	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	

DATE:	6/23/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	RS
LOCATION:	First Avenue & Pershing Avenue	INT #:	13

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
9:00 - 10:00 AM	TOTAL	1	10		1	1		3	1			13	3	33						
	TRUCK	0%	0%		0%	0%		0%	0%			0%	0%							0.92
9:15 - 10:15 AM	TOTAL	1	8		1			5	1			10	2	28						
	TRUCK	0%	0%		0%			0%	0%			0%	0%							0.78
9:30 - 10:30 AM	TOTAL	1	10	2			1	5	1			7	3	30						
	TRUCK	0%	0%	0%			0%	0%	0%			0%	0%							0.83
9:45 - 10:45 AM	TOTAL	1	10	2			1	3	2	1		6	3	29						
	TRUCK	0%	0%	0%			0%	0%	0%	0%		0%	0%							0.81
10:00 - 11:00 AM	TOTAL		8	2	1		1	3	1	1	1	3	4	25						
	TRUCK		0%	0%	0%		0%	0%	0%	0%	0%	0%	0%							0.69
10:15 - 11:15 AM	TOTAL		14	2	2		1		1	1	1	3	4	29						
	TRUCK		0%	0%	0%		0%		0%	0%	0%	0%	0%							0.81
10:30 - 11:30 AM	TOTAL	2	11		2		1	2	1	1	1	6	2	29						
	TRUCK	0%	0%		0%		0%	0%	0%	0%	0%	0%	0%							0.81
10:45 - 11:45 AM	TOTAL	2	12		2		2	2			1	7	1	29		1		1	2	
	TRUCK	0%	0%		0%		0%	0%			0%	0%	0%							0.81
11:00 - 12:00 AM	TOTAL	2	12		2		2	2				11		31		1		1	2	
	TRUCK	0%	0%		0%		0%	0%				0%								0.86
11:15 - 12:15 AM	TOTAL	2	8		2		2	3			2	14		33		1		1	2	
	TRUCK	0%	0%		0%		0%	0%			0%	0%								0.83
11:30 - 12:30 AM	TOTAL	1	8	1	2	1	1	1			2	12		29		1		1	2	
	TRUCK	0%	0%	0%	0%	0%	0%	0%			0%	0%								0.73
11:45 - 12:45 PM	TOTAL	1	7	1	2	2		2			2	11	1	29						
	TRUCK	0%	0%	0%	0%	0%		0%			0%	0%	0%							0.73
12:00 - 1:00 PM	TOTAL	4	12	1	1	2		2			2	7	2	33						
	TRUCK	0%	0%	0%	0%	0%		0%			0%	0%	0%							0.83

1: Narragarsett Ave WB - Right
2: Narragarsett Ave WB - Thru
3: Narragarsett Ave WB - Left
4: First Ave NB - Left
5: First Ave NB - Thru
6: First Ave NB - Right

7: First Ave SB - Left
8: First Ave SB - Thru
9: First Ave SB - Right
10: Pershing Ave EB - Left
11: Pershing Ave EB - Thru
12: Pershing Ave EB - Right

A: Cross Narragarsett East of INT
B: Cross First Ave South of INT
C: Cross Pershing Ave West of INT
D: Cross First Ave North of INT

DATE:	6/23/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	RS
LOCATION:	Second Avenue & Pershing Avenue	INT #:	14

ENTER COUNT DATA ON THIS PAGE

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
9:00 - 9:15 AM	TOTAL	0		0	0	0	0	1	0	0	0		1							
	TRUCK																			
9:15 - 9:30 AM	TOTAL	0		0	0	0	0	1	0	0	0		1							
	TRUCK																			
9:30 - 9:45 AM	TOTAL	0		1	0	0	0	1	1	1	1		1				1			
	TRUCK																			
9:45 - 10:00 AM	TOTAL	0		1	0	0	0	1	1	1	1		1							
	TRUCK																			
10:00 - 10:15 AM	TOTAL	0		1	1	1	0	1	1	1	1		1							
	TRUCK																			
10:15 - 10:30 AM	TOTAL	1		1	2	1	1	1	1	1	1		1							
	TRUCK																			
10:30 - 10:45 AM	TOTAL	1		1	2	1	1	2	2	1	1		1							
	TRUCK																			
10:45 - 11:00 AM	TOTAL	1		1	3	1	1	2	2	2	1		1							
	TRUCK																			
11:00 - 11:15 AM	TOTAL	4		1	3	1	2	3	2	2	1		1							
	TRUCK																			
11:15 - 11:30 AM	TOTAL	5		1	4	1	4	3	2	2	1		1							
	TRUCK																			
11:30 - 11:45 AM	TOTAL	6		1	4	1	5	3	2	3	2		2							
	TRUCK																			
11:45 - 12:00 PM	TOTAL	6		1	4	1	5	3	3	3	2		3							
	TRUCK																			
12:00 - 12:15 PM	TOTAL	6		1	5	1	5	3	3	5	2		3							
	TRUCK																			
12:15 - 12:30 PM	TOTAL	6		1	5	2	5	5	3	5	3		3							
	TRUCK																			
12:30 - 12:45 PM	TOTAL	6		1	5	2	5	5	4	5	3		4							
	TRUCK																			
12:45 - 1:00 PM	TOTAL	7		1	5	3	5	6	4	5	3		4							
	TRUCK																			

DATE:	6/23/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	RS
LOCATION:	Second Avenue & Pershing Avenue	INT #:	14

CALCULATIONS - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT 1	2	3	4	5	6	7	8	9	10	11	12	TOTAL VEHICLES	PED/BIKE MOVEMENT A	B	C	D	TOTAL PEDS /BIKE	INT. PHF
9:00 - 9:15 AM	TOTAL	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
9:15 - 9:30 AM	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
9:30 - 9:45 AM	TOTAL	0	0	1	0	0	0	0	1	1	1	0	0	4	0	0	1	0	1	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
9:45 - 10:00 AM	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:00 - 10:15 AM	TOTAL	0	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:15 - 10:30 AM	TOTAL	1	0	0	1	0	1	0	0	0	0	0	0	3	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:30 - 10:45 AM	TOTAL	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
10:45 - 11:00 AM	TOTAL	0	0	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:00 - 11:15 AM	TOTAL	3	0	0	0	0	1	1	0	0	0	0	0	5	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:15 - 11:30 AM	TOTAL	1	0	0	1	0	2	0	0	0	0	0	0	4	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:30 - 11:45 AM	TOTAL	1	0	0	0	0	1	0	0	1	1	0	1	5	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
11:45 - 12:00 PM	TOTAL	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
12:00 - 12:15 PM	TOTAL	0	0	0	1	0	0	0	0	2	0	0	0	3	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
12:15 - 12:30 PM	TOTAL	0	0	0	0	1	0	2	0	0	1	0	0	4	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
12:30 - 12:45 PM	TOTAL	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
12:45 - 1:00 PM	TOTAL	1	0	0	0	1	0	1	0	0	0	0	0	3	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	

DATE:	6/23/2018	JOB NO:	15064
PERIOD:	9:00AM-1:00PM	NAME:	RS
LOCATION:	Second Avenue & Pershing Avenue	INT #:	14

PEAK HOUR MOVEMENTS & % HEAVY VEHICLES - DO NOT EDIT THIS SHEET

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PED/BIKE MOVEMENT				TOTAL PEDS /BIKE	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
9:00 - 10:00 AM	TOTAL			1				1	1	1	1		1	6			1		1	
	TRUCK			0%				0%	0%	0%	0%		0%							0.38
9:15 - 10:15 AM	TOTAL			1	1	1			1	1	1			6			1		1	
	TRUCK			0%	0%	0%			0%	0%	0%									0.38
9:30 - 10:30 AM	TOTAL	1		1	2	1	1		1	1	1			9			1		1	
	TRUCK	0%		0%	0%	0%	0%		0%	0%	0%									0.56
9:45 - 10:45 AM	TOTAL	1			2	1	1	1	1					7						
	TRUCK	0%			0%	0%	0%	0%	0%											0.58
10:00 - 11:00 AM	TOTAL	1			3	1	1	1	1	1				9						
	TRUCK	0%			0%	0%	0%	0%	0%	0%										0.75
10:15 - 11:15 AM	TOTAL	4			2		2	2	1	1				12						
	TRUCK	0%			0%		0%	0%	0%	0%										0.60
10:30 - 11:30 AM	TOTAL	4			2		3	2	1	1				13						
	TRUCK	0%			0%		0%	0%	0%	0%										0.65
10:45 - 11:45 AM	TOTAL	5			2		4	1		2	1		1	16						
	TRUCK	0%			0%		0%	0%		0%	0%		0%							0.80
11:00 - 12:00 AM	TOTAL	5			1		4	1	1	1	1		2	16						
	TRUCK	0%			0%		0%	0%	0%	0%	0%		0%							0.80
11:15 - 12:15 AM	TOTAL	2			2		3		1	3	1		2	14						
	TRUCK	0%			0%		0%		0%	0%	0%		0%							0.70
11:30 - 12:30 AM	TOTAL	1			1	1	1	2	1	3	2		2	14						
	TRUCK	0%			0%	0%	0%	0%	0%	0%	0%		0%							0.70
11:45 - 12:45 PM	TOTAL				1	1		2	2	2	1		2	11						
	TRUCK				0%	0%		0%	0%	0%	0%		0%							0.69
12:00 - 1:00 PM	TOTAL	1			1	2		3	1	2	1		1	12						
	TRUCK	0%			0%	0%		0%	0%	0%	0%		0%							0.75

1: Pershing Ave WB - Right
2:
3: Pershing Ave WB - Left
4: Second Ave NB - Left
5: Second Ave NB - Thru
6: Second Ave NB - Right

7: Second Ave SB - Left
8: Second Ave SB - Thru
9: Second Ave SB - Right
10: Pershing Ave EB - Left
11:
12: Pershing Ave EB - Right

A: Cross Pershing Ave East of INT
B: Cross Second Ave South of INT
C: Cross Pershing Ave West of INT
D: Cross Second Ave North of INT

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Lane Configurations												
Traffic Volume (vph)	14	85	311	266	3	15	50	134	4	0	0	
Future Volume (vph)	14	85	311	266	3	15	50	134	4	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%			-2%		
Storage Length (ft)		45			0		0	0		0	0	
Storage Lanes		1			0		1	0		0	0	
Taper Length (ft)		20					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	
Ped Bike Factor		0.98		1.00			0.92					
Frt				0.992			0.901					
Flt Protected		0.950					0.987					
Satd. Flow (prot)	0	1726	1571	1404	0	0	1358	0	0	0	0	
Flt Permitted		0.465					0.987					
Satd. Flow (perm)	0	826	1571	1404	0	0	1345	0	0	0	0	
Right Turn on Red						Yes			No		Yes	
Satd. Flow (RTOR)				2								
Link Speed (mph)			30	30			30			30		
Link Distance (ft)			262	281			232			448		
Travel Time (s)			6.0	6.4			5.3			10.2		
Confl. Peds. (#/hr)	21	17			17	21	11	5	21	11	5	
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	
Heavy Vehicles (%)	8%	4%	7%	9%	0%	0%	2%	6%	0%	0%	0%	
Parking (#/hr)			3	7	7	7						
Adj. Flow (vph)	15	92	338	289	3	16	54	146	4	0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	338	308	0	0	204	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Right	Left	Right	
Median Width(ft)			12	12			10			0		
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	1.17	1.30	1.09	1.09	1.13	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	9	15	9	
Number of Detectors	1	0	0	0			0					
Detector Template	Left											
Leading Detector (ft)	20	0	0	0			0					
Trailing Detector (ft)	0	0	0	0			0					
Detector 1 Position(ft)	0	0	0	0			0					
Detector 1 Size(ft)	20	6	20	6			20					
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	D.P+P	D.P+P	NA	NA			Prot					
Protected Phases	1	1	1 3	3			4					2

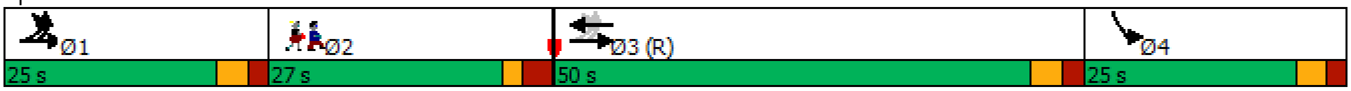
Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Permitted Phases	3	3										
Detector Phase	1	1	1 3	3			4					
Switch Phase												
Minimum Initial (s)	20.0	20.0		45.0			20.0					7.0
Minimum Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (%)	19.7%	19.7%		39.4%			19.7%					21%
Maximum Green (s)	20.0	20.0		45.0			20.0					22.0
Yellow Time (s)	3.0	3.0		3.0			3.0					2.0
All-Red Time (s)	2.0	2.0		2.0			2.0					3.0
Lost Time Adjust (s)		0.0		0.0			0.0					
Total Lost Time (s)		5.0		5.0			5.0					
Lead/Lag	Lead	Lead		Lead			Lag					Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			3.0					3.0
Recall Mode	Max	Max		C-Max			Max					None
Walk Time (s)												7.0
Flash Dont Walk (s)												15.0
Pedestrian Calls (#/hr)												20
Act Effct Green (s)		75.8	77.8	55.8			20.0					
Actuated g/C Ratio		0.60	0.61	0.44			0.16					
v/c Ratio		0.17	0.35	0.50			0.96					
Control Delay		8.3	9.4	32.4			104.9					
Queue Delay		0.0	0.0	0.0			0.0					
Total Delay		8.3	9.4	32.4			104.9					
LOS		A	A	C			F					
Approach Delay			9.2	32.4			104.9					
Approach LOS			A	C			F					
Queue Length 50th (ft)		21	78	207			169					
Queue Length 95th (ft)		36	114	310			#323					
Internal Link Dist (ft)			182	201			152			368		
Turn Bay Length (ft)		45										
Base Capacity (vph)		634	962	617			213					
Starvation Cap Reductn		0	0	0			0					
Spillback Cap Reductn		0	0	0			0					
Storage Cap Reductn		0	0	0			0					
Reduced v/c Ratio		0.17	0.35	0.50			0.96					

Intersection Summary

Area Type: Other
Cycle Length: 127
Actuated Cycle Length: 127
Offset: 7.5 (6%), Referenced to phase 3:EBWB, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 37.0 Intersection LOS: D
Intersection Capacity Utilization 91.5% ICU Level of Service F
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Croton Avenue & Todd Place & Dale Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	66	39	55	250	14
Future Volume (vph)	9	66	39	55	250	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			0%	-7%	
Storage Length (ft)	0	0	4			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.881				0.993	
Flt Protected	0.994			0.980		
Satd. Flow (prot)	1411	0	0	1751	1916	0
Flt Permitted	0.994			0.980		
Satd. Flow (perm)	1411	0	0	1751	1916	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	344			321	414	
Travel Time (s)	7.8			7.3	9.4	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	3%	4%	8%	2%	0%
Parking (#/hr)	1	1				
Adj. Flow (vph)	10	73	43	61	278	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	83	0	0	104	294	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.17	1.02	1.00	1.00	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 33.6% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	2.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	66	39	55	250	14
Future Vol, veh/h	9	66	39	55	250	14
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	0	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	11	3	4	8	2	0
Mvmt Flow	10	73	43	61	278	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	434	287	295	0	-	0
Stage 1	287	-	-	-	-	-
Stage 2	147	-	-	-	-	-
Critical Hdwy	7.11	6.53	4.14	-	-	-
Critical Hdwy Stg 1	6.11	-	-	-	-	-
Critical Hdwy Stg 2	6.11	-	-	-	-	-
Follow-up Hdwy	3.599	3.327	2.236	-	-	-
Pot Cap-1 Maneuver	523	732	1255	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	838	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	504	731	1254	-	-	-
Mov Cap-2 Maneuver	504	-	-	-	-	-
Stage 1	682	-	-	-	-	-
Stage 2	837	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	3.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1254	-	694	-	-
HCM Lane V/C Ratio	0.035	-	0.12	-	-
HCM Control Delay (s)	8	0	10.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	11	2	63	185	2
Future Volume (vph)	6	11	2	63	185	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	3%			1%	-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.912				0.999	
Flt Protected	0.983			0.999		
Satd. Flow (prot)	1566	0	0	1801	1844	0
Flt Permitted	0.983			0.999		
Satd. Flow (perm)	1566	0	0	1801	1844	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	273			129	341	
Travel Time (s)	6.2			2.9	7.8	
Confl. Peds. (#/hr)	1		1			1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%
Adj. Flow (vph)	7	13	2	72	210	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	74	212	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 20.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	11	2	63	185	2
Future Vol, veh/h	6	11	2	63	185	2
Conflicting Peds, #/hr	1	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	1	-2	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	5	4	0
Mvmt Flow	7	13	2	72	210	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	289	212	213	0	-	0
Stage 1	212	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	7	6.5	4.1	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	673	819	1369	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	670	818	1368	-	-	-
Mov Cap-2 Maneuver	670	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	938	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1368	-	759	-	-
HCM Lane V/C Ratio	0.002	-	0.025	-	-
HCM Control Delay (s)	7.6	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	15	7	1	2	1	0	1	0	2	4	0
Future Volume (vph)	1	15	7	1	2	1	0	1	0	2	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	10	10	10
Grade (%)		5%			-12%			-3%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.958			0.973							
Flt Protected		0.998			0.990						0.982	
Satd. Flow (prot)	0	1519	0	0	1875	0	0	1726	0	0	1566	0
Flt Permitted		0.998			0.990						0.982	
Satd. Flow (perm)	0	1519	0	0	1875	0	0	1726	0	0	1566	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			273			334			363	
Travel Time (s)		6.5			6.2			7.6			8.3	
Confl. Peds. (#/hr)			4	4			3		1	1		3
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1				1	1	1	1	1	1
Adj. Flow (vph)	1	19	9	1	3	1	0	1	0	3	5	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	5	0	0	1	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.19	1.03	0.97	0.97	0.97	0.98	1.13	0.98	1.09	1.25	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 15.5%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	15	7	1	2	1	0	1	0	2	4	0
Future Vol, veh/h	1	15	7	1	2	1	0	1	0	2	4	0
Conflicting Peds, #/hr	0	0	4	4	0	0	3	0	1	1	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	-12	-	-	-3	-	-	-1	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	14	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	19	9	1	3	1	0	1	0	3	5	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	4	0	0	32	0	0	41	36	29	33	40	7
Stage 1	-	-	-	-	-	-	30	30	-	6	6	-
Stage 2	-	-	-	-	-	-	11	6	-	27	34	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	6.9	6.3	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1631	-	-	1593	-	-	974	866	1054	981	858	1082
Stage 1	-	-	-	-	-	-	997	878	-	1021	895	-
Stage 2	-	-	-	-	-	-	1017	896	-	997	872	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1631	-	-	1587	-	-	961	861	1049	977	853	1079
Mov Cap-2 Maneuver	-	-	-	-	-	-	961	861	-	977	853	-
Stage 1	-	-	-	-	-	-	992	874	-	1020	894	-
Stage 2	-	-	-	-	-	-	1007	895	-	994	868	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1.8	9.2	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	861	1631	-	-	1587	-	-	891
HCM Lane V/C Ratio	0.001	0.001	-	-	0.001	-	-	0.008
HCM Control Delay (s)	9.2	7.2	0	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2	0	0	2	0	0	0	1	0	2	0
Future Volume (vph)	0	2	0	0	2	0	0	0	1	0	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		7%			-3%			-3%			-6%	
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								0.865				
Flt Protected												
Satd. Flow (prot)	0	1703	0	0	1726	0	0	1493	0	0	1752	0
Flt Permitted												
Satd. Flow (perm)	0	1703	0	0	1726	0	0	1493	0	0	1752	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			284			328			274	
Travel Time (s)		6.6			6.5			7.5			6.2	
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 (%)	0%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1
Adj. Flow (vph)	0	2	0	0	2	0	0	0	1	0	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	2	0	0	1	0	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.07	0.92	0.98	1.13	0.98	0.98	1.13	0.98	0.96	1.11	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 13.3% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	0	0	2	0	0	0	1	0	2	0
Future Vol, veh/h	0	2	0	0	2	0	0	0	1	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	7	-	-	-3	-	-	-3	-	-	-6	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	6	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2	0	0	2	0	0	0	1	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2	0	0	2	0	0	5	4	2	5	4	2
Stage 1	-	-	-	-	-	-	2	2	-	2	2	-
Stage 2	-	-	-	-	-	-	3	2	-	3	2	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	5.9	5.3	5.6
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1634	-	-	1634	-	-	1022	896	1088	1023	897	1089
Stage 1	-	-	-	-	-	-	1026	899	-	1027	899	-
Stage 2	-	-	-	-	-	-	1025	899	-	1026	899	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1634	-	-	1634	-	-	1020	896	1088	1022	897	1089
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	896	-	1022	897	-
Stage 1	-	-	-	-	-	-	1026	899	-	1027	899	-
Stage 2	-	-	-	-	-	-	1023	899	-	1025	899	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.3	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1088	1634	-	-	1634	-	-	897
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	0.002
HCM Control Delay (s)	8.3	0	-	-	0	-	-	9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Lane Configurations												
Traffic Volume (vph)	30	111	232	357	23	22	35	142	1	0	0	
Future Volume (vph)	30	111	232	357	23	22	35	142	1	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%			-2%		
Storage Length (ft)		45			0		0	0		0	0	
Storage Lanes		1			0		1	0		0	0	
Taper Length (ft)		20					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	
Ped Bike Factor		0.98		0.99			0.89					
Frt				0.985			0.891					
Flt Protected		0.950					0.990					
Satd. Flow (prot)	0	1791	1649	1441	0	0	1360	0	0	0	0	
Flt Permitted		0.352					0.990					
Satd. Flow (perm)	0	650	1649	1441	0	0	1347	0	0	0	0	
Right Turn on Red						Yes			Yes		Yes	
Satd. Flow (RTOR)				3			103					
Link Speed (mph)			30	30			30			30		
Link Distance (ft)			262	281			232			448		
Travel Time (s)			6.0	6.4			5.3			10.2		
Confl. Peds. (#/hr)	23	21			23	21	15	11	23	15	11	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Heavy Vehicles (%)	0%	1%	2%	4%	5%	10%	0%	1%	0%	0%	0%	
Parking (#/hr)			3	7	7	7						
Adj. Flow (vph)	31	116	242	372	24	23	36	148	1	0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	147	242	419	0	0	185	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Right	Left	Right	
Median Width(ft)			12	12			10			0		
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	1.17	1.30	1.09	1.09	1.13	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	9	15	9	
Number of Detectors	1	0	0	0			0					
Detector Template	Left											
Leading Detector (ft)	20	0	0	0			0					
Trailing Detector (ft)	0	0	0	0			0					
Detector 1 Position(ft)	0	0	0	0			0					
Detector 1 Size(ft)	20	6	20	6			20					
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	D.P+P	D.P+P	NA	NA			Prot					
Protected Phases	1	1	1 3	3			4					2

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Permitted Phases	3	3										
Detector Phase	1	1	1 3	3			4					
Switch Phase												
Minimum Initial (s)	20.0	20.0		45.0			20.0					5.0
Minimum Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (%)	19.7%	19.7%		39.4%			19.7%					21%
Maximum Green (s)	20.0	20.0		45.0			20.0					22.0
Yellow Time (s)	3.0	3.0		3.0			3.0					2.0
All-Red Time (s)	2.0	2.0		2.0			2.0					3.0
Lost Time Adjust (s)		0.0		0.0			0.0					
Total Lost Time (s)		5.0		5.0			5.0					
Lead/Lag	Lead	Lead		Lead			Lag					Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			3.0					3.0
Recall Mode	Max	Max		C-Max			Max					None
Walk Time (s)												7.0
Flash Dont Walk (s)												15.0
Pedestrian Calls (#/hr)												20
Act Effct Green (s)		75.8	77.8	55.8			20.0					
Actuated g/C Ratio		0.60	0.61	0.44			0.16					
v/c Ratio		0.26	0.24	0.66			0.62					
Control Delay		9.4	8.3	37.6			32.0					
Queue Delay		0.0	0.0	0.0			0.0					
Total Delay		9.4	8.3	37.6			32.0					
LOS		A	A	D			C					
Approach Delay			8.7	37.6			32.0					
Approach LOS			A	D			C					
Queue Length 50th (ft)		29	51	310			62					
Queue Length 95th (ft)		47	78	#481			145					
Internal Link Dist (ft)			182	201			152			368		
Turn Bay Length (ft)		45										
Base Capacity (vph)		567	1009	634			300					
Starvation Cap Reductn		0	0	0			0					
Spillback Cap Reductn		0	0	0			0					
Storage Cap Reductn		0	0	0			0					
Reduced v/c Ratio		0.26	0.24	0.66			0.62					

Intersection Summary

Area Type: Other

Cycle Length: 127

Actuated Cycle Length: 127

Offset: 26.5 (21%), Referenced to phase 3:EBWB, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

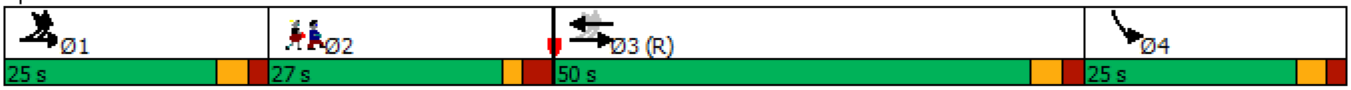
Intersection Signal Delay: 25.2 Intersection LOS: C

Intersection Capacity Utilization 93.1% ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Croton Avenue & Todd Place & Dale Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	17	37	63	196	127	14
Future Volume (vph)	17	37	63	196	127	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			0%	-7%	
Storage Length (ft)	0	0	4			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.907				0.986	
Flt Protected	0.985			0.988		
Satd. Flow (prot)	1496	0	0	1814	1888	0
Flt Permitted	0.985			0.988		
Satd. Flow (perm)	1496	0	0	1814	1888	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	344			321	414	
Travel Time (s)	7.8			7.3	9.4	
Confl. Peds. (#/hr)			3			3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	2%	4%	3%	0%
Parking (#/hr)	1	1				
Adj. Flow (vph)	19	42	71	220	143	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	0	0	291	159	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.17	1.02	1.00	1.00	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 35.2% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	37	63	196	127	14
Future Vol, veh/h	17	37	63	196	127	14
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	0	-7	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	2	4	3	0
Mvmt Flow	19	42	71	220	143	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	516	154	162	0	-	0
Stage 1	154	-	-	-	-	-
Stage 2	362	-	-	-	-	-
Critical Hdwy	7	6.5	4.12	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	480	886	1417	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	450	883	1413	-	-	-
Mov Cap-2 Maneuver	450	-	-	-	-	-
Stage 1	806	-	-	-	-	-
Stage 2	665	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1413	-	678	-	-
HCM Lane V/C Ratio	0.05	-	0.089	-	-
HCM Control Delay (s)	7.7	0	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	6	21	144	91	7
Future Volume (vph)	6	6	21	144	91	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	3%			1%	-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932				0.990	
Flt Protected	0.976			0.994		
Satd. Flow (prot)	1358	0	0	1863	1882	0
Flt Permitted	0.976			0.994		
Satd. Flow (perm)	1358	0	0	1863	1882	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	273			129	341	
Travel Time (s)	6.2			2.9	7.8	
Confl. Peds. (#/hr)			4			4
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	17%	17%	0%	1%	1%	0%
Adj. Flow (vph)	7	7	23	158	100	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	181	108	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 25.4%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	6	21	144	91	7
Future Vol, veh/h	6	6	21	144	91	7
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	1	-2	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	17	17	0	1	1	0
Mvmt Flow	7	7	23	158	100	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	312	108	112	0	-	0
Stage 1	108	-	-	-	-	-
Stage 2	204	-	-	-	-	-
Critical Hdwy	7.17	6.67	4.1	-	-	-
Critical Hdwy Stg 1	6.17	-	-	-	-	-
Critical Hdwy Stg 2	6.17	-	-	-	-	-
Follow-up Hdwy	3.653	3.453	2.2	-	-	-
Pot Cap-1 Maneuver	618	898	1490	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	604	895	1485	-	-	-
Mov Cap-2 Maneuver	604	-	-	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1485	-	721	-	-
HCM Lane V/C Ratio	0.016	-	0.018	-	-
HCM Control Delay (s)	7.5	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	9	1	4	14	10	3	2	2	1	2	3
Future Volume (vph)	1	9	1	4	14	10	3	2	2	1	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	10	10	10
Grade (%)		5%			-12%			-3%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.990			0.951			0.959			0.932	
Flt Protected		0.996			0.993			0.980			0.994	
Satd. Flow (prot)	0	1635	0	0	1839	0	0	1622	0	0	1478	0
Flt Permitted		0.996			0.993			0.980			0.994	
Satd. Flow (perm)	0	1635	0	0	1839	0	0	1622	0	0	1478	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			273			334			363	
Travel Time (s)		6.5			6.2			7.6			8.3	
Confl. Peds. (#/hr)							1		3	3		1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1				1	1	1	1	1	1
Adj. Flow (vph)	1	11	1	5	18	13	4	3	3	1	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	36	0	0	10	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.19	1.03	0.97	0.97	0.97	0.98	1.13	0.98	1.09	1.25	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 14.3% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	9	1	4	14	10	3	2	2	1	2	3
Future Vol, veh/h	1	9	1	4	14	10	3	2	2	1	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	3	3	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	-12	-	-	-3	-	-	-1	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	11	1	5	18	13	4	3	3	1	3	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	31	0	0	12	0	0	53	55	15	55	49	26
Stage 1	-	-	-	-	-	-	14	14	-	35	35	-
Stage 2	-	-	-	-	-	-	39	41	-	20	14	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	6.9	6.3	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1595	-	-	1620	-	-	959	848	1072	951	849	1056
Stage 1	-	-	-	-	-	-	1014	890	-	988	872	-
Stage 2	-	-	-	-	-	-	988	871	-	1005	889	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1595	-	-	1620	-	-	949	845	1069	941	846	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	949	845	-	941	846	-
Stage 1	-	-	-	-	-	-	1013	889	-	987	869	-
Stage 2	-	-	-	-	-	-	978	868	-	996	888	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	1	8.8	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	946	1595	-	-	1620	-	-	957
HCM Lane V/C Ratio	0.009	0.001	-	-	0.003	-	-	0.008
HCM Control Delay (s)	8.8	7.3	0	-	7.2	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	9	0	5	11	4	0	1	0	2	1	0
Future Volume (vph)	0	9	0	5	11	4	0	1	0	2	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		7%			-3%			-3%			-6%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.973							
Flt Protected					0.988						0.964	
Satd. Flow (prot)	0	1805	0	0	1659	0	0	1726	0	0	1688	0
Flt Permitted					0.988						0.964	
Satd. Flow (perm)	0	1805	0	0	1659	0	0	1726	0	0	1688	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			284			328			274	
Travel Time (s)		6.6			6.5			7.5			6.2	
Confl. Peds. (#/hr)			2	2			2					2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1
Adj. Flow (vph)	0	12	0	6	14	5	0	1	0	3	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	25	0	0	1	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.07	0.92	0.98	1.13	0.98	0.98	1.13	0.98	0.96	1.11	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 16.0% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	9	0	5	11	4	0	1	0	2	1	0
Future Vol, veh/h	0	9	0	5	11	4	0	1	0	2	1	0
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	7	-	-	-3	-	-	-3	-	-	-6	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	12	0	6	14	5	0	1	0	3	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	19	0	0	14	0	0	45	45	14	42	43	19
Stage 1	-	-	-	-	-	-	14	14	-	29	29	-
Stage 2	-	-	-	-	-	-	31	31	-	13	14	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	5.9	5.3	5.6
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1611	-	-	1617	-	-	969	857	1073	980	865	1068
Stage 1	-	-	-	-	-	-	1014	890	-	1003	883	-
Stage 2	-	-	-	-	-	-	996	878	-	1017	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1611	-	-	1614	-	-	961	852	1071	976	860	1065
Mov Cap-2 Maneuver	-	-	-	-	-	-	961	852	-	976	860	-
Stage 1	-	-	-	-	-	-	1012	888	-	1003	879	-
Stage 2	-	-	-	-	-	-	988	874	-	1016	890	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.8	9.2	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	852	1611	-	-	1614	-	-	934
HCM Lane V/C Ratio	0.002	-	-	-	0.004	-	-	0.004
HCM Control Delay (s)	9.2	0	-	-	7.2	0	-	8.9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SEL	SER	Ø2
Lane Configurations											
Traffic Volume (vph)	17	96	264	370	16	21	30	140	0	0	
Future Volume (vph)	17	96	264	370	16	21	30	140	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%		-2%		
Storage Length (ft)		45			0		0	0	0	0	
Storage Lanes		1			0		1	0	0	0	
Taper Length (ft)		20					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	
Frt				0.988			0.889				
Flt Protected		0.950					0.991				
Satd. Flow (prot)	0	1775	1617	1496	0	0	1499	0	0	0	
Flt Permitted		0.333					0.991				
Satd. Flow (perm)	0	622	1617	1496	0	0	1499	0	0	0	
Right Turn on Red						Yes				Yes	
Satd. Flow (RTOR)				2							
Link Speed (mph)			30	30			30		30		
Link Distance (ft)			262	281			232		448		
Travel Time (s)			6.0	6.4			5.3		10.2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	0%	2%	4%	2%	0%	0%	0%	2%	0%	0%	
Parking (#/hr)			3	7	7	7					
Adj. Flow (vph)	18	103	284	398	17	23	32	151	0	0	
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	121	284	438	0	0	183	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Left	Right	
Median Width(ft)			12	12			10		0		
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	1.17	1.30	1.09	1.09	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	15	9	
Number of Detectors	1	0	0	0			0				
Detector Template	Left										
Leading Detector (ft)	20	0	0	0			0				
Trailing Detector (ft)	0	0	0	0			0				
Detector 1 Position(ft)	0	0	0	0			0				
Detector 1 Size(ft)	20	6	20	6			20				
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	D.P+P	D.P+P	NA	NA			Prot				
Protected Phases	1	1	1 3	3			4				2
Permitted Phases	3	3									
Detector Phase	1	1	1 3	3			4				

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SEL	SER	Ø2
Switch Phase											
Minimum Initial (s)	20.0	20.0		45.0			20.0				5.0
Minimum Split (s)	25.0	25.0		50.0			25.0				27.0
Total Split (s)	25.0	25.0		50.0			25.0				27.0
Total Split (%)	19.7%	19.7%		39.4%			19.7%				21%
Maximum Green (s)	20.0	20.0		45.0			20.0				22.0
Yellow Time (s)	3.0	3.0		3.0			3.0				2.0
All-Red Time (s)	2.0	2.0		2.0			2.0				3.0
Lost Time Adjust (s)		0.0		0.0			0.0				
Total Lost Time (s)		5.0		5.0			5.0				
Lead/Lag	Lead	Lead		Lead			Lag				Lag
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0			3.0				3.0
Recall Mode	Max	Max		C-Max			Max				None
Walk Time (s)											7.0
Flash Dont Walk (s)											15.0
Pedestrian Calls (#/hr)											20
Act Effct Green (s)		75.8	77.8	55.8			20.0				
Actuated g/C Ratio		0.60	0.61	0.44			0.16				
v/c Ratio		0.22	0.29	0.67			0.78				
Control Delay		9.0	8.8	37.6			73.7				
Queue Delay		0.0	0.0	0.0			0.0				
Total Delay		9.0	8.8	37.6			73.7				
LOS		A	A	D			E				
Approach Delay			8.8	37.6			73.7				
Approach LOS			A	D			E				
Queue Length 50th (ft)		24	62	325			146				
Queue Length 95th (ft)		40	93	#501			#261				
Internal Link Dist (ft)			182	201			152		368		
Turn Bay Length (ft)		45									
Base Capacity (vph)		552	990	658			236				
Starvation Cap Reductn		0	0	0			0				
Spillback Cap Reductn		0	0	0			0				
Storage Cap Reductn		0	0	0			0				
Reduced v/c Ratio		0.22	0.29	0.67			0.78				

Intersection Summary

Area Type: Other

Cycle Length: 127

Actuated Cycle Length: 127

Offset: 27 (21%), Referenced to phase 3:EBWB, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

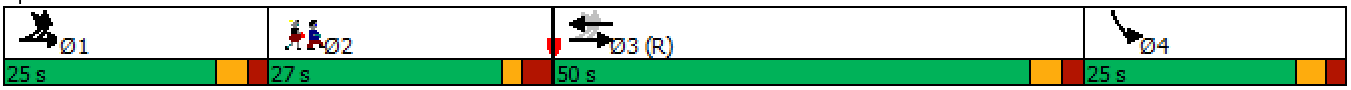
Intersection Signal Delay: 32.7 Intersection LOS: C

Intersection Capacity Utilization 83.3% 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: 10: Croton Avenue & Todd Place & Dale Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	43	26	121	141	16
Future Volume (vph)	21	43	26	121	141	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			0%	-7%	
Storage Length (ft)	0	0	4			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910				0.986	
Flt Protected	0.984			0.991		
Satd. Flow (prot)	1384	0	0	1883	1897	0
Flt Permitted	0.984			0.991		
Satd. Flow (perm)	1384	0	0	1883	1897	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	344			321	414	
Travel Time (s)	7.8			7.3	9.4	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	15%	5%	0%	0%	1%	13%
Parking (#/hr)	1	1				
Adj. Flow (vph)	23	46	28	130	152	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	69	0	0	158	169	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.17	1.02	1.00	1.00	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 30.2% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	43	26	121	141	16
Future Vol, veh/h	21	43	26	121	141	16
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	0	-7	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	15	5	0	0	1	13
Mvmt Flow	23	46	28	130	152	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	348	162	170	0	-	0
Stage 1	162	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Critical Hdwy	7.15	6.55	4.1	-	-	-
Critical Hdwy Stg 1	6.15	-	-	-	-	-
Critical Hdwy Stg 2	6.15	-	-	-	-	-
Follow-up Hdwy	3.635	3.345	2.2	-	-	-
Pot Cap-1 Maneuver	588	863	1420	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	574	862	1419	-	-	-
Mov Cap-2 Maneuver	574	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	790	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1419	-	740	-	-
HCM Lane V/C Ratio	0.02	-	0.093	-	-
HCM Control Delay (s)	7.6	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	11	16	129	126	2
Future Volume (vph)	4	11	16	129	126	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	3%			1%	-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.901				0.997	
Flt Protected	0.987			0.995		
Satd. Flow (prot)	1553	0	0	1832	1913	0
Flt Permitted	0.987			0.995		
Satd. Flow (perm)	1553	0	0	1832	1913	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	273			129	341	
Travel Time (s)	6.2			2.9	7.8	
Confl. Peds. (#/hr)			12			12
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	0%	0%	0%	3%	0%	1%
Adj. Flow (vph)	5	14	20	163	159	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	0	183	162	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 29.9% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.9					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	11	16	129	126	2
Future Vol, veh/h	4	11	16	129	126	2
Conflicting Peds, #/hr	0	0	12	0	0	12
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	1	-2	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	3	0	1
Mvmt Flow	5	14	20	163	159	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	376	173	174	0	-	0
Stage 1	173	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	7	6.5	4.1	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	591	863	1415	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	570	855	1402	-	-	-
Mov Cap-2 Maneuver	570	-	-	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	800	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1402	-	754	-	-
HCM Lane V/C Ratio	0.014	-	0.025	-	-
HCM Control Delay (s)	7.6	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	12	2	1	13	4	1	2	0	3	0	0
Future Volume (vph)	2	12	2	1	13	4	1	2	0	3	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	10	10	10
Grade (%)		5%			-12%			-3%			-1%	
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		0.985			0.969							
Flt Protected		0.994			0.998			0.984			0.950	
Satd. Flow (prot)	0	1623	0	0	1883	0	0	1698	0	0	1515	0
Flt Permitted		0.994			0.998			0.984			0.950	
Satd. Flow (perm)	0	1623	0	0	1883	0	0	1698	0	0	1515	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			273			334			363	
Travel Time (s)		6.5			6.2			7.6			8.3	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1				1	1	1	1	1	1
Adj. Flow (vph)	2	14	2	1	16	5	1	2	0	4	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	22	0	0	3	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.19	1.03	0.97	0.97	0.97	0.98	1.13	0.98	1.09	1.25	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	12	2	1	13	4	1	2	0	3	0	0
Future Vol, veh/h	2	12	2	1	13	4	1	2	0	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	-12	-	-	-3	-	-	-1	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	14	2	1	16	5	1	2	0	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	21	0	0	16	0	0	40	42	15	41	41	19
Stage 1	-	-	-	-	-	-	19	19	-	21	21	-
Stage 2	-	-	-	-	-	-	21	23	-	20	20	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	6.9	6.3	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1608	-	-	1615	-	-	976	860	1072	970	857	1066
Stage 1	-	-	-	-	-	-	1008	886	-	1004	883	-
Stage 2	-	-	-	-	-	-	1006	883	-	1005	884	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1608	-	-	1615	-	-	974	858	1072	966	855	1066
Mov Cap-2 Maneuver	-	-	-	-	-	-	974	858	-	966	855	-
Stage 1	-	-	-	-	-	-	1007	885	-	1003	882	-
Stage 2	-	-	-	-	-	-	1005	882	-	1001	883	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.4	9	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	893	1608	-	-	1615	-	-	966
HCM Lane V/C Ratio	0.004	0.001	-	-	0.001	-	-	0.004
HCM Control Delay (s)	9	7.2	0	-	7.2	0	-	8.7
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	12	1	0	13	1	1	2	0	4	1	2
Future Volume (vph)	1	12	1	0	13	1	1	2	0	4	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		7%			-3%			-3%			-6%	
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		0.992			0.992						0.955	
Flt Protected		0.997						0.988			0.973	
Satd. Flow (prot)	0	1750	0	0	1679	0	0	1672	0	0	1596	0
Flt Permitted		0.997						0.988			0.973	
Satd. Flow (perm)	0	1750	0	0	1679	0	0	1672	0	0	1596	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			284			328			274	
Travel Time (s)		6.6			6.5			7.5			6.2	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Parking (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1
Adj. Flow (vph)	1	16	1	0	17	1	1	3	0	5	1	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	18	0	0	4	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.07	0.92	0.98	1.13	0.98	0.98	1.13	0.98	0.96	1.11	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	2.5											
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations												
Traffic Vol, veh/h	1	12	1	0	13	1	1	2	0	4	1	2
Future Vol, veh/h	1	12	1	0	13	1	1	2	0	4	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	7	-	-	-3	-	-	-3	-	-	-6	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	16	1	0	17	1	1	3	0	5	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	18	0	0	17	0	0	39	37	17	38	37	18
Stage 1	-	-	-	-	-	-	19	19	-	18	18	-
Stage 2	-	-	-	-	-	-	20	18	-	20	19	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.52	5.92	5.92	5.92	5.32	5.62
Critical Hdwy Stg 1	-	-	-	-	-	-	5.52	4.92	-	4.92	4.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.52	4.92	-	4.92	4.32	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1599	-	-	1600	-	-	972	861	1063	979	866	1064
Stage 1	-	-	-	-	-	-	1003	882	-	1007	886	-
Stage 2	-	-	-	-	-	-	1002	883	-	1005	885	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1599	-	-	1600	-	-	968	860	1063	976	865	1064
Mov Cap-2 Maneuver	-	-	-	-	-	-	968	860	-	976	865	-
Stage 1	-	-	-	-	-	-	1002	881	-	1006	886	-
Stage 2	-	-	-	-	-	-	998	883	-	1001	884	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	9	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	893	1599	-	-	1600	-	-	981
HCM Lane V/C Ratio	0.004	0.001	-	-	-	-	-	0.01
HCM Control Delay (s)	9	7.3	0	-	0	-	-	8.7
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Lane Configurations												
Traffic Volume (vph)	15	93	324	277	3	16	52	149	4	0	0	
Future Volume (vph)	15	93	324	277	3	16	52	149	4	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%			-2%		
Storage Length (ft)		45			0		0	0		0	0	
Storage Lanes		1			0		1	0		0	0	
Taper Length (ft)		20					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	
Ped Bike Factor		0.98		1.00			0.92					
Frt				0.992			0.900					
Flt Protected		0.950					0.987					
Satd. Flow (prot)	0	1726	1571	1404	0	0	1355	0	0	0	0	
Flt Permitted		0.452					0.987					
Satd. Flow (perm)	0	804	1571	1404	0	0	1342	0	0	0	0	
Right Turn on Red						Yes			No		Yes	
Satd. Flow (RTOR)				2								
Link Speed (mph)			30	30			30			30		
Link Distance (ft)			262	281			232			448		
Travel Time (s)			6.0	6.4			5.3			10.2		
Confl. Peds. (#/hr)	21	17			17	21	11	5	21	11	5	
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	
Heavy Vehicles (%)	8%	4%	7%	9%	0%	0%	2%	6%	0%	0%	0%	
Parking (#/hr)			3	7	7	7						
Adj. Flow (vph)	16	101	352	301	3	17	57	162	4	0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	352	321	0	0	223	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Right	Left	Right	
Median Width(ft)			12	12			10			0		
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	1.17	1.30	1.09	1.09	1.13	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	9	15	9	
Number of Detectors	1	0	0	0			0					
Detector Template	Left											
Leading Detector (ft)	20	0	0	0			0					
Trailing Detector (ft)	0	0	0	0			0					
Detector 1 Position(ft)	0	0	0	0			0					
Detector 1 Size(ft)	20	6	20	6			20					
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	D.P+P	D.P+P	NA	NA			Prot					
Protected Phases	1	1	1 3	3			4					2

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Permitted Phases	3	3										
Detector Phase	1	1	1 3	3			4					
Switch Phase												
Minimum Initial (s)	20.0	20.0		45.0			20.0					7.0
Minimum Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (%)	19.7%	19.7%		39.4%			19.7%					21%
Maximum Green (s)	20.0	20.0		45.0			20.0					22.0
Yellow Time (s)	3.0	3.0		3.0			3.0					2.0
All-Red Time (s)	2.0	2.0		2.0			2.0					3.0
Lost Time Adjust (s)		0.0		0.0			0.0					
Total Lost Time (s)		5.0		5.0			5.0					
Lead/Lag	Lead	Lead		Lead			Lag					Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			3.0					3.0
Recall Mode	Max	Max		C-Max			Max					None
Walk Time (s)												7.0
Flash Dont Walk (s)												15.0
Pedestrian Calls (#/hr)												20
Act Effct Green (s)		75.8	77.8	55.8			20.0					
Actuated g/C Ratio		0.60	0.61	0.44			0.16					
v/c Ratio		0.19	0.37	0.52			1.05					
Control Delay		8.4	9.6	33.0			125.9					
Queue Delay		0.0	0.0	0.0			0.0					
Total Delay		8.4	9.6	33.0			125.9					
LOS		A	A	C			F					
Approach Delay			9.3	33.0			125.9					
Approach LOS			A	C			F					
Queue Length 50th (ft)		23	82	218			~199					
Queue Length 95th (ft)		39	119	326			#363					
Internal Link Dist (ft)			182	201			152			368		
Turn Bay Length (ft)		45										
Base Capacity (vph)		624	962	617			213					
Starvation Cap Reductn		0	0	0			0					
Spillback Cap Reductn		0	0	0			0					
Storage Cap Reductn		0	0	0			0					
Reduced v/c Ratio		0.19	0.37	0.52			1.05					

Intersection Summary

Area Type: Other

Cycle Length: 127

Actuated Cycle Length: 127

Offset: 7.5 (6%), Referenced to phase 3:EBWB, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 42.5 Intersection LOS: D

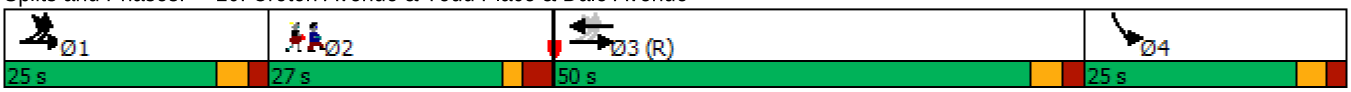
Intersection Capacity Utilization 91.5% ICU Level of Service F

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.

Splits and Phases: 10: Croton Avenue & Todd Place & Dale Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	69	41	64	266	15
Future Volume (vph)	9	69	41	64	266	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			0%	-7%	
Storage Length (ft)	0	0	4			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.881				0.993	
Flt Protected	0.994			0.981		
Satd. Flow (prot)	1411	0	0	1751	1916	0
Flt Permitted	0.994			0.981		
Satd. Flow (perm)	1411	0	0	1751	1916	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	344			321	414	
Travel Time (s)	7.8			7.3	9.4	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	3%	4%	8%	2%	0%
Parking (#/hr)	1	1				
Adj. Flow (vph)	10	77	46	71	296	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	87	0	0	117	313	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.17	1.02	1.00	1.00	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 35.3%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	2.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	69	41	64	266	15
Future Vol, veh/h	9	69	41	64	266	15
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	0	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	11	3	4	8	2	0
Mvmt Flow	10	77	46	71	296	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	469	306	314	0	-	0
Stage 1	306	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Critical Hdwy	7.11	6.53	4.14	-	-	-
Critical Hdwy Stg 1	6.11	-	-	-	-	-
Critical Hdwy Stg 2	6.11	-	-	-	-	-
Follow-up Hdwy	3.599	3.327	2.236	-	-	-
Pot Cap-1 Maneuver	496	713	1235	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	476	712	1234	-	-	-
Mov Cap-2 Maneuver	476	-	-	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	3.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1234	-	673	-	-
HCM Lane V/C Ratio	0.037	-	0.129	-	-
HCM Control Delay (s)	8	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	18	9	66	193	2
Future Volume (vph)	6	18	9	66	193	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	3%			1%	-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.900				0.999	
Flt Protected	0.987			0.994		
Satd. Flow (prot)	1552	0	0	1800	1844	0
Flt Permitted	0.987			0.994		
Satd. Flow (perm)	1552	0	0	1800	1844	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	273			129	341	
Travel Time (s)	6.2			2.9	7.8	
Confl. Peds. (#/hr)	1		1			1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%
Adj. Flow (vph)	7	20	10	75	219	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	85	221	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 21.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	18	9	66	193	2
Future Vol, veh/h	6	18	9	66	193	2
Conflicting Peds, #/hr	1	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	1	-2	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	5	4	0
Mvmt Flow	7	20	10	75	219	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	317	221	222	0	-	0
Stage 1	221	-	-	-	-	-
Stage 2	96	-	-	-	-	-
Critical Hdwy	7	6.5	4.1	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	645	809	1359	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	639	808	1358	-	-	-
Mov Cap-2 Maneuver	639	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	917	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1358	-	758	-	-
HCM Lane V/C Ratio	0.008	-	0.036	-	-
HCM Control Delay (s)	7.7	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	22	7	1	9	1	0	1	0	2	4	0
Future Volume (vph)	1	22	7	1	9	1	0	1	0	2	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	10	10	10
Grade (%)		5%			-12%			-3%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968			0.990							
Flt Protected		0.999			0.996						0.982	
Satd. Flow (prot)	0	1552	0	0	1920	0	0	1726	0	0	1566	0
Flt Permitted		0.999			0.996						0.982	
Satd. Flow (perm)	0	1552	0	0	1920	0	0	1726	0	0	1566	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			273			334			363	
Travel Time (s)		6.5			6.2			7.6			8.3	
Confl. Peds. (#/hr)			4	4			3		1	1		3
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1				1	1	1	1	1	1
Adj. Flow (vph)	1	28	9	1	11	1	0	1	0	3	5	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	0	0	13	0	0	1	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.19	1.03	0.97	0.97	0.97	0.98	1.13	0.98	1.09	1.25	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 15.5%		ICU Level of Service A
Analysis Period (min) 15		

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	22	7	1	9	1	0	1	0	2	4	0
Future Vol, veh/h	1	22	7	1	9	1	0	1	0	2	4	0
Conflicting Peds, #/hr	0	0	4	4	0	0	3	0	1	1	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	-12	-	-	-3	-	-	-1	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	14	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	28	9	1	11	1	0	1	0	3	5	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	12	0	0	41	0	0	58	53	38	50	57	15
Stage 1	-	-	-	-	-	-	39	39	-	14	14	-
Stage 2	-	-	-	-	-	-	19	14	-	36	43	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	6.9	6.3	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1620	-	-	1581	-	-	953	850	1043	957	841	1071
Stage 1	-	-	-	-	-	-	988	872	-	1012	889	-
Stage 2	-	-	-	-	-	-	1008	890	-	987	865	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1620	-	-	1575	-	-	941	845	1038	953	836	1068
Mov Cap-2 Maneuver	-	-	-	-	-	-	941	845	-	953	836	-
Stage 1	-	-	-	-	-	-	983	868	-	1011	888	-
Stage 2	-	-	-	-	-	-	998	889	-	984	861	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.7	9.3	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	845	1620	-	-	1575	-	-	872
HCM Lane V/C Ratio	0.001	0.001	-	-	0.001	-	-	0.009
HCM Control Delay (s)	9.3	7.2	0	-	7.3	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	29	0	0	9	0	0	0	1	0	2	0
Future Volume (vph)	0	29	0	0	9	0	0	0	1	0	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		7%			-3%			-3%			-6%	
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								0.865				
Flt Protected												
Satd. Flow (prot)	0	1703	0	0	1726	0	0	1493	0	0	1752	0
Flt Permitted												
Satd. Flow (perm)	0	1703	0	0	1726	0	0	1493	0	0	1752	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			284			328			274	
Travel Time (s)		6.6			6.5			7.5			6.2	
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 (%)	0%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1
Adj. Flow (vph)	0	32	0	0	10	0	0	0	1	0	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	10	0	0	1	0	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.07	0.92	0.98	1.13	0.98	0.98	1.13	0.98	0.96	1.11	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 13.3%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	29	0	0	9	0	0	0	1	0	2	0
Future Vol, veh/h	0	29	0	0	9	0	0	0	1	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	7	-	-	-3	-	-	-3	-	-	-6	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	6	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	32	0	0	10	0	0	0	1	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	32	0	0	43	42	32	43	42	10
Stage 1	-	-	-	-	-	-	32	32	-	10	10	-
Stage 2	-	-	-	-	-	-	11	10	-	33	32	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	5.9	5.3	5.6
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1623	-	-	1593	-	-	972	860	1050	979	866	1079
Stage 1	-	-	-	-	-	-	995	877	-	1020	894	-
Stage 2	-	-	-	-	-	-	1017	893	-	999	882	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1623	-	-	1593	-	-	970	860	1050	978	866	1079
Mov Cap-2 Maneuver	-	-	-	-	-	-	970	860	-	978	866	-
Stage 1	-	-	-	-	-	-	995	877	-	1020	894	-
Stage 2	-	-	-	-	-	-	1015	893	-	998	882	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.4	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1050	1623	-	-	1593	-	-	866
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	0.003
HCM Control Delay (s)	8.4	0	-	-	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Lane Configurations												
Traffic Volume (vph)	31	129	241	372	24	23	36	158	1	0	0	
Future Volume (vph)	31	129	241	372	24	23	36	158	1	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%			-2%		
Storage Length (ft)		45			0		0	0		0	0	
Storage Lanes		1			0		1	0		0	0	
Taper Length (ft)		20					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	
Ped Bike Factor		0.98		0.99			0.89					
Frt				0.985			0.890					
Flt Protected		0.950					0.991					
Satd. Flow (prot)	0	1791	1649	1441	0	0	1358	0	0	0	0	
Flt Permitted		0.334					0.991					
Satd. Flow (perm)	0	617	1649	1441	0	0	1346	0	0	0	0	
Right Turn on Red						Yes			Yes		Yes	
Satd. Flow (RTOR)				3			103					
Link Speed (mph)			30	30			30			30		
Link Distance (ft)			262	281			232			448		
Travel Time (s)			6.0	6.4			5.3			10.2		
Confl. Peds. (#/hr)	23	21			23	21	15	11	23	15	11	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Heavy Vehicles (%)	0%	1%	2%	4%	5%	10%	0%	1%	0%	0%	0%	
Parking (#/hr)			3	7	7	7						
Adj. Flow (vph)	32	134	251	388	25	24	38	165	1	0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	166	251	437	0	0	204	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Right	Left	Right	
Median Width(ft)			12	12			10			0		
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	1.17	1.30	1.09	1.09	1.13	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	9	15	9	
Number of Detectors	1	0	0	0			0					
Detector Template	Left											
Leading Detector (ft)	20	0	0	0			0					
Trailing Detector (ft)	0	0	0	0			0					
Detector 1 Position(ft)	0	0	0	0			0					
Detector 1 Size(ft)	20	6	20	6			20					
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	D.P+P	D.P+P	NA	NA			Prot					
Protected Phases	1	1	1 3	3			4					2

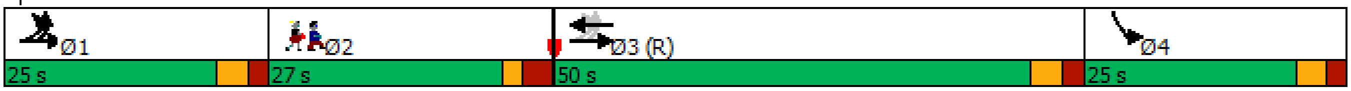
Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Permitted Phases	3	3										
Detector Phase	1	1	1 3	3			4					
Switch Phase												
Minimum Initial (s)	20.0	20.0		45.0			20.0					5.0
Minimum Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (%)	19.7%	19.7%		39.4%			19.7%					21%
Maximum Green (s)	20.0	20.0		45.0			20.0					22.0
Yellow Time (s)	3.0	3.0		3.0			3.0					2.0
All-Red Time (s)	2.0	2.0		2.0			2.0					3.0
Lost Time Adjust (s)		0.0		0.0			0.0					
Total Lost Time (s)		5.0		5.0			5.0					
Lead/Lag	Lead	Lead		Lead			Lag					Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			3.0					3.0
Recall Mode	Max	Max		C-Max			Max					None
Walk Time (s)												7.0
Flash Dont Walk (s)												15.0
Pedestrian Calls (#/hr)												20
Act Effct Green (s)		75.8	77.8	55.8			20.0					
Actuated g/C Ratio		0.60	0.61	0.44			0.16					
v/c Ratio		0.30	0.25	0.69			0.68					
Control Delay		10.0	8.4	38.8			37.0					
Queue Delay		0.0	0.0	0.0			0.0					
Total Delay		10.0	8.4	38.8			37.0					
LOS		B	A	D			D					
Approach Delay			9.1	38.8			37.0					
Approach LOS			A	D			D					
Queue Length 50th (ft)		33	53	329			78					
Queue Length 95th (ft)		53	81	#515			168					
Internal Link Dist (ft)			182	201			152			368		
Turn Bay Length (ft)		45										
Base Capacity (vph)		552	1009	634			300					
Starvation Cap Reductn		0	0	0			0					
Spillback Cap Reductn		0	0	0			0					
Storage Cap Reductn		0	0	0			0					
Reduced v/c Ratio		0.30	0.25	0.69			0.68					

Intersection Summary

Area Type: Other
Cycle Length: 127
Actuated Cycle Length: 127
Offset: 26.5 (21%), Referenced to phase 3:EBWB, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 26.7 — Intersection LOS: C
Intersection Capacity Utilization 93.1% — ICU Level of Service F
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Croton Avenue & Todd Place & Dale Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	39	66	211	141	15
Future Volume (vph)	18	39	66	211	141	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			0%	-7%	
Storage Length (ft)	0	0	4			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.907				0.987	
Flt Protected	0.985			0.988		
Satd. Flow (prot)	1496	0	0	1813	1890	0
Flt Permitted	0.985			0.988		
Satd. Flow (perm)	1496	0	0	1813	1890	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	344			321	414	
Travel Time (s)	7.8			7.3	9.4	
Confl. Peds. (#/hr)			3			3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	2%	4%	3%	0%
Parking (#/hr)	1	1				
Adj. Flow (vph)	20	44	74	237	158	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	0	311	175	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.17	1.02	1.00	1.00	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 37.0% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	39	66	211	141	15
Future Vol, veh/h	18	39	66	211	141	15
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	0	-7	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	2	4	3	0
Mvmt Flow	20	44	74	237	158	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	555	170	178	0	-	0
Stage 1	170	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Critical Hdwy	7	6.5	4.12	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	452	867	1398	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	422	865	1394	-	-	-
Mov Cap-2 Maneuver	422	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	647	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	1.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1394	-	650	-	-
HCM Lane V/C Ratio	0.053	-	0.099	-	-
HCM Control Delay (s)	7.7	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	15	29	150	95	7
Future Volume (vph)	6	15	29	150	95	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	3%			1%	-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.906				0.990	
Flt Protected	0.985			0.992		
Satd. Flow (prot)	1332	0	0	1860	1882	0
Flt Permitted	0.985			0.992		
Satd. Flow (perm)	1332	0	0	1860	1882	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	273			129	341	
Travel Time (s)	6.2			2.9	7.8	
Confl. Peds. (#/hr)			4			4
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	17%	17%	0%	1%	1%	0%
Adj. Flow (vph)	7	16	32	165	104	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	0	197	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 26.2%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	1.4					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	15	29	150	95	7
Future Vol, veh/h	6	15	29	150	95	7
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	1	-2	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	17	17	0	1	1	0
Mvmt Flow	7	16	32	165	104	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	341	112	116	0	-	0
Stage 1	112	-	-	-	-	-
Stage 2	229	-	-	-	-	-
Critical Hdwy	7.17	6.67	4.1	-	-	-
Critical Hdwy Stg 1	6.17	-	-	-	-	-
Critical Hdwy Stg 2	6.17	-	-	-	-	-
Follow-up Hdwy	3.653	3.453	2.2	-	-	-
Pot Cap-1 Maneuver	591	894	1485	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	573	891	1480	-	-	-
Mov Cap-2 Maneuver	573	-	-	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	744	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1480	-	769	-	-
HCM Lane V/C Ratio	0.022	-	0.03	-	-
HCM Control Delay (s)	7.5	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	18	1	4	22	10	3	2	2	1	2	3
Future Volume (vph)	1	18	1	4	22	10	3	2	2	1	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	10	10	10
Grade (%)		5%			-12%			-3%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.995			0.962			0.959			0.932	
Flt Protected		0.998			0.995			0.980			0.994	
Satd. Flow (prot)	0	1646	0	0	1864	0	0	1622	0	0	1478	0
Flt Permitted		0.998			0.995			0.980			0.994	
Satd. Flow (perm)	0	1646	0	0	1864	0	0	1622	0	0	1478	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			273			334			363	
Travel Time (s)		6.5			6.2			7.6			8.3	
Confl. Peds. (#/hr)							1		3	3		1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1				1	1	1	1	1	1
Adj. Flow (vph)	1	23	1	5	28	13	4	3	3	1	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	46	0	0	10	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.19	1.03	0.97	0.97	0.97	0.98	1.13	0.98	1.09	1.25	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 14.3%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	18	1	4	22	10	3	2	2	1	2	3
Future Vol, veh/h	1	18	1	4	22	10	3	2	2	1	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	3	3	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	-12	-	-	-3	-	-	-1	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	23	1	5	28	13	4	3	3	1	3	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	41	0	0	24	0	0	75	77	27	77	71	36
Stage 1	-	-	-	-	-	-	26	26	-	45	45	-
Stage 2	-	-	-	-	-	-	49	51	-	32	26	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	6.9	6.3	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1581	-	-	1604	-	-	931	828	1057	921	827	1043
Stage 1	-	-	-	-	-	-	1001	881	-	976	864	-
Stage 2	-	-	-	-	-	-	977	864	-	991	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1581	-	-	1604	-	-	922	825	1054	912	824	1042
Mov Cap-2 Maneuver	-	-	-	-	-	-	922	825	-	912	824	-
Stage 1	-	-	-	-	-	-	1000	880	-	975	861	-
Stage 2	-	-	-	-	-	-	967	861	-	982	878	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.8	8.9	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	924	1581	-	-	1604	-	-	937
HCM Lane V/C Ratio	0.009	0.001	-	-	0.003	-	-	0.008
HCM Control Delay (s)	8.9	7.3	0	-	7.3	0	-	8.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	18	0	5	19	4	0	1	0	2	1	0
Future Volume (vph)	0	18	0	5	19	4	0	1	0	2	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		7%			-3%			-3%			-6%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.981							
Flt Protected					0.992						0.964	
Satd. Flow (prot)	0	1805	0	0	1680	0	0	1726	0	0	1688	0
Flt Permitted					0.992						0.964	
Satd. Flow (perm)	0	1805	0	0	1680	0	0	1726	0	0	1688	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			284			328			274	
Travel Time (s)		6.6			6.5			7.5			6.2	
Confl. Peds. (#/hr)			2	2			2					2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1
Adj. Flow (vph)	0	23	0	6	24	5	0	1	0	3	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	0	0	35	0	0	1	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.07	0.92	0.98	1.13	0.98	0.98	1.13	0.98	0.96	1.11	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 16.3% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	18	0	5	19	4	0	1	0	2	1	0
Future Vol, veh/h	0	18	0	5	19	4	0	1	0	2	1	0
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	7	-	-	-3	-	-	-3	-	-	-6	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	23	0	6	24	5	0	1	0	3	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	29	0	0	25	0	0	66	66	25	63	64	29
Stage 1	-	-	-	-	-	-	25	25	-	39	39	-
Stage 2	-	-	-	-	-	-	41	41	-	24	25	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	5.9	5.3	5.6
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1597	-	-	1603	-	-	943	838	1059	956	849	1057
Stage 1	-	-	-	-	-	-	1002	882	-	994	878	-
Stage 2	-	-	-	-	-	-	986	871	-	1007	886	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1597	-	-	1600	-	-	935	833	1057	952	844	1054
Mov Cap-2 Maneuver	-	-	-	-	-	-	935	833	-	952	844	-
Stage 1	-	-	-	-	-	-	1000	880	-	994	874	-
Stage 2	-	-	-	-	-	-	978	868	-	1006	884	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	9.3	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	833	1597	-	-	1600	-	-	913
HCM Lane V/C Ratio	0.002	-	-	-	0.004	-	-	0.004
HCM Control Delay (s)	9.3	0	-	-	7.3	0	-	9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

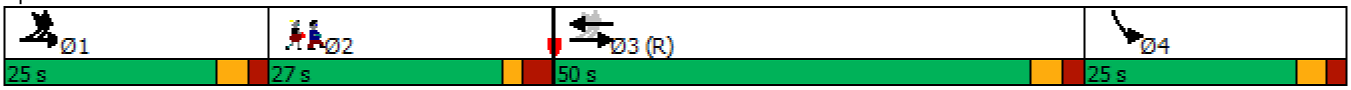
Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SEL	SER	Ø2
Lane Configurations											
Traffic Volume (vph)	18	110	275	385	17	22	31	157	0	0	
Future Volume (vph)	18	110	275	385	17	22	31	157	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%		-2%		
Storage Length (ft)		45			0		0	0	0	0	
Storage Lanes		1			0		1	0	0	0	
Taper Length (ft)		20					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	
Frt				0.988			0.887				
Flt Protected		0.950					0.992				
Satd. Flow (prot)	0	1774	1617	1496	0	0	1496	0	0	0	
Flt Permitted		0.316					0.992				
Satd. Flow (perm)	0	590	1617	1496	0	0	1496	0	0	0	
Right Turn on Red						Yes				Yes	
Satd. Flow (RTOR)				2							
Link Speed (mph)			30	30			30		30		
Link Distance (ft)			262	281			232		448		
Travel Time (s)			6.0	6.4			5.3		10.2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	0%	2%	4%	2%	0%	0%	0%	2%	0%	0%	
Parking (#/hr)			3	7	7	7					
Adj. Flow (vph)	19	118	296	414	18	24	33	169	0	0	
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	137	296	456	0	0	202	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Left	Right	
Median Width(ft)			12	12			10		0		
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	1.17	1.30	1.09	1.09	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	15	9	
Number of Detectors	1	0	0	0			0				
Detector Template	Left										
Leading Detector (ft)	20	0	0	0			0				
Trailing Detector (ft)	0	0	0	0			0				
Detector 1 Position(ft)	0	0	0	0			0				
Detector 1 Size(ft)	20	6	20	6			20				
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	D.P+P	D.P+P	NA	NA			Prot				
Protected Phases	1	1	1 3	3			4				2
Permitted Phases	3	3									
Detector Phase	1	1	1 3	3			4				

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SEL	SER	Ø2
Switch Phase											
Minimum Initial (s)	20.0	20.0		45.0			20.0				5.0
Minimum Split (s)	25.0	25.0		50.0			25.0				27.0
Total Split (s)	25.0	25.0		50.0			25.0				27.0
Total Split (%)	19.7%	19.7%		39.4%			19.7%				21%
Maximum Green (s)	20.0	20.0		45.0			20.0				22.0
Yellow Time (s)	3.0	3.0		3.0			3.0				2.0
All-Red Time (s)	2.0	2.0		2.0			2.0				3.0
Lost Time Adjust (s)		0.0		0.0			0.0				
Total Lost Time (s)		5.0		5.0			5.0				
Lead/Lag	Lead	Lead		Lead			Lag				Lag
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0			3.0				3.0
Recall Mode	Max	Max		C-Max			Max				None
Walk Time (s)											7.0
Flash Dont Walk (s)											15.0
Pedestrian Calls (#/hr)											20
Act Effct Green (s)		75.8	77.8	55.8			20.0				
Actuated g/C Ratio		0.60	0.61	0.44			0.16				
v/c Ratio		0.25	0.30	0.69			0.86				
Control Delay		9.5	8.9	38.8			84.0				
Queue Delay		0.0	0.0	0.0			0.0				
Total Delay		9.5	8.9	38.8			84.0				
LOS		A	A	D			F				
Approach Delay			9.1	38.8			84.0				
Approach LOS			A	D			F				
Queue Length 50th (ft)		27	66	345			164				
Queue Length 95th (ft)		45	97	#536			#299				
Internal Link Dist (ft)			182	201			152		368		
Turn Bay Length (ft)		45									
Base Capacity (vph)		538	990	658			235				
Starvation Cap Reductn		0	0	0			0				
Spillback Cap Reductn		0	0	0			0				
Storage Cap Reductn		0	0	0			0				
Reduced v/c Ratio		0.25	0.30	0.69			0.86				

Intersection Summary

Area Type: Other
Cycle Length: 127
Actuated Cycle Length: 127
Offset: 27 (21%), Referenced to phase 3:EBWB, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 35.4 Intersection LOS: D
Intersection Capacity Utilization 83.3% 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: 10: Croton Avenue & Todd Place & Dale Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	45	27	133	156	17
Future Volume (vph)	22	45	27	133	156	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			0%	-7%	
Storage Length (ft)	0	0	4			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910				0.987	
Flt Protected	0.984			0.992		
Satd. Flow (prot)	1384	0	0	1885	1900	0
Flt Permitted	0.984			0.992		
Satd. Flow (perm)	1384	0	0	1885	1900	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	344			321	414	
Travel Time (s)	7.8			7.3	9.4	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	15%	5%	0%	0%	1%	13%
Parking (#/hr)	1	1				
Adj. Flow (vph)	24	48	29	143	168	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	0	0	172	186	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.17	1.02	1.00	1.00	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 31.9% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	45	27	133	156	17
Future Vol, veh/h	22	45	27	133	156	17
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	0	-7	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	15	5	0	0	1	13
Mvmt Flow	24	48	29	143	168	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	379	178	187	0	-	0
Stage 1	178	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	7.15	6.55	4.1	-	-	-
Critical Hdwy Stg 1	6.15	-	-	-	-	-
Critical Hdwy Stg 2	6.15	-	-	-	-	-
Follow-up Hdwy	3.635	3.345	2.2	-	-	-
Pot Cap-1 Maneuver	561	845	1399	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	776	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	547	844	1398	-	-	-
Mov Cap-2 Maneuver	547	-	-	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	775	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1398	-	716	-	-
HCM Lane V/C Ratio	0.021	-	0.101	-	-
HCM Control Delay (s)	7.6	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	13	24	134	131	2
Future Volume (vph)	11	13	24	134	131	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	3%			1%	-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.928				0.998	
Flt Protected	0.977			0.993		
Satd. Flow (prot)	1584	0	0	1831	1915	0
Flt Permitted	0.977			0.993		
Satd. Flow (perm)	1584	0	0	1831	1915	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	273			129	341	
Travel Time (s)	6.2			2.9	7.8	
Confl. Peds. (#/hr)			12			12
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	0%	0%	0%	3%	0%	1%
Adj. Flow (vph)	14	16	30	170	166	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	0	200	169	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 30.8% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	13	24	134	131	2
Future Vol, veh/h	11	13	24	134	131	2
Conflicting Peds, #/hr	0	0	12	0	0	12
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	1	-2	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	3	0	1
Mvmt Flow	14	16	30	170	166	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	410	180	181	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	7	6.5	4.1	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	562	855	1407	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	538	847	1394	-	-	-
Mov Cap-2 Maneuver	538	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	774	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	10.6		1.2		0	
HCM LOS	B					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1394	-	670	-	-
HCM Lane V/C Ratio	0.022	-	0.045	-	-
HCM Control Delay (s)	7.6	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	21	2	1	21	4	1	2	0	3	0	0
Future Volume (vph)	2	21	2	1	21	4	1	2	0	3	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	10	10	10
Grade (%)		5%			-12%			-3%			-1%	
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		0.991			0.978							
Flt Protected		0.997			0.998			0.984			0.950	
Satd. Flow (prot)	0	1638	0	0	1900	0	0	1698	0	0	1515	0
Flt Permitted		0.997			0.998			0.984			0.950	
Satd. Flow (perm)	0	1638	0	0	1900	0	0	1698	0	0	1515	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			273			334			363	
Travel Time (s)		6.5			6.2			7.6			8.3	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1				1	1	1	1	1	1
Adj. Flow (vph)	2	25	2	1	25	5	1	2	0	4	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	31	0	0	3	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.19	1.03	0.97	0.97	0.97	0.98	1.13	0.98	1.09	1.25	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 13.3%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	21	2	1	21	4	1	2	0	3	0	0
Future Vol, veh/h	2	21	2	1	21	4	1	2	0	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	-12	-	-	-3	-	-	-1	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	25	2	1	25	5	1	2	0	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	30	0	0	27	0	0	60	62	26	61	61	28
Stage 1	-	-	-	-	-	-	30	30	-	30	30	-
Stage 2	-	-	-	-	-	-	30	32	-	31	31	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	6.9	6.3	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1596	-	-	1600	-	-	950	841	1058	942	837	1054
Stage 1	-	-	-	-	-	-	997	878	-	994	876	-
Stage 2	-	-	-	-	-	-	997	877	-	992	875	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1596	-	-	1600	-	-	948	839	1058	938	835	1054
Mov Cap-2 Maneuver	-	-	-	-	-	-	948	839	-	938	835	-
Stage 1	-	-	-	-	-	-	996	877	-	993	875	-
Stage 2	-	-	-	-	-	-	996	876	-	988	874	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	9.1	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	872	1596	-	-	1600	-	-	938
HCM Lane V/C Ratio	0.004	0.002	-	-	0.001	-	-	0.004
HCM Control Delay (s)	9.1	7.3	0	-	7.3	0	-	8.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	21	1	0	21	1	1	2	0	4	1	2
Future Volume (vph)	1	21	1	0	21	1	1	2	0	4	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		7%			-3%			-3%			-6%	
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		0.995			0.995						0.955	
Flt Protected		0.998						0.988			0.973	
Satd. Flow (prot)	0	1757	0	0	1684	0	0	1672	0	0	1596	0
Flt Permitted		0.998						0.988			0.973	
Satd. Flow (perm)	0	1757	0	0	1684	0	0	1672	0	0	1596	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			284			328			274	
Travel Time (s)		6.6			6.5			7.5			6.2	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Parking (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1
Adj. Flow (vph)	1	28	1	0	28	1	1	3	0	5	1	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	30	0	0	29	0	0	4	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.07	0.92	0.98	1.13	0.98	0.98	1.13	0.98	0.96	1.11	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 13.3%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	21	1	0	21	1	1	2	0	4	1	2
Future Vol, veh/h	1	21	1	0	21	1	1	2	0	4	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	7	-	-	-3	-	-	-3	-	-	-6	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	28	1	0	28	1	1	3	0	5	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	29	0	0	29	0	0	62	60	29	61	60	29
Stage 1	-	-	-	-	-	-	31	31	-	29	29	-
Stage 2	-	-	-	-	-	-	31	29	-	32	31	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.52	5.92	5.92	5.92	5.32	5.62
Critical Hdwy Stg 1	-	-	-	-	-	-	5.52	4.92	-	4.92	4.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.52	4.92	-	4.92	4.32	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1584	-	-	1584	-	-	943	839	1048	954	848	1051
Stage 1	-	-	-	-	-	-	991	874	-	998	879	-
Stage 2	-	-	-	-	-	-	991	875	-	995	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1584	-	-	1584	-	-	939	838	1048	951	847	1051
Mov Cap-2 Maneuver	-	-	-	-	-	-	939	838	-	951	847	-
Stage 1	-	-	-	-	-	-	990	873	-	997	879	-
Stage 2	-	-	-	-	-	-	987	875	-	991	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	9.2	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	869	1584	-	-	1584	-	-	960
HCM Lane V/C Ratio	0.005	0.001	-	-	-	-	-	0.01
HCM Control Delay (s)	9.2	7.3	0	-	0	-	-	8.8
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Lane Configurations												
Traffic Volume (vph)	15	92	324	277	3	16	52	155	4	0	0	
Future Volume (vph)	15	92	324	277	3	16	52	155	4	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%			-2%		
Storage Length (ft)		45			0		0	0		0	0	
Storage Lanes		1			0		1	0		0	0	
Taper Length (ft)		20					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	
Ped Bike Factor		0.98		1.00			0.92					
Frt				0.992			0.899					
Flt Protected		0.950					0.988					
Satd. Flow (prot)	0	1726	1571	1404	0	0	1353	0	0	0	0	
Flt Permitted		0.452					0.988					
Satd. Flow (perm)	0	804	1571	1404	0	0	1341	0	0	0	0	
Right Turn on Red						Yes			No		Yes	
Satd. Flow (RTOR)				2								
Link Speed (mph)			30	30			30			30		
Link Distance (ft)			262	281			232			448		
Travel Time (s)			6.0	6.4			5.3			10.2		
Confl. Peds. (#/hr)	21	17			17	21	11	5	21	11	5	
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	
Heavy Vehicles (%)	8%	4%	7%	9%	0%	0%	2%	6%	0%	0%	0%	
Parking (#/hr)			3	7	7	7						
Adj. Flow (vph)	16	100	352	301	3	17	57	168	4	0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	116	352	321	0	0	229	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Right	Left	Right	
Median Width(ft)			12	12			10			0		
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	1.17	1.30	1.09	1.09	1.13	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	9	15	9	
Number of Detectors	1	0	0	0			0					
Detector Template	Left											
Leading Detector (ft)	20	0	0	0			0					
Trailing Detector (ft)	0	0	0	0			0					
Detector 1 Position(ft)	0	0	0	0			0					
Detector 1 Size(ft)	20	6	20	6			20					
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	D.P+P	D.P+P	NA	NA			Prot					
Protected Phases	1	1	1 3	3			4					2

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Permitted Phases	3	3										
Detector Phase	1	1	1 3	3			4					
Switch Phase												
Minimum Initial (s)	20.0	20.0		45.0			20.0					7.0
Minimum Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (%)	19.7%	19.7%		39.4%			19.7%					21%
Maximum Green (s)	20.0	20.0		45.0			20.0					22.0
Yellow Time (s)	3.0	3.0		3.0			3.0					2.0
All-Red Time (s)	2.0	2.0		2.0			2.0					3.0
Lost Time Adjust (s)		0.0		0.0			0.0					
Total Lost Time (s)		5.0		5.0			5.0					
Lead/Lag	Lead	Lead		Lead			Lag					Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			3.0					3.0
Recall Mode	Max	Max		C-Max			Max					None
Walk Time (s)												7.0
Flash Dont Walk (s)												15.0
Pedestrian Calls (#/hr)												20
Act Effct Green (s)		75.8	77.8	55.8			20.0					
Actuated g/C Ratio		0.60	0.61	0.44			0.16					
v/c Ratio		0.19	0.37	0.52			1.08					
Control Delay		8.4	9.6	33.0			133.2					
Queue Delay		0.0	0.0	0.0			0.0					
Total Delay		8.4	9.6	33.0			133.2					
LOS		A	A	C			F					
Approach Delay			9.3	33.0			133.2					
Approach LOS			A	C			F					
Queue Length 50th (ft)		23	82	218			~209					
Queue Length 95th (ft)		38	119	326			#375					
Internal Link Dist (ft)			182	201			152			368		
Turn Bay Length (ft)		45										
Base Capacity (vph)		624	962	617			213					
Starvation Cap Reductn		0	0	0			0					
Spillback Cap Reductn		0	0	0			0					
Storage Cap Reductn		0	0	0			0					
Reduced v/c Ratio		0.19	0.37	0.52			1.08					

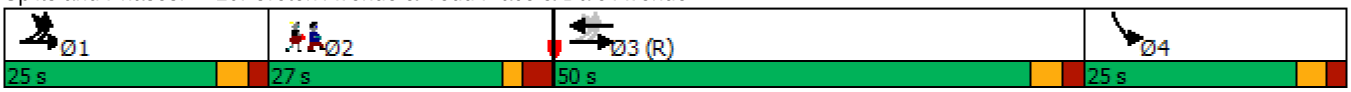
Intersection Summary

Area Type: Other
Cycle Length: 127
Actuated Cycle Length: 127
Offset: 7.5 (6%), Referenced to phase 3:EBWB, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 44.6 Intersection LOS: D
Intersection Capacity Utilization 91.5% 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.

Splits and Phases: 10: Croton Avenue & Todd Place & Dale Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	69	41	59	288	15
Future Volume (vph)	9	69	41	59	288	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			0%	-7%	
Storage Length (ft)	0	0	4			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.881				0.993	
Flt Protected	0.994			0.980		
Satd. Flow (prot)	1411	0	0	1751	1916	0
Flt Permitted	0.994			0.980		
Satd. Flow (perm)	1411	0	0	1751	1916	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	344			321	414	
Travel Time (s)	7.8			7.3	9.4	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	3%	4%	8%	2%	0%
Parking (#/hr)	1	1				
Adj. Flow (vph)	10	77	46	66	320	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	87	0	0	112	337	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.17	1.02	1.00	1.00	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 36.2% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	69	41	59	288	15
Future Vol, veh/h	9	69	41	59	288	15
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	0	-7	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	11	3	4	8	2	0
Mvmt Flow	10	77	46	66	320	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	488	330	338	0	-	0
Stage 1	330	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	7.11	6.53	4.14	-	-	-
Critical Hdwy Stg 1	6.11	-	-	-	-	-
Critical Hdwy Stg 2	6.11	-	-	-	-	-
Follow-up Hdwy	3.599	3.327	2.236	-	-	-
Pot Cap-1 Maneuver	482	690	1210	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	462	689	1209	-	-	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	826	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	3.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1209	-	652	-	-
HCM Lane V/C Ratio	0.038	-	0.133	-	-
HCM Control Delay (s)	8.1	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	40	4	66	193	2
Future Volume (vph)	6	40	4	66	193	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	3%			1%	-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.883				0.999	
Flt Protected	0.993			0.997		
Satd. Flow (prot)	1532	0	0	1800	1844	0
Flt Permitted	0.993			0.997		
Satd. Flow (perm)	1532	0	0	1800	1844	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	273			129	341	
Travel Time (s)	6.2			2.9	7.8	
Confl. Peds. (#/hr)	1		1			1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%
Adj. Flow (vph)	7	45	5	75	219	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	0	0	80	221	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 20.4%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	1.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	40	4	66	193	2
Future Vol, veh/h	6	40	4	66	193	2
Conflicting Peds, #/hr	1	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	1	-2	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	5	4	0
Mvmt Flow	7	45	5	75	219	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	307	221	222	0	-	0
Stage 1	221	-	-	-	-	-
Stage 2	86	-	-	-	-	-
Critical Hdwy	7	6.5	4.1	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	655	809	1359	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	929	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	651	808	1358	-	-	-
Mov Cap-2 Maneuver	651	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1358	-	783	-	-
HCM Lane V/C Ratio	0.003	-	0.067	-	-
HCM Control Delay (s)	7.7	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Volume (vph)	1	44	7	1	4	1	0	1	0	2	4	0
Future Volume (vph)	1	44	7	1	4	1	0	1	0	2	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	10	10	10
Grade (%)		5%			-12%			-3%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.981			0.981							
Flt Protected		0.999			0.993						0.982	
Satd. Flow (prot)	0	1594	0	0	1897	0	0	1726	0	0	1566	0
Flt Permitted		0.999			0.993						0.982	
Satd. Flow (perm)	0	1594	0	0	1897	0	0	1726	0	0	1566	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			273			334			363	
Travel Time (s)		6.5			6.2			7.6			8.3	
Confl. Peds. (#/hr)			4	4			3		1	1		3
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1				1	1	1	1	1	1
Adj. Flow (vph)	1	55	9	1	5	1	0	1	0	3	5	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	0	0	7	0	0	1	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.19	1.03	0.97	0.97	0.97	0.98	1.13	0.98	1.09	1.25	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 15.5% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	44	7	1	4	1	0	1	0	2	4	0
Future Vol, veh/h	1	44	7	1	4	1	0	1	0	2	4	0
Conflicting Peds, #/hr	0	0	4	4	0	0	3	0	1	1	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	-12	-	-	-3	-	-	-1	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	14	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	55	9	1	5	1	0	1	0	3	5	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	6	0	0	68	0	0	79	74	65	71	78	9
Stage 1	-	-	-	-	-	-	66	66	-	8	8	-
Stage 2	-	-	-	-	-	-	13	8	-	63	70	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	6.9	6.3	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1628	-	-	1546	-	-	927	830	1010	929	820	1079
Stage 1	-	-	-	-	-	-	960	853	-	1019	893	-
Stage 2	-	-	-	-	-	-	1015	894	-	956	844	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1628	-	-	1540	-	-	915	825	1005	925	815	1076
Mov Cap-2 Maneuver	-	-	-	-	-	-	915	825	-	925	815	-
Stage 1	-	-	-	-	-	-	955	849	-	1018	892	-
Stage 2	-	-	-	-	-	-	1005	893	-	953	840	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.2	9.4	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	825	1628	-	-	1540	-	-	849
HCM Lane V/C Ratio	0.002	0.001	-	-	0.001	-	-	0.009
HCM Control Delay (s)	9.4	7.2	0	-	7.3	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	51	0	0	4	0	0	0	1	0	2	0
Future Volume (vph)	0	51	0	0	4	0	0	0	1	0	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		7%			-3%			-3%			-6%	
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								0.865				
Flt Protected												
Satd. Flow (prot)	0	1703	0	0	1726	0	0	1493	0	0	1752	0
Flt Permitted												
Satd. Flow (perm)	0	1703	0	0	1726	0	0	1493	0	0	1752	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			284			328			274	
Travel Time (s)		6.6			6.5			7.5			6.2	
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 (%)	0%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1
Adj. Flow (vph)	0	55	0	0	4	0	0	0	1	0	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	4	0	0	1	0	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.07	0.92	0.98	1.13	0.98	0.98	1.13	0.98	0.96	1.11	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 13.3%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	51	0	0	4	0	0	0	1	0	2	0
Future Vol, veh/h	0	51	0	0	4	0	0	0	1	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	7	-	-	-3	-	-	-3	-	-	-6	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	6	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	55	0	0	4	0	0	0	1	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	4	0	0	55	0	0	60	59	55	60	59	4
Stage 1	-	-	-	-	-	-	55	55	-	4	4	-
Stage 2	-	-	-	-	-	-	5	4	-	56	55	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	5.9	5.3	5.6
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1631	-	-	1563	-	-	950	844	1022	960	852	1086
Stage 1	-	-	-	-	-	-	971	861	-	1025	898	-
Stage 2	-	-	-	-	-	-	1023	897	-	979	869	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1631	-	-	1563	-	-	948	844	1022	959	852	1086
Mov Cap-2 Maneuver	-	-	-	-	-	-	948	844	-	959	852	-
Stage 1	-	-	-	-	-	-	971	861	-	1025	898	-
Stage 2	-	-	-	-	-	-	1021	897	-	978	869	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.5	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1022	1631	-	-	1563	-	-	852
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	0.003
HCM Control Delay (s)	8.5	0	-	-	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Lane Configurations												
Traffic Volume (vph)	31	134	241	372	24	23	36	158	1	0	0	
Future Volume (vph)	31	134	241	372	24	23	36	158	1	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%			-2%		
Storage Length (ft)		45			0		0	0		0	0	
Storage Lanes		1			0		1	0		0	0	
Taper Length (ft)		20					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	
Ped Bike Factor		0.98		0.99			0.89					
Frt				0.985			0.890					
Flt Protected		0.950					0.991					
Satd. Flow (prot)	0	1790	1649	1441	0	0	1358	0	0	0	0	
Flt Permitted		0.334					0.991					
Satd. Flow (perm)	0	617	1649	1441	0	0	1346	0	0	0	0	
Right Turn on Red						Yes			Yes		Yes	
Satd. Flow (RTOR)				3			103					
Link Speed (mph)			30	30			30			30		
Link Distance (ft)			262	281			232			448		
Travel Time (s)			6.0	6.4			5.3			10.2		
Confl. Peds. (#/hr)	23	21			23	21	15	11	23	15	11	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Heavy Vehicles (%)	0%	1%	2%	4%	5%	10%	0%	1%	0%	0%	0%	
Parking (#/hr)			3	7	7	7						
Adj. Flow (vph)	32	140	251	388	25	24	38	165	1	0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	172	251	437	0	0	204	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Right	Left	Right	
Median Width(ft)			12	12			10			0		
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	1.17	1.30	1.09	1.09	1.13	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	9	15	9	
Number of Detectors	1	0	0	0			0					
Detector Template	Left											
Leading Detector (ft)	20	0	0	0			0					
Trailing Detector (ft)	0	0	0	0			0					
Detector 1 Position(ft)	0	0	0	0			0					
Detector 1 Size(ft)	20	6	20	6			20					
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	D.P+P	D.P+P	NA	NA			Prot					
Protected Phases	1	1	1 3	3			4					2

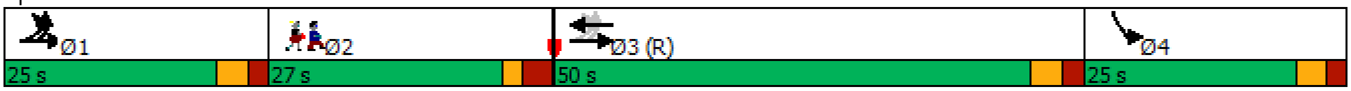
Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Permitted Phases	3	3										
Detector Phase	1	1	1 3	3			4					
Switch Phase												
Minimum Initial (s)	20.0	20.0		45.0			20.0					5.0
Minimum Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (s)	25.0	25.0		50.0			25.0					27.0
Total Split (%)	19.7%	19.7%		39.4%			19.7%					21%
Maximum Green (s)	20.0	20.0		45.0			20.0					22.0
Yellow Time (s)	3.0	3.0		3.0			3.0					2.0
All-Red Time (s)	2.0	2.0		2.0			2.0					3.0
Lost Time Adjust (s)		0.0		0.0			0.0					
Total Lost Time (s)		5.0		5.0			5.0					
Lead/Lag	Lead	Lead		Lead			Lag					Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			3.0					3.0
Recall Mode	Max	Max		C-Max			Max					None
Walk Time (s)												7.0
Flash Dont Walk (s)												15.0
Pedestrian Calls (#/hr)												20
Act Effct Green (s)		75.8	77.8	55.8			20.0					
Actuated g/C Ratio		0.60	0.61	0.44			0.16					
v/c Ratio		0.31	0.25	0.69			0.68					
Control Delay		10.2	8.4	38.8			37.0					
Queue Delay		0.0	0.0	0.0			0.0					
Total Delay		10.2	8.4	38.8			37.0					
LOS		B	A	D			D					
Approach Delay			9.1	38.8			37.0					
Approach LOS			A	D			D					
Queue Length 50th (ft)		34	53	329			78					
Queue Length 95th (ft)		54	81	#515			168					
Internal Link Dist (ft)			182	201			152			368		
Turn Bay Length (ft)		45										
Base Capacity (vph)		552	1009	634			300					
Starvation Cap Reductn		0	0	0			0					
Spillback Cap Reductn		0	0	0			0					
Storage Cap Reductn		0	0	0			0					
Reduced v/c Ratio		0.31	0.25	0.69			0.68					

Intersection Summary

Area Type: Other
Cycle Length: 127
Actuated Cycle Length: 127
Offset: 26.5 (21%), Referenced to phase 3:EBWB, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 26.7 Intersection LOS: C
Intersection Capacity Utilization 93.1% ICU Level of Service F
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Croton Avenue & Todd Place & Dale Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	39	66	210	147	15
Future Volume (vph)	18	39	66	210	147	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			0%	-7%	
Storage Length (ft)	0	0	4			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.907				0.987	
Flt Protected	0.985			0.988		
Satd. Flow (prot)	1496	0	0	1813	1890	0
Flt Permitted	0.985			0.988		
Satd. Flow (perm)	1496	0	0	1813	1890	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	344			321	414	
Travel Time (s)	7.8			7.3	9.4	
Confl. Peds. (#/hr)			3			3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	2%	4%	3%	0%
Parking (#/hr)	1	1				
Adj. Flow (vph)	20	44	74	236	165	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	0	310	182	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.17	1.02	1.00	1.00	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 37.2% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	39	66	210	147	15
Future Vol, veh/h	18	39	66	210	147	15
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	0	-7	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	2	4	3	0
Mvmt Flow	20	44	74	236	165	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	561	177	185	0	-	0
Stage 1	177	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Critical Hdwy	7	6.5	4.12	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	448	859	1390	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	418	857	1386	-	-	-
Mov Cap-2 Maneuver	418	-	-	-	-	-
Stage 1	781	-	-	-	-	-
Stage 2	648	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1386	-	644	-	-
HCM Lane V/C Ratio	0.054	-	0.099	-	-
HCM Control Delay (s)	7.7	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	21	28	150	95	7
Future Volume (vph)	6	21	28	150	95	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	3%			1%	-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.896				0.990	
Flt Protected	0.988			0.992		
Satd. Flow (prot)	1322	0	0	1860	1882	0
Flt Permitted	0.988			0.992		
Satd. Flow (perm)	1322	0	0	1860	1882	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	273			129	341	
Travel Time (s)	6.2			2.9	7.8	
Confl. Peds. (#/hr)			4			4
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	17%	17%	0%	1%	1%	0%
Adj. Flow (vph)	7	23	31	165	104	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	0	196	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 26.1% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	21	28	150	95	7
Future Vol, veh/h	6	21	28	150	95	7
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	1	-2	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	17	17	0	1	1	0
Mvmt Flow	7	23	31	165	104	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	339	112	116	0	-	0
Stage 1	112	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Critical Hdwy	7.17	6.67	4.1	-	-	-
Critical Hdwy Stg 1	6.17	-	-	-	-	-
Critical Hdwy Stg 2	6.17	-	-	-	-	-
Follow-up Hdwy	3.653	3.453	2.2	-	-	-
Pot Cap-1 Maneuver	593	894	1485	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	576	891	1480	-	-	-
Mov Cap-2 Maneuver	576	-	-	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	746	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	9.7		1.2		0
HCM LOS	A				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1480	-	794	-	-
HCM Lane V/C Ratio	0.021	-	0.037	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	24	1	4	21	10	3	2	2	1	2	3
Future Volume (vph)	1	24	1	4	21	10	3	2	2	1	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	10	10	10
Grade (%)		5%			-12%			-3%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.960			0.959			0.932	
Flt Protected		0.998			0.994			0.980			0.994	
Satd. Flow (prot)	0	1648	0	0	1858	0	0	1622	0	0	1478	0
Flt Permitted		0.998			0.994			0.980			0.994	
Satd. Flow (perm)	0	1648	0	0	1858	0	0	1622	0	0	1478	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			273			334			363	
Travel Time (s)		6.5			6.2			7.6			8.3	
Confl. Peds. (#/hr)							1		3	3		1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1				1	1	1	1	1	1
Adj. Flow (vph)	1	30	1	5	26	13	4	3	3	1	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	44	0	0	10	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.19	1.03	0.97	0.97	0.97	0.98	1.13	0.98	1.09	1.25	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 14.4% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	24	1	4	21	10	3	2	2	1	2	3
Future Vol, veh/h	1	24	1	4	21	10	3	2	2	1	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	3	3	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	-12	-	-	-3	-	-	-1	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	30	1	5	26	13	4	3	3	1	3	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	39	0	0	31	0	0	80	82	34	82	76	34
Stage 1	-	-	-	-	-	-	33	33	-	43	43	-
Stage 2	-	-	-	-	-	-	47	49	-	39	33	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	6.9	6.3	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1584	-	-	1595	-	-	925	823	1048	914	822	1046
Stage 1	-	-	-	-	-	-	994	876	-	979	865	-
Stage 2	-	-	-	-	-	-	979	865	-	983	873	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1584	-	-	1595	-	-	916	820	1045	905	819	1045
Mov Cap-2 Maneuver	-	-	-	-	-	-	916	820	-	905	819	-
Stage 1	-	-	-	-	-	-	993	875	-	978	862	-
Stage 2	-	-	-	-	-	-	969	862	-	974	872	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.8	9	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	918	1584	-	-	1595	-	-	935
HCM Lane V/C Ratio	0.01	0.001	-	-	0.003	-	-	0.008
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	8.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (vph)	0	24	0	5	18	4	0	1	0	2	1	0
Future Volume (vph)	0	24	0	5	18	4	0	1	0	2	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		7%			-3%			-3%			-6%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.980							
Flt Protected					0.991						0.964	
Satd. Flow (prot)	0	1805	0	0	1676	0	0	1726	0	0	1688	0
Flt Permitted					0.991						0.964	
Satd. Flow (perm)	0	1805	0	0	1676	0	0	1726	0	0	1688	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			284			328			274	
Travel Time (s)		6.6			6.5			7.5			6.2	
Confl. Peds. (#/hr)			2	2			2					2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1
Adj. Flow (vph)	0	31	0	6	23	5	0	1	0	3	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	34	0	0	1	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.07	0.92	0.98	1.13	0.98	0.98	1.13	0.98	0.96	1.11	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 16.2% ICU Level of Service A

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	1.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	24	0	5	18	4	0	1	0	2	1	0
Future Vol, veh/h	0	24	0	5	18	4	0	1	0	2	1	0
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	7	-	-	-3	-	-	-3	-	-	-6	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	31	0	6	23	5	0	1	0	3	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	28	0	0	33	0	0	73	73	33	70	71	28
Stage 1	-	-	-	-	-	-	33	33	-	38	38	-
Stage 2	-	-	-	-	-	-	40	40	-	32	33	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	5.9	5.3	5.6
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	4.9	4.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1599	-	-	1592	-	-	934	831	1049	949	843	1058
Stage 1	-	-	-	-	-	-	994	876	-	995	878	-
Stage 2	-	-	-	-	-	-	987	871	-	1000	881	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1599	-	-	1589	-	-	927	826	1047	945	838	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	927	826	-	945	838	-
Stage 1	-	-	-	-	-	-	992	874	-	995	874	-
Stage 2	-	-	-	-	-	-	979	868	-	999	879	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	9.4	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	826	1599	-	-	1589	-	-	906
HCM Lane V/C Ratio	0.002	-	-	-	0.004	-	-	0.004
HCM Control Delay (s)	9.4	0	-	-	7.3	0	-	9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SEL	SER	Ø2
Lane Configurations											
Traffic Volume (vph)	18	112	275	385	17	22	31	158	0	0	
Future Volume (vph)	18	112	275	385	17	22	31	158	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%		-2%		
Storage Length (ft)		45			0		0	0	0	0	
Storage Lanes		1			0		1	0	0	0	
Taper Length (ft)		20					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	
Frt				0.988			0.887				
Flt Protected		0.950					0.992				
Satd. Flow (prot)	0	1774	1617	1496	0	0	1496	0	0	0	
Flt Permitted		0.316					0.992				
Satd. Flow (perm)	0	590	1617	1496	0	0	1496	0	0	0	
Right Turn on Red						Yes				Yes	
Satd. Flow (RTOR)				2							
Link Speed (mph)			30	30			30		30		
Link Distance (ft)			262	281			232		448		
Travel Time (s)			6.0	6.4			5.3		10.2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	0%	2%	4%	2%	0%	0%	0%	2%	0%	0%	
Parking (#/hr)			3	7	7	7					
Adj. Flow (vph)	19	120	296	414	18	24	33	170	0	0	
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	139	296	456	0	0	203	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Left	Right	
Median Width(ft)			12	12			10		0		
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	1.17	1.30	1.09	1.09	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	15	9	
Number of Detectors	1	0	0	0			0				
Detector Template	Left										
Leading Detector (ft)	20	0	0	0			0				
Trailing Detector (ft)	0	0	0	0			0				
Detector 1 Position(ft)	0	0	0	0			0				
Detector 1 Size(ft)	20	6	20	6			20				
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	D.P+P	D.P+P	NA	NA			Prot				
Protected Phases	1	1	1 3	3			4				2
Permitted Phases	3	3									
Detector Phase	1	1	1 3	3			4				

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SEL	SER	Ø2
Switch Phase											
Minimum Initial (s)	20.0	20.0		45.0			20.0				5.0
Minimum Split (s)	25.0	25.0		50.0			25.0				27.0
Total Split (s)	25.0	25.0		50.0			25.0				27.0
Total Split (%)	19.7%	19.7%		39.4%			19.7%				21%
Maximum Green (s)	20.0	20.0		45.0			20.0				22.0
Yellow Time (s)	3.0	3.0		3.0			3.0				2.0
All-Red Time (s)	2.0	2.0		2.0			2.0				3.0
Lost Time Adjust (s)		0.0		0.0			0.0				
Total Lost Time (s)		5.0		5.0			5.0				
Lead/Lag	Lead	Lead		Lead			Lag				Lag
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0			3.0				3.0
Recall Mode	Max	Max		C-Max			Max				None
Walk Time (s)											7.0
Flash Dont Walk (s)											15.0
Pedestrian Calls (#/hr)											20
Act Effct Green (s)		75.8	77.8	55.8			20.0				
Actuated g/C Ratio		0.60	0.61	0.44			0.16				
v/c Ratio		0.26	0.30	0.69			0.86				
Control Delay		9.6	8.9	38.8			84.6				
Queue Delay		0.0	0.0	0.0			0.0				
Total Delay		9.6	8.9	38.8			84.6				
LOS		A	A	D			F				
Approach Delay			9.1	38.8			84.6				
Approach LOS			A	D			F				
Queue Length 50th (ft)		27	66	345			165				
Queue Length 95th (ft)		45	97	#536			#303				
Internal Link Dist (ft)			182	201			152		368		
Turn Bay Length (ft)		45									
Base Capacity (vph)		538	990	658			235				
Starvation Cap Reductn		0	0	0			0				
Spillback Cap Reductn		0	0	0			0				
Storage Cap Reductn		0	0	0			0				
Reduced v/c Ratio		0.26	0.30	0.69			0.86				

Intersection Summary

Area Type: Other

Cycle Length: 127

Actuated Cycle Length: 127

Offset: 27 (21%), Referenced to phase 3:EBWB, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

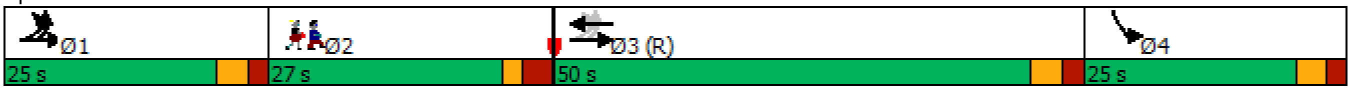
Intersection Signal Delay: 35.5 Intersection LOS: D

Intersection Capacity Utilization 83.3% 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: 10: Croton Avenue & Todd Place & Dale Avenue



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	45	27	130	165	17
Future Volume (vph)	22	45	27	130	165	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			0%	-7%	
Storage Length (ft)	0	0	4			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910				0.988	
Flt Protected	0.984			0.991		
Satd. Flow (prot)	1384	0	0	1883	1903	0
Flt Permitted	0.984			0.991		
Satd. Flow (perm)	1384	0	0	1883	1903	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	344			321	414	
Travel Time (s)	7.8			7.3	9.4	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	15%	5%	0%	0%	1%	13%
Parking (#/hr)	1	1				
Adj. Flow (vph)	24	48	29	140	177	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	0	0	169	195	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.17	1.02	1.00	1.00	0.96	0.96
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 32.2%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	45	27	130	165	17
Future Vol, veh/h	22	45	27	130	165	17
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	0	-7	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	15	5	0	0	1	13
Mvmt Flow	24	48	29	140	177	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	385	187	196	0	-	0
Stage 1	187	-	-	-	-	-
Stage 2	198	-	-	-	-	-
Critical Hdwy	7.15	6.55	4.1	-	-	-
Critical Hdwy Stg 1	6.15	-	-	-	-	-
Critical Hdwy Stg 2	6.15	-	-	-	-	-
Follow-up Hdwy	3.635	3.345	2.2	-	-	-
Pot Cap-1 Maneuver	556	834	1389	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	542	833	1388	-	-	-
Mov Cap-2 Maneuver	542	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	778	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1388	-	708	-	-
HCM Lane V/C Ratio	0.021	-	0.102	-	-
HCM Control Delay (s)	7.6	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	22	21	134	131	2
Future Volume (vph)	11	22	21	134	131	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	3%			1%	-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910				0.998	
Flt Protected	0.984			0.993		
Satd. Flow (prot)	1564	0	0	1830	1915	0
Flt Permitted	0.984			0.993		
Satd. Flow (perm)	1564	0	0	1830	1915	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	273			129	341	
Travel Time (s)	6.2			2.9	7.8	
Confl. Peds. (#/hr)			12			12
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	0%	0%	0%	3%	0%	1%
Adj. Flow (vph)	14	28	27	170	166	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	0	197	169	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.01	1.01	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 30.7% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	22	21	134	131	2
Future Vol, veh/h	11	22	21	134	131	2
Conflicting Peds, #/hr	0	0	12	0	0	12
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	1	-2	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	3	0	1
Mvmt Flow	14	28	27	170	166	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	404	180	181	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	224	-	-	-	-	-
Critical Hdwy	7	6.5	4.1	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	567	855	1407	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	544	847	1394	-	-	-
Mov Cap-2 Maneuver	544	-	-	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	780	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	10.4		1		0	
HCM LOS	B					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1394	-	714	-	-
HCM Lane V/C Ratio	0.019	-	0.059	-	-
HCM Control Delay (s)	7.6	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	30	2	1	18	4	1	2	0	3	0	0
Future Volume (vph)	2	30	2	1	18	4	1	2	0	3	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	10	10	10
Grade (%)		5%			-12%			-3%			-1%	
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		0.993			0.976							
Flt Protected		0.998			0.998			0.984			0.950	
Satd. Flow (prot)	0	1643	0	0	1896	0	0	1698	0	0	1515	0
Flt Permitted		0.998			0.998			0.984			0.950	
Satd. Flow (perm)	0	1643	0	0	1896	0	0	1698	0	0	1515	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			273			334			363	
Travel Time (s)		6.5			6.2			7.6			8.3	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	1	1	1				1	1	1	1	1	1
Adj. Flow (vph)	2	36	2	1	22	5	1	2	0	4	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	28	0	0	3	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.19	1.03	0.97	0.97	0.97	0.98	1.13	0.98	1.09	1.25	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 13.3%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	2	30	2	1	18	4	1	2	0	3	0	0
Future Vol, veh/h	2	30	2	1	18	4	1	2	0	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	-12	-	-	-3	-	-	-1	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	36	2	1	22	5	1	2	0	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	27	0	0	38	0	0	68	70	37	69	69	25
Stage 1	-	-	-	-	-	-	41	41	-	27	27	-
Stage 2	-	-	-	-	-	-	27	29	-	42	42	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.5	5.9	5.9	6.9	6.3	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.5	4.9	-	5.9	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1600	-	-	1585	-	-	940	834	1044	932	829	1058
Stage 1	-	-	-	-	-	-	986	871	-	997	878	-
Stage 2	-	-	-	-	-	-	1000	879	-	980	866	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1600	-	-	1585	-	-	938	832	1044	928	827	1058
Mov Cap-2 Maneuver	-	-	-	-	-	-	938	832	-	928	827	-
Stage 1	-	-	-	-	-	-	985	870	-	996	877	-
Stage 2	-	-	-	-	-	-	999	878	-	976	865	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.3	9.2	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	865	1600	-	-	1585	-	-	928
HCM Lane V/C Ratio	0.004	0.002	-	-	0.001	-	-	0.004
HCM Control Delay (s)	9.2	7.3	0	-	7.3	0	-	8.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	30	1	0	18	1	1	2	0	4	1	2
Future Volume (vph)	1	30	1	0	18	1	1	2	0	4	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		7%			-3%			-3%			-6%	
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		0.997			0.995						0.955	
Flt Protected		0.999						0.988			0.973	
Satd. Flow (prot)	0	1763	0	0	1684	0	0	1672	0	0	1596	0
Flt Permitted		0.999						0.988			0.973	
Satd. Flow (perm)	0	1763	0	0	1684	0	0	1672	0	0	1596	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			284			328			274	
Travel Time (s)		6.6			6.5			7.5			6.2	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Parking (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1
Adj. Flow (vph)	1	40	1	0	24	1	1	3	0	5	1	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	25	0	0	4	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.07	0.92	0.98	1.13	0.98	0.98	1.13	0.98	0.96	1.11	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	30	1	0	18	1	1	2	0	4	1	2
Future Vol, veh/h	1	30	1	0	18	1	1	2	0	4	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	7	-	-	-3	-	-	-3	-	-	-6	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	40	1	0	24	1	1	3	0	5	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	25	0	0	41	0	0	70	68	41	69	68	25
Stage 1	-	-	-	-	-	-	43	43	-	25	25	-
Stage 2	-	-	-	-	-	-	27	25	-	44	43	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.52	5.92	5.92	5.92	5.32	5.62
Critical Hdwy Stg 1	-	-	-	-	-	-	5.52	4.92	-	4.92	4.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.52	4.92	-	4.92	4.32	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1589	-	-	1568	-	-	933	832	1034	945	841	1056
Stage 1	-	-	-	-	-	-	978	865	-	1001	882	-
Stage 2	-	-	-	-	-	-	995	878	-	984	871	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1589	-	-	1568	-	-	929	831	1034	942	840	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	929	831	-	942	840	-
Stage 1	-	-	-	-	-	-	977	864	-	1000	882	-
Stage 2	-	-	-	-	-	-	991	878	-	980	870	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	9.2	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	861	1589	-	-	1568	-	-	955
HCM Lane V/C Ratio	0.005	0.001	-	-	-	-	-	0.01
HCM Control Delay (s)	9.2	7.3	0	-	0	-	-	8.8
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Lane Configurations												
Traffic Volume (vph)	15	92	324	277	3	16	52	155	4	0	0	
Future Volume (vph)	15	92	324	277	3	16	52	155	4	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%			-2%		
Storage Length (ft)		45			0		0	0		0	0	
Storage Lanes		1			0		1	0		0	0	
Taper Length (ft)		20					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	
Ped Bike Factor		0.98		1.00			0.93					
Frt				0.992			0.899					
Flt Protected		0.950					0.988					
Satd. Flow (prot)	0	1726	1571	1403	0	0	1371	0	0	0	0	
Flt Permitted		0.427					0.988					
Satd. Flow (perm)	0	758	1571	1403	0	0	1361	0	0	0	0	
Right Turn on Red						Yes			No		Yes	
Satd. Flow (RTOR)				2								
Link Speed (mph)			30	30			30			30		
Link Distance (ft)			262	281			232			448		
Travel Time (s)			6.0	6.4			5.3			10.2		
Confl. Peds. (#/hr)	21	17			17	21	11	5	21	11	5	
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	
Heavy Vehicles (%)	8%	4%	7%	9%	0%	0%	2%	6%	0%	0%	0%	
Parking (#/hr)			3	7	7	7						
Adj. Flow (vph)	16	100	352	301	3	17	57	168	4	0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	116	352	321	0	0	229	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Right	Left	Right	
Median Width(ft)			12	12			10			0		
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	1.17	1.30	1.09	1.09	1.13	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	9	15	9	
Number of Detectors	1	0	0	0			0					
Detector Template	Left											
Leading Detector (ft)	20	0	0	0			0					
Trailing Detector (ft)	0	0	0	0			0					
Detector 1 Position(ft)	0	0	0	0			0					
Detector 1 Size(ft)	20	6	20	6			20					
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	D.P+P	D.P+P	NA	NA			Prot					
Protected Phases	1	1	1 3	3			4					2

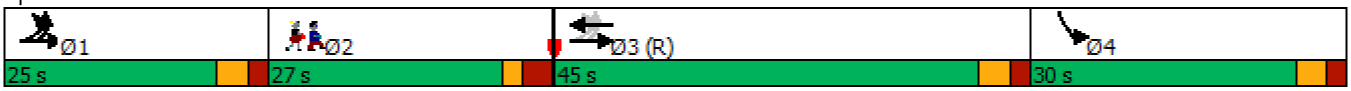
Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL	SER	Ø2
Permitted Phases	3	3										
Detector Phase	1	1	1 3	3			4					
Switch Phase												
Minimum Initial (s)	20.0	20.0		40.0			20.0					7.0
Minimum Split (s)	25.0	25.0		45.0			25.0					27.0
Total Split (s)	25.0	25.0		45.0			30.0					27.0
Total Split (%)	19.7%	19.7%		35.4%			23.6%					21%
Maximum Green (s)	20.0	20.0		40.0			25.0					22.0
Yellow Time (s)	3.0	3.0		3.0			3.0					2.0
All-Red Time (s)	2.0	2.0		2.0			2.0					3.0
Lost Time Adjust (s)		0.0		0.0			0.0					
Total Lost Time (s)		5.0		5.0			5.0					
Lead/Lag	Lead	Lead		Lead			Lag					Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			3.0					3.0
Recall Mode	Max	Max		C-Max			Max					None
Walk Time (s)												7.0
Flash Dont Walk (s)												15.0
Pedestrian Calls (#/hr)												20
Act Effct Green (s)		70.8	72.8	50.8			25.0					
Actuated g/C Ratio		0.56	0.57	0.40			0.20					
v/c Ratio		0.20	0.39	0.57			0.85					
Control Delay		10.0	11.5	38.0			77.1					
Queue Delay		0.0	0.0	0.0			0.0					
Total Delay		10.0	11.5	38.0			77.1					
LOS		B	B	D			E					
Approach Delay			11.1	38.0			77.1					
Approach LOS			B	D			E					
Queue Length 50th (ft)		25	92	233			183					
Queue Length 95th (ft)		43	133	347			#327					
Internal Link Dist (ft)			182	201			152			368		
Turn Bay Length (ft)		45										
Base Capacity (vph)		574	900	562			269					
Starvation Cap Reductn		0	0	0			0					
Spillback Cap Reductn		0	0	0			0					
Storage Cap Reductn		0	0	0			0					
Reduced v/c Ratio		0.20	0.39	0.57			0.85					

Intersection Summary

Area Type: Other
Cycle Length: 127
Actuated Cycle Length: 127
Offset: 7.5 (6%), Referenced to phase 3:EBWB, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 34.5 Intersection LOS: C
Intersection Capacity Utilization 87.4% 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: 10: Croton Avenue & Todd Place & Dale Avenue



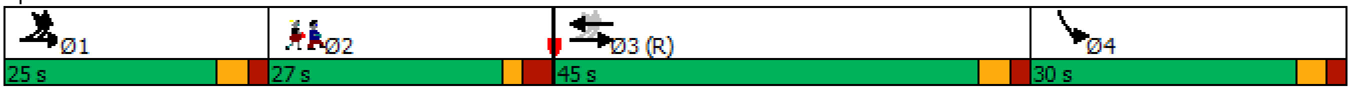
Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SEL	SER	Ø2
Lane Configurations											
Traffic Volume (vph)	18	112	275	385	17	22	31	158	0	0	
Future Volume (vph)	18	112	275	385	17	22	31	158	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	10	10	10	10	10	12	12	
Grade (%)			0%	-1%			5%		-2%		
Storage Length (ft)		45			0		0	0	0	0	
Storage Lanes		1			0		1	0	0	0	
Taper Length (ft)		20					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	
Frt				0.988			0.887				
Flt Protected		0.950					0.992				
Satd. Flow (prot)	0	1774	1617	1496	0	0	1496	0	0	0	
Flt Permitted		0.279					0.992				
Satd. Flow (perm)	0	521	1617	1496	0	0	1496	0	0	0	
Right Turn on Red						Yes				Yes	
Satd. Flow (RTOR)				2							
Link Speed (mph)			30	30			30		30		
Link Distance (ft)			262	281			232		448		
Travel Time (s)			6.0	6.4			5.3		10.2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	0%	2%	4%	2%	0%	0%	0%	2%	0%	0%	
Parking (#/hr)			3	7	7	7					
Adj. Flow (vph)	19	120	296	414	18	24	33	170	0	0	
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	139	296	456	0	0	203	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Right	Left	Right	
Median Width(ft)			12	12			10		0		
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	1.17	1.30	1.09	1.09	1.13	1.13	0.99	0.99	
Turning Speed (mph)	15	15			9	9	15	9	15	9	
Number of Detectors	1	0	0	0			0				
Detector Template	Left										
Leading Detector (ft)	20	0	0	0			0				
Trailing Detector (ft)	0	0	0	0			0				
Detector 1 Position(ft)	0	0	0	0			0				
Detector 1 Size(ft)	20	6	20	6			20				
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	D.P+P	D.P+P	NA	NA			Prot				
Protected Phases	1	1	1 3	3			4				2
Permitted Phases	3	3									
Detector Phase	1	1	1 3	3			4				

Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SEL	SER	Ø2
Switch Phase											
Minimum Initial (s)	20.0	20.0		40.0			20.0				5.0
Minimum Split (s)	25.0	25.0		45.0			25.0				27.0
Total Split (s)	25.0	25.0		45.0			30.0				27.0
Total Split (%)	19.7%	19.7%		35.4%			23.6%				21%
Maximum Green (s)	20.0	20.0		40.0			25.0				22.0
Yellow Time (s)	3.0	3.0		3.0			3.0				2.0
All-Red Time (s)	2.0	2.0		2.0			2.0				3.0
Lost Time Adjust (s)		0.0		0.0			0.0				
Total Lost Time (s)		5.0		5.0			5.0				
Lead/Lag	Lead	Lead		Lead			Lag				Lag
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0			3.0				3.0
Recall Mode	Max	Max		C-Max			Max				None
Walk Time (s)											7.0
Flash Dont Walk (s)											15.0
Pedestrian Calls (#/hr)											20
Act Effct Green (s)		70.8	72.8	50.8			25.0				
Actuated g/C Ratio		0.56	0.57	0.40			0.20				
v/c Ratio		0.29	0.32	0.76			0.69				
Control Delay		11.6	10.6	45.6			60.8				
Queue Delay		0.0	0.0	0.0			0.0				
Total Delay		11.6	10.6	45.6			60.8				
LOS		B	B	D			E				
Approach Delay			10.9	45.6			60.8				
Approach LOS			B	D			E				
Queue Length 50th (ft)		30	73	367			157				
Queue Length 95th (ft)		50	108	#587			#246				
Internal Link Dist (ft)			182	201			152		368		
Turn Bay Length (ft)		45									
Base Capacity (vph)		487	926	599			294				
Starvation Cap Reductn		0	0	0			0				
Spillback Cap Reductn		0	0	0			0				
Storage Cap Reductn		0	0	0			0				
Reduced v/c Ratio		0.29	0.32	0.76			0.69				

Intersection Summary

Area Type: Other
Cycle Length: 127
Actuated Cycle Length: 127
Offset: 27 (21%), Referenced to phase 3:EBWB, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 34.6 Intersection LOS: C
Intersection Capacity Utilization 79.2% 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.

Splits and Phases: 10: Croton Avenue & Todd Place & Dale Avenue



Appendix D
Agency Correspondence

Sam Schwartz Engineering, D.P.C.
322 Eighth Avenue, 5th Floor
New York, NY 10001
phone: (212) 598-9010
samschwartz.com

June 19, 2018

Kevin Sylvester, Chief of Police
Birdsall-Fagan Police Court Facility
86-88 Spring Street
Ossining, NY, 10562

Re: Request for Updated Information Regarding the River Knoll (n/f Stony Lodge Hospital) Project

Dear Chief Sylvester,

On behalf of The Glenco Group, LLC, *Sam Schwartz* is preparing a Final Environmental Impact Statement (FEIS) for the development of 40 Croton Dam Road (the "Project Site") in the Town of Ossining and the Village of Ossining. The 17.89-acre site, 16.65 acres in the Town and 1.24 acres in the Village, is the location of the former Stony Lodge Psychiatric Hospital that was closed in 2012. The proposed project will primarily be located within the Town; no disturbance is expected within the Village of Ossining. The FEIS will present an update of potentially adverse impacts of the proposed project, as presented in the DEIS, as well as respond to comments made on the DEIS.

River Knoll (the "Proposed Project") is proposed to be a single multifamily building with 188 dwelling units in the approximate location of the former hospital building. Parking for residents and guests will be below the building. The existing buildings on the site will all be removed and the single River Knoll building at the center of the site will enable the creation of a permanently protected green buffer of approximately 14 acres (78% of the site) around the entire site. Ingress and egress of the Proposed Project will be located on the already existing driveway of the Stony Lodge Hospital.

For our analysis, we need to obtain information relevant to the current services provided by the Ossining Police Department to the Project Site, which is shown in the attached map. Specifically, we need to obtain the following information:

- Level of Staffing
- Anticipated response times to the Project Site
- Number and types of all service calls by the department within Ossining from 2016-2018

In addition to the above information, please provide any relevant information on anticipated changes to your department that may affect its future capacities to respond to emergencies, such as new equipment, anticipated changes in personnel or budget, or other factors that are expected to increase or decrease capacity that may be necessary as a due to the Proposed Project

If possible, please email the information to karmstead@samschwartz.com or call me at 212-598-9010 (x135). We appreciate the time and consideration you gave to our request. If you need further information from me, or have any questions regarding this request, please feel free to contact me at my direct line above. Thank you in advance for your attention to this matter.

Sincerely,

Kendra Armstead

Kendra Armstead

Planner

Sam Schwartz Engineering, D.P.C.
322 Eighth Avenue, 5th Floor
New York, NY 10001
phone: (212) 598-9010
samschwartz.com

June 19, 2018

Nick Franzoso, Captain
Ossining Volunteer Ambulance Corps, Inc.
8 Clinton Ave
Ossining, NY, 10562

Re: Request for Updated Information Regarding the River Knoll (n/f Stony Lodge Hospital) Project

Dear Captain Franzoso,

On behalf of The Glenco Group, LLC, *Sam Schwartz* is preparing a Final Environmental Impact Statement (FEIS) for the development of 40 Croton Dam Road (the "Project Site") in the Town of Ossining and the Village of Ossining. The 17.89-acre site, 16.65 acres in the Town and 1.24 acres in the Village, is the location of the former Stony Lodge Psychiatric Hospital that was closed in 2012. The proposed project will primarily be located within the Town; no disturbance is expected within the Village of Ossining. The FEIS will present an update of potentially adverse impacts of the proposed project, as presented in the DEIS, as well as respond to comments made on the DEIS.

River Knoll (the "Proposed Project") is proposed to be a single multifamily building with 188 dwelling units in the approximate location of the former hospital building. Parking for residents and guests will be below the building. The existing buildings on the site will all be removed and the single River Knoll building at the center of the site will enable the creation of a permanently protected green buffer of approximately 14 acres (78% of the site) around the entire site. Ingress and egress of the Proposed Project will be located on the already existing driveway of the Stony Lodge Hospital.

For our analysis, we need to obtain information relevant to the current services provided by Ossining Volunteer Ambulance Corps to the Project Site, which is shown in the attached map. Specifically, we need to obtain the following information:

- Level of Staffing
- Anticipated response times to the Project Site
- Number and types of all service calls by the department within Ossining from 2016-2018

In addition to the above information, please provide any relevant information on anticipated changes to your department that may affect its future capacities to respond to emergencies, such as new equipment, anticipated changes in personnel or budget, or other factors that are expected to increase or decrease capacity that may be necessary due to the Proposed Project.

If possible, please email the information to karmstead@samschwartz.com or call me at 212-598-9010 (x135). We appreciate the time and consideration you gave to our request. If you need further information from me, or have any questions regarding this request, please feel free to contact me at my direct line above. Thank you in advance for your attention to this matter.

Sincerely,

Kendra Armstead

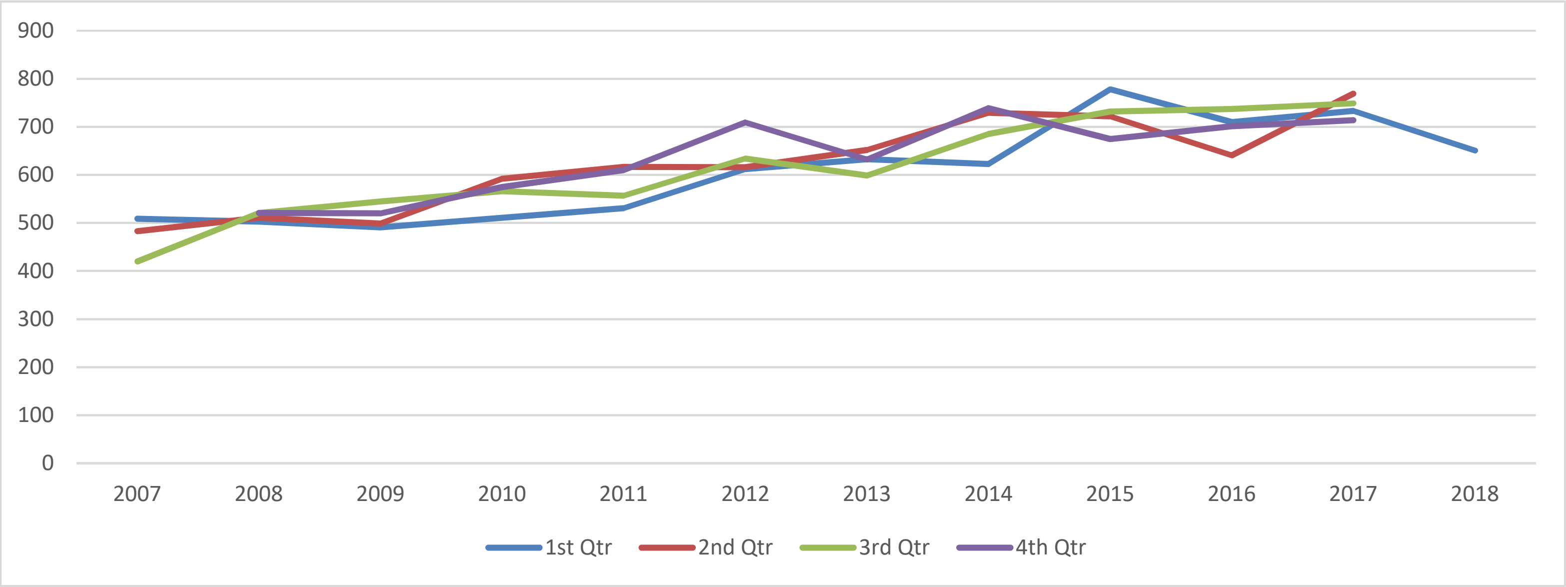
Planner

From: Nick Franzoso
To: Kendra Armstead
Subject: Ossining VAC
Date: Tuesday, June 26, 2018 4:07:07 PM
Attachments: Dispositions 2015-2018.pdf

Nick Franzoso
EMS Director
Ossining Volunteer Ambulance Corps., Inc.
8 Clinton Ave
PO Box 523
Ossining, NY 10562
o:914-941-9196
c:914-906-7154
f:914-941-3941
ossiningvac.org

OVAC Call Volume 12 Years

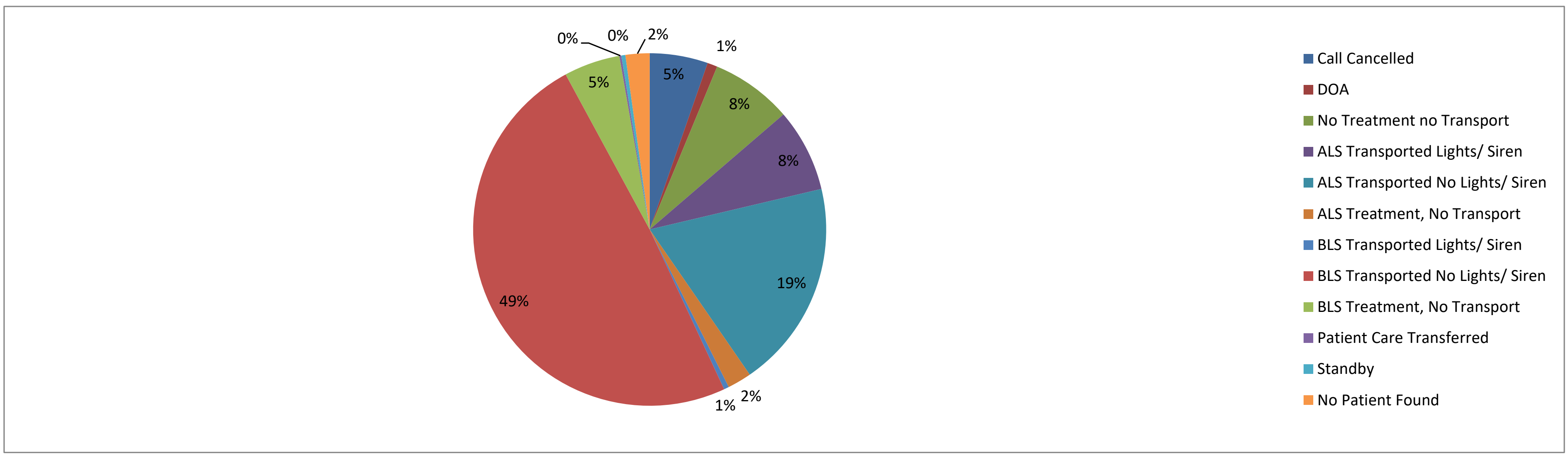
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Totals
2007	509	483	420		1412
2008	503	511	521	521	2056
2009	491	499	545	520	2055
2010	511	592	566	575	2244
2011	531	617	557	610	2315
2012	612	616	634	709	2571
2013	633	652	599	632	2516
2014	623	729	685	739	2776
2015	778	722	732	675	2907
2016	710	641	737	701	2789
2017	733	769	749	714	2965
2018	651				651



OVAC 2018 Dispositions

	Total	January	February	March	April	May	June	July	August	September	October	November	December
Call Cancelled	58	9	12	15	11	11							
DOA	10	1	2	4	2	1							
No Treatment no Transport	81	20	16	13	17	15							
ALS Transported Lights/ Siren	83	17	16	12	13	25							
ALS Transported No Lights/ Siren	208	45	34	40	43	46							
ALS Treatment, No Transport	24	4	7	3	5	5							
BLS Transported Lights/ Siren	5	2	1	1	1								
BLS Transported No Lights/ Siren	534	116	95	108	102	113							
BLS Treatment, No Transport	56	14	9	12	12	9							
Patient Care Transferred	2		1	1									
Standby	4	1	2			1							
No Patient Found	24	8	4	6	2	4							
TOTAL:	1089	237	199	215	208	230							
Cumlative Totals:		237	436	651	859	1089	1089	1089	1089	1089	1089	1089	1089

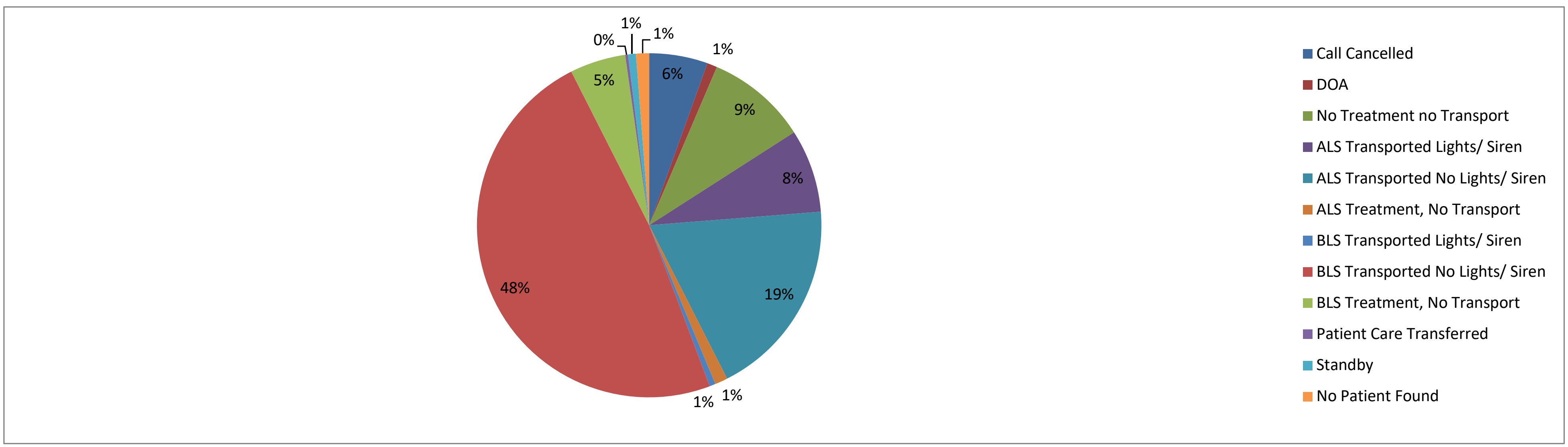
ALS: 315
BLS: 595
Average: 217.8



OVAC 2017 Dispositions

	Total	January	February	March	April	May	June	July	August	September	October	November	December
Call Cancelled	163	17	11	8	20	15	12	16	14	9	19	12	10
DOA	28	1		4		1	4	1	2	4	3	3	5
No Treatment no Transport	281	27	22	28	24	22	32	24	33	18	28	13	10
ALS Transported Lights/ Siren	232	17	15	17	20	20	29	12	22	23	20	23	14
ALS Transported No Lights/ Siren	557	36	55	49	41	47	43	54	51	41	43	42	55
ALS Treatment, No Transport	35	3	3	1	3		1	6	2	3	4	4	5
BLS Transported Lights/ Siren	17			2		1	3	3			1	1	6
BLS Transported No Lights/ Siren	1431	132	119	113	120	134	108	125	131	112	135	101	101
BLS Treatment, No Transport	155	19	13	10	15	16	20	11	8	6	15	8	14
Patient Care Transferred	8					2	2	2				1	1
Standby	22			1	2	1	3	3	2	1	5	4	
No Patient Found	36	3	5	2		4	4	3	4	3	2	3	3
TOTAL:	2965	255	243	235	245	263	261	260	269	220	275	215	224
Cumlative Totals:		255	498	733	978	1241	1502	1762	2031	2251	2526	2741	2965

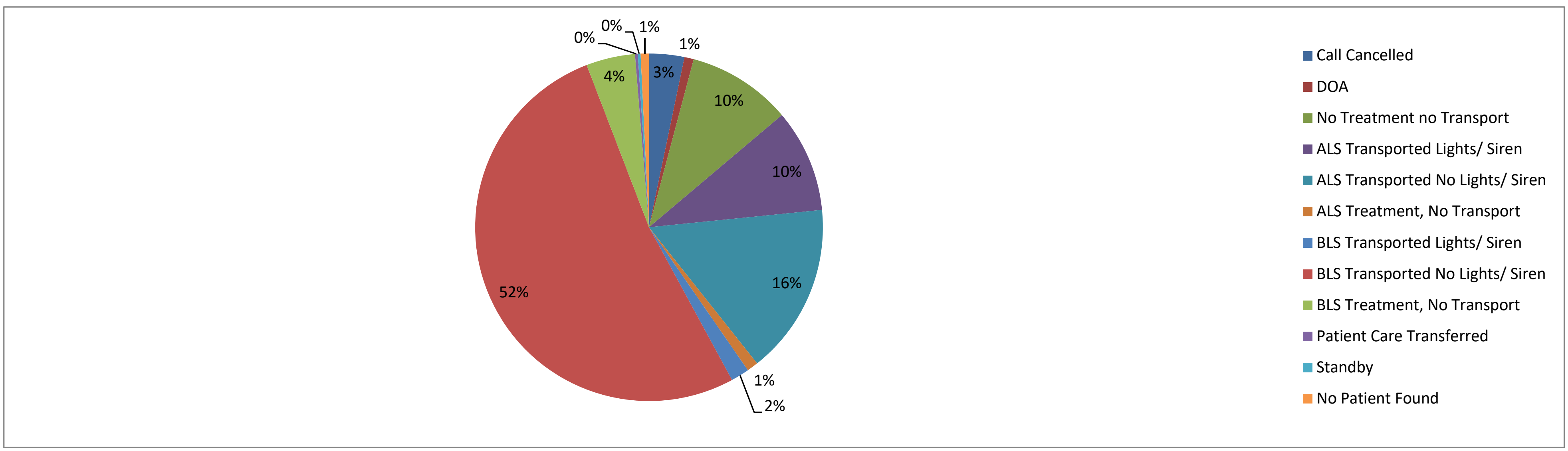
ALS:	824
BLS:	1603
Average:	247.1



OVAC 2016 Dispositions

	Total	January	February	March	April	May	June	July	August	September	October	November	December
Call Cancelled	91	4	3	3	9	10	6	6	12	9	9	13	7
DOA	24	5	3	1			2	3	3	2	1		4
No Treatment no Transport	271	21	15	23	17	19	27	33	29	19	22	23	23
ALS Transported Lights/ Siren	267	26	30	29	21	24	21	21	15	29	20	14	17
ALS Transported No Lights/ Siren	444	43	30	41	39	27	37	37	39	45	41	37	28
ALS Treatment, No Transport	29	1		1	3	3	3		3	5	2	4	4
BLS Transported Lights/ Siren	48	6	9	7	4	2	3	6	4	1	3	3	
BLS Transported No Lights/ Siren	1452	131	129	111	89	120	117	112	114	150	147	108	124
BLS Treatment, No Transport	127	12	10	9	9	13	10	8	11	12	11	13	9
Patient Care Transferred	7		2			1	1			1	1		1
Standby	7						1	2	1		2		1
No Patient Found	22	2	1	2			3	1	3	1	4	1	4
TOTAL:	2789	251	232	227	191	219	231	229	234	274	263	216	222
Cumlative Totals:		251	483	710	901	1120	1351	1580	1814	2088	2351	2567	2789

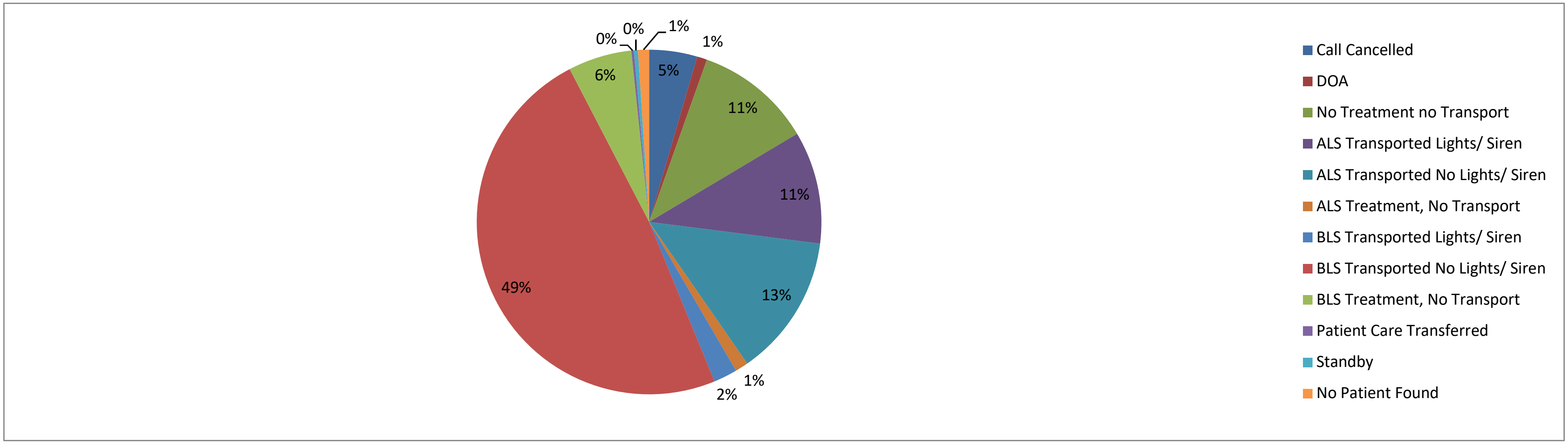
ALS:	740
BLS:	1627
Average:	232.4



OVAC 2015 Dispositions

	Total	January	February	March	April	May	June	July	August	September	October	November	December
Call Cancelled	131	12	10	8	5	15	7	15	16	14	12	3	14
DOA	27	2	2		4	2	1	4	3	3	3	1	2
No Treatment no Transport	320	41	40	29	29	36	23	28	27	15	21	12	19
ALS Transported Lights/ Siren	307	23	17	23	16	47	22	33	21	29	26	25	25
ALS Transported No Lights/ Siren	388	40	23	31	27	37	37	40	30	35	30	28	30
ALS Treatment, No Transport	36			3	1	2	8	1	3	4	4	3	7
BLS Transported Lights/ Siren	64	7	6	8		3	6	2	4	11	3	6	8
BLS Transported No Lights/ Siren	1412	176	108	115	112	117	113	119	119	99	94	114	126
BLS Treatment, No Transport	174	12	17	17	13	14	12	11	14	16	14	17	17
Patient Care Transferred	7	1					2	1		1			2
Standby	11		1	2	3		1		1	1			2
No Patient Found	30	1	2	1	2		5	4	7	1	3		4
TOTAL:	2907	315	226	237	212	273	237	258	245	229	210	209	256
Cumlative Totals:		315	541	778	990	1263	1500	1758	2003	2232	2442	2651	2907

ALS:	731
BLS:	1650
Average:	242.3



Sam Schwartz Engineering, D.P.C.
322 Eighth Avenue, 5th Floor
New York, NY 10001
phone: (212) 598-9010
samschwartz.com

Sam Schwartz

June 19, 2018

Bill Garrison, Superintendent of Recreation
Ossining Recreation and Parks Department
Joseph G. Caputo Community Center
95 Broadway
Ossining, NY, 10562

Re: Request for Updated Information Regarding the River Knoll (n/f Stony Lodge Hospital) Project

Dear Mr. Garrison:

On behalf of The Glenco Group, LLC, *Sam Schwartz* is preparing a Final Environmental Impact Statement (FEIS) for the development of 40 Croton Dam Road (the "Project Site") in the Town of Ossining and the Village of Ossining. The 17.89-acre site, 16.65 acres in the Town and 1.24 acres in the Village, is the location of the former Stony Lodge Psychiatric Hospital that was closed in 2012. The proposed project will primarily be located within the Town; no disturbance is expected within the Village of Ossining. The FEIS will present an update of potentially adverse impacts of the proposed project, as presented in the DEIS, as well as respond to comments made on the DEIS.

River Knoll (the “Proposed Project”) is proposed to be a single multifamily building with 188 dwelling units in the approximate location of the former hospital building. Parking for residents and guests will be below the building. The existing buildings on the site will all be removed and the single River Knoll building at the center of the site will enable the creation of a permanently protected green buffer of approximately 14 acres (78% of the site) around the entire site. Ingress and egress of the Proposed Project will be located on the already existing driveway of the Stony Lodge Hospital.

For our analysis we need to obtain information relevant to the current services provided by the Ossining Recreation and Parks Department to the Project Site, which is shown in the attached map, as well as needs and recreation fees for the Proposed Project.

If possible, please email the information to karmstead@samschwartz.com or feel free to call me at 212-598-9010 (x135). We appreciate the time and consideration you provide to our request. If you need further information from me, or have any questions regarding this request, please feel free to contact me at my direct line above. Thank you in advance for your attention to this matter.

Sincerely,

Kendra Armstead

Kendra Armstead

Planner

Sam Schwartz Engineering, D.P.C.
322 Eighth Avenue, 5th Floor
New York, NY 10001
phone: (212) 598-9010
samschwartz.com

Sam Schwartz

June 19, 2018

Angelo Manicchio, Chief Engineer
Village of Ossining Fire Department
21 State Street
Ossining, NY, 10562

Re: Request for Updated Information Regarding the River Knoll (n/f Stony Lodge Hospital) Project

Dear Chief Manicchio,

On behalf of The Glenco Group, LLC, *Sam Schwartz* is preparing a Final Environmental Impact Statement (FEIS) for the development of 40 Croton Dam Road (the "Project Site") in the Town of Ossining and the Village of Ossining. The 17.89-acre site, 16.65 acres in the Town and 1.24 acres in the Village, is the location of the former Stony Lodge Psychiatric Hospital that was closed in 2012. The proposed project will primarily be located within the Town; no disturbance is expected within the Village of Ossining. The FEIS will present an update of potentially adverse impacts of the proposed project, as presented in the DEIS, as well as respond to comments made on the DEIS.

River Knoll (the "Proposed Project") is proposed to be a single multifamily building with 188 dwelling units in the approximate location of the former hospital building. Parking for residents and guests will be below the building. The existing buildings on the site will all be removed and the single River Knoll building at the center of the site will enable the creation of a permanently protected green buffer of approximately 14 acres (78% of the site) around the entire site. Ingress and egress of the Proposed Project will be located on the already existing driveway of the Stony Lodge Hospital.

For our analysis, we need to obtain updated information relevant to the current municipal services provided by the Ossining Fire Department to the Project Site, which is shown in the attached map. Specifically, we need to obtain the following information:

- Level of Staffing
- Anticipated response times to the Project Site
- Number and types of all service calls by the department within Ossining from 2016-2018

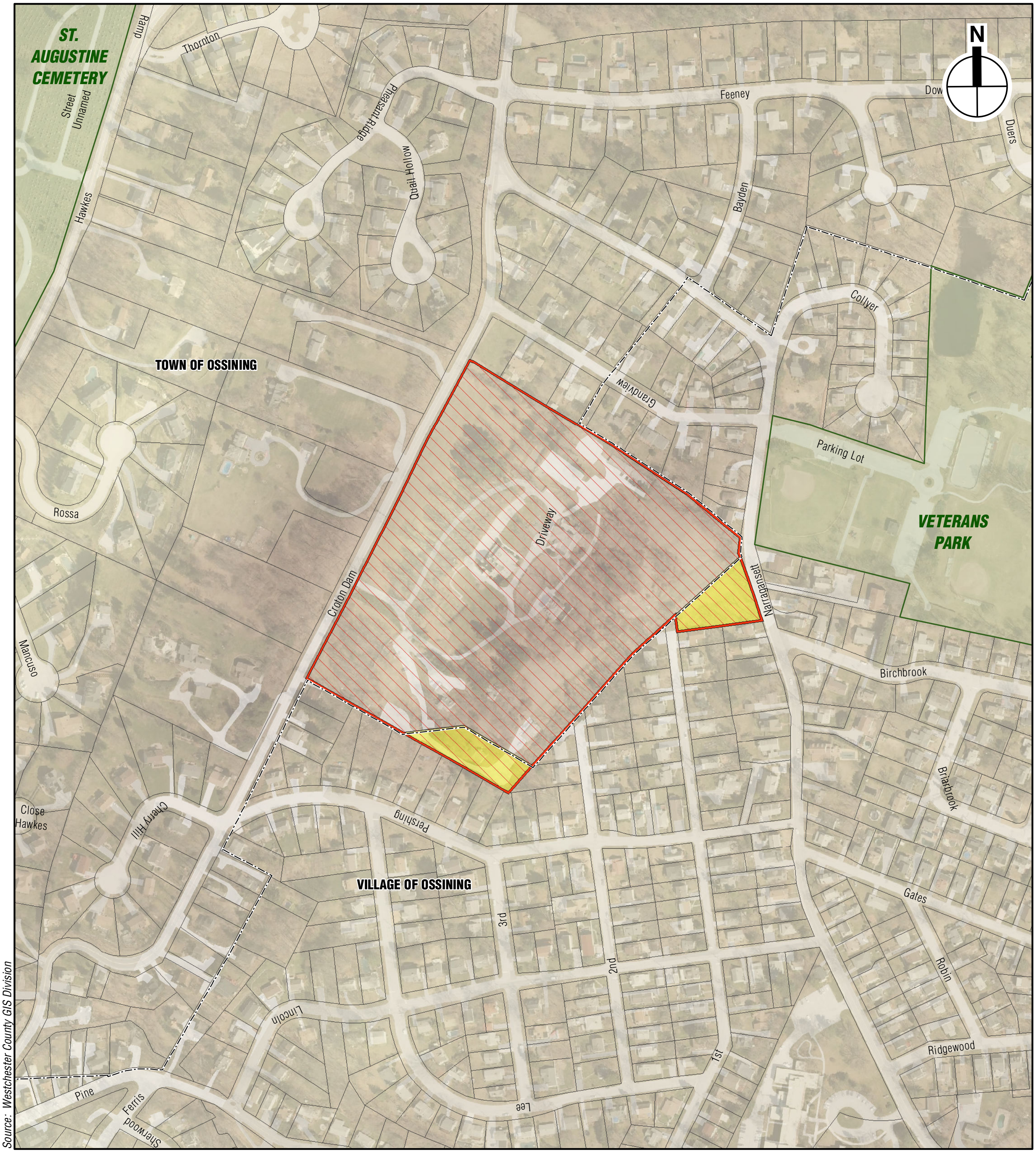
In addition to the above information, please provide any relevant information on anticipated changes to your department that may affect its future capacities to respond to emergencies, such as new equipment, anticipated changes in personnel or budget, or other factors that are expected to increase or decrease capacity that may be necessary due to the Proposed Project.

If possible, please email the information to karmstead@samschwartz.com or call me at 212-598-9010 (x135). We appreciate the time and consideration you gave to our request. If you need further information from me, or have any questions regarding this request, please feel free to contact me at my direct line above. Thank you in advance for your attention to this matter.

Sincerely,

Kendra Armstead

Planner



Project Site

Project Site Within Village Boundary

Village/Town Boundary

Tax Parcel Boundaries

0 500 FEET

Project Site Location

RIVER KNOLL

GLENCO
GROUP

October 10, 2016

Ms. Ileana Ortiz
District Clerk
Ossining Union Free School District
400 Executive Boulevard
Ossining, NY 10562

Re: River Knoll – Revised Agreement Between the Ossining Union Free School District and Glenco Group, LLC

Dear Ileana,

I enclosed one copy of the fully executed Agreement between the School and Glenco. I've retained the second original for my records. Many thanks for facilitating this and we look forward to working with you going forward!

Sincerely,

Glen Vetromile

Glen Vetromile

670 White Plains Road, Suite 201, Scarsdale, NY 10583
glen@glencogroupny.com 917-589-5550

OSSINING UNION FREE SCHOOL DISTRICT

400 Executive Blvd. · Ossining, New York 10562-4599
Tel: (914) 941-7700 ▪ Fax: (914) 941-2794
www.OssiningUFSD.org

October 5, 2016

Mr. Glen Vetromile
Glenco Group LLC
670 White Plains Road
Scarsdale, NY 10583

Re: River Knoll - Revised Agreement Between the Ossining Union Free School District and Glenco Group, LLC

Dear Mr. Vetromile,

Enclosed for your signature please find **two (2) original** revised Agreements between the Ossining Union Free School District and Glenco Group, LLC. Both originals have been signed by our Board President.

Please sign both copies, retain one for your records and mail one fully executed original to my attention in the self-addressed, post-paid envelope enclosed for your convenience.

Thank you!

Sincerely,

Ileana Ortiz

Ileana Ortiz
District Clerk

AGREEMENT BY AND BETWEEN
OSSINING UNION FREE SCHOOL DISTRICT
AND GLENCO GROUP, LLC

This **AGREEMENT** made as of September 29, 2016, by and between the **OSSINING UNION FREE SCHOOL DISTRICT** (the "School District" or "District"), located at 400 Executive Blvd, Ossining, New York 10562, and **GLENCO GROUP, LLC** (hereinafter referred to interchangeably as the "Donor") located at 670 White Plains Road, Scarsdale, New York 10583.

WHEREAS, the Donor is the Contract-Vendee of certain real property (the "Premises") comprising approximately 17.9 acres, of which 16.65 acres are within the Town of Ossining and 1.24 acres are within the Village of Ossining, which Premises are commonly known as Stony Lodge Hospital, 40 Croton Dam Road, Ossining, New York; and

WHEREAS, on December 7, 2015, the Donor submitted to the Town Board of the Town of Ossining a Petition and an Environmental Assessment Form ("EAF") in accordance with the New York State Environmental Quality Review Act (Article 8 of the New York State Environmental Conservation Law and the rules and regulations promulgated thereunder at 6 NYCRR, Part 617) (collectively "SEQRA") together with conceptual Site Plans and architectural details (collectively the "Donor's Application") requesting the Amendment of the Zoning Ordinance of the Town of Ossining to permit the redevelopment of the Premises as a multi-family development with 169 market-rate rental apartment units, 19 affordable rental apartment units and appurtenant parking and amenities substantially as detailed in Donor's Application (collectively the "Project")[1]; and

WHEREAS, the Project will include families with children; and

WHEREAS, the EAF includes, among other things, analyses regarding "School Generation Rates for Nearby Developments" and "Comparison of School-Age Multipliers and Estimated Students;" and

WHEREAS, the School District is aware that the Town of Ossining has yet to review or act upon the Donor's Application, which remains subject to the Town of Ossining's consideration in accordance with the Code of the Town of Ossining (the "Town Code") and SEQRA, among

---

[1]A detailed description of the Project is set forth in the Petition and EAF, which incorporate the following plans by reference (copies of which Petition and EAF, including the plans, the School District has received and considered):

a. Plans prepared by Minno & Wasko, Architects and Planners, entitled "River Knoll, Town of Ossining, Westchester County, New York," dated October 2, 2015, consisting of the following sheets:
   - i. Concept Site Plan, including "Development Program";
   - ii. Concept Site Plan Overlay showing existing Stony Lodge Hospital buildings;

b. Plans prepared by John Meyer Consulting, entitled "River Knoll, 40 Croton Dam Road, Town of Ossining, New York" dated October 2, 2015, consisting of the following sheets:
   - i. "Site Existing Conditions Plan" (SP-1);
   - ii. "Conceptual Site Layout Plan" (SP-2); and
   - iii. "Conceptual Site Grading Plan" (SP-3).

other things; and

WHEREAS, based upon the information set forth in the Donor's Application, including but not limited to the EAF, the School District has independently assessed the likely numbers of school children to be generated by this Project; and

WHEREAS, based thereon the School District has determined that the Project will generate school-age students anticipated to attend public school within the School District and that there will be a financial impact to the School District as a result thereof; and

WHEREAS, the School District recognizes that if and when the Project were to be constructed and occupied, real estate taxes payable to the School District would annually pay the costs of servicing the students to be generated by the Project; and

WHEREAS, despite the anticipated generation of increased real estate taxes that will assist in managing the budgetary needs of the District on an annual basis, there would be a direct financial impact to the School District by reason of the Project; and

WHEREAS, based upon its independent assessment of the Project, the School District has determined that it would require a mitigation payment of Three Hundred Fifty Thousand Dollars ($350,000.00) to mitigate the impact of the Project to the District to the maximum extent practicable and the funds shall be used to address capital needs in the District; and

WHEREAS, based upon discussions between the District and Donor, the Donor voluntarily has agreed to donate to the School District the sum of Three Hundred Fifty Thousand Dollars ($350,000.00) (the "District Donation"), which District Donation would only be due if and when the Town of Ossining determined to approve Project substantially as described in the Donor's Application and expressly including 169 market-rate rental apartments and 19 rental affordable housing units (following compliance with the requirements of the Town Code and SEQRA, among other things); and

WHEREAS, by entering into this Agreement the School District and the Donor hereby desire to confirm their agreement regarding the above-referenced District Donation.

NOW THEREFORE, under this Agreement, the School District accepts the donation from the Donor, as set forth below:

1. The above-referenced WHEREAS clauses are incorporated herein by reference as if they were repeated verbatim at this Paragraph 1.
2. Subject to the Town of Ossining (and any other governmental entity or regulated entity having jurisdiction over the Project) approving the Donor's Application in order to permit the redevelopment of the Premises as a multi-family development with 169 market-rate rental apartment units, 19 affordable rental apartment units and appurtenant parking and amenities substantially as detailed therein Donor's Application, as well as any and all approvals necessary to connect and complete installation and/or improvements required to facilitate the Project such as utilities, roadways, and environmental permits (collectively the "Project Approvals"), Donor shall pay the District Donation in accordance with the following payment schedule:
    a. Assuming the Project Approvals, on or before December 31, 2017 the sum of $175,000 for general use by the School District;

b. Assuming the Project Approvals, on or before December 31, 2018 the sum of $175,000 for general use by the School District.

3. The School District hereby agrees that the sum comprising the District Donation is a sufficient, adequate and appropriate mitigation payment to comprise full and complete offset of any and all impacts to the District arising out of, or in connection with the Project.

4. In order to become effective, this Agreement shall be reviewed, considered and approved by the adoption by the School District of a written Resolution at a duly noticed public meeting conducted in the regular course of its business and the filing of such determination or decision by the School District all in accordance with applicable laws, rules and regulations established by the State of New York for the School District.

5. This Agreement shall not become binding upon execution hereof by an authorized officer of each party.

6. Notwithstanding the foregoing, Donor shall have no obligation to tender the District Donation unless and until the Project Approvals have been issued and, if the Project Approvals are appealed, then the timing for the payment of any portion of the District Donation shall await the sustaining the Project Approvals by a final, non-appealable order of a court of competent jurisdiction.

7. This Agreement constitutes the full and complete understanding between the School District and Donor and supersedes all prior written and oral agreements, commitments or understandings with respect to the donation to be made by Donor.

8. The provisions of this Agreement may only be waived, modified, or changed by an amendment in writing signed by both parties.

9. No failure by either party to insist upon any performance of the other party's obligation under this Agreement shall constitute a waiver of such obligation or a waiver of future obligations under this Agreement.

10. This Agreement shall be governed in all respects by the laws of the State of New York.

IN WITNESS WHEREOF, the undersigned hereby acknowledge that they have read and fully understand the foregoing Agreement and, further, that they agree to each of the terms and conditions contained herein and this Agreement is executed by its duly authorized officer.

GLENCO GROUP, LLC	**OSSINING UNION FREE SCHOOL DISTRICT**
By: [signature]	By: [signature]
Dated: 10/10/16	Dated: 9/29/16

Appendix E
Market Assessment

Market Assessment for the River Knoll Rental Apartment Community;

Ossining, New York

Prepared for Glenco Residential, LLC | Mount Vernon, NY | July 12, 2018

Contents

Objectives

Glenco is evaluating the development opportunity of an approximately 188-unit rental apartment community in Ossining, NY, located in northwestern Westchester County. As input into your planning process, you would like RCLCO to provide an independent third-party assessment of the supply-demand conditions in the marketplace and the impact that the planned development will have on the rental market.

To achieve the objectives of this engagement, RCLCO completed the following analytical tasks:

1. Physically examined the subject property and its surrounding land uses relative to quality, visibility, access, planned developments, views, and other relevant factors.
2. Obtained and analyzed secondary market information regarding the health of and trends occurring in the local and regional rental housing markets.
3. Identified potential future housing supply in the local market, including projects currently under construction and planned and proposed, and examined the the potential impact of this new product on the local market and the development opportunities at the subject property.
4. Compiled and analyzed demographic and socioeconomic data pertaining to the future demand for rental apartment product, including the most recent population, household and employment growth forecasts; household income distributions; household sizes by age of householder; etc.
5. Conducted a statistical demand analyses to estimate the demand for rental apartments and compared this with the competitive market to understand the supply/demand relationship, i.e. the product/customer alignment or lack thereof.
6. Based on an analysis of the above, prepare Projected achievable lease-up pace;

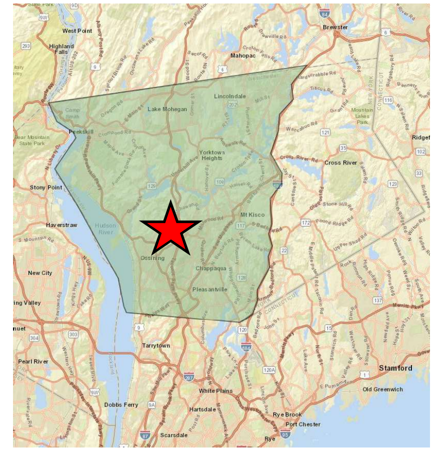
Key Findings

Key Findings

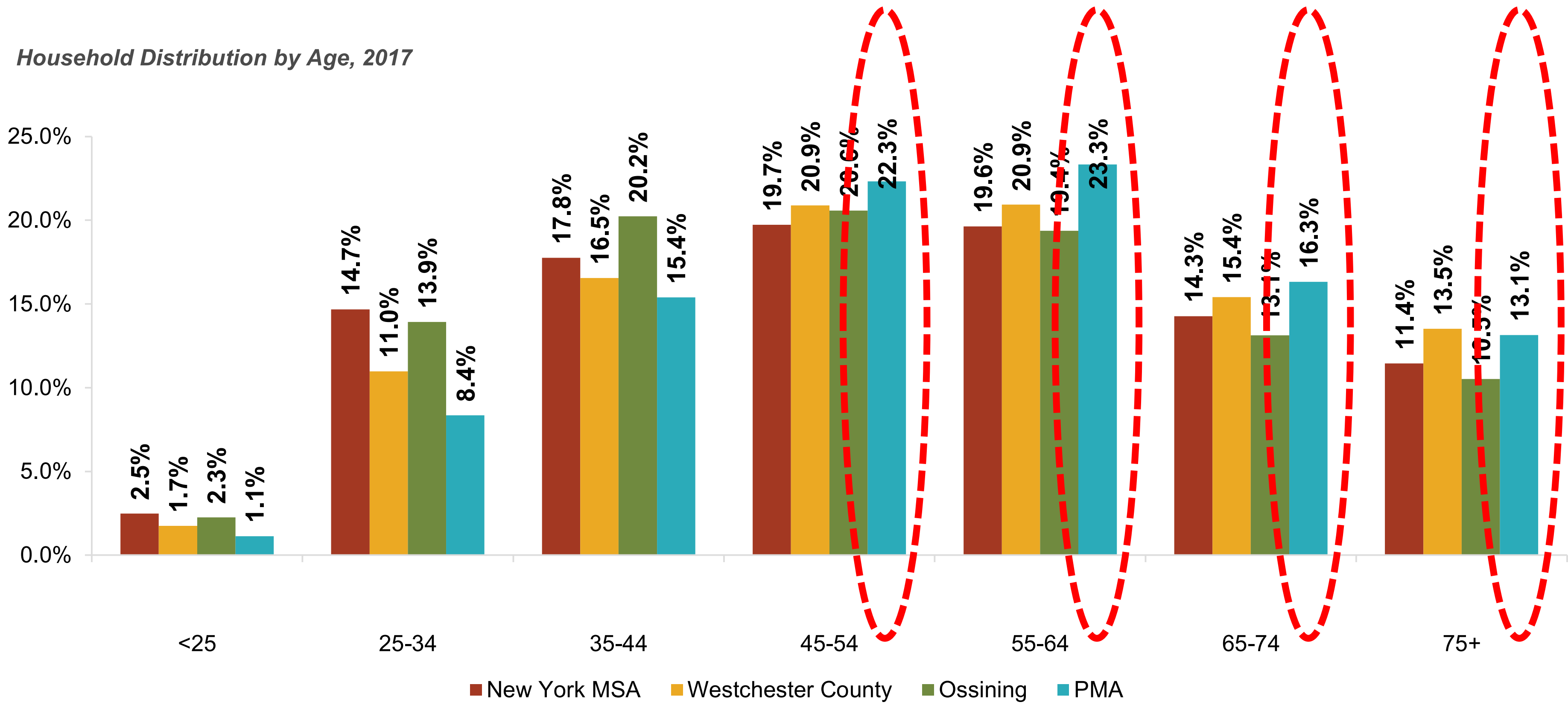
Strong demographic support for rental apartments

- The Primary Market Area (PMA), which is defined as the area from which the majority of prospective renters at the subject property are expected to emanate, has a higher distribution of "more mature" head of householders than the City of Ossining, Westchester County, or even the NY metro region.
- This indicates a potentially sizeable pool of move-down, empty nester, pre-retirees and retirees from which the subject property can draw upon, particularly the large and growing segment of seniors that are interested in moving down from large single-family detached homes and converting into a lower-maintenance renter-by-choice lifestyle.

Primary Market Area (PMA)



Household Distribution by Age, 2017



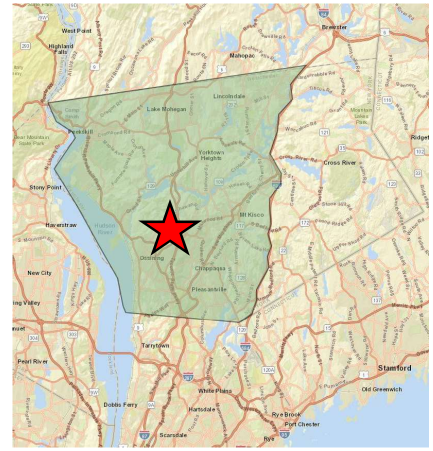
Source: RCLCO

Key Findings

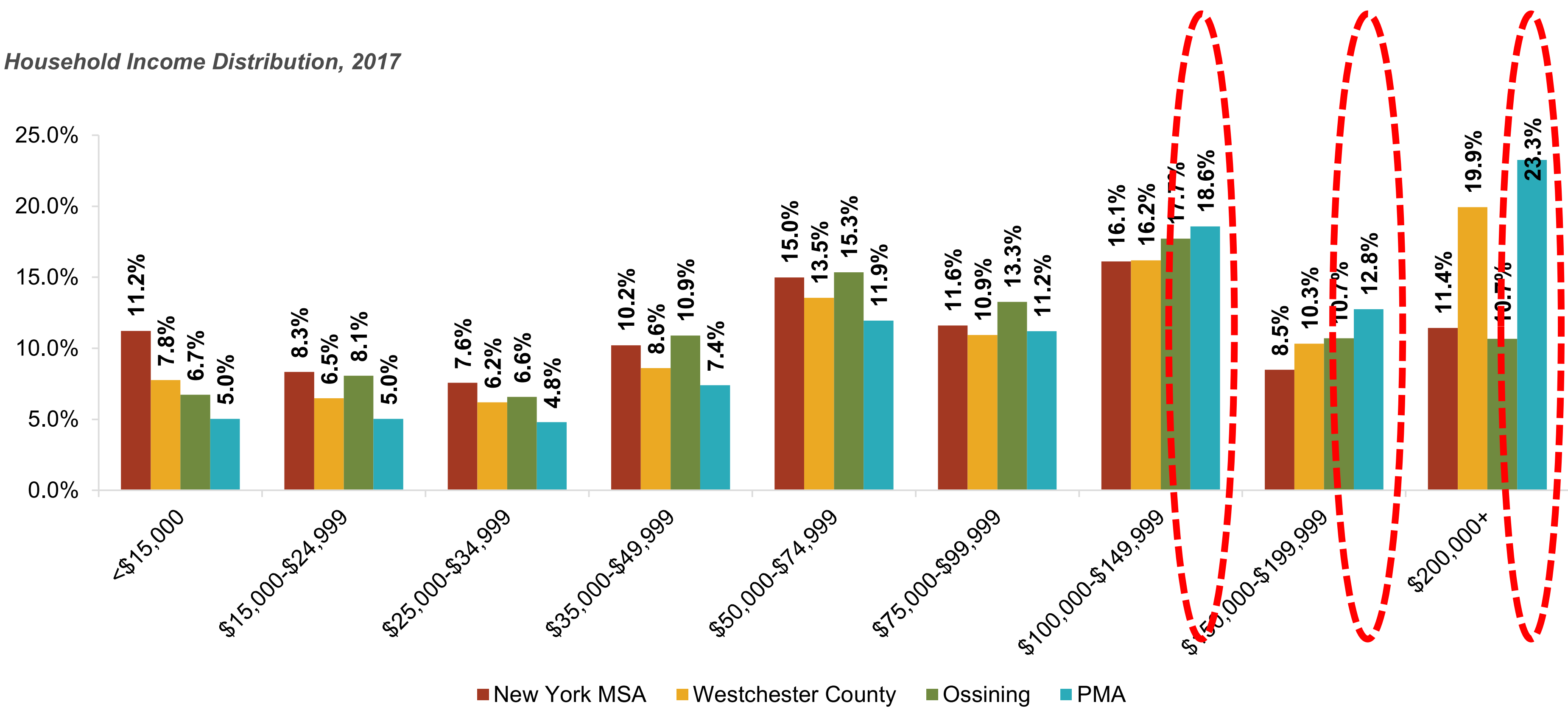
Affluent households able to support new apartments:

- The PMA also has a much higher distribution of high income $100,000+) households than the City of Ossining, Westchester County, and the NY metro region.
- These are the households that are willing and able to pay rents at the top of the market necessary to support new construction.

Primary Market Area (PMA)



Household Income Distribution, 2017



Source: RCLCO

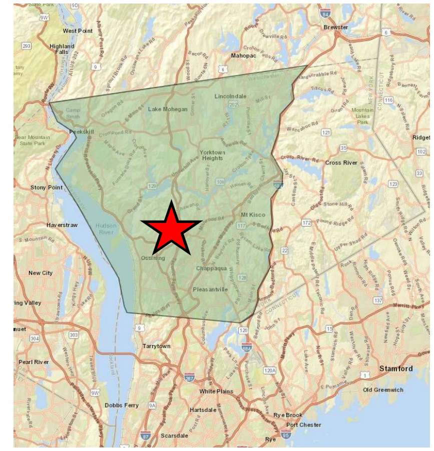
RCLCO

Key Findings

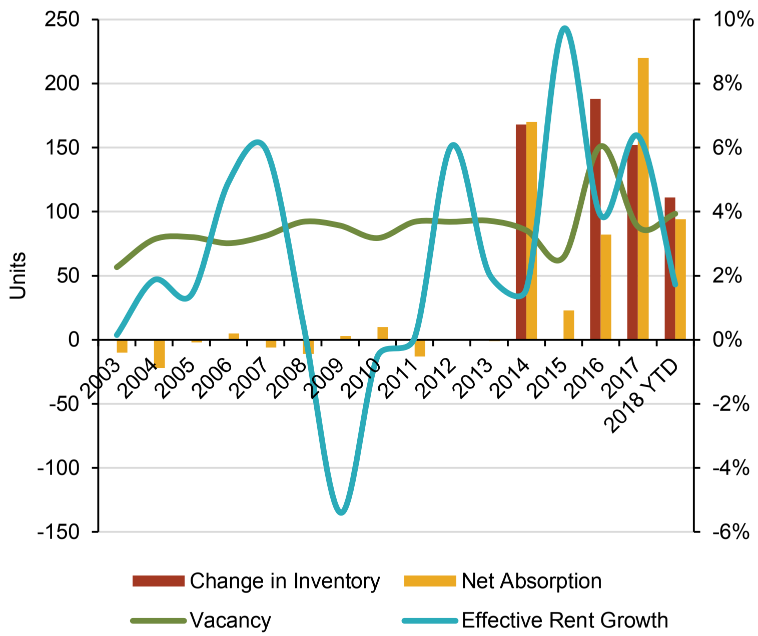
Rental Apartment Market Overview – healthy occupancy and strong rental rate growth indicates potential pent-up demand

- The rental apartment market in the Primary Market Area (PMA) of the subject property is strong.
- Net absorption of rental apartments has kept pace with new deliveries.
- Occupancy rates have remained healthy in the mid- to high-ninety percent range throughout the post-Great Recession recovery beginning in 2010.
- Rental rate escalations have also been strong ranging between 2% and 10% per year, indicative of a market with potential pent-up demand for new apartments.

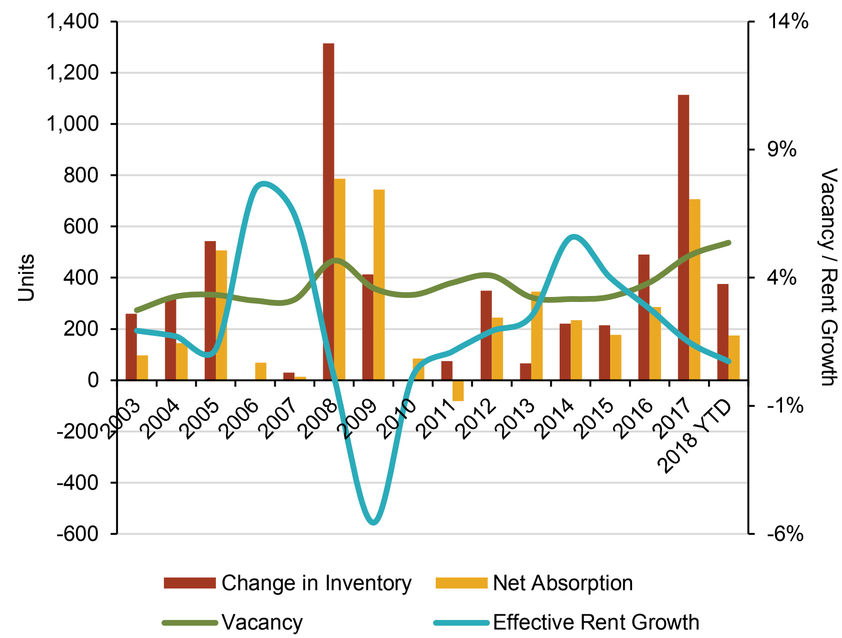
Primary Market Area (PMA)



Deliveries, Absorption, Vacancy, and Rent Growth; Primary Market Area



Deliveries, Absorption, Vacancy, and Rent Growth; Westchester County



Source: RCLCO

RCLCO

Key Findings

Rental Market Outlook – strong long-term demand fundamentals; limited pipeline

- Looking forward, RCLCO projects that there is demand for approximately 244 new market-rate multifamily rental apartment homes per year based on a demographically-driven statistical demand model that incorporates turnover of existing households and net new household growth, as well as household multifamily product preference, and income-to-rent potential. Of this demand, approximately 180 net new households have income levels of $100,000 that could afford rents that would support new construction.
- At the same time, the supply of new rental home communities that are either under construction or planned/proposed in the market is relatively limited compared with the demand projections. Specifically, there are approximately 690 apartment homes in only four communities, including the subject property, in the 5-year pipeline.
- Assuming these communities are delivered as planned and the current economic expansion continues as projected, this translates into an average increase in the rental apartment supply of approximately 140 units per year. Compared with the approximately 180 units of annual demand, this would translate into an undersupply of rental apartment homes of approximately 220 over the next five years.
- Assuming the subject property captures its fair share of the demand for new multifamily rental homes in the marketplace, River Knoll will achieve an estimated annual lease-up pace of approximately 10 units per month. At this pace, and assuming no preleasing activity, which is likely a conservative assumption, the subject property will reach a stabilized occupancy of 95% in approximately 16 months.
- Based on this analysis, RCLCO finds sufficient market demand to absorb the proposed units at the subject property in a reasonable period of time. Furthermore, even with the addition of River Knoll, there is likely to be an undersupply of new rental units relative to the demand, which will continue to support strong occupancy rates in the market overall and drive additional rental rate escalations.

Supply-Demand Analysis for the PMA

PMA SUPPLY AND DEMAND BALANCE	LOW DEMAND	RCLCO ESTIMATE	HIGH DEMAND
		Oversupply or (Undersupply)	
If 80% of Planned Supply Delivers	(130)	(356)	(582)
If 90% of Planned Supply Delivers	(61)	(288)	(514)
If 100% of Planned Supply Delivers	7	(219)	(445)
If 110% of Planned Supply Delivers	76	(150)	(377)
If 120% of Planned Supply Delivers	144	(82)	(308)
Current Multifamily Occupancy Rate[3]	96.0%	96.0%	96.0%
		Projected 2018 Vacancy Rate	
If 80% of Planned Supply Delivers	constrained	constrained	constrained
If 90% of Planned Supply Delivers	1.9%	constrained	constrained
If 100% of Planned Supply Delivers	3.5%	constrained	constrained
If 110% of Planned Supply Delivers	5.1%	constrained	constrained
If 120% of Planned Supply Delivers	6.7%	1.5%	constrained

Source: RCLCO

Key Findings

Subject Site Assessment – attractive suburban location with excellent views and convenient highway/transportation access will draw working professionals and empty nester renter households

- Located in Ossining NY, two miles from the Ossining train station, the subject site provides a unique and compelling choice in the marketplace attracting affluent renter households who are looking for convenient access to employment, retail and entertainment options, but prefer a bucolic exurban suburban lifestyle.
- The site benefits from easy access to downtown Ossining's downtown retail core, as well as major employment centers in Westchester County through access to Route 9, the Briarcliff-Peekskill Parkway and the Taconic Parkway. Renter households with one or more family member working in any of the number of closer-in employment concentrations in Westchester County and New York City have the option of driving or taking the Hudson line from Ossining station.
- The property will have extensive open space and wooded buffer from the surrounding neighborhood consisting primarily of single-family detached homes, and it will offer unparalleled 360-degree views of the surrounding countryside, including glimpses of the Hudson River to the east.

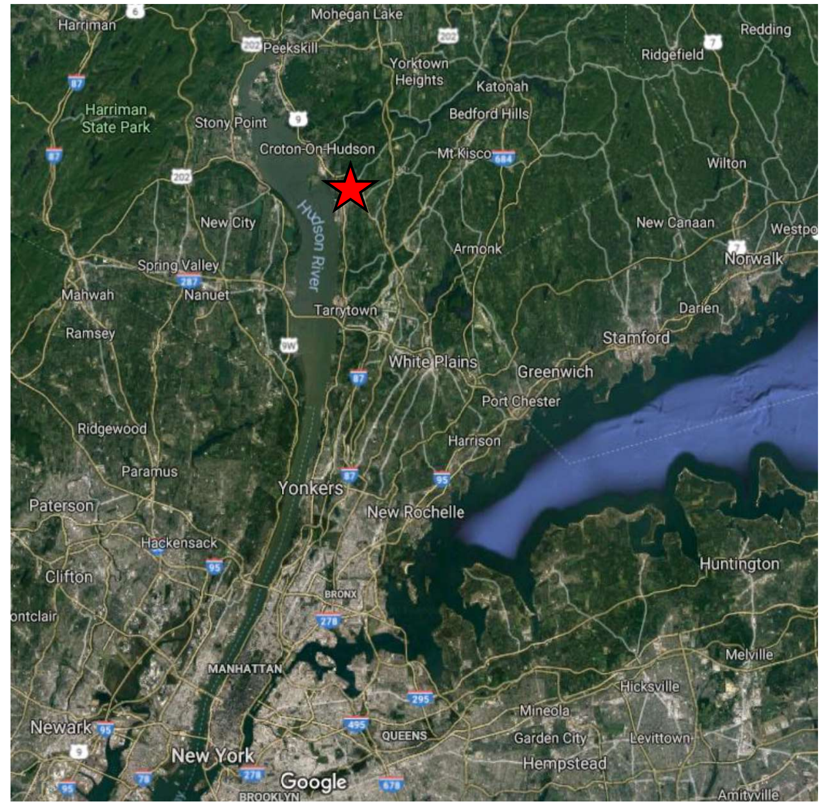
Product Program – appropriately targeted to meet market demand of affluent renter households

- As current envisioned, the subject property includes 169 rental homes positioned with rents averaging $2,866, or $3.02 per square foot (Q2 2018 dollars). The proposed unit mix and apartment home configurations are appropriate to meet the market demand in the area.

Proposed Product Program

UNIT TYPE	UNITS	MIX	AVG. SIZE (SF)	AVG. RENT	AVG. $/SF
1BR/1ba	87	46.3%	750	$2,423	$3.23
2BR/2ba	60	31.9%	1,125	$3,296	$2.93
2BR/2ba + Den	22	11.7%	1,250	$3,450	$2.76
TOTAL/AVG.	**169**	**100.0%**	**948**	**$2,866**	**$3.02**

Regional Area Map



★ ***Subject Site***

Source: RCLCO

RCLCO

Site Analysis

Strengths

- Strong highway and rail access to major employment concentrations in Westchester and NYC, including the Metro North Hudson line with a station in Ossining.
- Convenient to retail and entertainment concentrations in downtown Ossining.
- Bucolic exurban wooded setting with spectacular views.

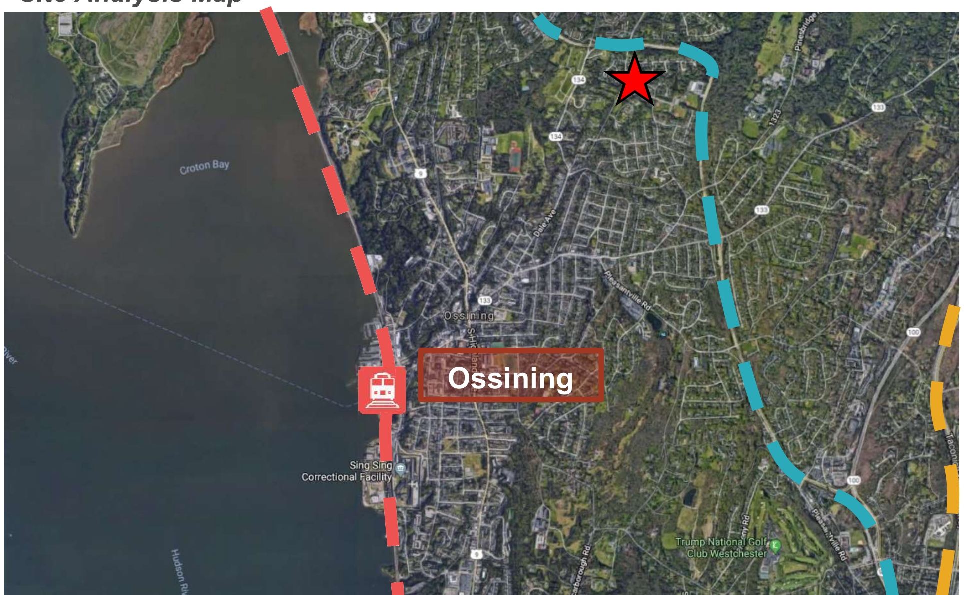
Challenges

- Low traffic counts and limited marketing window on Croton Dam Road.

Opportunities

- Appealing option for professional singles, couples and families seeking convenient location in a suburban setting.
- Opportunity to tap into large and growing potential empty nester market looking to downsize.

Site Analysis Map



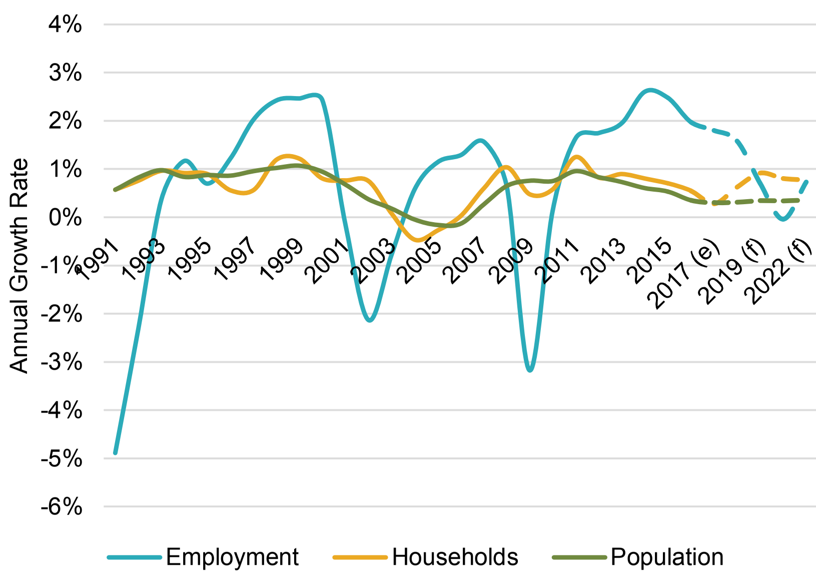
MAP KEY	
Metro North – Hudson Train Line	
Route 9A	
Taconic State Parkway	
Subject Site	

Source: RCLCO; Google Earth

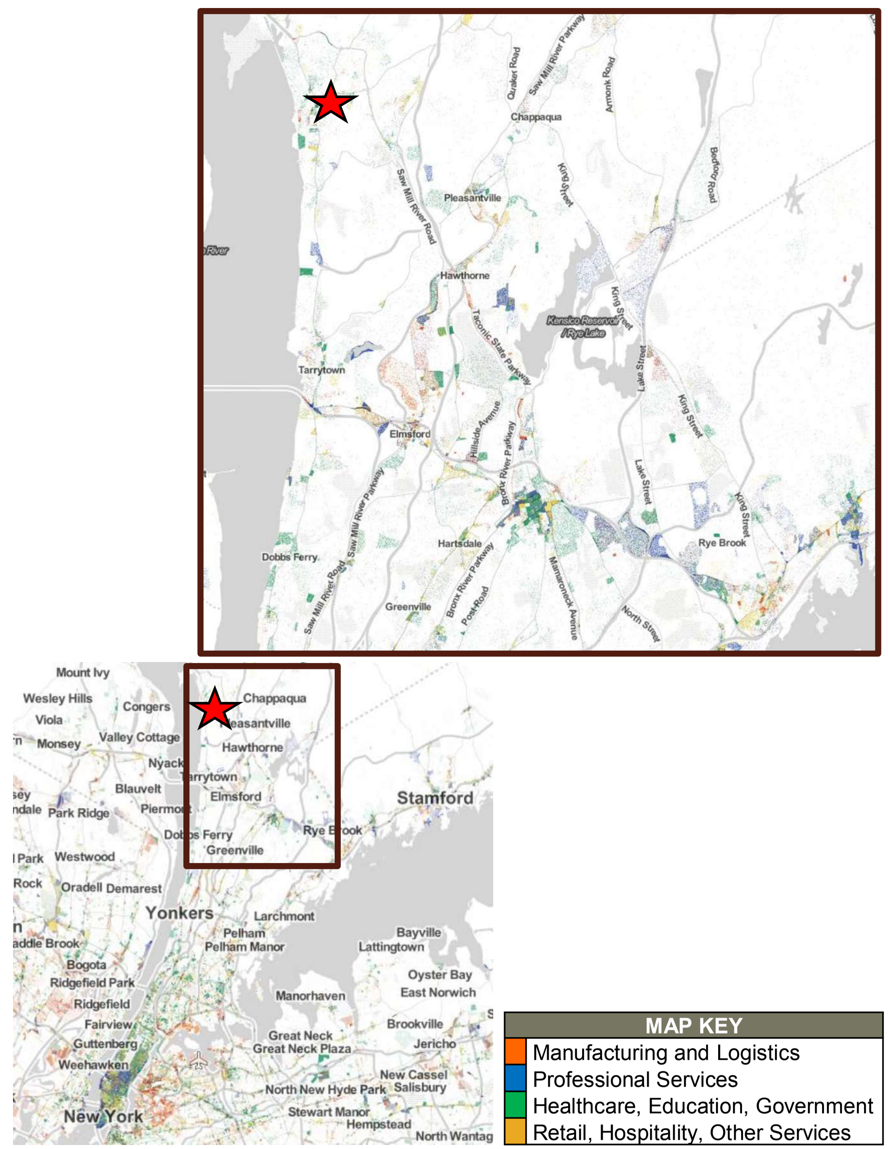
Regional Economic Outlook

- The subject site is located in Westchester County, NY, an affluent suburb of New York City.
- While many of the county's residents are employed in NYC, the county has a number of high-growth employment cores of its own, such as White Plains.
- The subject site is surrounded by numerous government and business offices, including MasterCard, IBM and PepsiCo headquarters, as well as a high volume of education and healthcare employees.

Employment, Household, and Population Growth; 1991-2022; New York-Jersey City-White Plains, NY NJ MD



Employment Map; 2014

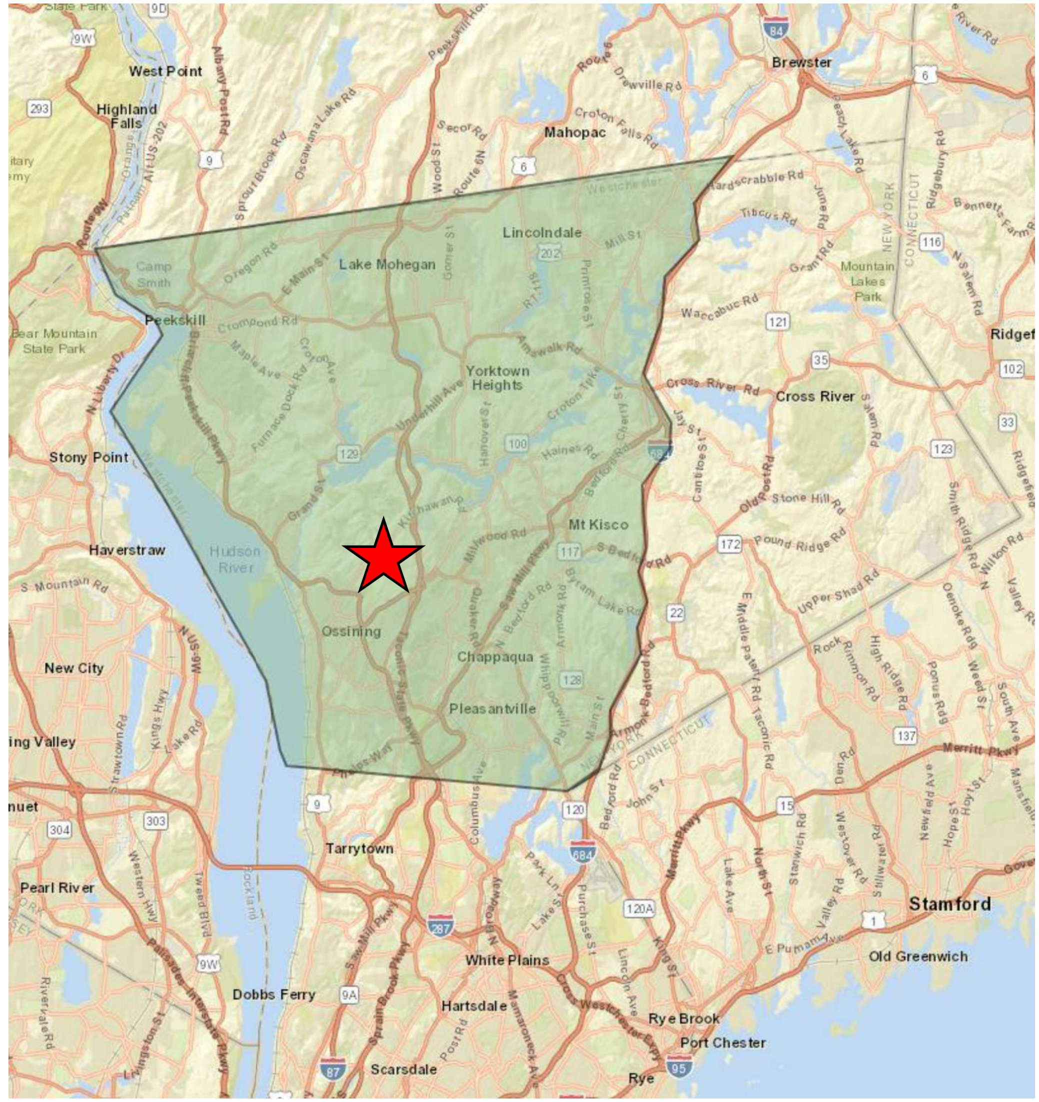


RCLCO

Supply/Demand Outlook

Primary Market Area

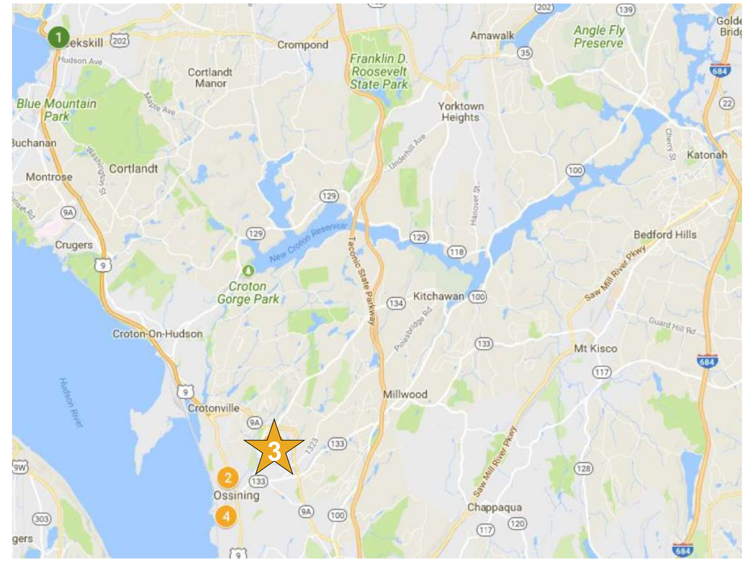
- The Primary Market Area (PMA) is the area from which a majority of renters at the subject site are expected to emanate.
- The PMA is defined as the northwestern portion of Westchester county, bounded by I-684 to the east, and cutting just north of Tarrytown to the south.



Source: Esri

PMA Historical Performance and Outlook

- Currently, there are four properties totaling 686 market-rate apartment homes that are expected to deliver in the PMA in the next five years.
- Of these, three properties totaling 508 units, which include the subject site, are located in Ossining.



Pipeline Communities Market Rate Units; Primary Market Area

MAP KEY	PROJECT NAME	CITY	STATE	DEVELOPER	STATUS	EST. OPENING	TOTAL UNITS	COMPETITIVENESS/ PROBABILITY	2018	2019	2020	2021	2022+
UNDER CONSTRUCTION													
1	Fort Hill Apartments	Peekskill	NY	Ginsburg Development Co.	Under Construction	2018	178	100%	178				
							178		**178**	**-**	**-**	**-**	**-**
PLANNED/PROPOSED													
2	Snowden Woods	Ossining	NY	Ossining River Associates	Planned	2022	169	80%					169
3	River Knoll	Ossining	NY	Glenco Residential	Planned	2021	169	100%				169	
4	Hudson Steppe	Ossining	NY	Orb Management	Planned	2021	170	80%				170	
							508	**87%**	**-**	**-**	**-**	**339**	**169**

Source: Axiometrics; CoStar; RCLCO

Demand and Supply Analysis

- Using a demographics-based statistical demand model, RCLCO estimates that there is annual structural demand for approximately 180 income-qualified (incomes of $100,000+) multifamily rental units in the subject site's PMA. In general, demand in the PMA is fueled by strong job growth and a desirable location in Ossining, NY.
- The subject property should be able to achieve an absorption pace of approximately 10 units per month. At this pace, the community will reach a stabilized occupancy rate of 95% in approximately 16 months. This pace assumes that the lease-up of Hudson Steppe overlaps with the subject site. However, if this property does not deliver as expected, the lease-up pace at the subject property is likely to be 15 units per month reducing market exposure to less than 12 months.
- This lease-up pace takes into account the limited pipeline of projects currently planned for delivery from 2020-2022, assuming that an average of 1-2 apartment communities are in lease-up in the PMA annually over that time period. The expected deliveries in 2021-2022 will come after two years of no new supply. Over a five year average, the market is expected to experience an average increase in supply of 140 units per year, compared with income qualified demand ($100,000) of approximately 180 units per year.

Annual Demand Analysis

AGE AND INCOME	RENT AS A % OF INCOME	AFFORDABLE MONTHLY RENT RANGE[1]	DEMAND FROM EXISTING RENTERS IN TURNOVER	ANNUAL RENTER DEMAND FROM NEW HHS	ANNUAL RENTAL DEMAND POOL	% MULTIFAMILY RENTERS[2]	% CHOOSE NEW[2]	ANNUAL MULTIFAMILY RENTER DEMAND FOR NEW UNITS
SUMMARY OF DEMAND BY INCOME AND RENT RANGE								
UNDER $35,000	33%	UNDER $960	1,563	170	1,732	49%	0%	-
$35,000 - $49,999	33% - 30%	$960 - $1,250	683	91	774	44%	0%	-
$50,000 - $74,999	30% - 28%	$1,250 - $1,750	1,006	142	1,148	40%	0%	-
$75,000 - $99,999	28% - 25%	$1,750 - $2,080	637	105	742	43%	20%	63
$100,000 - $149,999	25% - 20%	$2,080 - $2,500	765	113	878	45%	25%	100
$150,000 AND OVER	20%	$2,500 AND OVER	499	60	559	41%	35%	81
TOTAL			5,153	680	5,833	45%	9%	244

MARKET STATISTICS	
Market Rate Units at Subject Site	169
Units Delivering in a Similar Time Frame	90
Total Units (Competitive Units + Subject Site)	259
Income-Qualified Demand ($100,000+)	**181**
SUBJECT SITE CAPTURE OF INCOME-QUALIFIED DEMAND	
Subject Site Share of Income-Qualified Demand (RCLCO Estimate)	65%
Subject Site Capture of Income-Qualified Demand	**117**
Monthly Absorption Potential	**10**
Months to Stabilized Occupancy (95%)	**16.4**

[1] RCLCO determined propensity to spend on rent at various income levels. This was used to calculate the affordable monthly rent range for each income range
[2] Calculated using PUMS American Community Survey for Primary Market Area
SOURCE: Esri; American Community Survey PUMS; RCLCO

Supply and Demand Balance

- There are approximately 690 market-rate rental units (excluding purpose-built student housing, seniors housing, and tax credit housing) planned to deliver in the PMA in the next five years.
- At the same time, multifamily absorption has been strong, and rental rate growth and occupancy at stabilized properties is high. Of the comparable properties RCLCO surveyed, all stabilized properties had occupancy rates of 95% or higher.
- While there have been approximately 620 units completed since 2014 in the PMA, the market has been absorbing these quickly.
- Projected employment and household growth generate sufficient demand to capture the pipeline supply and the supply of new rental apartment homes is likely to remain constrained for the near term, particularly for high-quality Class A product.
- The peak of deliveries is expected to occur in 2021, but despite this the market is likely to stabilize at its current rate of 4% vacancy or lower.
- Even in the unlikely scenario of lower demand, and higher than anticipated supply, the market is likely to experience occupancy rates in the 94% to 95% range, which is considered very healthy.

PMA SUPPLY AND DEMAND BALANCE	LOW DEMAND	RCLCO ESTIMATE	HIGH DEMAND
Total Annual Income-Qualified Demand For New MF Units[1]		181	
Projected Demand Variance	*75%*	*100%*	*125%*
Annual New Rental Demand	136	181	226
Total 5-Year Demand	**679**	**905**	**1,131**
Planned and Proposed 5-Year Supply[2] *2Q 2018-2022*	**686**	**686**	**686**
	Oversupply or (Undersupply)		
If 80% of Planned Supply Delivers	(130)	(356)	(582)
If 90% of Planned Supply Delivers	(61)	(288)	(514)
If 100% of Planned Supply Delivers	7	(219)	(445)
If 110% of Planned Supply Delivers	76	(150)	(377)
If 120% of Planned Supply Delivers	144	(82)	(308)
Current Multifamily Occupancy Rate[3]	96.0%	96.0%	96.0%
Current Multifamily Vacant Supply[3]	145	145	145
Current Multifamily Supply[3]	3,621	3,621	3,621
	Projected 2018 Vacancy Rate		
If 80% of Planned Supply Delivers	constrained	constrained	constrained
If 90% of Planned Supply Delivers	1.9%	constrained	constrained
If 100% of Planned Supply Delivers	3.5%	constrained	constrained
If 110% of Planned Supply Delivers	5.1%	constrained	constrained
If 120% of Planned Supply Delivers	6.7%	1.5%	constrained

[1] See Exhibit V-4, new MF demand for households with incomes above $100,000.
[2] Axiometrics projected pipeline for PMA, see Exhibit IV-1 and IV-2.
[3] 2Q 2018 Data, CoStar

Rental Market Audience Segments





	POST-GRAD	YOUNG PROFESSIONAL	FAMILY	MATURE PROFESSIONALS	EMPTY NESTER
Description	Just completed degree, in first job or grad school, single	Well into career, singles and couples	Children at home, usually young children	Couples and singles, established wealth, rent due to life change or preference	Couple or single, active in community and socially
Motivated By…	Price-point, location, transit	Location, amenities, quality, transit	Value-orientation, convenience, good schools	Nice finishes and amenities, convenience	Downsizing, urban living, nice finishes, convenience of renting
Moves From	College housing	Older, less amenitized building in area or further from the city; relocating from other MSAs	Relocating to area; saving to buy a house	Older, less amenitized buildings in the area, or moving from downtown	Surrounding single family areas
Financial Status	$50,000	$110,000 (combined, lots of student loans)	$125,000 (waiting to buy home)	$140,000 (limited savings)	$150,000+ (saving for retirement)
Age Range	Early and mid 20's	Late 20's and 30's	30's and 40's	Late 30's, 40's, some 50's	60's, 70's
Unit Layout	2-BR roommates, Studio, 1-BR	Studio, 1-BR, 2-BR	2-BR, 3-BR	1-BR + Den, 2-BR	1-BR + Den, 2-BR, 2-BR + Den
Amenity Preferences	Pool, fitness, grill and lounge areas, pet amenities	Fitness, grill and lounge areas, pool, pet amenities	Fitness, outdoor open spaces, pet amenities, playrooms	Fitness, pet amenities, concierge services	Fitness, on-site storage, pet amenities, concierge
Opportunity to capture	**Limited –** Many will prefer more urban and metro-accessible locations, and are willing to seek cheaper, more efficient unit types	**Strong –** Young singles and couples looking for suburban quality of life and value, possibly considering transition into family lifestage	**Moderate –** Some families in transition, moving to the area and looking to buy.	**Strong–** Transient jobs and transitional life stages drive established singles and couples to suburbs near employment	**Strong–** Due to the distribution of larger units, the project is likely to attract empty nesters downsizing in the local area

Source: RCLCO

RCLCO

Critical Assumptions

Our conclusions are based on our analysis of the information available from our own sources and from the client as of the date of this report. We assume that the information is correct, complete, and reliable.

We made certain assumptions about the future performance of the global, national, and local economy and real estate market, and on other factors similarly outside either our control or that of the client. We analyzed trends and the information available to us in drawing these conclusions. However, given the fluid and dynamic nature of the economy and real estate markets, as well as the uncertainty surrounding particularly the near-term future, it is critical to monitor the economy and markets continuously and to revisit the aforementioned conclusions periodically to ensure that they are reflective of changing market conditions.

We assume that the economy and real estate markets will grow at a stable and moderate rate to 2020 and beyond. However, stable and moderate growth patterns are historically not sustainable over extended periods of time, the economy is cyclical, and real estate markets are typically highly sensitive to business cycles. Further, it is very difficult to predict when an economic and real estate upturn will end.

With the above in mind, we assume that the long term average absorption rates and price changes will be as projected, realizing that most of the time performance will be either above or below said average rates.

Our analysis does not consider the potential impact of future economic shocks on the national and/or local economy, and does not consider the potential benefits from major "booms" that may occur. Similarly, the analysis does not reflect the residual impact on the real estate market and the competitive environment of such a shock or boom. Also, it is important to note that it is difficult to predict changing consumer and market psychology.

As such, we recommend the close monitoring of the economy and the marketplace, and updating this analysis as appropriate.

Further, the project and investment economics should be "stress tested" to ensure that potential fluctuations in revenue and cost assumptions resulting from alternative scenarios regarding the economy and real estate market conditions will not cause failure.

In addition, we assume that the following will occur in accordance with current expectations:

- Economic, employment, and household growth.
- Other forecasts of trends and demographic and economic patterns, including consumer confidence levels.
- The cost of development and construction.
- Tax laws (i.e., property and income tax rates, deductibility of mortgage interest, and so forth).
- Availability and cost of capital and mortgage financing for real estate developers, owners and buyers.
- Competitive projects will be developed as planned (active and future) and that a reasonable stream of supply offerings will satisfy real estate demand.
- Major public works projects occur and are completed as planned.

Should any of the above change, this analysis should be updated, with the conclusions reviewed accordingly (and possibly revised).

General Limiting Conditions

Reasonable efforts have been made to ensure that the data contained in this study reflect accurate and timely information and are believed to be reliable. This study is based on estimates, assumptions, and other information developed by RCLCO from its independent research effort, general knowledge of the industry, and consultations with the client and its representatives. No responsibility is assumed for inaccuracies in reporting by the client, its agent, and representatives or in any other data source used in preparing or presenting this study. This report is based on information that to our knowledge was current as of the date of this report, and RCLCO has not undertaken any update of its research effort since such date.

Our report may contain prospective financial information, estimates, or opinions that represent our view of reasonable expectations at a particular time, but such information, estimates, or opinions are not offered as predictions or assurances that a particular level of income or profit will be achieved, that particular events will occur, or that a particular price will be offered or accepted. Actual results achieved during the period covered by our prospective financial analysis may vary from those described in our report, and the variations may be material. Therefore, no warranty or representation is made by RCLCO that any of the projected values or results contained in this study will be achieved.

Possession of this study does not carry with it the right of publication thereof or to use the name of "Robert Charles Lesser & Co." or "RCLCO" in any manner without first obtaining the prior written consent of RCLCO. No abstracting, excerpting, or summarization of this study may be made without first obtaining the prior written consent of RCLCO. This report is not to be used in conjunction with any public or private offering of securities or other similar purpose where it may be relied upon to any degree by any person other than the client without first obtaining the prior written consent of RCLCO. This study may not be used for any purpose other than that for which it is prepared or for which prior written consent has first been obtained from RCLCO.

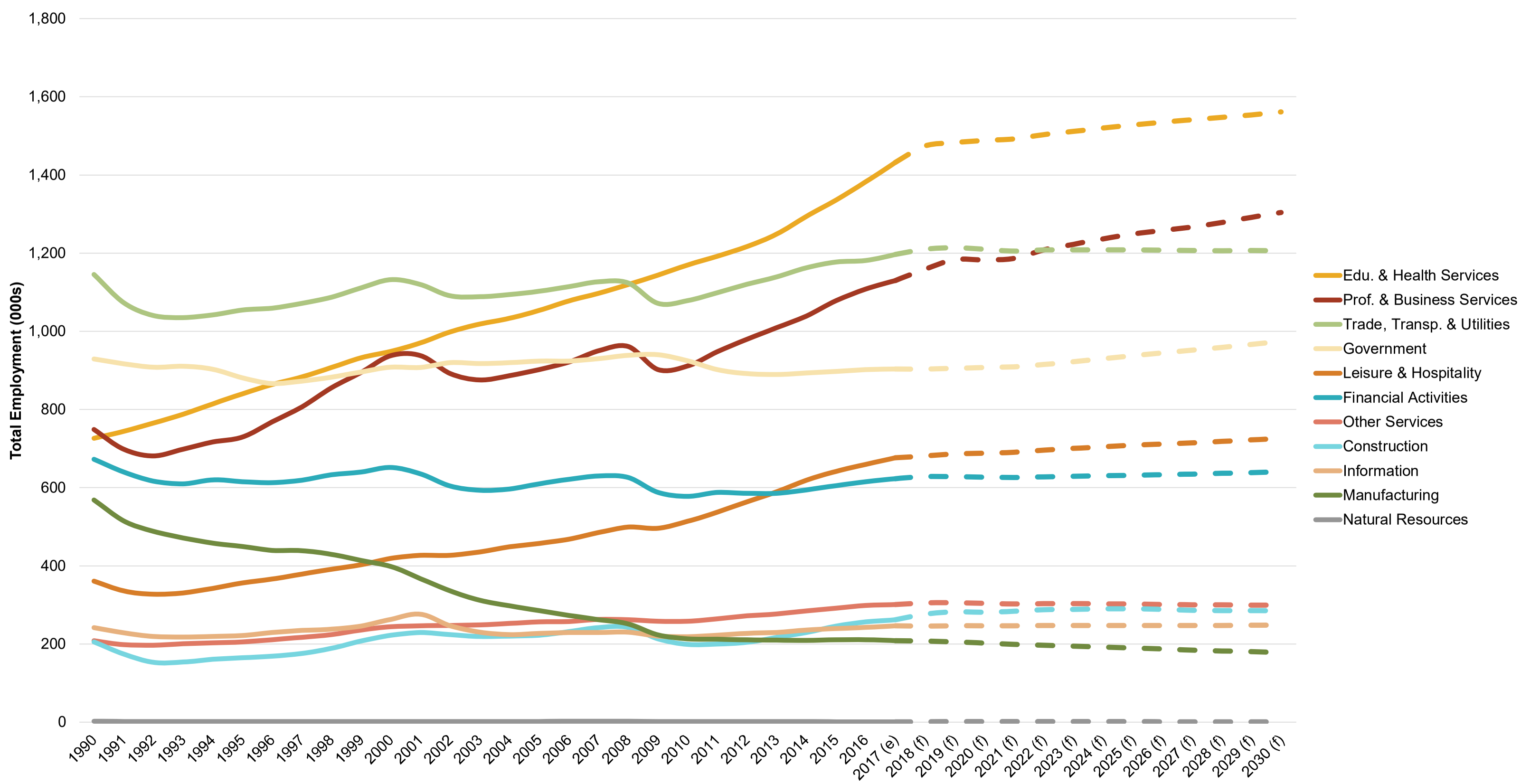
Appendix: Supporting Exhibits

I. MACROECONOMIC TRENDS

GLENCO RESIDENTIAL, LLC

Exhibit I-1

HISTORICAL AND FORECASTED NON-AGRICULTURAL EMPLOYMENT BY INDUSTRY
NEW YORK-JERSEY CITY-WHITE PLAINS, NY-NJ MD
1990-2030
(in thousands)



NOTE: (e) denotes estimated figure; (f) denotes forecasted figure.
SOURCE: Moody's Analytics; RCLCO

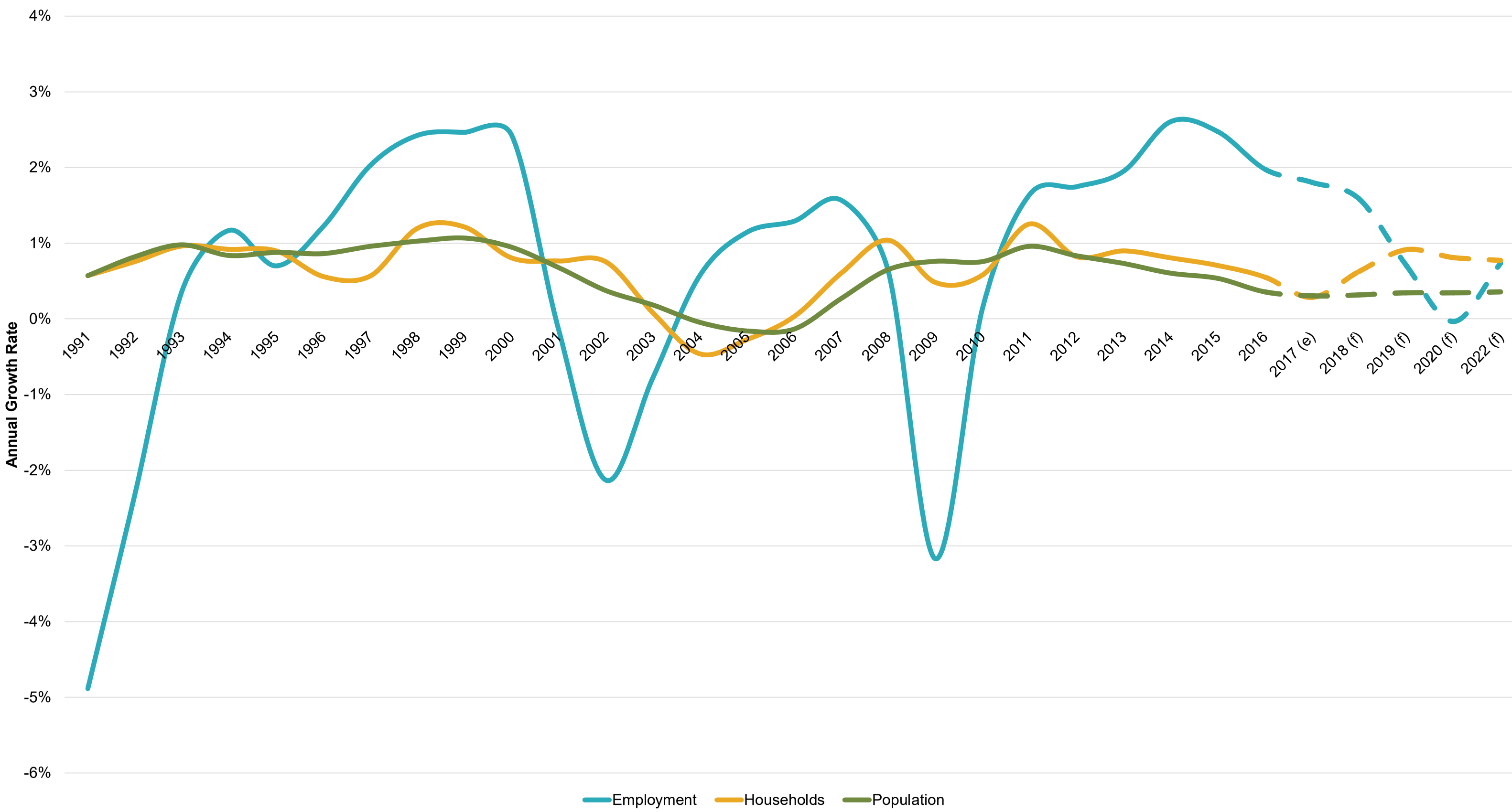
RCLCO REAL ESTATE ADVISORS

Exhibit I-1
U4-14297.00
Printed: 6/14/2018

GLENCO RESIDENTIAL, LLC

Exhibit I-2

HISTORICAL AND FORECASTED NON-AGRICULTURAL EMPLOYMENT, HOUSEHOLD, AND POPULATION GROWTH RATES
NEW YORK-JERSEY CITY-WHITE PLAINS, NY-NJ MD
1991-2022



NOTE: (e) denotes estimated figure; (f) denotes forecasted figure.
SOURCE: Moody's Analytics; RCLCO

RCLCO REAL ESTATE ADVISORS

Exhibit I-2
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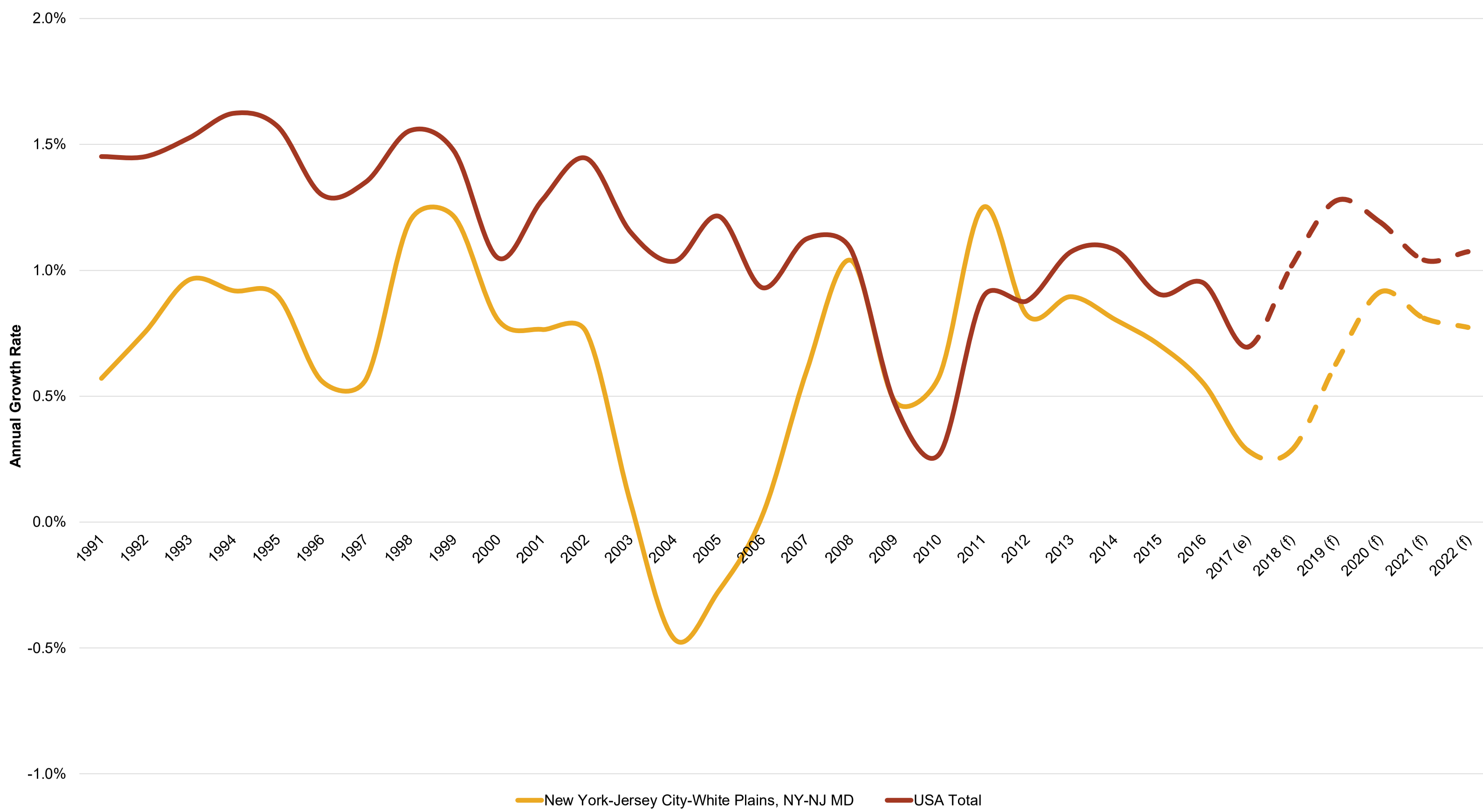
Exhibit I-3

HISTORICAL AND FORECASTED HOUSEHOLD GROWTH RATES
NEW YORK-JERSEY CITY-WHITE PLAINS, NY-NJ MD AND USA TOTAL
1991-2022



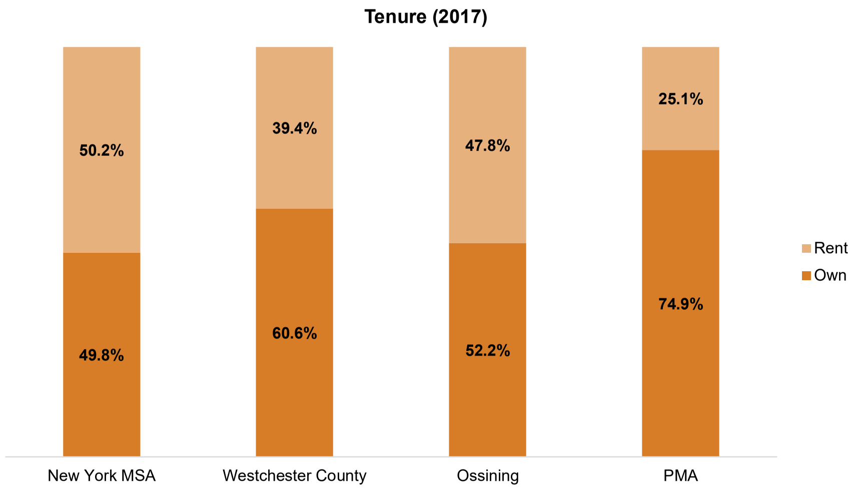
NOTE: (e) denotes estimated figure; (f) denotes forecasted figure.
SOURCE: Moody's Analytics; RCLCO

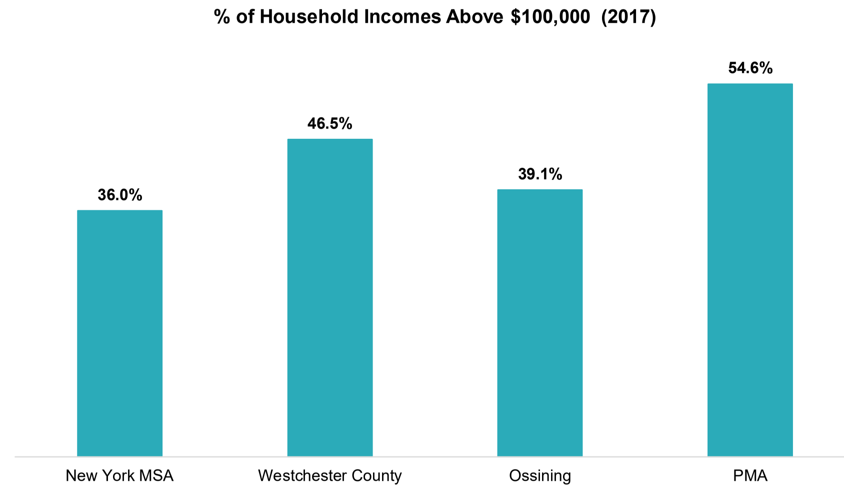
II. DEMOGRAPHICS

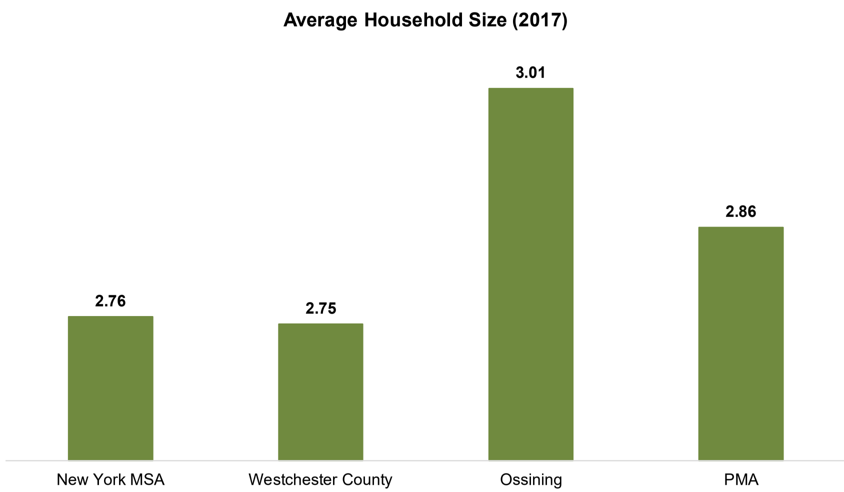
GLENCO RESIDENTIAL, LLC

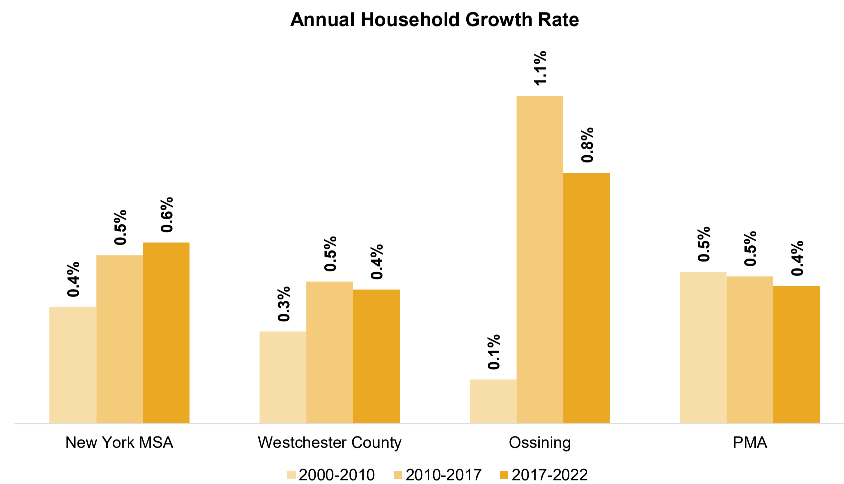
Exhibit II-1

COMPARISON OF KEY DEMOGRAPHIC CHARACTERISTICS
NEW YORK MSA, WESTCHESTER COUNTY, OSSINING, AND PMA
2000-2022









SOURCE: Esri; RCLCO

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Exhibit II-1
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Exhibit II-2

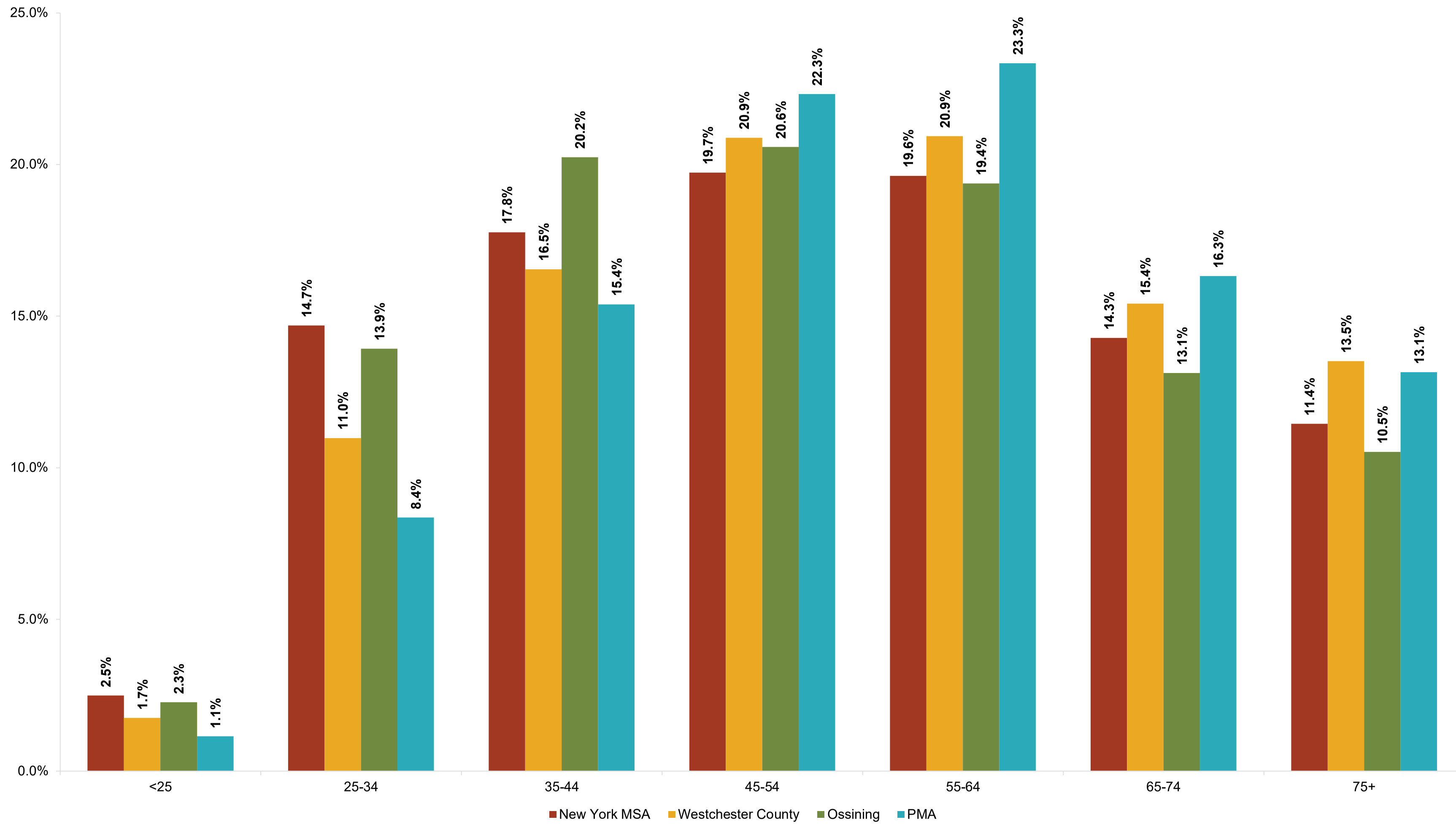
COMPARATIVE SOCIOECONOMIC CHARACTERISTICS
NEW YORK MSA, WESTCHESTER COUNTY, OSSINING, AND PMA
2000-2022

CHARACTERISTIC	NEW YORK MSA	WESTCHESTER COUNTY	OSSINING	PMA
POPULATION				
2000	18,941,082	923,459	24,010	218,355
2010	19,567,410	949,113	25,060	226,272
2017	20,487,271	985,735	27,009	235,652
2022	21,158,148	1,010,011	28,088	241,734
Growth Rate (2000-2010)	0.3%	0.3%	0.4%	0.4%
Growth Rate (2010-2017)	0.7%	0.5%	1.1%	0.6%
Growth Rate (2017-2022)	0.6%	0.5%	0.8%	0.5%
Per Capita Income (2017)	$38,309	$52,129	$35,896	$56,350
HOUSEHOLDS				
2000	6,890,641	337,142	8,227	76,043
2010	7,152,840	347,232	8,344	79,830
2017	7,428,362	358,471	8,978	82,512
2022	7,647,029	366,258	9,346	84,353
Growth Rate (2000-2010)	0.4%	0.3%	0.1%	0.5%
Growth Rate (2010-2017)	0.5%	0.5%	1.1%	0.5%
Growth Rate (2017-2022)	0.6%	0.4%	0.8%	0.4%
Owner Propensity (2017)	50%	61%	52%	75%
Renter Propensity (2017)	50%	39%	48%	25%
Average Household Size (2017)	2.76	2.75	3.01	2.86
Average Household Income (2017)	$104,217	$141,565	$106,516	$158,842
HOUSEHOLDS AGE DISTRIBUTION (2017)				
Under 35	17.2%	12.7%	16.2%	9.5%
35-54	37.5%	37.4%	40.8%	37.7%
Over 55	45.3%	49.9%	43.0%	52.8%
HOUSEHOLDS INCOME DISTRIBUTION (2017)				
Under $50,000	37.4%	29.1%	32.3%	22.2%
$50,000-$99,999	26.6%	24.5%	28.6%	23.1%
Over $100,000	36.0%	46.5%	39.1%	54.6%

NOTE: Primary Market Area is defined in Map.
SOURCE: Esri; RCLCO

Exhibit II-3

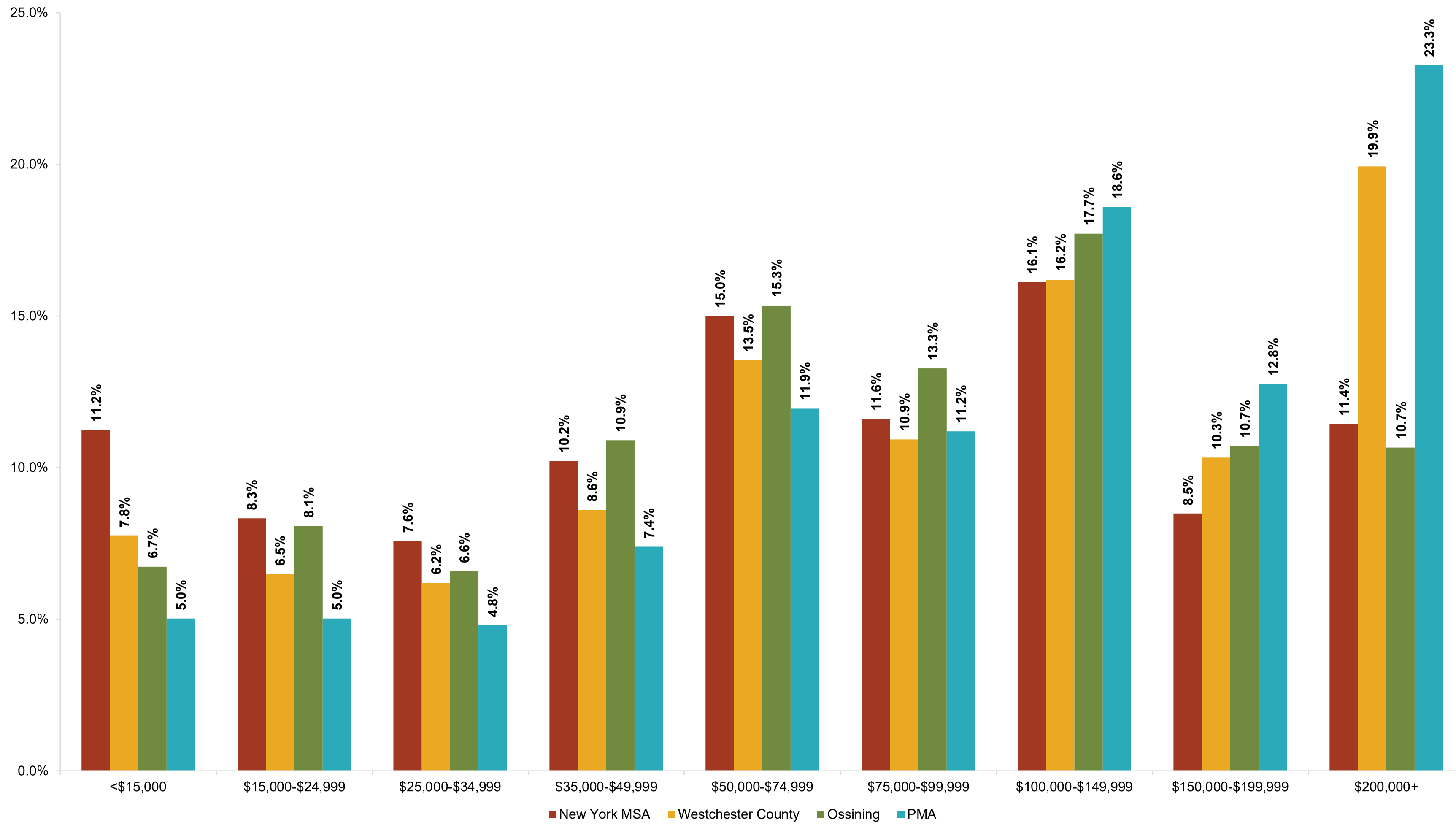
HOUSEHOLD DISTRIBUTION BY AGE
NEW YORK MSA, WESTCHESTER COUNTY, OSSINING, AND PMA
2017



SOURCE: Esri; RCLCO

Exhibit II-4

HOUSEHOLD DISTRIBUTION BY INCOME
NEW YORK MSA, WESTCHESTER COUNTY, OSSINING, AND PMA
2017



SOURCE: Esri; RCLCO

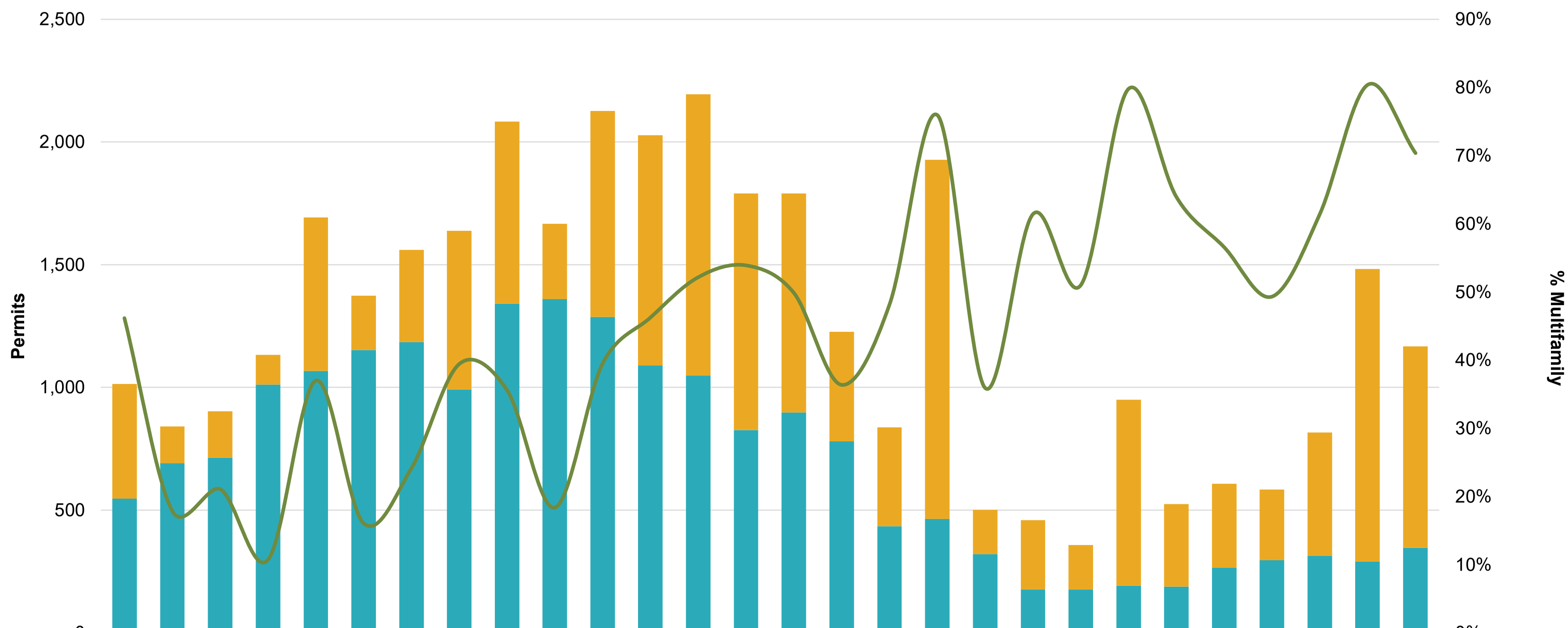
III. HUD PERMIT TRENDS

GLENCO RESIDENTIAL, LLC

Exhibit III-1

RESIDENTIAL PERMITTING ACTIVITY
WESTCHESTER COUNTY, NY
NEW YORK
1990-2017

	ANNUAL AVERAGE			
	SINGLE-FAMILY	MULTIFAMILY	TOTAL	% MULTIFAMILY
1990-1999	1,006	385	1,391	28%
2000-2009	733	755	1,488	51%
2010-2017	259	553	811	68%
1990-2017	**724**	**531**	**1,255**	**42%**



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Multifamily	468	150	190	121	626	221	377	646	742	306	839	938	1,145	965
Single-Family	546	691	713	1,011	1,067	1,152	1,184	992	1,342	1,360	1,287	1,090	1,049	826
% Multifamily	46%	18%	21%	11%	37%	16%	24%	39%	36%	18%	39%	46%	52%	54%

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Multifamily	892	446	403	1,464	180	282	182	758	335	344	288	501	1,192	821
Single-Family	898	780	434	464	321	177	175	192	189	264	296	315	291	346
% Multifamily	50%	36%	48%	76%	36%	61%	51%	80%	64%	57%	49%	61%	80%	70%

SOURCE: HUD

RCLCO REAL ESTATE ADVISORS

Exhibit III-1
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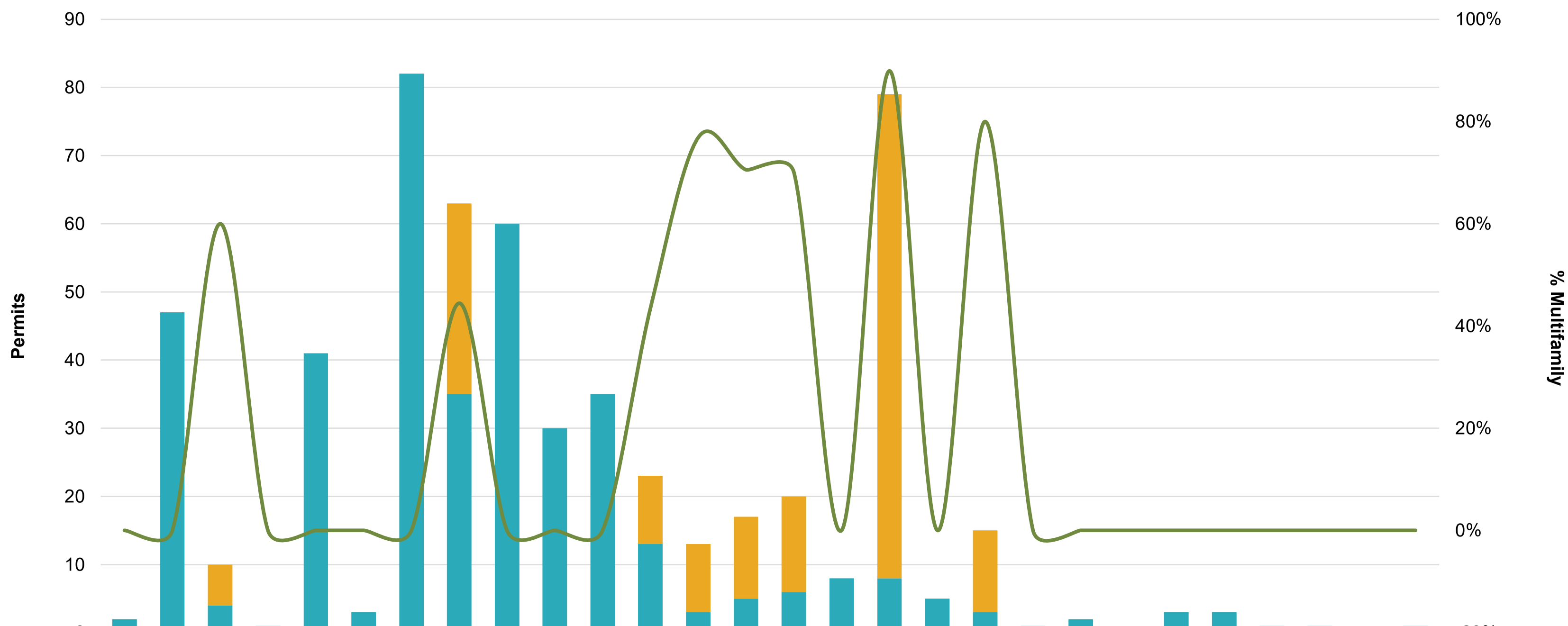
GLENCO RESIDENTIAL, LLC

Exhibit III-2

RESIDENTIAL PERMITTING ACTIVITY
OSSINING VILLAGE, NY
NEW YORK
1990-2017

	ANNUAL AVERAGE			
	SINGLE-FAMILY	MULTIFAMILY	TOTAL	% MULTIFAMILY
1990-1999	31	3	34	10%
2000-2009	9	13	22	60%
2010-2017	1	0	1	0%
1990-2017	**15**	**6**	**22**	**29%**



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Multifamily	0	0	6	0	0	0	0	28	0	0	0	10	10	12
Single-Family	2	47	4	1	41	3	82	35	60	30	35	13	3	5
% Multifamily	0%	0%	60%	0%	0%	0%	0%	44%	0%	0%	0%	43%	77%	71%

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Multifamily	14	0	71	0	12	0	0	0	0	0	0	0	0	0
Single-Family	6	8	8	5	3	1	2	0	3	3	1	1	0	1
% Multifamily	70%	0%	90%	0%	80%	0%	0%	0%	0%	0%	0%	0%	0%	0%

SOURCE: HUD

RCLCO REAL ESTATE ADVISORS

Exhibit III-2
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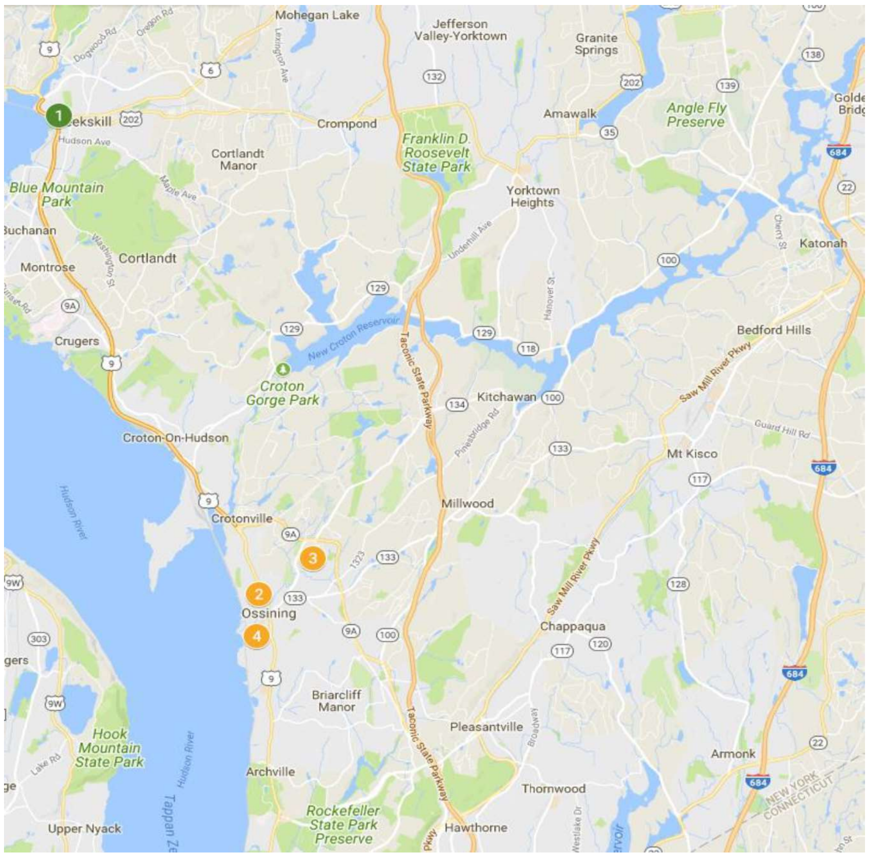
IV. APARTMENT PIPELINE

Exhibit IV-1

MAP OF APARTMENT DEVELOPMENT PIPELINE
PMA
JUNE 2018



SOURCE: CoStar; Axiometrics; RCLCO

MAP KEY	PROJECT	DEVELOPER	EST. OPENING	TOTAL UNITS
	UNDER CONSTRUCTION			
1	Fort Hill Apartments	Ginsburg Development Companies	2018	178
				178
	PLANNED/PROPOSED			
2	Snowden Woods	Ossining River Associates	2022	169
3	River Knoll	Glenco Residential	2021	169
4	Hudson Steppe	Orb Management	2021	170
				508

Exhibit IV-2

APARTMENT DEVELOPMENT PIPELINE
PMA
JUNE 2018

MAP KEY	PROJECT NAME	ADDRESS	CITY	STATE	DEVELOPER	STATUS	EST. OPENING	TOTAL UNITS	COMPETITIVENESS/PROBABILITY	2018	2019	2020	2021	2022+
	UNDER CONSTRUCTION													
1	Fort Hill Apartments	1 St Mary's Convent	Peekskill	NY	Ginsburg Development Companies	Under Construction	2018	178	100%	178				
								178		**178**	**-**	**-**	**-**	**-**
	PLANNED/PROPOSED													
2	Snowden Woods	23 Snowden Ave	Ossining	NY	Ossining River Associates	Planned	2022	169	80%					169
3	River Knoll	40 Croton Dam Rd	Ossining	NY	Glenco Residential	Planned	2021	169	100%				169	
4	Hudson Steppe	34 State St	Ossining	NY	Orb Management	Planned	2021	170	80%				170	
								508	**87%**	**-**	**-**	**-**	**339**	**169**

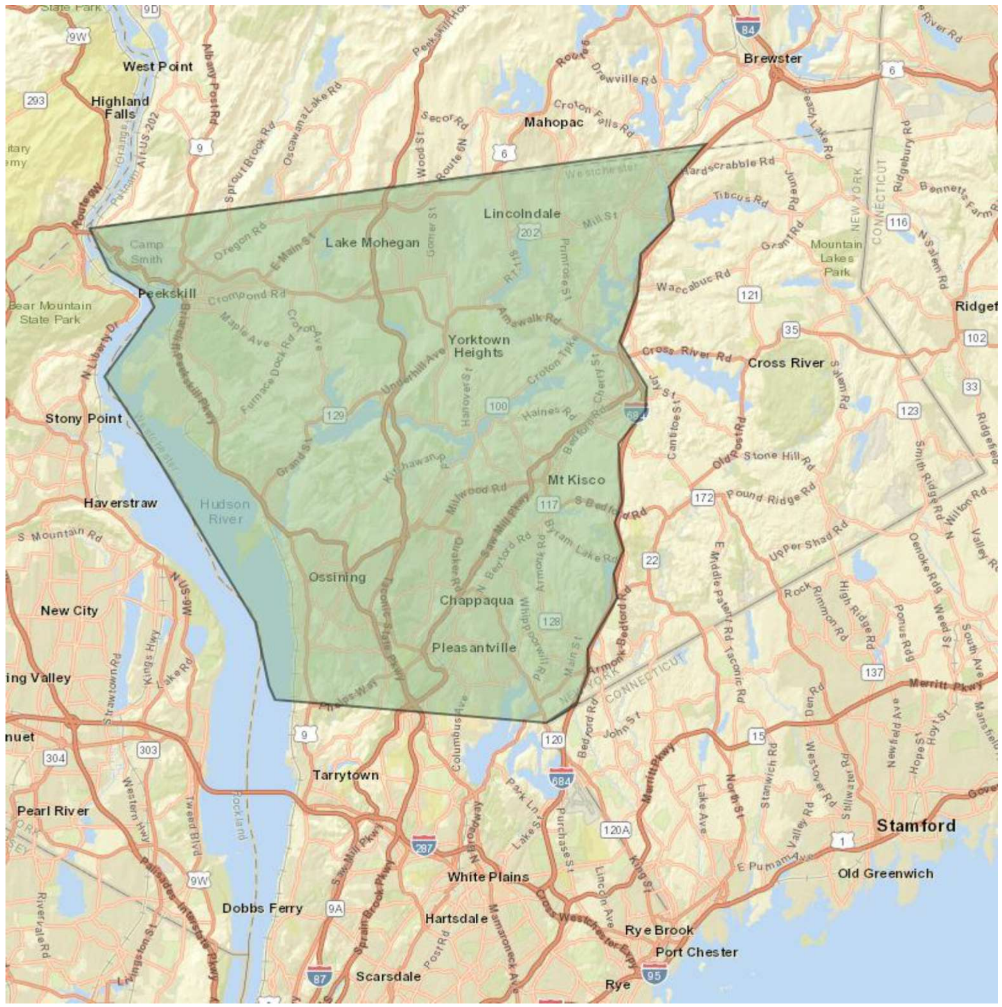
SOURCE: CoStar; Axiometrics; RCLCO

V. APARTMENT DEMAND

GLENCO RESIDENTIAL, LLC

Exhibit V-1

MAP OF PRIMARY MARKET AREA (PMA)
PMA
JUNE 2018



SOURCE: Esri; RCLCO

RCLCO REAL ESTATE ADVISORS

Exhibit V-1
U4-14297.00
Printed: 6/14/2018

Exhibit V-2

DEFINITION OF RENTER LIFESTAGES AND MARKET SEGMENTS
PMA
2017-2022

			AGE - LIFESTAGE				
INCOME	HOUSEHOLD TYPE	ECONOMIC SEGMENT	UNDER 25	25-34	35-54	55-64	65+
UNDER $35,000	Single	Affordable	Post-Grad	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Couple	Affordable	Post-Grad	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Roommates	Affordable	Post-Grad	Young Professional	Mature Professional	Mature Professional	Empty Nester
	Family	Affordable	Family	Family	Family	Family	Family
$35,000 - $49,999	Single	Workforce	Post-Grad	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Couple	Workforce	Post-Grad	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Roommates	Affordable	Post-Grad	Young Professional	Mature Professional	Mature Professional	Empty Nester
	Family	Affordable	Family	Family	Family	Family	Family
$50,000 - $99,999	Single	Market Rate	Post-Grad	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Couple	Market Rate	Post-Grad	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Roommates	Workforce	Post-Grad	Young Professional	Mature Professional	Mature Professional	Empty Nester
	Family	Workforce	Family	Family	Family	Family	Family
$100,000 - $149,999	Single	Luxury	Young Professional	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Couple	Market Rate	Post-Grad	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Roommates	Market Rate	Post-Grad	Young Professional	Mature Professional	Mature Professional	Empty Nester
	Family	Market Rate	Family	Family	Family	Family	Family
$150,000 AND OVER	Single	Luxury	Young Professional	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Couple	Luxury	Young Professional	Young Professional	Mature Professional	Empty Nester	Empty Nester
	Roommates	Luxury	Young Professional	Young Professional	Mature Professional	Mature Professional	Empty Nester
	Family	Luxury	Family	Family	Family	Family	Family

SOURCE: RCLCO

Exhibit V-3

CAPTURE RATE ANALYSIS
SUBJECT SITE DEVELOPMENT
2017-2022

MARKET STATISTICS	
Units at Subject Site	169
Over/(Under) Supply at 95% Occupancy	0
Units Delivering in a Similar Time Frame	90
Total Competitive Units	90
Total Units (Competitive Units + Subject Site)	259
Subject Site Share of Total Units (Fair Share)	65.3%
Total Demand	244
Income-Qualified Demand ($100,000+)	**181**

SUBJECT SITE CAPTURE OF INCOME-QUALIFIED DEMAND	
Subject Site Capture of Income-Qualified Demand	**118**
Monthly Absorption Potential	**10**
Months to Stabilized Occupancy (95%)	**16.4**

SOURCE: Esri; American Community Survey PUMS; RCLCO

Exhibit V-4

CAPTURE RATE ANALYSIS
SUBJECT SITE DEVELOPMENT
2017-2022

MARKET STATISTICS	LOW	MEDIUM	HIGH	RCLCO ESTIMATE
Units at Subject Site	169	169	169	
Over/(Under) Supply at 95% Occupancy	0	0	0	
Units Delivering in a Similar Time Frame	0	90	170	
Total Competitive Units	0	90	170	
Total Units (Competitive Units + Subject Site)	169	259	339	
Subject Site Share of Total Units (Fair Share)	100.0%	65.3%	49.9%	
RCLCO Estimate				65.0%
Total Demand		244		
Income-Qualified Demand ($100,000+)		**181**		

SUBJECT SITE CAPTURE	FAIR SHARE CAPTURE			
	LOW	MEDIUM	HIGH	RCLCO ESTIMATE
Subject Site Capture of Income-Qualified Demand	**181**	**118**	**90**	**117**
Monthly Absorption Potential	**15**	**10**	**7**	**10**
Months to Stabilized Occupancy (95%)	**10.7**	**16.4**	**21.4**	**16.4**

SOURCE: Esri; American Community Survey PUMS; RCLCO

Exhibit V-5

ANNUAL MULTIFAMILY RENTAL DEMAND FOR NEW UNITS
PMA
2017-2022

					DEMAND FROM EXISTING RENTERS						DEMAND FROM EXISTING OWNERS						DEMAND FROM NEW HOUSEHOLDS			TOTAL ANNUAL DEMAND				
AGE AND INCOME	RENT AS A % OF INCOME	AFFORDABLE MONTHLY RENT RANGE[1]	TOTAL HHS[2] #	TOTAL HHS[2] %	RENTERS[3] %	RENTERS[3] #	IN TURNOVER[3] %	IN TURNOVER[3] #	RENTERS BECOMING OWNERS %	RENTERS BECOMING OWNERS #	OWNERS	IN TURNOVER[3] %	IN TURNOVER[3] #	OWNERS BECOMING RENTERS %	OWNERS BECOMING RENTERS #	DEMAND FROM EXISTING HHS IN TURNOVER	NET NEW HHS	RENTERS[3]	ANNUAL RENTER DEMAND FROM NEW HHS[4]	ANNUAL RENTER DEMAND POOL	CHOOSE MULTIFAMILY RENTALS[3] %	CHOOSE MULTIFAMILY RENTALS[3] #	CHOOSE NEW[3] %	CHOOSE NEW[3] #
UNDER 25			**939**	**100%**		**930**		**521**		**-**	**9**		**1**		**-**	**521**	**126**		**125**	**647**		**364**		**30**
UNDER $35,000	33%	UNDER $960	232	25%	99%	230	60%	138	0%	-	2	8%	0	0%	-	138	31	99%	31	169	60%	101	0%	-
$35,000 - $49,999	33% - 30%	$960 - $1,250	153	16%	99%	151	60%	91	0%	-	2	8%	0	0%	-	91	21	99%	20	111	55%	61	0%	-
$50,000 - $74,999	30% - 28%	$1,250 - $1,750	226	24%	99%	224	55%	123	0%	-	2	8%	0	0%	-	123	30	99%	30	153	55%	84	0%	-
$75,000 - $99,999	28% - 25%	$1,750 - $2,080	147	16%	99%	146	55%	80	0%	-	1	8%	0	0%	-	80	20	99%	20	100	55%	55	20%	11
$100,000 - $149,999	25% - 20%	$2,080 - $2,500	92	10%	99%	91	50%	46	0%	-	1	8%	0	0%	-	46	12	99%	12	58	55%	32	25%	8
$150,000 AND OVER	20%	$2,500 AND OVER	89	9%	99%	88	50%	44	0%	-	1	8%	0	0%	-	44	12	99%	12	56	55%	31	35%	11
25-34			**6,897**	**100%**		**3,456**		**1,523**		**(63)**	**3,441**		**275**		**-**	**1,459**	**652**		**327**	**1,786**		**744**		**87**
UNDER $35,000	33%	UNDER $960	1,029	15%	95%	978	44%	426	0%	-	51	8%	4	0%	-	426	97	95%	92	518	35%	180	0%	-
$35,000 - $49,999	33% - 30%	$960 - $1,250	631	9%	70%	442	42%	186	0%	-	189	8%	15	0%	-	186	60	70%	42	227	40%	91	0%	-
$50,000 - $74,999	30% - 28%	$1,250 - $1,750	1,022	15%	66%	679	41%	278	-3%	(8)	343	8%	27	0%	-	270	97	66%	64	334	40%	134	0%	-
$75,000 - $99,999	28% - 25%	$1,750 - $2,080	1,066	15%	54%	572	40%	229	-5%	(11)	494	8%	40	0%	-	217	101	54%	54	271	45%	122	20%	24
$100,000 - $149,999	25% - 20%	$2,080 - $2,500	1,501	22%	35%	525	48%	251	-10%	(25)	976	8%	78	0%	-	226	142	35%	50	276	50%	138	25%	34
$150,000 AND OVER	20%	$2,500 AND OVER	1,648	24%	16%	259	59%	153	-12%	(18)	1,389	8%	111	0%	-	135	156	16%	25	159	50%	80	35%	28
35-44			**12,694**	**100%**		**4,492**		**1,125**		**(51)**	**8,202**		**656**		**-**	**1,074**	**623**		**220**	**1,294**		**362**		**43**
UNDER $35,000	33%	UNDER $960	1,431	11%	71%	1,012	25%	253	0%	-	419	8%	34	0%	-	253	70	71%	50	303	23%	71	0%	-
$35,000 - $49,999	33% - 30%	$960 - $1,250	804	6%	72%	583	25%	146	0%	-	221	8%	18	0%	-	146	39	72%	29	174	35%	61	0%	-
$50,000 - $74,999	30% - 28%	$1,250 - $1,750	1,265	10%	72%	905	25%	231	-3%	(7)	360	8%	29	0%	-	224	62	72%	44	268	22%	59	0%	-
$75,000 - $99,999	28% - 25%	$1,750 - $2,080	1,485	12%	40%	599	25%	150	-5%	(7)	886	8%	71	0%	-	142	73	40%	29	172	30%	52	20%	10
$100,000 - $149,999	25% - 20%	$2,080 - $2,500	2,508	20%	37%	925	25%	231	-10%	(23)	1,583	8%	127	0%	-	208	123	37%	45	253	35%	89	25%	22
$150,000 AND OVER	20%	$2,500 AND OVER	5,201	41%	9%	467	25%	115	-12%	(14)	4,734	8%	379	0%	-	101	255	9%	23	124	25%	31	35%	11
45-54			**18,414**	**100%**		**3,538**		**884**		**(23)**	**14,876**		**1,190**		**-**	**862**	**170**		**33**	**894**		**365**		**34**
UNDER $35,000	33%	UNDER $960	1,619	9%	55%	892	25%	223	0%	-	727	8%	58	0%	-	223	15	55%	8	231	43%	100	0%	-
$35,000 - $49,999	33% - 30%	$960 - $1,250	950	5%	50%	475	25%	119	0%	-	475	8%	38	0%	-	119	9	50%	4	123	40%	49	0%	-
$50,000 - $74,999	30% - 28%	$1,250 - $1,750	1,683	9%	51%	852	25%	213	-3%	(6)	831	8%	66	0%	-	207	16	51%	8	215	38%	82	0%	-
$75,000 - $99,999	28% - 25%	$1,750 - $2,080	1,766	10%	22%	396	25%	99	-5%	(5)	1,370	8%	110	0%	-	94	16	22%	4	98	40%	39	20%	8
$100,000 - $149,999	25% - 20%	$2,080 - $2,500	3,605	20%	16%	565	25%	141	-5%	(7)	3,040	8%	243	0%	-	134	33	16%	5	139	45%	63	25%	16
$150,000 AND OVER	20%	$2,500 AND OVER	8,791	48%	4%	358	25%	90	-5%	(4)	8,433	8%	675	0%	-	85	81	4%	3	88	35%	31	35%	11
55-64			**19,256**	**100%**		**2,820**		**473**		**(3)**	**16,436**		**822**		**53**	**522**	**76**		**11**	**533**		**299**		**29**
UNDER $35,000	33%	UNDER $960	2,271	12%	54%	1,221	17%	201	0%	-	1,050	5%	53	5%	3	204	9	54%	5	209	61%	128	0%	-
$35,000 - $49,999	33% - 30%	$960 - $1,250	1,021	5%	23%	234	17%	40	0%	-	787	5%	39	5%	2	42	4	23%	1	43	56%	24	0%	-
$50,000 - $74,999	30% - 28%	$1,250 - $1,750	1,758	9%	21%	364	17%	62	0%	-	1,394	5%	70	5%	3	65	7	21%	1	67	55%	37	0%	-
$75,000 - $99,999	28% - 25%	$1,750 - $2,080	2,007	10%	13%	260	16%	42	-2%	(1)	1,747	5%	87	5%	4	45	8	13%	1	46	55%	25	20%	5
$100,000 - $149,999	25% - 20%	$2,080 - $2,500	3,830	20%	14%	522	19%	98	-2%	(2)	3,308	5%	165	7%	12	108	15	14%	2	110	54%	59	25%	15
$150,000 AND OVER	20%	$2,500 AND OVER	8,369	43%	3%	219	14%	30	-2%	(1)	8,150	5%	408	7%	29	58	33	3%	1	59	45%	26	35%	9
65+			**24,311**	**100%**		**3,862**		**678**		**-**	**20,449**		**613**		**36**	**715**	**(1,278)**		**(36)**	**679**		**465**		**21**
UNDER $35,000	33%	UNDER $960	5,674	23%	38%	2,178	14%	314	0%	-	3,496	3%	105	5%	5	319	(298)	38%	(16)	302	88%	266	0%	-
$35,000 - $49,999	33% - 30%	$960 - $1,250	2,541	10%	26%	654	15%	98	0%	-	1,887	3%	57	5%	3	101	(134)	26%	(5)	96	59%	56	0%	-
$50,000 - $74,999	30% - 28%	$1,250 - $1,750	3,905	16%	10%	408	27%	112	0%	-	3,497	3%	105	5%	5	117	(205)	10%	(6)	111	60%	67	0%	-
$75,000 - $99,999	28% - 25%	$1,750 - $2,080	2,770	11%	8%	213	26%	54	0%	-	2,557	3%	77	5%	4	58	(146)	8%	(3)	55	44%	24	20%	5
$100,000 - $149,999	25% - 20%	$2,080 - $2,500	3,796	16%	4%	151	24%	36	0%	-	3,645	3%	109	7%	8	43	(200)	4%	(2)	41	45%	19	25%	5
$150,000 AND OVER	20%	$2,500 AND OVER	5,625	23%	5%	259	25%	65	0%	-	5,366	3%	161	7%	11	76	(296)	5%	(3)	73	45%	32	35%	11

GLENCO RESIDENTIAL, LLC

Exhibit V-5

ANNUAL MULTIFAMILY RENTAL DEMAND FOR NEW UNITS
PMA
2017-2022

					DEMAND FROM EXISTING RENTERS						DEMAND FROM EXISTING OWNERS							DEMAND FROM NEW HOUSEHOLDS		TOTAL ANNUAL DEMAND				
AGE AND INCOME	RENT AS A % OF INCOME	AFFORDABLE MONTHLY RENT RANGE[1]	TOTAL HHS[2]		RENTERS[3]		IN TURNOVER[3]		RENTERS BECOMING OWNERS		OWNERS	IN TURNOVER[3]		OWNERS BECOMING RENTERS		DEMAND FROM EXISTING HHS IN TURNOVER	NET NEW HHS	RENTERS[3]	ANNUAL RENTER DEMAND FROM NEW HHS[4]	ANNUAL RENTER DEMAND POOL	CHOOSE MULTIFAMILY RENTALS[3]		CHOOSE NEW[3]	
			#	%	%	#	%	#	%	#		%	#	%	#						%	#	%	#
SUMMARY OF DEMAND BY AGE GROUP																								
UNDER 25			939	1%	99%	930	56%	521	0%	-	9	8%	1	0%	-	521	126	99%	125	647	56%	364	8%	30
25-34			6,897	8%	50%	3,456	44%	1,523	-4%	(63)	3,441	8%	275	0%	-	1,459	652	50%	327	1,786	42%	744	12%	87
35-44			12,694	15%	35%	4,492	25%	1,125	-5%	(51)	8,202	8%	656	0%	-	1,074	623	35%	220	1,294	28%	362	12%	43
45-54			18,414	22%	19%	3,538	25%	884	-3%	(23)	14,876	8%	1,190	0%	-	862	170	19%	33	894	41%	365	9%	34
55-64			19,256	23%	15%	2,820	17%	473	-1%	(3)	16,436	5%	822	6%	53	522	76	15%	11	533	56%	299	10%	29
65+			24,311	29%	16%	3,862	18%	678	0%	-	20,449	3%	613	6%	36	715	(1,278)	3%	(36)	679	68%	465	4%	21
TOTAL			82,511	100%	23%	19,097	27%	5,205	-3%	(141)	63,414	6%	3,558	2%	89	5,153	369		680	5,833	45%	2,599	9%	244
SUMMARY OF DEMAND BY INCOME AND RENT RANGE																								
UNDER $35,000	33%	UNDER $960	12,256	15%	53%	6,511	24%	1,555		-	5,745		253		8	1,563	(76)		170	1,732	49%	847	0%	-
$35,000 - $49,999	33% - 30%	$960 - $1,250	6,100	7%	42%	2,539	27%	679		-	3,561		167		5	683	(1)		91	774	44%	342	0%	-
$50,000 - $74,999	30% - 28%	$1,250 - $1,750	9,859	12%	35%	3,433	30%	1,019		(22)	6,426		297		9	1,006	6		142	1,148	40%	463	0%	-
$75,000 - $99,999	28% - 25%	$1,750 - $2,080	9,241	11%	24%	2,185	30%	654		(25)	7,056		384		8	637	72		105	742	43%	317	20%	63
$100,000 - $149,999	25% - 20%	$2,080 - $2,500	15,332	19%	18%	2,779	29%	803		(57)	12,553		723		19	765	126		113	878	45%	398	25%	100
$150,000 AND OVER	20%	$2,500 AND OVER	29,723	36%	6%	1,651	30%	496		(37)	28,072		1,733		40	499	241		60	559	41%	231	35%	81
TOTAL			82,511	100%	23%	19,097	27%	5,205		(141)	63,414		3,558		89	5,153	369		680	5,833	45%	2,599	9%	244

[1] RCLCO determined propensity to spend on rent at various income levels. This was used to calculate the affordable monthly rent range for each income range

[2] Calculated using Esri Age by Income data

[3] Calculated using PUMS American Community Survey for Primary Market Area

[4] Applies PUMS American Community Survey data for Primary Market Area to annual net new households within the Primary Market Area. Where negative net new households are expected, applies PUMS American Community Survey data for % renter and % in turnover to the negative net new households

SOURCE: Esri; American Community Survey PUMS; RCLCO

GLENCO RESIDENTIAL, LLC

Exhibit V-6

ANNUAL MULTIFAMILY RENTER DEMAND FOR NEW UNITS BY LIFESTAGE AND ECONOMIC SEGMENT
PMA
2017-2022

ECONOMIC SEGMENT	LIFESTAGE					TOTAL
	POST-GRAD	YOUNG PROFESSIONAL	FAMILY	MATURE PROFESSIONAL	EMPTY NESTER	
AFFORDABLE	0	0	0	0	0	**0**
	0%	0%	0%	0%	0%	**0%**
WORKFORCE	0	2	24	5	0	**31**
	0%	1%	10%	2%	0%	**13%**
MARKET RATE	15	37	13	29	13	**107**
	6%	15%	5%	12%	5%	**44%**
LUXURY	0	31	32	28	15	**106**
	0%	13%	13%	11%	6%	**43%**
TOTAL	**15**	**70**	**69**	**62**	**28**	**244**
	6%	**29%**	**28%**	**25%**	**12%**	**100%**

SOURCE: Esri; American Community Survey PUMS; RCLCO

RCLCO REAL ESTATE ADVISORS

Exhibit V-6
U4-14297.00
Printed: 6/14/2018

Exhibit V-7

ANNUAL MULTIFAMILY RENTER DEMAND FOR NEW UNITS BY AGE AND INCOME
PMA
2017-2022

	AGE					
INCOME	UNDER 25	25-34	35-54	55-64	65+	TOTAL
UNDER $35,000	0 0%	0 0%	0 0%	0 0%	0 0%	**0** **0%**
$35,000 - $49,999	0 0%	0 0%	0 0%	0 0%	0 0%	**0** **0%**
$50,000 - $99,999	11 4%	24 10%	18 7%	5 2%	5 2%	**63** **26%**
$100,000 - $149,999	8 3%	34 14%	38 16%	15 6%	5 2%	**100** **41%**
$150,000 AND OVER	11 4%	28 11%	22 9%	9 4%	11 5%	**81** **33%**
TOTAL	**30** **12%**	**87** **36%**	**78** **32%**	**29** **12%**	**21** **9%**	**244** **100%**

SOURCE: Esri; American Community Survey PUMS; RCLCO

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