VOLUNTARY DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Riverview Lofts

Site Plan/Special Permit Application

SCTM: 600-129-1-21 & 22
Hamlet of Riverhead, Town of Riverhead
Suffolk County, New York

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NP&V Project No. 16068

June 2017

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B Miscellaneous Documents

B-1 EAF Part 1, NP&V, LLC, *December 8, 2016*
B-2 Photographs of Site and Vicinity, NP&V, LLC, *Photographs taken in October 2016*
B-3 Phase I Environmental Site Assessment (ESA) for 221 East Main Street (text and Appendix I only), Cashin Associates, P.C., *November 7, 2014*
B-4 Phase I Environmental Site Assessment for 31 McDermott Avenue (text and figures only), NP&V, LLC, *October 6, 2016*
B-5 Town of Riverhead East Main Street Urban Renewal Plan Update 2008 (text only), Town of Riverhead Community Development Agency, *October 2008*
B-6 Geotechnical Evaluation, 221 E. Main Street and 31 McDermott Avenue, J.R. Holzmacher P.E., LLC, *May 12, 2016*
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SUMMARY

SUMMARY

Introduction

This document is a Voluntary Draft Environmental Impact Statement (DEIS) for a project known as **Riverview Lofts** (hereafter, the *"proposed project"*). The site of this proposal is in the downtown area of Riverhead hamlet, Town of Riverhead (hereafter, *"the project site"* or *"the subject site"*). **Figures 1-1a and 1-1b** provide regional and local location maps of the project site, respectively *(all figures will be found in the section following the main text of this document)*. Note that the site is currently occupied by two structures, whose street addresses are 221 East Main Street and 31 McDermott Avenue.

The proposed use is consistent with the Town of Riverhead Zoning Code designation for the subject site, which is DC-1. A mixed-use development of this type is encouraged by zoning and well-grounded in the planning efforts of the Town as embodied in the East Main Street Urban Renewal Plan (EMSURP) plan the Town of Riverhead Peconic River/Route 25 Corridor Step II Brownfields Opportunity Area (BOA) plan and is consistent with Town initiatives to revitalize downtown Riverhead as will be further discussed. Further, the project will provide needed quality housing for households characterized by a mix of incomes, in a pedestrian-friendly, transit-oriented environment

The site is composed of two contiguous developed tax lots, designated as follows (see **Topographical Survey**, in **Appendix A**, and **Table S-1**):

Table S-1
PROJECT SITE IDENTIFICATION

Parameter	221 East Main Street [(1)] (Section/Block/Lot)	31 McDermott Avenue [(1)] (Section/Block/Lot)	Total
Tax Lot Designation [(2)]	129/1/21	129/1/22	---
Square Feet (SF)	26,597	10,570	37,167
Current Use	Commercial (vacant)	Commercial (occupied)	---

(1) Both tax lots are in District 0600 (Town of Riverhead).
(2) Per Suffolk County Tax Map designation; see **Figure 1-2**.

A site plan application was submitted to the Board in December 2016, to allow for the development of the proposed project. As part of that application package, the applicant prepared a Part 1 Environmental Assessment Form (EAF), which generally describes the project and provides general information to the Town with respect to potential impacts of the project. The EAF Part 1 is contained herein, in **Appendix B-1**. Subsequently, and in an effort to provide the Board with additional project information and potential impact analyses, the applicant prepared a Supplement to the EAF Part 1, and submitted it to the Board in December 2016.

The Town Board conducted a coordinated review among involved agencies to assume lead agency status beginning on May 25, 2017. Having received concurrence from involved

agencies, the Town Board assumed lead agency and deemed this Voluntary DEIS acceptable for circulation to involved agencies and the public on June 15, 2017 for a period of 30 days. This document ensures that the Board takes a "hard look" at the project and will assist in determining potential impacts of the proposed project in order to support a State Environmental Quality Review Act (SEQRA) determination of significance.

Description of the Proposed Project

The approximately 0.85-acre project site is located at the southwestern corner of the intersection of East Main Street and McDermott Avenue; the site is roughly rectangular in shape, with its narrow northern side fronting on the south side of East Main Street, while its longer eastern side fronts on the west side of McDermott. The site is currently developed and occupied on the north by a vacant, one-story brick commercial structure that fronts on East Main Street (the "221 East Main Street building"), and on the south by an occupied two-story frame commercial/residential building (the "31 McDermott Avenue structure"). The central portion of the property features an at-grade parking lot for the 221 East Main Street structure. This parking area is accessed only from McDermott Avenue; there is no vehicle access from East Main Street. On-site parking will consist of 55 spaces although none are required since the subject site is within the Riverhead Parking District which considers the abundance of Town parking available on the street and in lots throughout the downtown area as will be further discussed herein.

The applicant, Georgica Green Ventures, LLC, seeks Board approval to demolish the two existing structures on the site, and construct a single five-story mixed-use structure featuring 12,622 SF of first-floor commercial spaces (at-grade with East Main Street) and four floors of apartments (116 un**its**). Note that specific type(s) of tenants are not presently known for the commercial spaces; in order to provide a "conservative" analysis of potential impacts, this document (and the plans in **Appendix A**) assume restaurant use for 11,114 SF of this area; the remaining 1,508 SF is assumed to be retail space.

Because the subject site slopes downward toward to south from East Main Street, the proposed lower level for parking beneath the structure will be accessed via McDermott Avenue (see **Figure 1-3**).

Of the 116 apartments, 115 will be rented, and one (1) apartment will be set aside for occupancy by the building superintendent.

The provision of work force and next generation housing for various income levels is a key beneficial feature of the project that furthers the housing goals of the Town.

In addition, there are number of agencies contributing to the funding for the project, and include:

- New York State (NYS) Homes & Community Renewal
- NYS Housing Finance Agency
- Governor's Office of Storm Recovery

- Suffolk County Department of Economic Development and Planning (SC Affordable Housing Opportunities Program)
- Riverhead Industrial Development Agency
- NYS Empire State Development (RESTORE NY Communities Initiative Municipal Grant Program)

As noted, the project conforms to the 2003 Town Comprehensive Plan and to the goals and intent of the 2008 Update of the Town's EMSURP and the BOA, and will conform to nearly all the applicable Town Zoning Code bulk and setback requirements for development in the site's DC-1 zoning district. Specifically, the project will require two (2) variances from the Town Zoning Board of Appeals (ZBA): to exceed the allowed floor area range of the studio apartments, and for the size of the parking spaces. In addition, the project needs a minimal Town Board (hereafter, *"the Board"*) special permit to exceed the maximum allowed site coverage (80% allowed, 93% requested, to provide for on-site parking). **Section 2.1.2** discusses the project's conformance to the standards on which the Board will review the special permit request and determine whether those standards are met.

With respect to the number of parking spaces provided relative to the amount of development proposed, Town Zoning Code Section 301-231 I. states that, for a site within a designated Parking District, the requirements of the Town Zoning Code do not apply. That is, the presence and availability of sufficient free, public parking spaces off-site but nearby would satisfy Town conditions that parking will be available to residents of the development; the project is not required to provide any on-site parking spaces. However, at the request of the Town, the Applicant will provide 55 on-site parking spaces, and the balance of parking needs will be met by off-site spaces within the Riverhead Parking District area. The size of the on-site parking spaces will also require a ZBA variance. The two existing driveways onto McDermott Avenue will be closed, and the site will be accessed via a single, new driveway onto McDermott Avenue that leads directly into the internal groundlevel parking area beneath the building. This access will be "stop"-controlled for departing vehicles.

Sanitary wastewater from the project will be conveyed off-site via the existing network of the Riverhead Sewer District, and treated and discharged at the existing municipal facility. The project will conform to all applicable flow and design requirements of the Suffolk County Department of Health Services (SCDHS) and the Riverhead Sewer District (RSD).

The applicant has designed the project to:

- Conform to the Town Comprehensive Plan in terms of providing quality housing for households having a mix of incomes, in a downtown location with ground floor retail spaces;
- Conform to the goals and intent of the EMSURP and BOA for the area;
- Increase pedestrian traffic in the hamlet downtown area, to support commercial activity and enhance the hamlet downtown area aesthetic;
- Strike a balance between the yield permitted by the DC-1 zoning while remaining within a density that would not adversely impact the downtown hamlet character of the area and still support an economically viable project;
- Minimize potential adverse impact to groundwater resources by connecting to the public sanitary sewer system;
- Provide an aesthetically attractive development;

- Obviate a potential impact to local stormwater runoff patterns, by retaining all site-generated stormwater runoff on-site, to be recharged in the project's drainage system;
- Provide safe pedestrian and vehicle access in conformance with Town and County highway access limitations;
- Conform to all other appropriate land use requirements; and
- Provide superior site design, including appropriate on-site recreational amenities; walkability and sense of place through attractive community architecture and landscaping.

The environmental review process is a balancing process, wherein the potential adverse impacts of the proposed project are matched against its potential beneficial impacts, to give reviewing entities sufficient information and analysis to render an informed decision to approve or deny the application.

The analyses in this document support a conclusion that the potential adverse impacts of the proposed project will not be significant and will be geographically localized, and that the potential beneficial impacts will be significant.

- The proposed project is in conformance with and complements the local land use pattern; it generally conforms to the requirements of the DC-1 zoning district; it conforms to the Town Comprehensive Plan Update; and it conforms to the EMSURP and BOA.
- The project also helps fulfill a need in the Town for quality housing for a mix of household incomes, by providing a substantial number of such units.
- The project would not strain the ability of any of the community services to adequately serve the site or project.
- The project will substantially increase the amount of property taxes generated by the site, which would offset at least a portion of the increased costs to provide such services, particularly educational expenses of the Riverhead Central School District (CSD).
- With minor timing adjustments to the traffic signal at the intersection of East Main Street and McDermott Avenue/Maple Avenue for the northbound approach on McDermott Avenue, the project's TIS indicates that there would be no significant traffic impacts associated with the project.
- The project will not adversely impact resources because of its connections to the public sanitary and stormwater sewer systems.
- The site's soils do not present any engineering-related limitations on the project.
- The two Environmental Site Assessments (ESAs) prepared for the existing buildings on the site indicate the presence of an underground storage tank (UST), and the potential presence of a second UST. These will be investigated prior to the onset of construction and properly removed; any impacted soils will be properly remediated at that time, to the satisfaction of the appropriate County and NYS agencies.
- There are no cultural resources on the site, so that no direct impact to such resources could or would occur. The new building has been designed to have an architectural appearance conforming to that of its surroundings, and is oriented to present its narrow side facing East Main Street, to minimize its potential to visually dominate the character along that corridor.

Anticipated Impacts

Land Use, Zoning and Plans

Land Use

As the site is presently considered to be Commercial and Residential land use, and the proposed project is also commercial and residential, there would be no significant change in the land use category of the site, or to the pattern of land uses in the area. The amount of residential development in the vicinity would be increased by the proposed project, as would the amount of commercial space in that same area. However, the Town prepared supporting plans, and created and adopted zoning specifically to address the needs of the Town of Riverhead as embodied in the DC-1 district. This zoning is intended to establish land use that will assist in the revitalization of downtown Riverhead and this resultant land use has been supported by the Comprehensive Plan Update (2003), the EMSURP (2008) and the BOA (2016). Therefore, since these uses characterize the hamlet downtown area, and these uses conform to the area's DC-1 zoning and the recommendations of the pertinent plans (as will be discussed below), neither of these increases would represent a significant adverse impact on land use.

Zoning

As the proposed project does not involve a change of zone of the site, there will be no impact on the pattern of zoning in the vicinity.

Table S-2 lists the various building bulk and setback requirements of the DC-1 zoning district, along with the pertinent quantity of the proposed project. As can be seen, the proposed project will conform to nearly all the applicable requirements of the DC-1 district, with two exceptions: the floor area of the studio apartment units, and the maximum allowed lot coverage for a site served by sewers. Special permits from the Town Board will be required for these two items as well as ZBA approval for unit size.

The variance for the size of the studio units is necessary to provide the type of unit that the applicant has determined would be appropriate to meet the market demand for such units; smaller studio units meeting the Town Code standard would not be as marketable or attractive to potential occupants as the units of the sizes proposed.

The special permit needed for the exceedance of 80% of the site to be covered by the structure is the result of the Town's request that the project provide some amount of on-site parking. The size of the parking stalls will also require a ZBA variance. It is noteworthy that on-site parking is not required for development in the DC-1 zoning district; nevertheless, the Applicant has agreed to satisfy this request. The project, as proposed, reflects the Applicant's effort to balance the need to produce a structure having a substantial number of rental apartments, each having a floor area of sufficient size to attract qualified tenants, as well as ground floor commercial spaces that are both appropriate for the downtown hamlet area and would support the Town's goals for the area. Because of this balancing and responding to the Town's request for on-site parking, it is necessary that the Town Code maximum allowed site coverage be exceeded.

Table S-2
CONFORMANCE TO BULK, HEIGHT & SETBACK REQUIREMENTS
DC-1 Zoning District

Parameter	Required	Provided
Town Zoning Code Section 301-142		
Lot Area, Minimum (SF)	5,000	37,167
Lot Width at Front Street, Minimum (feet)	50	382
Building Lot Coverage, Maximum with Sewer (%)	80	93.0*
Impervious Surfaces, Maximum (%)	100	100
Building Height, Maximum (feet)	60	60
Floor Area Ratio, Maximum with Sewer	4.00	3.4
Front Yard Depth, Minimum (feet)	0	0
Side Yard Width, Minimum, Corner Lot (feet)	0	0
Side Yard Depth, Minimum, Combined (feet)	0	0
Rear Yard Depth, Minimum (feet)	0	0
Town Zoning Code Section 301-141		
Permitted Use:	---	---
Retail Store (Max., SF)	10,000	1,508
Restaurant	allowed	Complies
Studio Apartment (Min. to Max., SF)	300-450	410-520*
Town Zoning Code Section 301-231		
Off Street Parking	n/a	n/a

*Variance required from ZBA.

Riverhead seeks residential occupancy for revitalization and a healthy downtown environment. Similarly, ground floor retail adds to the vibrancy to the downtown setting. The applicant has significant experience in designing successful projects with full occupancy. The economic feasibility of a project is critical to its success. Changes to the unit sizes/numbers, or commercial use are not advisable if the project is to be successful and meet the goals of the applicant and the Town of Riverhead to achieve the revitalization envisioned in the various Town land use plans.

Table S-3 lists the Town Code standards under which the Town Board will review the special permit requested, to determine whether these standards have been met and the special permit can justifiably be approved and issued. The ZBA will make a determination on the two variances requested, based on the project's merits, as related to size of the studio units and the size of the parking spaces.

Land Use Plans

Town Comprehensive Plan (November 2003) - The plan recommended that the subject site be developed with uses conforming to the DC zoning district (see **Figure 2-3a**). Following are brief discussions as to whether and how the project conforms to the goals and recommendations of each of the nine Town Comprehensive Plan elements pertinent to the proposed project.

Table S-3
CONFORMANCE TO SPECIAL PERMIT STANDARDS

Standard	Building Lot Coverage Special Permit
§301-312 The Town Board and the Planning Board may consider, among other matters or factors which either Board may deem material, that:	
A. The site is particularly suitable for the location of such use in the community.	The project site is well-suited for the proposed mixed-use (i.e., upper-floor residential and ground floor commercial spaces) project, as such uses dominate successful downtown areas and are present in the Riverhead hamlet downtown area, and reflect the goals of established Town zoning and planning efforts specified for this area in land use plans.
B. The plot area is sufficient, appropriate and adequate for the use and the reasonably anticipated operation and expansion thereof.	The project site is adequately-sized to accommodate the proposed project. The project will provide 55 more parking stalls than are required by zoning, and the design and development of the building fits well within the proposed project site.
C. The characteristics of the proposed use are not such that its proposed location would be unsuitably near to a church, school, theater, recreational area or other place of public assembly.	The project site is located opposite both a church (to the north) and a public recreation area (to the south). However, the nature and magnitude of the project are such that neither of these public resources would be significantly or adversely impacted if the special permit were to be approved, and would in fact be enhanced by the types of development proposed.
D. Access facilities are adequate for the estimated traffic from public streets and sidewalks, so as to assure the public in relation to the general character of the neighborhood and other existing or permitted uses within it, and to avoid traffic congestion; and further that vehicular entrances and exits shall be clearly visible from the street and not be within 75 feet of the intersection of street lines at a street intersection except under unusual circumstances.	The project has been designed and engineered with proper geometry to conform to all applicable Town standards for vehicle access and provide a safe means of ingress and egress from the site. In this way, safe and proper roadway operations would be assured. The project site is located in the Riverhead hamlet downtown area, and so his provided with sidewalks along its northern and eastern boundaries.
E. All proposed curb cuts and street intersections have been approved by the street or highway agency which has jurisdiction.	The project has been designed and engineered to conform to all applicable Town standards for vehicle access, which design will be subject to detailed review by Town engineering staff during the site plan application review process, ensuring safe and proper roadway operations. All curb cuts will be approved by the appropriate agencies.
F. Adequate provisions have been made for emergency conditions.	The project has been designed and engineered to conform to all applicable Town standards for emergency vehicle access, as well as for operations related to emergency conditions. Further, the project's design will be reviewed and be subject to the approval of qualified Town planning and engineering staff, as well as by the Riverhead Fire Department and Riverhead Fire Marshal prior to the issuance of building permits. The project will conform with applicable building/fire code requirements for safety.
G. There are off-street parking and truck loading spaces at least in the number required by the provisions of this chapter, but in any case, an adequate number for the anticipated number of occupants, both employees and patrons or visitors; and further, that the layout of the spaces and driveways are convenient and conducive to safe operation.	It is noteworthy that the project site is within a Town-designated Parking District, wherein no on-site parking spaces would be required for a site in a DC-1 zoning district. However, at the request of the Town, the project includes 55 parking spaces on-site. These will be located an at-grade parking level beneath the structure. Providing these parking stalls where no such stalls are required is an important feature of the project that complements the use and its location in the Parking District. It is expected that sufficient spaces will be available in Town parking lots nearby to satisfy any parking needs over and above that addressed by the project's on-site spaces.
H. Adequate buffer yards, landscaping, walls, fences and screening are provided where necessary to protect adjacent properties and land uses.	The project has been designed and engineered to conform to all applicable Town standards for yard depths and building setbacks. The proposed building has been reviewed and approved by the Architectural Review Board (ARB) and conforms to applicable dimensional requirements of the Town DC-1 zoning district.
I. Where necessary, special setback, yard, height and building area coverage requirements, or easements, rights-of-way or restrictive covenants, shall be established.	It is not expected that any special setback, yard, height, easements, rights-of-way or covenants will be necessary or applicable to the proposed project. The project does require Town Board approval of a special permit for its lot coverage, but this exceedance (maximum 80% allowed, 91.5% requested) is due to the Town's request that the project include on-site parking which is a feature of the project. The project, as proposed, reflects the Applicant's effort to balance the need to produce a structure having a substantial number of rental apartments (as sought by the Town for the DC-1 zoning district), each having a floor area of sufficient size to attract qualified tenants, as well as ground floor commercial spaces that are both appropriate for the downtown hamlet area and would support the Town's goals for the area. As a consequence of this balancing and responding to the Town's request for on-site parking, it is necessary that the Town Code maximum allowed site coverage be exceeded.
J. Where appropriate, a public or semipublic plaza or recreational or other public areas will be located on the property.	The project site is contiguous to an established, substantial Town open space amenity (the Peconic Riverfront Park) and is near another such amenity (the East End Arts Park). As a result, there is no substantial need for additional public space on the project site.
K. Adequate provisions will be made for the collection and disposal of stormwater runoff from the site and of sanitary sewage, refuse or other waste, whether liquid, solid, gaseous or of other character.	The project will connect to the Riverhead Sewer District to treat and dispose of all wastewater generated on the site. All stormwater runoff will be retained on-site per Town design storm requirements and recharged to the ground through the project's drainage system. All solid waste will be removed and disposed of by a private carter operating under contract with the project ownership. The nature of the project is such that no hazardous, or other types of wastes, whether solid, liquid or gaseous, will be generated.
L. Existing municipal services and facilities are adequate to provide for the needs of the proposed use.	It is anticipated that all Town facilities, services and systems that the project will utilize have capacities adequate to properly serve the site. The project represents only an incremental increase in the overall usage of these facilities, services and systems. Utility service providers have been contacted and notified of the project through this Voluntary DEIS.
M. The use will tend to generate or accumulate dirt or refuse or tend to	The nature of the project is such that no generation of dirt, refuse, or other type of environmental pollution are associated with its occupancy or operation. Temporary dust

create any type of environmental pollution, including vibration, noise, light, electrical discharges, electromagnetism, odors, smoke or irritants, particularly where they are discernible on adjacent properties or boundary streets.	and noise may occur during construction, but this is not a permanent condition and will controlled and mitigated through proper construction management and adherence to applicable hours of operation (see N. below).
N. The construction, installation or operation of the proposed use is such that there is a need for regulating the hours, days or similar aspects of its activity.	During the construction period, all such operations will conform to all applicable Town restrictions on hours of demolition and construction activities, truck-related operations and movements, debris removal, and noise and dust controls. The proposed project is residential and commercial in nature; as such, only the commercial component would be subject to Town restrictions on its hours of operation, to which it will conform.
O. The proposed use recognizes and provides for the further special conditions and safeguards required for particular uses as may be determined by the Town Board or the Planning Board.	The project has been designed to conform as closely as practicable to the Town Zoning Code, given the implications on its design necessitated by the Town's request for on-site parking. It does not include any uses that are expected to merit further special conditions or safeguards, but the Applicant is ready to discuss such matters with Town Board if it deems further restrictions may be warranted.
P. The design, layout and contours of all roads and rights-of-way encompassed within the site of the application are adequate and meet Town specifications.	The project, including its vehicle access point, has been designed and engineered to conform to all applicable Town standards. The project's design will be subject to detailed review by Town engineering staff during the site plan application review process, ensuring safe and proper roadway operations. The project will be approved through site plan review and will be constructed consistent with approved plans including design, layout, contours of roads and related site design requirements.
Q. Adequate provisions have been made for the collection and disposal or solid wastes, including but not limited to the screening of all containers.	The project will provide for the collection and storage of its solid wastes in dedicated spaces interior to the structure, until such time that these containers are emptied by a licensed private carter. Adequate provisions will be provided for all such wastes in screened containers with frequent scheduled removal.
R. That the intensity of the proposed specially permitted use is justified in light of similar uses within the zoning district.	The land use types and associated intensities of the project match those of the Riverhead hamlet downtown area. The project is below the maximum number of units permitted in the downtown area, and conforms with the applicable dimensional requirements of the DC-1 district as related to intensity of use.
§301-314 The Town Board shall determine that:	
A. The use will not prevent or substantially impair either the reasonable and orderly use or the reasonable and orderly development of other properties in the neighborhood.	The requested special permit is necessary as a consequence of the Town's request that on-site parking, which is not required by the Town Code in the DC-1 district, be provided. Approval of this special permit request would not prevent the use of any adjacent or nearby properties, or impair the value of such properties. The physical impacts of the requested special permit will be limited only to the project site, and would not extend to any off-site areas. Consequently, the use will not prevent or impair the reasonable and orderly use or development of other properties in the downtown.
B. The hazards or disadvantages to the neighborhood from the location of such use at the property are outweighed by the advantage to be gained either by the neighborhood or the Town.	Approval of the special permit request would not present any hazard or disadvantage to the neighborhood. Further, the special permit regarding site coverage exceedance is due to the Town's request that on-site parking be provided, even though it is not required for a site zoned DC-1 and in a Town Parking District.
C. The health, safety, welfare, comfort, convenience and order of the Town will not be adversely affected by the authorized use.	The special permit is necessary because of the Town's request that on-site parking (a feature not required by the Town Code for a site in a DC-1 zone) be provided. Approval would not prevent the use of any adjacent or nearby properties, or impair the value of such properties. Any effects of this special permit would be limited to only the project site, so that the nature and magnitude of this special permit would not impact the safety, health, welfare, comfort, convenience or order of the Town.
D. Such use will be in harmony with and promote the general purposes and intent of this chapter.	The special permit requested is necessary due the Town's request for on-site parking. As such, this special permit, if approved by the Town Board, would provide a project that would be more harmonious and beneficial to the Riverhead hamlet downtown area than a similar project that does not have these features.

Land Use Element
The proposed project is intended to benefit from and contribute to the expansion and continued enhancement of downtown Riverhead. The project conforms to the mixed-use nature designated for the site by the Town Comprehensive Plan (as well as to the recommendations of the EMSURP; see below), in that it will provide for high-quality ground floor retail space and restaurant spaces (of which one would overlook the Peconic River corridor and Peconic Riverfront Park to the south). The proposed building will be designed to enhance the aesthetics of the area, by being built with an architectural styling that complements that of its surroundings. By incorporating a significant number of quality rental apartments for a mix of household income, the project would enhance the vitality and activity of the neighborhood. Inclusion of restaurant use overlooking the river would tend to enhance public appreciation and use of the Peconic Riverfront Park that lines the north bank of this natural feature.

Natural Resources Conservation Element
While the project site has no natural features or resources to protect, the proposed project will nonetheless help to preserve and enhance the natural features proximate to the site; specifically, of the Peconic River and its northern bank to the south. This will be accomplished by including quality restaurant space overlooking the river, which would tend to increase public and patron appreciation of the scenic and natural qualities of the river corridor, as well as of public use of the Peconic Riverfront Park and boardwalk.

Scenic and Historic Preservation Element
The proposed mixed-use building will be designed with an architectural styling that complements and enhances the built and aesthetic environment of the downtown commercial corridor, and thereby enhances the character of this community.

Business Districts Element
The proposed project is well-located as both a commercial and residential development; the increased residents will add to the customer base of local businesses and add to the vitality of the downtown, and its commercial component will help draw customers to the site and to other local businesses.

Economic Development Element
The proposed project will add to the economic base of downtown Riverhead by increasing employment and business spaces, with associated increased property tax generation and employee income.

Housing Element
The project will result in an increase in the number of quality housing units targeted for the housing market that is specifically intended by the Town Comprehensive Plan as in need of support. These units are in close and convenient proximity to public transit resources, for the use of its residents.

Transportation Element
Traffic engineering analysis indicates that the vehicle trips generated by the proposed project would not require any substantial off-site roadway improvements. The project may help to minimize the potential increase in local roadway use because of its location in the downtown area adjacent to public transit resources. This would tend to increase potential bus and Long Island Rail Road (LIRR) ridership and intermodal transportation in general.

Utility Service Element
The proposed project will not create any new utility resources, but will utilize available existing public utilities, particularly water and wastewater treatment services. In this way, the impacts on groundwater and surface water resources would be minimized.

Parks and Recreation Element
The proposed project will indirectly help to increase public use and enjoyment of the Peconic River and Peconic Riverfront Park along its northern bank south of the site, by incorporating a restaurant that overlooks this area. This would tend to increase public awareness of this natural and scenic resource.

East Main Street Urban Renewal Plan Update (2008) - The EMSURP recommended that the subject site be developed with ground floor shops and a central surface shared parking lot (see **Figure 2-3b**). Following are brief discussions as to whether and how the proposed project conforms to each of the eleven EMSURP recommendations pertinent to the proposed project.

1. *The proposed project will eliminate an underutilized property by demolishing existing buildings (and an adjacent, occupied property), and redeveloping both sites in a cohesive way with a single new structure, under the existing DC-1 zoning code, as envisioned by the EMSURP.*

2. *The existing vacant commercial structure at 221 East Main Street will be demolished by the proposed project, and will be replaced by a new structure architecturally designed to complement its surroundings.*

4. *The new structure will be designed with an architectural styling that complements the character of the structures in the adjacent portion of the East Main Street commercial corridor.*

6. *The proposed project, in conformance with the EMSURP and Town Comprehensive Plan, as well as with its DC-1 zoning, incorporates both commercial (i.e., retail and restaurant) spaces as well as a significant number of quality rental apartments for a mix of household incomes.*

7. *The proposed project includes a substantial number of quality rental apartment units for occupancy by households characterized by a mix of incomes qualified households.*

11. *While the project would not directly affect any open spaces, the restaurant uses proposed would tend to benefit the open spaces along the Peconic River, by providing scenic overlooks of the river corridor for the restaurant patrons and site's residents, which would reinforce public appreciation of this valuable public open space resource.*

13. *The proposed new mixed-use structure will be 5 stories in height, or up to about 60 feet in height which does conform to zoning in terms of height/stories. Considering the rather restricted size of the property, a building of this height is necessary to provide the number of apartments in four levels above the required ground floor commercial spaces. It is noteworthy that the north-south orientation of the property (and therefore, of the building) is such that views for observers to the north would be restricted to the lowest degree practicable; these observers will view the new structure narrow edge-on, which would present the lowest degree of obscuration possible. Additional visual analysis is provided in* ***Section 2.7.***

16. *In conformance with this element, the proposed project includes restaurant space that overlooks the Peconic River and the Peconic Riverfront Park as an amenity for diners, as well as a substantial number of quality rental apartments for a mix of household incomes.*

40. *This recommendation is inconsistent with DC-1 code that was later adopted which does not require any on-site parking for those parcels located within the parking district, due to the availability of centralized municipal parking. Nevertheless, the proposed project includes 58 parking spaces in a ground floor parking level beneath the building, in addition to several nearby public parking lots. The project conforms to the Town Code parking requirement for the DC-1 zoning district and in fact exceeds the requirements of the code and parking district by providing 58 on-site stalls.*

50. *The subject site is within walking distance of employment opportunities, services, amenities, daily needs and transportation. Additional incentives do not appear needed; however, the applicant is willing to consider entering any such program that may come about for the overall EMSURA.*

54. *The applicant expects to provide a space interior to the building where all solid waste is gathered and stored to await removal and disposal by a licensed carter operation under contract.*

Community Services

With respect to the community services discussed herein, it is expected that the project, when it is completed, occupied and fully operational, will participate in a PILOT (payment in lieu of taxes) program, which would increase public revenues generated by the site as compared to the revenues it currently generates. This revenue will be distributed among the various community services, which would help to offset at least a portion of any increased costs to provide services to the project site.

Public Schools - It is estimated that 14 school-aged children will reside at the proposed project. This will have a small incremental effect on enrollment and expenditures of the Riverhead CSD. The PILOT will assist in off-setting this incremental increase and it is noted that this is a relatively small number of potential school-aged children that would be distributed over multiple age groups. As stated in the Riverhead CSD Superintendent's response e-mail:

> As per council, we do not take positions on individual projects or make comments. We will comply with Education law in all instances.

Police Protection - It is expected that the project will result in an increased potential for need of Riverhead Police Department emergency services, due to the increased development and human presence on the property. The Department's response letter states:

> At this point in time, we should be able to assume the additional police services needed for your proposed project. Obviously, as with all development in our Township, the increase in population and vehicles will have a negative impact on our agency.

Fire Protection and Ambulance Services - It is expected that the project will result in an increased potential for need of the emergency services of both the Riverhead Volunteer Fire Department and the Riverhead Volunteer Ambulance Corps, Inc. The Fire Department's response letter states:

> This letter may not be taken to express any opinion about this/these project(s) or the Fire Department's ability to respond to emergencies now or in the future.
>
> It is the District's position that it is incumbent on the project(s) developer(s) to design and construct this/these project(s) in full compliance with all applicable laws, codes, regulations, standards, etc.
>
> At such time that this/these project(s) have been fully designed and engineered the District expects that the Town of Riverhead Fire Marshall shall present the same to the District and Department. The District and Department reserve their right to comment on the same at an appropriate future date.

The ambulance corps' response letter confirmed that it *"…can and will provide emergency medical services to your Riverview Lofts project…"*

Public Water Supply - It is expected that the proposed project will consume a total of 39,871 gpd of potable water, to be supplied by the Riverhead Water District (RWD). This increase in demand would represent 5.82% of the average daily pumpage of the RWD. The proposed project is not anticipated to impact the ability of the RWD to serve the subject site and existing customers. Each apartment will be equipped with software that monitors for leaks or water wastage

The project's design will be subject to detailed engineering review by the RWD as part of the Town's site plan review process, at which time final arrangements for infrastructure improvements will be made.

Sanitary Wastewater Treatment and Disposal - It is assumed that all 39,871 gallons per day (gpd) of water supplied to the project site will leave the site daily as wastewater, to be conveyed via the Town's sewer district network to the sewage treatment plant (STP) on River Road. As this facility currently treats an average of about 1.0 million gpd, the proposed project would represent a 4.02% increase in loading at this facility. This STP has a permitted capacity of 1.5 million gpd, so that it has about 500,000 gpd of unfilled capacity; the proposed project represents an 8.04% reduction in the amount of available treatment capacity of this facility.

The RSD's response e-mail confirms that the district has capacity to serve the project and the applicant's plans to connect to the RSD are currently under review. A final letter of sewage treatment availability will be issued after an analysis of the flow impacts to the collection and conveyance systems is complete.

Energy Suppliers - It is expected that PSE&G and National Grid can and will serve the proposed project with electrical and natural gas services, respectively. Generally, PSE&G and National Grid provide services per their filed tariff and schedules in effect at the time service is required. As the project will remove both buildings presently on the site, the existing service connections will also be removed, to be replaced with new service connections; it is expected that the existing distribution system serving the site will not need to be replaced or supplemented to service the project.

Recreational Facilities - The proposed project will not encroach into or otherwise adversely impact any of the existing park or recreational facilities in the vicinity. The proposed project

would increase the number of potential patrons of local and regional park and recreation sites, but this impact would be incremental in nature and is not expected to significantly impact the use of any of these sites, in consideration of the following:

- there are a substantial number of such facilities to choose from. This would tend to distribute these visits broadly and conversely reduce the number of these visits (and their associated impacts) at any one park/recreational site.
- the number of site residents is small in comparison to the number of local and regional residents, so that any increase in park/recreational site patronization attributed to the proposed project would be small as well.

Transportation

The findings of the revised Traffic Impact Study (TIS) dated June 2017 are summarized herein.

Trip Generation - It should also be noted that, according to studies conducted by the Institute of Transportation Engineers (ITE), traffic associated with a retail and restaurant developments is not 100% newly generated, a significant portion of these trips will be "pass-by" traffic. It is expected that at least 40% of the peak hour trips generated by the retail and restaurant development on the site would originate from traffic already using the roadway traveling to or from another destination. No passby credit was applied to the retail portion of the project since it is only a small portion of the project. Passby credits were applied for the restaurant component of the proposed project in accordance with ITE guidelines.

The proposed project is projected to generate 79 trips (21 entering and 58 exiting) during the weekday AM peak hour, 167 trips (109 entering and 58 exiting) during the weekday PM peak hour and 252 trips (142 entering and 110 exiting) during the Saturday midday peak hour.

Anticipated LOS [level of service] and Roadway Conditions, Main Street at Peconic Avenue/Roanoke Avenue - In the No Build Condition, at the intersections Main Street and Peconic Avenue/Roanoke Avenue, eastbound West Main Street through movement at Peconic Avenue operates at LOS D, E and F during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operates at LOS F during the weekday AM, PM and Saturday midday peak hours. The westbound left turn movement operates at LOS F during the Saturday midday peak hour. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and E during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at No Build LOS.

Anticipated LOS and Roadway Conditions, East Main Street at McDermott Avenue/Maple Avenue - Under the No Build Condition, all the approach movements at the intersection of East Main Street and McDermott Avenue/Maple Avenue operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM peak hour and at LOS B during the PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at LOS D or better except for the McDermott Avenue northbound approach

which is anticipated to operate at LOS D and E during the weekday PM and Saturday midday peak hours, respectively. Minor signal timing adjustments will improve the northbound LOS D to LOS C during the PM peak hour and from LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.

Anticipated LOS and Roadway Conditions, Peconic Avenue at Parking Lot Access - Under the No Build Condition, the southbound Peconic Avenue left turn movement operates at LOS A during the AM and PM peak hours and at LOS B during the Saturday peak hour. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM and Saturday midday peak hours and at LOS C during the PM peak hour. After the completion of the project, the approach movements to the intersection will continue to operate at No Build LOS during all peak hours.

Conclusion - Nelson & Pope, LLP has investigated the potential traffic and parking impacts associated with the proposed development to be located at the southwest corner of East Main Street and McDermott Avenue in Riverhead, New York. The following is a summary of this investigation and the findings thereof:

Based on the results of the TIS, it is the professional opinion of N&P, LLP that the proposed project will not result in significant traffic impacts in the study area.

Water Resources

The proposed project will connect to the RSD and as a result, wastewater will be managed in a manner that ensures that no groundwater impacts will occur. Drainage will be stored and recharged on-site in conformance with Town requirements and subject to Town engineering review. Consequently, potential drainage impacts are also addressed through design. Discussion of these design features as related to water resources is provided herein.

Groundwater Conditions - The volume of water recharged on the site is not expected to significantly change by the project as compared to the site in its existing condition. This is because the site is presently covered entirely by impervious surfaces, and will continue to be entirely impervious-surfaced after the project is constructed. However, the proposed project will be designed to contain runoff from proposed new impervious surfaces; under current conditions, it is not expected that all stormwater is retained on site. This means that the volume of stormwater runoff generated on the site is the same; but storage of stormwater will increase such that less off-site runoff is expected to occur.

All stormwater runoff generated on the site will be retained and recharged to groundwater by means of an on-site drainage system. Likewise, all wastewater generated on the site will be conveyed off-site via the Town sewer system for treatment and disposal. In this way, the existing elevation of the water table beneath the site would not significantly change, so that the direction of groundwater flow would not change from its current southerly direction.

Connection to the Town sewer system and the lack of landscaped surfaces would ensure that the potential for adverse impacts on groundwater quality are minimized for the proposed project.

The project will connect to the Town sanitary system, so that its wastewater would be conveyed off-site and treated to a tertiary level, thereby minimizing the amount of nitrogen from the site that ultimately is recharged to the water table, and at a location distant from the project site.

Surface Water Conditions - The project will not adversely impact any surface water resources. Generally, the primary source of such an impact would be from the escape of stormwater runoff from a site to a surface water resource (e.g., a pond/wetland, a creek or river, etc.). But, as noted above, the site will retain more stormwater under proposed conditions than current conditions so that all the runoff generated on the site will be recharged and not overflowed to surface waters. This means that for the design storm, no runoff from the site (along with any contamination that may be carried in that water) will reach the nearest surface water resource that is in a downslope location, the Peconic River.

The project is designed in conformance with Federal Emergency management Agency (FEMA) flood plain elevation requirements, so that no adverse impacts in this regard are expected. As shown in **Figure 2-14**, the southern portion of the subject site is in FEMA Flood Hazard Zone AE, which designates an area that is subject to the 1% annual flood ("100-year flood"), also known as the Base Flood. This is the flood that has a 1% chance of being equaled or exceeded in any given year. Specifically, the Base Flood Elevation of this part of the AE zone is established at 7 feet asl. The first floor of the building will be elevated such that the bottom of any structural member will be above 7 feet asl to comply with FEMA design as implemented by the Town.

Soils

The test hole report indicates that the soils on the site are expected to be capable of properly supporting the proposed structure, with the use of appropriate piles. Thus, no adverse soil-related impacts in this this regard are anticipated.

Considering the small size of the site, its flat surface, and the fact that it is already fully developed, it is not expected that the necessary clearing and grading operations would be limited by any soil-related condition.

The Phase I ESAs prepared for the 221 East Main Street and 31 McDermott Avenue buildings (see **Section 1.3.2**) noted that a 1,000-gallon #2 fuel oil tank is present on the former site, and that a gasoline storage tank may exist on the latter site. Prior to initiating the demolition process, both tanks will be investigated and both tanks (if present) will be removed in accordance with proper county and state requirements, and any soil contamination that may have occurred will be properly remediated as part of that removal and certification process. Such potential contamination, if discovered, would not represent an adverse impact on the project, as any such contamination will be properly remediated.

Erosion control measures to be implemented during the construction phase are discussed in detail in **Section 1.5.3**, and are expected to include measures recommended in the NYS Department of Environmental Conservation (NYSDEC) Technical Guidance Manual, such as:

- Silt fence, storm drain inlet protection, hay bales and good housekeeping procedures will be used;
- Construction equipment and vehicles will be parked and loaded/unloaded within the site;

- "Rumble strips" at the site entrance will prevent soil on truck tires from being tracked onto the public road system;
- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures; and
- The drainage system will provide permanent stormwater controls once construction is completed.

Cultural Resources

As the subject site is entirely developed, it is expected that no undiscovered pre-historic era resources remain on the site, as any such resources that may have been present would have been destroyed when the site was developed about 70 years ago. As the NYS Office of Parks, Recreation & Historic Preservation (OPRHP) correspondence confirms that there are no historic era cultural resources on the subject site, the proposed project would not directly impact such resources, nor would the removal of the two existing buildings result in an impact on cultural resources.

The OPRHP letter confirms that the proposed project will not result in any adverse impacts to cultural resources, as follows:

> Based upon our review of the materials submitted and conversations with your office, it is the OPRHP's opinion that the proposed project, as designed and presented, will have No Adverse Impact upon historic resources.

Visual Resources

The proposed project is expected to change the visual character of the site and views of the site by replacing two smaller low structures with a single, larger and taller structure proximity. The existing character of the subject property as a site in need of revitalization will be removed and replaced with an attractive five-story mixed use building that conforms to the DC-1 zoning, provides housing for various income levels, provides a street presence in the form of commercial use along the sidewalk, and provides an anchor to revitalize this portion of East Main Street. It is noted that an additional development is proposed to the west of the subject site at 203-213 East Main Street.

The change in visual character that will result from the proposed project and the adjoining proposed development is consistent with the Town's intended use of the site and area, pursuant to the EMSURP and DC-1 zoning. The EMSURP outlined a program to revitalize East Main Street through urban renewal which is part of the Town's comprehensive plan initiative for downtown Riverhead. The EMSURP combined with the DC-1 zoning envisions mixed use buildings up to five stories in height to provide incentives for re-development, and stimulate revitalization of the downtown area. This initiative is grounded in the Town Comprehensive Plan Update (2003), the EMSURP (2008) and the BOA (2016). The proposed use of the subject site as well as the site at 203-213 East Main Street provides a means of realizing this urban renewal and revitalization initiative that the Town has envisioned through these studies and zoning code provisions. The economic and social benefits of revitalization are numerous and formed the basis for the Town's planning initiatives that are being implemented through redevelopment of 221 East Main Street and other sites in the area pursuant to existing zoning. The redevelopment of this site will anchor the south side of East Main Street west of McDermott

Avenue and promote the planning goals of the Town for revitalization and provision of apartments for various income levels.

Additional assessment of visual resources is provided to further examine the proposed project in the context of the site and area. The most effective way to assess the change in visual character is to provide illustrations of how the proposed project will appear from various vantage points, and as a result, a series of architectural graphics have been prepared to portray the character of the site in the context of the area. **Appendix B-8** presents a number of computer-simulated views of the proposed building. As can be seen, the building will feature an architectural style complementary to that of the commercial buildings adjacent and to the east of the site.

With respect to the visual context of the project site and its surroundings along McDermott Avenue and East Main Street, the figures in **Appendix B-9** compare the site's existing character to its (simulated) appearance after construction of the proposed building. The figures show that, while the proposed building will change the appearance of the site for observers, the building has been designed with an architectural style that complements that of the neighborhood, and so will be attractive and appropriate within the East Main Street downtown area.

The building is larger than other buildings in the area; however, the proposed architecture provides an attractive complement to the south side of East Main Street. The building height is consistent with the DC-1 zoning, and the appearance of the building is overall residential, with first floor storefronts, both features characteristic of a main street setting. The new building will be placed on its site with an orientation that presents its narrow side facing the existing uses to the north. Overall, the proposed use will be larger than existing buildings in the immediate vicinity of the site; however, the impact of these differences will be reduced in consideration of the trend toward development in the vicinity and the intended revitalization through Town planning initiatives.

An additional photo-simulation has been prepared to assist in visualizing the proposed project and the massing of the adjacent 203-213 East Main Street proposal, in the context of the character of the community **(Appendix B-10)**. This analysis includes views of the project site from seven (7) viewing angles and shows architectural details of the proposed project and the massing of the two proposals. Note that more detailed views of the 203-213 East Main Street structure (so that its architectural treatment, material colors and textures, fenestration, etc.) are not available, so that only its proposed dimensions can be added to the simulations. However, the graphics clearly identify the massing of this building in the context of its surroundings which include the proposed project site at 221 East Main Street.

The proposed project is subject to review by the ARB (the Landmarks Preservation Commission (LPC) would have no jurisdiction, as the subject site in not within an historic district). The project was subject to ARB review and discussion at various meetings, the latest of which occurred on April 19, 2017. On May 17, 2017, the ARB recommended approval of the proposed project to the Town Board (see **Appendix B-11**), with the following two minor comments:

- More development should be made of the cornice
- Please submit final working drawings with all necessary details when available

The Applicant will forward these comments to the project architect and ensure that both comments will be addressed to ARB and Town Board satisfaction.

This visual impact assessment considers the following key points:

- The area is comprised of a mix of uses, architectural styles and heights of buildings
- There is precedent for five-story buildings on East Main Street, specifically east of the site at the Sea Star building and Hyatt Place hotel which are equal to five stories (and greater to the east part of the Hyatt) and varying architectural styles.
- There is precedent for a five-story building near a traditional structure with historic context, specifically the approved five-story hotel on the Preston House site at 428 East Main Street.
- The proposed use conforms to zoning in terms of height and all dimensional requirements related to site design/alignment.
- The proposed project will redevelop a deteriorated site in need of revitalization.
- The proposed project includes a five-story mixed use building in conformance with DC-1 zoning and consistent with the Towns goals for downtown revitalization as embodied in studies dating back to 2003 including: the Town Comprehensive Plan Update, the EMSURP, and the BOA.
- The proposed building will anchor the portion of East Main Street west of McDermott Avenue with an attractively styled building that complements the main street setting and promotes revitalization.
- The project will further the Town's housing goals by providing units for a range of income levels.
- The proposed project will further social and economic goals of the Town by stimulating revitalization of East Main Street to support existing businesses in the downtown, increase spending, provide tax revenue and/or PILOT, sales tax revenue, employment and related benefits.
- The building is sited to present its narrow side facing the existing uses to the north.
- The architecture of the project has been approved by the Town ARB a primary entity responsible for architectural review to *"promote visual qualities in the environment which bring value to the community; to foster the attractiveness of the community as a place to live and work; to preserve the character and quality of our heritage by maintaining the integrity of those areas which have a discernable character or are of special historic significance; to protect public and private investments in the area; and to raise the level of community awareness and expectations for the quality of its environment."*

Based on the visual assessment, no significant adverse impacts to visual resources are anticipated. The site is in need of revitalization, and the proposed use is consistent with Town planning goals for redevelopment of the area to achieve this revitalization. The appearance of the build has been carefully considered and will establish a use characteristic of a main street setting that will complement this area of East Main Street.

Proposed Mitigation

Land Use, Zoning and Plans

- As no adverse impacts with respect to land use are anticipated, no additional mitigation measures with respect land uses are necessary or proposed.
- While the project will not conform to all the bulk requirements of the DC-1 zoning district (thereby necessitating two special permits and variances), analysis indicates that neither of these special permits or variances, if approved, would adversely impact the area, or set an unacceptable precedent

for future development on other sites. These special permits/variances are needed to enable the project to move forward with as little potential for adverse effect regarding zoning as practicable. Thus, no additional mitigation with respect to zoning is necessary or proposed.

- The proposed project has been designed to conform to all applicable recommendations of both the Town Comprehensive Plan and the EMSURP as practicable. Thus, no additional mitigation in this regard is necessary or proposed.

Community Services

- It is expected that the proposed project will increase the need for and usage of those community facilities and services pertinent to commercial and residential spaces, and, hence the costs that such services will expend. However, the expected increase in taxes generated and/or a PILOT will help offset at least portions of the increased needs for and costs of community services.
- The Riverhead CSD will benefit from an increase in annual school tax revenue and/or a PILOT as compared to the amount of school taxes generated by the site in its current condition. This increased revenue will assist in offsetting some of the increased district expenditures necessitated by the expected 14 new students generated by the project.
- The proposed project may increase the potential need for emergency security services of the Riverhead Police Department. However, to mitigate this potential increase in calls, the proposed building and parking level will be equipped with security lighting and emergency alarms.
- The proposed project may increase the potential need for emergency security services of the Riverhead Volunteer Fire Department and the Riverhead Volunteer Ambulance Corps, Inc. However, to mitigate these potential increases in calls, the proposed building and parking level will be equipped with fire and smoke alarms, emergency lighting systems, and sprinklers, as required by NYS Fire and Building Codes. These features will increase the level of safety from fires and minimize the potential for use of ambulance services.
- Pertinent input from the Riverhead Volunteer Fire Department will be solicited throughout the site plan application process to ensure that the site layout and the building are designed to provide adequate provisions for emergency vehicle access and adequate hydrant and standpipe locations.
- The project will increase the consumption of water on-site. In consideration of this increase in demand, water-conserving plumbing fixtures and mechanical systems will be utilized in construction, which will further minimize the volume of water required from the public water supply.
- Each apartment will be equipped with software that monitors for leaks or water wastage.
- While the project will increase the consumption of energy resources, it is anticipated that sustainable energy-conserving measures, including energy-saving wall insulations, triple-glazed windows and energy efficient mechanical systems will be utilized, thereby mitigating the anticipated increase in energy consumption.

Transportation

- As recommended by the TIS, after completion of the project, minor signal timing adjustments at the intersection of East Main Street at McDermott Avenue/Maple Avenue will be made for the northbound McDermott Avenue approach, improve the northbound LOS E to LOS C during the PM peak hour and LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.

Water Resources

- As no adverse impacts to groundwater quality or quantity are anticipated to occur because of the project, no additional mitigation is necessary or proposed.
- As no adverse impacts on the elevation of the water table or direction of groundwater flow beneath the subject site are expected, from the project, no additional mitigation is necessary or proposed.

- No impacts on the quality or quantity of water in the Peconic River or any other surface water resource in the vicinity is anticipated; no additional mitigation is necessary or proposed.
- The proposed project will conform to the applicable building elevation requirements associated with its presence within the AE Zone (as delineated by the FEMA Flood Hazard Zone Map). Therefore, no adverse impacts in this regard are expected, and no additional mitigation is necessary or proposed.

Soils

- A detailed grading and drainage plan will be prepared for the site plan application, and will provide details of overall site grading and will require Town Division of Planning review and Planning Board approval prior to implementation.
- Any soil contamination that may have occurred because of oil storage tank leakage will be properly evaluated and remediated prior to initiation of the demolition phase. The remediation process will be subject to the review and approval of proper county and state entities, which will certify that such remediation was properly conducted, and that the process is complete.
- Erosion at the site and sedimentation at downslope locations may occur during the construction phase of the project. These potential impacts will be overcome by implementing erosion control measures and installing proper drainage facilities as part of the construction activities.

Cultural Resources

- As no adverse impacts to cultural resources on the subject property can occur (there are no such resources on the subject site), no additional mitigation is necessary or proposed.

Visual Resources

- Potential adverse impacts have been mitigated to the maximum extent practicable by use of an architectural styling that complements the other structures in the neighborhood (so that it would not contrast with the context of the resources), and by orienting the building so that its narrow side faces the cultural resources (to minimize impacts on views to and from the resources).
- The Applicant will ensure that the project architect addresses the ARB comment regarding the building's cornice.
- The ARB's recommendation to the Town Board for approval indicates that it has determined that the architecture of the proposed project is appropriate for the site and context through project architectural design. Therefore, no additional mitigation in this regard is necessary or proposed.

Alternatives Considered

SEQRA requires the consideration of alternatives to the proposed project. Alternatives should represent reasonable and feasible land use, technology and other options to the proposed project that would achieve the applicant's objectives and remain within the applicant's capabilities. The purpose of this analysis is to determine the merits of the proposed project as compared to those of other possible uses, sites and technologies that would also achieve the applicant's objectives and potentially reduce environmental impacts. The discussion and analysis of the alternatives should be conducted at a level of detail sufficient to allow for this informed comparison, to be conducted by the decision-making agencies. Alternative 1 is the "No Action" alternative, which is required by SEQRA and is intended to represent site conditions if the proposed project is not implemented.

For the subject application, the following alternatives were evaluated:

- **Alternative 1: No Action** - assumes that the site remains unchanged from its current use and condition; no re-development occurs.
- **Alternative 2: Mixed-Use Development** - assumes re-development of the site under its existing zoning, with a structure similar to the proposed project, of a mixed commercial and residential project having 12,622± SF of ground floor commercial space and 116 apartments on floors 2 through 5.
- **Alternative 3: Hotel Development** - assumes re-development of the site under its existing zoning, with a structure similar to the proposed project, of a hotel having 12,622± SF of ground floor administrative/maintenance/mechanical spaces and 110 rooms on floors 2 through 5. A special permit for this scenario will be required from the Town Board.

Permits and Approvals Required

Prior to the issuance of any permits or approvals, the applicant and Lead Agency must fulfill the requirements of SEQRA. This Voluntary DEIS describes the proposed project, catalogues site and area resources, discusses potential environmental impacts of the project, presents measures to mitigate adverse impacts, and examines alternatives to the project.

This Voluntary DEIS provides the Board (as lead agency under SEQRA) and all involved agencies with information necessary to render informed decisions on the site plan application. This document ensures that the Town Board takes a "hard look" at the project and will assist in determining potential impacts of the proposed project in order to support a SEQRA determination of significance.

Table S-4 is a list of the permits and approvals anticipated necessary for the proposed project.

Table S-4
PERMITS AND APPROVALS REQUIRED

Applicable Board/Agency	Permit/Approval Type
Town Board	Site Plan approval
	Special Permit (Site coverage)
Town Building Department	Building Permit
	239f review (to SCDPW*)
Town Fire Marshal	Site Plan review
Town ZBA	Variances (Studio unit size & parking space size)
RSD	Sanitary Sewer System Connection approval
RWD	Water Supply System Connection approval
SCDHS	Sanitary Sewer System review
	Water Supply System review
SCPC*	Referral
NYS GOSR/HCR*	Concurrence memo

* SCDPW - Suffolk County Department of Public Works; SCPC - Suffolk County Planning Commission; GOSR/HCR - Governor's Office of Storm Recovery/Homes and Community Renewal.

SECTION 1.0

DESCRIPTION OF THE PROPOSED PROJECT

1.0 DESCRIPTION OF THE PROPOSED PROJECT

1.1 Introduction

This document is a Voluntary Draft Environmental Impact Statement (DEIS) for a project known as **Riverview Lofts** (hereafter, the *"proposed project"*). The site of this proposal is in the downtown area of Riverhead hamlet, Town of Riverhead (hereafter, *"the project site"* or *"the subject site"*). **Figures 1-1a and 1-1b** provide regional and local location maps of the project site, respectively *(all figures will be found in the section following the main text of this document)*. Note that the site is currently occupied by two structures, whose street addresses are 221 East Main Street and 31 McDermott Avenue.

The proposed use is consistent with the Town of Riverhead Zoning Code designation for the subject site, which is DC-1. A mixed-use development of this type is encouraged by zoning and well-grounded in the planning efforts of the Town as embodied in the East Main Street Urban Renewal Plan (EMSURP) plan the Town of Riverhead Peconic River/Route 25 Corridor Step II Brownfields Opportunity Area (BOA) plan and is consistent with Town initiatives to revitalize downtown Riverhead as will be further discussed. Further, the project will provide needed quality housing for households characterized by a mix of incomes, in a pedestrian-friendly, transit-oriented environment

The site is composed of two contiguous developed tax lots, designated as follows (see **Topographical Survey**, in **Appendix A**, and **Table 1-1**):

Table 1-1
PROJECT SITE IDENTIFICATION

Parameter	221 East Main Street [(1)] (Section/Block/Lot)	31 McDermott Avenue [(1)] (Section/Block/Lot)	Total
Tax Lot Designation [(2)]	129/1/21	129/1/22	---
Square Feet (SF)	26,597	10,570	37,167
Current Use	Commercial (vacant)	Commercial (occupied)	---

(1) Both tax lots are in District 0600 (Town of Riverhead).
(2) Per Suffolk County Tax Map (SCTM) designation; see **Figure 1-2**.

The approximately 0.85-acre project site is located at the southwestern corner of the intersection of East Main Street and McDermott Avenue; the site is roughly rectangular in shape, with its narrow northern side fronting on the south side of East Main Street, while its longer eastern side fronts on the west side of McDermott. The site is currently developed and occupied on the north by a vacant, one-story brick commercial structure that fronts on East Main Street (the "221 East Main Street building"), and on the south by an occupied two-story frame commercial/residential building (the "31 McDermott Avenue structure"). The central portion of the property features an at-grade parking lot for the 221 East Main Street structure. This parking area is accessed only from McDermott Avenue; there is no vehicle access from East Main Street. On-site parking will consist of 55 spaces although none are required since the subject site is within the Riverhead

Parking District which considers the abundance of Town parking available on the street and in lots throughout the downtown area as will be further discussed herein.

The applicant, Georgica Green Ventures, LLC, seeks Board approval to demolish the two existing structures on the site, and construct a single five-story mixed-use structure featuring 12,622 SF of first-floor commercial spaces (at-grade with East Main Street) and four floors of apartments (116 un**its**). Note that specific type(s) of tenants are not presently known for the commercial spaces; in order to provide a "conservative" analysis of potential impacts, this document (and the plans in **Appendix A**) assume restaurant use for 11,114 SF of this area; the remaining 1,508 SF is assumed to be retail space.

Because the subject site slopes downward toward to south from East Main Street, the proposed lower level for parking beneath the structure will be accessed via McDermott Avenue (see **Figure 1-3**).

Of the 116 apartments, 115 will be rented, and one (1) apartment will be set aside for occupancy by the building superintendent.

The provision of work force and next generation housing for various income levels is a key beneficial feature of the project that furthers the housing goals of the Town.

In addition, there are number of agencies contributing to the funding for the project, and include:

- New York State (NYS) Homes & Community Renewal
- NYS Housing Finance Agency
- Governor's Office of Storm Recovery
- Suffolk County Department of Economic Development and Planning (SC Affordable Housing Opportunities Program)
- Riverhead Industrial Development Agency
- NYS Empire State Development (RESTORE NY Communities Initiative Municipal Grant Program)

As noted, the project conforms to the 2003 Town Comprehensive Plan and to the goals and intent of the 2008 Update of the Town's EMSURP and the BOA, and will conform to nearly all the applicable Town Zoning Code bulk and setback requirements for development in the site's DC-1 zoning district. Specifically, the project will require two (2) variances from the Town Zoning Board of Appeals (ZBA): to exceed the allowed floor area range of the studio apartments, and for the size of the parking spaces. In addition, the project needs a minimal Town Board (hereafter, *"the Board"*) special permit to exceed the maximum allowed site coverage (80% allowed, 93% requested, to provide for on-site parking). **Section 2.1.2** discusses the project's conformance to the standards on which the Board will review the special permit request and determine whether those standards are met.

With respect to the number of parking spaces provided relative to the amount of development proposed, Town Zoning Code Section 301-231 I. states that, for a site within a designated Parking District, the requirements of the Town Zoning Code do not apply. That is, the presence and availability of sufficient free, public parking spaces off-site but nearby would satisfy Town

conditions that parking will be available to residents of the development; the project is not required to provide any on-site parking spaces. However, at the request of the Town, the Applicant will provide 55 on-site parking spaces, and the balance of parking needs will be met by off-site spaces within the Riverhead Parking District area. The size of the on-site parking spaces will also require a ZBA variance. The two existing driveways onto McDermott Avenue will be closed, and the site will be accessed via a single, new driveway onto McDermott Avenue that leads directly into the internal groundlevel parking area beneath the building. This access will be "stop"-controlled for departing vehicles.

Sanitary wastewater from the project will be conveyed off-site via the existing network of the Riverhead Sewer District, and treated and discharged at the existing municipal facility. The project will conform to all applicable flow and design requirements of the Suffolk County Department of Health Services (SCDHS) and the Riverhead Sewer District (RSD).

The applicant has designed the project to:

- Conform to the Town Comprehensive Plan in terms of providing quality housing for households having a mix of incomes, in a downtown location with ground floor retail spaces;
- Conform to the goals and intent of the EMSURP and BOA for the area;
- Increase pedestrian traffic in the hamlet downtown area, to support commercial activity and enhance the hamlet downtown area aesthetic;
- Strike a balance between the yield permitted by the DC-1 zoning while remaining within a density that would not adversely impact the downtown hamlet character of the area and still support an economically viable project;
- Minimize potential adverse impact to groundwater resources by connecting to the public sanitary sewer system;
- Provide an aesthetically attractive development;
- Obviate a potential impact to local stormwater runoff patterns, by retaining all site-generated stormwater runoff on-site, to be recharged in the project's drainage system;
- Provide safe pedestrian and vehicle access in conformance with Town and County highway access limitations;
- Conform to all other appropriate land use requirements; and
- Provide superior site design, including appropriate on-site recreational amenities; walkability and sense of place through attractive community architecture and landscaping.

The environmental review process is a balancing process, wherein the potential adverse impacts of the proposed project are matched against its potential beneficial impacts, to give reviewing entities sufficient information and analysis to render an informed decision to approve or deny the application.

The analyses in this document support a conclusion that the potential adverse impacts of the proposed project will not be significant and will be geographically localized, and that the potential beneficial impacts will be significant.

- The proposed project is in conformance with and complements the local land use pattern; it generally conforms to the requirements of the DC-1 zoning district; it conforms to the Town Comprehensive Plan Update; and it conforms to the EMSURP and BOA.

- The project also helps fulfill a need in the Town for quality housing for a mix of household incomes, by providing a substantial number of such units.
- The project would not strain the ability of any of the community services to adequately serve the site or project.
- The project will substantially increase the amount of property taxes generated by the site, which would offset at least a portion of the increased costs to provide such services, particularly educational expenses of the Riverhead CSD.
- With minor timing adjustments to the traffic signal at the intersection of East Main Street and McDermott Avenue/Maple Avenue for the northbound approach on McDermott Avenue, the project's TIS indicates that there would be no significant traffic impacts associated with the project.
- The project will not adversely impact resources because of its connections to the public sanitary and stormwater sewer systems.
- The site's soils do not present any engineering-related limitations on the project.
- The two ESAs prepared for the existing buildings on the site indicate the presence of a UST, and the potential presence of a second UST. These will be investigated prior to the onset of construction and properly removed; any impacted soils will be properly remediated at that time, to the satisfaction of the appropriate County and NYS agencies.
- There are no cultural resources on the site, so that no direct impact to such resources could or would occur. The new building has been designed to have an architectural appearance conforming to that of its surroundings, and is oriented to present its narrow side facing East Main Street, to minimize its potential to visually dominate the character along that corridor.

1.2 Project Background

A site plan application was submitted to the Board in December 2016, to allow for the development of the proposed project. As part of that application package, the applicant prepared a Part 1 EAF form, which generally describes the project and provides general information to the Town with respect to potential impacts of the project. The EAF Part 1 is contained herein, in **Appendix B-1**. Subsequently, and in an effort to provide the Board with additional project information and potential impact analyses, the applicant prepared a Supplement to the EAF Part 1, and submitted it to the Board in December 2016.

The Town Board conducted a coordinated review among involved agencies to assume lead agency status beginning on May 25, 2017. Having received concurrence from involved agencies, the Town Board assumed lead agency and deemed this Voluntary DEIS acceptable for circulation to involved agencies and the public on June 15, 2017 for a period of 30 days. This document ensures that the Board takes a "hard look" at the project and will assist in determining potential impacts of the proposed project in order to support a State Environmental Quality Review Act (SEQRA) determination of significance.

1.3 Project Location and Existing Site Conditions

1.3.1 Project Location

The subject site is in the East Main Street Urban Renewal Area in the Town of Riverhead, Suffolk County (see **Figure 1-4**), and is zoned DC-1 in a mixed-use area. The subject site is approximately 37,167 SF (0.85 acres) in size and located at the southwestern corner of the intersection of East Main Street and McDermott Avenue, in the downtown area of Riverhead hamlet. To the north of the site are commercial and residential properties lining the East Main Street commercial corridor, and the Riverhead United Methodist Church and Doroszka House (both historically significant structures in the Town Main Street Historic District); across McDermott Avenue to the east are residential properties, beyond which is the Long Island Aquarium. To the south is Heidi Behr Way and a public park (the Town's Peconic Riverfront Park) along the north bank of the Peconic River and a Town parking lot, and to the west is a vacant lot (previously occupied by a Sears store, recently demolished), the East End Arts Park, and various commercial properties associated with the East Main Street commercial corridor.

The subject site is in the New York State Empire Zone, Business Improvement District (BID; see **Figure 1-5**), RSD, the Riverhead Water District (RWD), and the Riverhead Parking District (see **Figure 1-6**). The proposed project is considered a continuation of the urban renewal efforts of earlier projects in the vicinity, consistent with the intent of the 2008 Update of the EMSURP and the Town of Riverhead Peconic River/Route 25 Corridor Step II Brownfields Opportunity Area Nomination Study (April 2016). Note that the property abutting the west side of the subject site, previously occupied by a Sears store (since demolished), is a designated "brownfield site" (see **Figure 1-7**); this site is presently under application for re-development with a mixed-use project.

The property is more specifically identified as SCTM District 0600, Section 129, Block 1, Lots 21 and 22. The street addresses of the two tax lots are 221 East Main Street (tax lot 21), and 31 McDermott Avenue (tax lot 22).

The site is within the following planning and/or service zones and districts:

- Downtown Center-1 (DC-1) Zoning District
- Town of Riverhead East Main Street Urban Renewal Area
- Town Peconic River/Route 25 Corridor Step II BOA
- Riverhead Parking District
- Town of Riverhead BID
- Town Main Street Historic District
- Long Island North Shore Heritage Area
- Groundwater Management Zone IV (600 gallons per day per acre; gpd/acre)
- Federal Emergency Management Agency (FEMA) Flood Hazard Zone AE (southern half of site)
- FEMA Flood Hazard Zone X (northern half of site)
- Riverhead Central School District (CSD)
- Riverhead Volunteer Fire Department
- Riverhead Volunteer Ambulance Corps, Inc.
- Riverhead Police Department

- Riverhead Water District (RWD)
- Riverhead Sewer District (RSD)
- Riverhead Stormwater System
- Public Service Electric and Gas Company (PSE&G; electricity)
- National Grid (natural gas)

The project site is not in the Central Suffolk Special Groundwater Protection Area (SGPA) or the Central Pine Barrens Zone.

1.3.2 Existing Site Conditions

A series of photographs of the site and surroundings were taken in October 2016 for this document, and are reproduced in **Appendix B-2**. **Figure 1-8** presents an aerial photograph of the subject site, which depicts its existing conditions as of 2013. This figure also indicates the locations of the various site features delineated and discussed in the Environmental Site Assessments (ESAs) prepared for 221 East Main Street and for 31 McDermott Avenue. The ESA for 221 East Main Street was prepared by Cashin Associates, P.C., in November 2014 (see **Appendix B-3**), and the ESA for 31 McDermott Avenue was prepared by Nelson, Pope & Voorhis, LLC (NP&V) in October 2016 (see **Appendix B-4**). The following descriptions of the existing uses of the site, as well as the recognized environmental conditions (RECs) of each, have been taken from the Summaries of those documents.

<u>221 East Main Street</u>

This report outlines the findings of a Phase I ESA conducted by Cashin Associates, P.C. (CA) for the subject property located at 221 East Main Street, Riverhead, New York (District 600, Section 129, Block 1, Lot 21). The 0.5-acre subject property is currently developed with a 9,369 square foot building with an asphalt parking area in the rear of the building. The current building was built in 1947. The field inspection was conducted on October 27, 2014 by Mr. Keith Brewer; an Environmental Scientist from CA. CA accessed and inspected all areas of the subject property. Mr. Brewer was accompanied by Mr. Robert Knotoff (current owner for the past 35 years) and Ms. Connie Lassandro (Consultant).

Based on the Sanborn Maps, it was determined that the subject property was initially developed between 1885 and 1891 with a two-story residential building. The existing 9,369 square foot building was built sometime in 1947.

The subject property is not listed on any of the reviewed databases. While nearby properties in the surrounding area did appear in some of the reviewed databases (Section 3.0 [of **Appendix B-3**), CA found no evidence in the reports that any of the listed properties in the surrounding area have directly or negatively affected conditions at the subject property.

No Recognized Environmental Conditions (RECs) or Business Environmental Risk issues were identified for the subject property.

Recognized Environmental Conditions (RECs)
None Identified

Business Environmental Risk Issues

Suspected and Potential Asbestos-Containing Material (ACM): The original age of the subject buildings (1947) indicates that ACM may be present in both exposed and unexposed building construction materials and components, particularly in older, un-renovated portions of the buildings. An ACM survey should be performed prior to building demolition or major renovation to identify ACM abatement needs.

NYSDEC PBS Tank: The subject property (221 East Main Street) is not listed as a registered NYSDEC Petroleum Bulk Storage (PBS) site. During the site visit and discussions with Mr. Robert Knotoff (property owner) it was brought to CA's attention that there is a 1,000-gallon #2 fuel oil tank located under East Main Street in front of the subject property. A 1,000-gallon tank is below the 1,100-gallon threshold required for registration under State and County requirements. (Although the type and age of the tank is unknown, it is likely a single-wall steel tank possibly over 30 years old). The tank vent is located on the outside wall in the northwest corner of the building. If the tank is to remain in use, it should be tightness tested to confirm that it is not leaking. If the building is to be demolished, then the tank should be properly abandoned or removed. Old single-wall steel tanks can be associated with subsurface contamination of soils and groundwater from leaks and spills.

Potential Lead-Based Paint (LBP): Based on the original age of the subject buildings (1947), the potential exists for the presence of lead paint in the underlayers of paint throughout older, unrenovated portions of the buildings. The presence of lead paint should be considered during major renovation or demolition.

31 McDermott Avenue

The subject property is developed with a two (2) story commercial/residential structure with a paved parking lot area. The building is divided into four (4) sections which contain an apparel store, an acupuncturist's office, an upholstery store and an apartment. The apparel store, which is located on the first floor of the east side of the building, also has two (2) rooms on the second floor. The upholstery store is located on the west side of the first floor, the acupuncturist is in the central portion of the building and the apartment is located on the second floor. The building consists of a wood framed structure situated on a concrete slab foundation, with wood and vinyl shingle siding, and an asphalt shingle roof. The interior of the stores consists of hardwood, bare concrete and carpeted floors, as well as, painted sheetrock and wood paneling walls. The building is connected to the Town of Riverhead sewage collection system and the Riverhead Water District for potable water.

A 275 gallon above ground fuel oil storage tank is located on the west side of the building which is utilized to supply the heating system of the upholstery store. No areas of staining, evidence of discharge, areas of stressed vegetation, residue of oils or other toxic substances, pools of discharge, petroleum or chemical odors, or other such indicators were noted during the site reconnaissance.

Sanborn map coverage from 1891, 1897, 1902, 1909, 1920, 1929, 1947 and 1969 was available for the subject property and maps were reviewed in order to determine the prior uses of the subject property and surrounding area. The subject property was not depicted on the 1891-1920 maps. The 1929 map revealed that an "L" shaped building identified as wallpaper and paints and storage of building materials was located along the north and west portions of the subject property. In 1947 and 1969, an addition had been had to the southwest portion of this building bring the building to its present configuration. A gasoline tank was depicted off the northeast corner of the building from 1929 to 1969. It is uncertain if this tank is presently located on the subject property. The surrounding area was densely developed with residences and commercial buildings as well as a church and bank.

Aerial photographs from 1938, 1940, 1947, 1957, 1962, 1966, 1970, 1976, 1980, 1985, 1994, 2006, 2008, 2009 and 2011 were available for the subject property. A review of the aerials revealed that the existing building was present on the subject property in all of the aerials. The surrounding area consisted of East Main Street to the north, residential land, and undeveloped wooded land to the southeast and Peconic Avenue to the west.

USGS [United States Geological Survey] Riverhead topographic maps from 1903, 1904, 1943, 1947, 1956 and 2013 were available for review for the subject property. The scale was too small to determine if the subject property contained any improvements in the 1904 topographic map. The 1943 and 1947 map revealed that the subject property was developed. The remaining maps indicated that the subject property was located in a developed area. Please refer to Section 4.3 for additional information regarding site history.

An extensive government records search found no potential sources of environmental degradation on the subject property. Several Federal, State and County documented regulated sites were noted in the vicinity of the subject property. Specifically, ten (10) active and eighty-three (83) closed spill incidents and one (1) active and eleven (11) closed LUST [leaking underground storage tank] incidents are located within one-half (0.5) mile; and twenty-seven (27) Petroleum Bulk Storage listings, fourteen (14) RCRA [Resource Conservation and Recovery Act] Generators and one (1) Wastewater Discharges (PCSTWD) are located within one-quarter (0.25) mile of the subject property.

A Tier 1 Vapor Encroachment Condition (VEC) Assessment was conducted as part of this Phase I ESA due to the proximity of several spill incidents. The assessment was conducted in accordance to the methods and procedures outlined within ASTM E2600-15, Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions.

For this assessment under conditions where the direction of groundwater flow can be ascertained critical search distances are used to determine if a VEC exists. Specifically, the following distances are applied to the Tier I Assessment:

Upgradient Sources
1,760 feet for Chemical of Concern (COC)
520 feet for petroleum hydrocarbons

Cross-gradient Sources
365 feet for COC
165 feet for petroleum hydrocarbon LNAPL sources & 95 feet dissolved petroleum hydrocarbon sources with plume considerations

Down-gradient Sources
100 feet for COC/petroleum hydrocarbon LNAPL sources
30 feet dissolved petroleum hydrocarbon sources

Review of the regulatory agency database report provided for the subject property did not identify any sites within the critical distances for potential contamination sources. Based on this finding and the lack of potential impacted sites in the vicinity of the subject property, a VEC can be ruled out because it does not exist or is not likely to exist.

This assessment has identified the following with respect to recognized environmental conditions, controlled recognized environmental conditions, de minimus conditions and historic recognized

environmental conditions in connection with the subject property, subject to the methodology and limitations of this report.

One (1) recognized environmental condition was noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

The Sanborn Maps from1929 to 1969 identified a gasoline storage tank off the northeast corner of the existing building. It is unknown if tank has been removed from the subject property.

No controlled recognized environmental conditions were noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

One (1) de minimus condition was noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

A 275 gallon above ground fuel oil storage tank is located on the west of the building.

No historic recognized environmental conditions were noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

This report was completed in accordance with the standards set forth in the ASTM E 1527-13 and the USEPA AAI. ASTM [American Society for Testing and Materials] protocols identify asbestos containing material (ACM) and mold as non-scope issues. In the interest of serving the client, observations concerning ACM and mold are included herein. This visual assessment should not be considered an asbestos survey or a mold assessment, which would be required for building demolition and/or identification of all possible sources of ACM and mold, regardless of health danger.

Opinions

It is the opinion of the environmental professional who completed this assessment that there is evidence of one (1) recognized environmental condition, one (1) de minimus condition, no controlled recognized environmental conditions, and no historic environmental conditions in connection with the subject property, based on the reconnaissance, interviews or regulatory agency records review conducted as part of this Phase I ESA, subject to the methodology and limitations of this report. As a result of the observations noted in this report, the following recommendations are provided.

1. The subject property should be subject to a Ground Penetrating Radar (GPR) survey to determine if the tank which appears on the Sanborn maps is still present, and sampling in the vicinity of the previously identified tank should be completed to determine the environmental quality of subsoils on the property in this area.
2. If the 275 gallon above ground fuel oil storage tank is no longer in use, the tank should be emptied and removed from the subject property and properly disposed of in order to prevent a future release from occurring.
3. If the structure is to undergo major renovation or demolition, an Asbestos Survey should be completed in accordance with the New York State Department of Labor Industrial Code 56.

The applicant is committed to addressing the above-noted issues related to each of the two existing buildings prior to or as a part of building demolition actions, to the satisfaction of all applicable reviewing agencies.

1.4 Project Design and Layout

1.4.1 Overall Site Layout

To construct the proposed project, the two existing commercial structures, paved surfaces, and associated utility service connections, as well as any and all underground storage tanks, will first be removed. This phase is discussed in more detail in **Section 1.5**.

The proposed project consists of a single, five-story mixed commercial/residential structure on the subject site. The building will be accessed by vehicles only from it's the McDermott Avenue frontage; however, there will be pedestrian access from both the East Main Street and McDermott Avenue frontages. There will be first-floor commercial space including 1,508 SF of retail space and two restaurants, totaling 11,114 SF (note that these restaurant spaces may be occupied instead by other types of commercial spaces, to be determined based on market conditions). Above the ground level retail will be four floors of apartments as: 31 studios, 57 one-bedroom and 28 two-bedroom units (one of which will be set aside for rent-free occupancy by the building superintendent). Occupancy will be subject to review and jurisdiction of the Town. Refer to **Table 1-2** for a list of the current and anticipated future conditions of the project site.

Potable water will be supplied by the RWD, wastewater will be conveyed off-site to the RSD sewage treatment plan (STP) to the east, and stormwater generated on-site will be retained and recharged on-site, in the project's drainage system. Electrical power will be provided by PSE&G, and natural gas will be available from National Grid.

All solid waste will be collected on-site, stored temporarily in closed containers within the structure, and removed by a properly licensed carter on a regular basis, for disposal.

The proposed project will construct one (1) building on the site; it will have a total of 146,375 SF of floor area, distributed into commercial spaces (12,622 SF) and residential spaces (116 units), with other, non-occupied spaces. This structure will be five stories in height, or a maximum of 60 feet above grade, with a lower level for parking beneath the structure. As the property slopes downward from its high point along its northern frontage, the first floor (the level that contains the commercial spaces) will be at-grade with East Main Street. The parking area will be in the lower level, beneath the structure and accessed along the site's McDermott Avenue frontage, along which the site's slopes give direct access to the 55-space parking level.

Three types of apartment are planned: studio units (31 total, 410 to 520 SF each, an average of 465 SF); one-bedroom units (57 total, 560 to 788 SF each, an average of 674 SF); and two-bedroom units (28 total, 875 to 1,334 SF each, an average of 1,105 SF).

Sheet A-013 shows that there will be two first-floor restaurants, totaling 535 seats: Restaurant 1 is to have 4,999 SF of floor space and 235 seats, and Restaurant 2 will be 6,115 SF in size, with 300 seats. Restaurant 1 will be entirely interior to the northern portion of the building, and at-grade with East Main Street. Restaurant 2 will be located at the southern end of the building, overlooking the Peconic River. To take advantage of this view, Restaurant 2 will have an

exterior wooden deck for the use and enjoyment of its patrons. The intended restaurant use is subject to market and/or business considerations at the time the building is completed. In any case, 11,114 SF of floor space will be allocated to street level retail use with a preference for restaurants.

Table 1-2
SITE AND PROJECT CHARACTERISTICS
Existing Conditions and Proposed Project

Parameter		**Existing Conditions**	**Proposed Project** (1)
Use & Yield	221 East Main St.	9,460 SF Commercial (vacant)	1,508 SF Retail &11,114 SF/535 seats (Restaurants) (1st floor); 116 Apartments (2nd - 5th floors)
	31 McDermott Ave.	4,772 SF Commercial, 1 Unit	
Zoning		DC-1	
Wastewater Treatment System		Riverhead Sewer District	
Coverages (SF)**:**		---	---
Building		14,232	34,673
Paved/Impervious		19,194	2,494
Grassy/Bare Soil		3,741	0
TOTAL		37,167	37,167
Water Resources:		---	---
Total/Domestic Water Use (gpd) (2)		444	39,871
Intersection LOS (Peak Hour)**:**		---	---
East/West Main St. at Peconic Ave.	Weekday AM	C	C
	Weekday PM	C	C
	Saturday Midday	D	E
East/West Main St. at Roanoke Ave.	Weekday AM	C	C
	Weekday PM	C	C
	Saturday Midday	C	C
East/West Main St. & Maple/McDermott Ave.	Weekday AM	A	B
	Weekday PM	A	B (3)
	Saturday Midday	A	B (3)
Miscellaneous:		---	---
Total Residential Units		0	116
Studio Units		0	31
One-Bedroom Units		0	57
Two-Bedroom Units		0	28
Total Residents (capita)		1	213 (4)
School-Age Children (capita)		0	14 (5)
Parking Provided (spaces)		55±	55

Notes: vph-vehicles per hour; FTE-full time equivalents.

(1) **Sheet A-013** shows two restaurants: Restaurant 1 has 5,000 SF/235 seats, and Restaurant 2 has 6,115 SF/300 seats. However, these spaces may ultimately be occupied by other types of commercial uses.

(2) Based on SCDHS rates; see **Table 1-3**.

(3) With signal timing adjustments; see TIS, **Appendix C**.

(4) Assuming 1.67 capita/studio or one-bedroom unit, and 2.31 capita/two-bedroom unit.

(5) Assuming 0.08 school-age children/studio or one-bedroom unit, & 0.23 school-age children/two-bedroom unit.

There is an additional 1,508 SF of intended retail space at street level. Other first floor spaces include rooms for building maintenance and management, as well as rooms for the use and enjoyment of its residents, to include exercise room, lounge, tots room, and lobby.

To estimate the consumptive water use of the project, it is assumed that the amount of wastewater generated would equal the amount of water. The requirements of Suffolk County Sanitary Code (SCSC) Article 6 are used to determine the amount of wastewater generated. Under those requirements, an apartment of less than 600 SF would generate 150 gpd of wastewater, while apartments between 600 and 1,200 SF generate 225 gpd. The restaurants would use an additional 16,050 gpd of water. As shown in **Table 1-2** (and detailed in **Section 1.4.4** below), the project would consume an estimated 39,871 gpd of water, and generate the same amount as wastewater.

1.4.2 Grading Program and Drainage System

Grading

It is expected that the entire property will be involved in the demolition and building phases of the project. Based on the site coverages in **Table 1-2**, it is noted that no landscaping or open land is present, so that no vegetation currently exists on the site that would be disturbed during this phase.

Soil disturbance will occur as part of the demolition process, as well as to establish suitable grades for the proposed building. Additionally, the grading program must consider requirements for slopes to ensure proper drainage system performance, conformance with requirements of the Americans with Disabilities Act (ADA), and the convenience of the site's visitors, patrons and residents.

As part of the grading program, soil excavated during the demolition process that displays acceptable characteristics as fill may be used elsewhere on-site to provide suitable development surfaces. Any excess soil, as well as all the soil that is unacceptable for use as fill, will be removed by a licensed hauler, and taken to an approved disposal facility.

See **Section 2.5.2** for a discussion of the potential impacts of the proposed grading program with respect to post-construction soil erosion.

Drainage System

In conformance with Town requirements, all stormwater runoff generated on the property will be retained on the site, to be recharged to groundwater via the project's drainage system. Subject to review by the Town Engineering Department, one-half of the runoff generated on the rooftop will be detained there temporarily, while the remainder will be immediately conveyed to infiltration units located beneath Restaurant 2, on the southern portion of the property (where the land surface is lowest).

In addition to Town jurisdiction over the project's stormwater system, this aspect of the project will be subject to review by the NYS Governor's Office Storm Recovery (GOSR).

1.4.3 Vehicle Access and Parking

Vehicle Access

The proposed project will close the two existing accesses onto McDermott Avenue, and install a single, new driveway onto McDermott Avenue to provide vehicle access into the lower level parking area beneath the structure. This access will be controlled by a Stop sign for exiting vehicles. There will be no vehicular access directly onto East Main Street.

As part of the Town's site plan review process, the Town Fire Marshal and representatives of the Riverhead Fire Department will evaluate the project design for proper access for emergency and fire equipment access.

Parking

As noted in **Section 1.1**, the subject site is located within the Riverhead Parking District. The Town Zoning Code Section 301-231 I states *"...where a public parking district has been created, the owner of property within such district need not provide off-street parking areas required by this chapter."* That is, the presence and availability of enough free, public parking spaces off-site but nearby would satisfy parking such that off-site spaces will be available to residents of the area.

The project will provide a total of 55 spaces in the parking level beneath the structure, for the use of residents and patrons of the site use.

1.4.4 Water Supply and Sanitary Wastewater Disposal Systems

Water Supply System

Potable water will be provided to the proposed project from the RWD distribution system. It is anticipated that the project will be served via the main beneath East Main Street, off which distribution lines run southerly beneath McDermott Avenue. However, the final determination of this connection will be made as part of the water supply connection application review process. All necessary associated meters, easements and installations will be provided to ensure adequate water supply.

Assuming the sanitary design flow rates used by the SCDHS for wastewater systems, each studio unit will consume 150 gpd of potable water, and each one- or two-bedroom unit will consume 225 gpd. In addition, the 1,508 SF of retail space will consume 46 gpd (assuming a 0.03 gpd/SF consumption rate), and each of the 535 restaurant seats would demand 30 gpd. The building's non-habitable utility spaces and the parking area will not require water supply and, there will be no demand for irrigation. Therefore, a total of 39,871 gpd of water will be consumed (see **Table 1-3**). Each apartment will be equipped with software that monitors for leaks or water wastage.

Table 1-3
WATER USE AND WASTEWATER FLOWS
Proposed Project

Use	Quantity	Article 6 Wastewater Flow Rate	Wastewater Flow/Water Use (gpd)
Retail	1,508 SF	0.03 gpd/SF (1)	46
Restaurant 1	235 seats	30 gpd/seat	7,050
Restaurant 2	300 seats	30 gpd/seat	9,000
Studio Apartment	31 units	150 gpd/unit	4,650
One-Bedroom Apartment	57 units	225 gpd/unit	12,825
Two-Bedroom Apartment	28 units	225 gpd/unit	6,300
TOTAL FLOW	**---**	**---**	**39,871**

(1) Assuming "dry retail" space.

Sanitary Wastewater Disposal

Sanitary wastewater flow and discharge requirements are determined by the SCDHS, under the jurisdiction of SCSC Article 6. The project site is located within Groundwater Management Zone IV as defined by the SCDHS. Based on the requirements of SCSC Article 6, for a property that uses a conventional sanitary system, no more than 600 gallons may be discharged per acre daily within this zone unless wastewater treatment is provided. The proposed project is proposed to be connected to the RSD such that the requirements of Article 6 will be met.

Table 1-3 indicates that, for the uses and yields proposed, the project would generate 39,871 gpd of wastewater to be conveyed to the RSD. As stated in the e-mail from Mr. Michael Reichel, Superintendent of the RSD on March 22, 2017 (see **Appendix D**), plans for a connection to the system are currently under review. Approvals from the RSD and SCDHS will be required for this connection.

The details of the project's connections to the Town sewer system will be determined during the district's review of the sanitary sewer connection application. There is an existing sewer line beneath McDermott Avenue that is the district's preferred option. However, the district would also accept connection directly to the main that passes beneath the site and leads to the STP to the east. The district would accept up to three separate connections to its pipe network (whichever is chosen); one for each of the two restaurants, and a third for the rest of the building.

SCSC Article 12 regulates storage/handling of toxic and hazardous materials to *"…maintain [Suffolk County's] water resources as near to their natural condition of purity as reasonably possible for the safeguarding of the public health…"* The project won't use toxic or hazardous materials (other than common household cleaners), and so will conform to this regulation.

1.4.5 Lighting

Lighting will be consistent with current Town standards and requirements, with all installed lighting dark-sky compliant including downcast fixtures. Lighting will be provided to establish a

safe and secure environment with illumination only in those areas where it is necessary.

It is expected that the proposed project will illuminate the building walls and sidewalks along the site's northern and eastern facades, as well as the outdoor restaurant terrace. Lighting will be provided consistent with other adjacent and nearby properties typical of a quality mixed commercial/residential structure. Lighting for the project will conform to the applicable requirements of Town Zoning Code Article XLIX (Exterior Lighting). The applicant will ensure that only "dark sky" compliant luminaires will be used; this type of fixture is equipped with a full cut-off shroud that directs all illumination downward. By use of such fixtures, the potential for adverse impacts to the visibility of the nighttime sky for site patrons and residents, as well as impacts to the neighboring properties will be minimized.

1.5 Demolition and Construction Schedule & Operations

1.5.1 Demolition and Construction Schedule

It is expected that the demolition phase will start shortly after issuance of the necessary permits from the Town, and last an estimated 20 days. The limited recommended remediation actions given in the Phase I ESAs for the two existing buildings, will be completed as part of this phase, and are not anticipated to take a substantial amount of time to perform.

Based on a preliminary estimate, construction of the proposed project is anticipated to occur in one phase, with construction anticipated to begin upon completion off the demolition phase, which is estimated to be in October of 2017. It is expected that the construction phase will last 24 months, so that the project would be completed in October of 2019.

Demolition and construction activities will conform to Town Code Section 251-5 K regulations on hours, and would not occur between the hours of 8:00 PM and 7:00 AM (excepting Sundays, when no construction activities are anticipated), and will conform to additional applicable Town regulations regarding construction noise generation.

1.5.2 Demolition and Construction- Related Operations

The overall site development process will begin as soon as practicable following the completion of the site plan approval process, and building permit issuance.

<u>General Remediation and Demolition Process Descriptions</u>
A Demolition Plan will be prepared for Town review and approval, and a demolition permit will be obtained prior to the onset of demolition activities. In general, demolition for each of the existing structures would follow the same process, including cessation of activities and disconnection of utilities, followed by inspection for potentially hazardous or toxic building materials (e.g., asbestos, chemicals, etc.; see above). Any recyclable building materials would be removed at this time, to increase re-use of materials and reduce the volume of demolition wastes to be handled. No on-site crushing of concrete, brick, etc., is anticipated (to eliminate a potential

source of dust raised on the site during the demolition process). However, in the unlikely event that such activity becomes necessary, the Applicant will ensure that proper and effective dust suppression measures are undertaken to minimize the potential for adverse impacts.

The remediation/demolition phase will begin with investigations of the two structures for the potential sources of impact described in their respective ESAs. For the 221 East Main Street structure, the presence and extent of ACM and lead-based paint will be determined, and for the 31 McDermott Avenue structure, the presence of ACM will be determined. Additionally, investigations at both structures will be completed to determine the presence of suspected USTs.

If found in the existing structures, any ACM and/or lead-based paint will be properly removed and disposed of, in conformance with appropriate regulations. Some measures may include, but not be limited to, restricted hours that removal operations may occur, installation of proper shielding, air baffles or the like, establishment of equipment and personnel staging areas, and provisions for waste material storage on-site until it is removed for disposal. As the removal operations would occur within the structures, it is expected that these measures would be located within the structures, to minimize potential disturbance to the neighborhood. The applicant will utilize contractors licensed in lead-based paint materials control as well as asbestos removal, to ensure compliance with applicable health/safety requirements.

With respect to USTs, each will be removed and an investigation of the surrounding soil will be made to determine the presence, nature and extent of any soil contamination resulting from leakage or spillage from each UST. Tank removal will be conducted subject to applicable Town, County and/or State standards, including but not limited to the NYS Department of Environmental Conservation (NYSDEC). The SCDHS will be notified of any storage tanks that require removal. The tanks will be removed under the oversight of SCDHS personnel and by a reputable, licensed contractor.

Demolition may be performed using an excavator and/or front-end loader to transfer debris to dump trucks for disposal at an approved, permitted construction/demolition landfill. Trucks will access the site via the existing entrances on McDermott Avenue, and will be staged and loaded within the site. It is expected that trucks will approach and depart the site from East Main Street.

In support of the above-described narrative, the following general description of the demolition process has been prepared by the Applicant's construction manager:

> Overview
> The proposed site currently contains a vacant one-story commercial building fronting East Main Street, and a one- and two-story wood frame structure in the rear of the property facing the Peconic River. Both of these structures will be demolished and debris removed from the site prior to proceeding with the excavation and foundation operations. A construction fence will be erected encompassing the site and adjacent sidewalks. Appropriate barriers will be provided to create a safe sidewalk path where necessary or direct pedestrians to utilize the sidewalks on the opposite side of the street. Once all safety measures, warning signs and utilities are disconnected the actual demolish will commence as follows:

Site Examination

1. Contractor shall visit the site and carefully examine work to be undertaken to become familiar with the existing conditions, new construction, nature and scope of work, as well as, difficulties that attend its execution.
2. In addition, examine all work that is intended to remain as part of the completed project and report all unsatisfactory conditions prior to the commencement of the work.
3. Verify existing conditions both above and below the surface of the ground before commencing work to protect existing utilities and other items to remain that may be subject to damage during demolition and removal operations.

Demolition Procedures

1. Provide and erect all temporary fencing, sidewalk bridges, bracing, shoring, sheet piling, lights and warning signs required by jurisdictional authorities and/or site conditions to protect the workers engaged in operations, the public and adjacent on-site and off-site property, all as may be required and as supplementary to such items that have been left in place. Ascertain and comply with all legal and other requirements from agencies and utilities having jurisdiction.
2. Leave all protection in place and maintain until work has been completed and all danger of damage or injury has passed.
3. Protect existing work which is to remain in place or that is to be reused, by temporary covers, shoring, bracing, and supports, or by removal, storage and protection. Items which are to remain and/or which are to be salvaged and which are damaged during performance of the work shall be repaired to their original condition or replaced.
4. Protect building interior and all materials and equipment from the weather and adverse temperatures at all times. Temporary coverings shall be attended, as necessary, to insure effectiveness and to prevent displacement.
5. Protect adjacent and adjoining structures and property from damage, debris, dust and excessive noise. Take appropriate action to check the spread of dust in the buildings and avoid creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions, such as ice, flooding or pollution. Erect temporary, sealed partitions as required to prevent the spread of dust. During non-freezing weather, wet down work to minimize dust.
6. Protect street lamps, electrical work, plumbing work, cable TV, hydrants, and public amenities.
7. All work including removal of debris shall be done in a careful manner so as not to damage any retained work, architectural features, ornamentation, etc. All retained work shall be kept clean and in as undamaged a condition as possible.
8. All necessary and required shoring, bracing and other supports shall be provided and installed to support existing construction to remain while removing items to be demolished. All shoring shall comply with local applicable codes.
9. Remove and transport debris and rubbish in a manner that will prevent spillage on streets or adjacent areas with appropriate trucking equipment.
10. Comply with Federal, State and local hauling and disposal regulations. Provide manifests if necessary.
11. Where conditions of structural instability are encountered, notify the Architect immediately and the non-structural materials surrounding the condition shall be removed to facilitate inspection.

Utility Lines

1. The Architect and MEP [mechanical, electrical and plumbing] Engineer shall be notified if utility lines are uncovered between the face of the building and the curb line. Non-project utility lines including storm and sanitary sewers, water, gas, electric, telephone, television or any other lines shall not be removed without proper authorization. General Contractor shall also advise the

Utility Company if any of these lines may impact on the project work required.
2. All utilities shall be disconnected as required and verified before any removal and/or demolition.

Equipment and Timeline

1. The nature of the construction to be undertaken will require the use of two hydraulic excavators equipped with hydraulic thumbs. Typical construction debris from inside the 221 East Main Street building and the one and one-half story wood frame building will be crushed on site and removed by a payloader. A water truck will be on site to control dust, as necessary. Masonry components of the buildings will be removed and crushed offsite. It is anticipated that the demolition will take approximate twenty working days to accomplish weather permitting.

General Construction Process Description

Immediately upon completion of the demolition phase, construction of the proposed mixed-use structure can commence. It is anticipated that the southern end of the property will be used for construction material unloading/storage and staging areas, as well as for construction worker parking. Like the demolition phase, it is expected that trucks will use East Main Street to approach and depart the site area, as the only construction access will be on McDermott Avenue, Excavations for the building foundation and utility connections will indicate the first stage of construction, to be followed by installing forms for the foundation, then pouring of concrete. After the concrete has set, building construction can then begin. The structure is planned for wood frame construction for the four floors of residences above the first (commercial) floor, so that the ground floor and first floor would be framed using steel beams to provide a solid structural base. Concurrent activities may include installation of the utility connections, while the completed shell receives its interior electrical, plumbing and other mechanical systems (e.g., elevators, HVAC [heating, ventilation and air conditioning] equipment, etc.); installation of the site lighting system may be performed while the interior of the building is being completed (i.e., tilework, wall paneling, lighting and plumbing fixtures, painting, rugs, furnishings, etc.). Utility system commissioning will complete the construction process.

As a supplement to the above-described narrative, the following general description of the construction process has been prepared by the Applicant's construction manager:

> Upon completion of both demolition and site clearing, excavations to the depth of the building footings and pile caps will occur, followed by driving of piles. Approximately 550 piles, each having a capacity of 50 tons per pile, will be installed over an eight-week period. Support of excavation, if necessary, will then be put in place. Just prior to concrete operations, underground tanks and drainage structures will be installed and piped into place. Afterwards, cast-in-place concrete formwork will start, including pile caps, footings, foundation walls, piers, columns, grade beams, parking slab and the first-floor deck will be poured to establish the concrete podium the four floors above. Construction of the podium phase is expected to take three months. Following the podium phase, erection of the wood frame superstructure will begin. Pre-assembled wood panels and trusses will be delivered to the site and placed in sequence to erect exterior and interior floor layouts and subsequent placing of the floor truss system. Simultaneous with the wood panel system, masonry CMU shafts will be built for the elevators and stairwell enclosures. It is anticipated this phase will take three months to accomplish. Once the superstructure is erected, scaffolding will be placed and the building envelope will begin encompassing, sheathing, insulation, windows, exterior finishes, roof installation and details which is expected to take five months. Once the structure is deemed weathertight, interior

buildout can commence. Interior construction beginning with electrical, plumbing and mechanical roughing, followed by sheetrock, taping, installation of kitchen cabinets, prime and finish painting, floor and wall finishes, doors, frames, hardware, electrical and plumbing fixtures and toilet accessories. In parallel sequence with the interior work will be installation of elevators and steel pan stairs. It is anticipated this ongoing work will take eight months. During the eight-month interior scope packages, scaffolding will be removed and first floor retail and entrance work along the McDermott Avenue and East Main Street building sides can move forward. After the facade work is completed, curbs, sidewalks and planting will be undertaken. Final phases of the project will provide for commissioning and system testing, building department sign offs, punch list items and final clean up over a two- month period.

1.5.3 Erosion Control During Construction

The following discussion presents erosion and sedimentation control guidelines to be observed during construction to minimize impacts. In general, because of the implementation of these measures, sediment will not be transported off-site by stormwater runoff, so that no significant level of impact on adjacent sites or local water quality of the Peconic River is expected. However, should any sediment escape from the site, it will be swept back onto the site by manual or mechanical means (depending upon the amount of fugitive sediments) under the direction of the construction manager. During the construction process, inspections of the construction site will be regularly performed under the supervision of a qualified professional to ensure that erosion controls are properly maintained.

In general, the construction manager, in combination with the various specialized contractors, will be responsible for all construction activities, and installation and maintenance of the erosion and sediment controls. The construction manager will also be responsible for ensuring proper storage and stockpiling of construction materials and that building supplies will be stored in designated areas, and that measures are implemented to prevent/reduce wind-blown dust. The construction manager will be responsible for securing an approved carter to empty the construction waste dumpsters and haul waste from the site to an approved location for disposal.

It is expected that the erosion control plan will incorporate recommended measures of the NYSDEC Technical Guidance Manual, and use of measures such as:

- Silt fence, storm drain inlet protection, hay bales and good housekeeping procedures will be used;
- Construction equipment and vehicles will be parked and loaded/unloaded within the site;
- "Rumble strips" at the site entrance will prevent soil on truck tires from being tracked onto the public road system;
- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures; and
- The drainage system will provide permanent stormwater controls once construction is completed.

The property will be operated by the site's owner, which will be responsible for all on-site maintenance and repair, including all the interior spaces and exterior surfaces, the site's drainage system, the connection to the public sanitary sewer system, snow removal, garbage pick-up, etc.

1.6 Permits and Approvals Required

Prior to the issuance of any permits or approvals, the applicant and Lead Agency must fulfill the requirements of SEQRA. This Voluntary DEIS describes the proposed project, catalogues site and area resources, discusses potential environmental impacts of the project, presents measures to mitigate adverse impacts, and examines alternatives to the project.

This Voluntary DEIS provides the Board (as lead agency under SEQRA) and all involved agencies with information necessary to render informed decisions on the site plan application. This document ensures that the Town Board takes a "hard look" at the project and will assist in determining potential impacts of the proposed project in order to support a SEQRA determination of significance.

Table 1-6 is a list of the permits and approvals anticipated to be necessary for the proposed project.

Table 1-6
PERMITS AND APPROVALS REQUIRED

Applicable Board/Agency	Permit/Approval Type
Town Board	Site Plan approval Special Permit (Site Coverage)
Town Building Department	Building Permit
	239f review (to SCDPW*)
Town Fire Marshal	Site Plan review
Town Zoning Board of Appeals	Variances (Size of Studio Units and Size of Parking Spaces)
RSD	Sanitary Sewer System Connection approval
RWD	Water Supply System Connection approval
SCDHS	Sanitary Sewer System review
	Water Supply System review
SCPC*	Referral
NYS GOSR/HCR*	Concurrence memo

* SCDPW - Suffolk County Department of Public Works; SCPC - Suffolk County Planning Commission; GOSR/HCR - Governor's Office of Storm Recovery/Homes and Community Renewal.

SECTION 2.0

EXISTING CONDITIONS, ANTICIPATED IMPACTS AND PROPOSED MITIGATION

2.0 EXISTING CONDITIONS, ANTICIPATED IMPACTS AND PROPOSED MITIGATION

2.1 Land Use, Zoning, and Plans

2.1.1 Existing Conditions

Land Use

Figure 2-1 depicts the land use categories of properties adjacent to the project site, as well as of sites in the immediate vicinity. As can be seen, the land use categories of the site are presently "Commercial" and "Residential," as both structures are predominantly commercial buildings (though the northerly structure, at 221 East Main Street is presently vacant), and the 31 McDermott Avenue building has a single apartment. The following table describes the land uses of the properties abutting the site and in the vicinity:

Direction	Abutting Properties	In the Vicinity
to the north	Commercial, Religious/Institutional, Residential	Residential
to the east	Commercial, Residential, Public Parking	Commercial, Residential, Recreation
to the south	Public Open Space, Public Parking	Public Open Space, Vacant
to the west	Vacant (former Commercial), Public Parking	Public Open Space, Commercial

The pattern of land uses near the site is dominated by the Commercial uses of properties fronting on both sides of East Main Street to both the east and west of the site, though the two sites opposite the subject property (on the north side of East Main Street) are Religious/Institutional (the Riverhead United Methodist Church) and Residential uses. In the area between East Main Street and the Peconic River, the intensity of the land use categories decreases in a southerly direction, to include first Residential uses, then Recreation (the Long Island Aquarium), and Parking and Public Open Spaces (e.g., Peconic Riverfront Park and the East End Arts Park).

Zoning

Figure 2-2 depicts the zoning designations of properties adjacent to the project site, as well as of sites in the immediate vicinity of the project site. As can be seen, the site is zoned DC-1, which is the zoning category that the Town Board had determined appropriate for the site and vicinity as an outcome of the EMSURP. The following table identifies the zoning classifications of the properties abutting the site and in the vicinity:

Direction	Abutting Properties	In the Vicinity
to the north	DC-1	DC-4, DC-5
to the east	DC-1	DC-1, DC-2, DC-3, DC-4
to the south	DC-2	DC-2
to the west	DC-1	DC-1, DC-2, DC-3

The zoning pattern in the area reflects the recommendations of the EMSURP that was adopted by the Town, incorporating the several types of DC districts recommended in that plan. Zoning near the subject site is dominated by the DC-1 district, which is the district assigned to all

properties along both sides of East Main Street, in support of the Commercial uses that line this corridor. It is noteworthy that the DC-1 district (as intended by the Town) allows for the continuation of Residential uses that are found in this area as well. The DC-2 district occupies the northern bank of the Peconic River to both the east and west of the site, to provide for the Peconic Riverfront Park.

Land Use Plans

Town Comprehensive Plan (November 2003) - The following description of the genesis, reasons for, and preparation of the Town Comprehensive Plan has been taken from that document.

1. INTRODUCTION

Riverhead is a community rich in natural, historic, and scenic resources that is experiencing powerful forces of change. Riverhead continues to be the most important agricultural community in Suffolk County and one of the most important in the State. Riverhead's unique landscape also includes waterfront areas on the Great Peconic Bay, Flanders Bay, and Long Island Sound; portions of the Central Pine Barrens and the scenic Peconic River; and distinctive bluffs and woodlands along the Sound. The Town has an historic Main Street and hamlet centers, like Jamesport and Aquebogue.

With change, there are both opportunities and risks. Enterprise Park at Calverton promises to attract new businesses and jobs. Increasing tourism is drawing more visitors into downtown, Jamesport hamlet, and the wine country, where they spend money on overnight accommodations, cultural events and attractions, meals, and specialty items like antiques and crafts. Retailers along Route 58 are drawing shoppers from the entire East End, as well as in the western part of Suffolk County.

At the same, local residents know the downsides of growth all too well: disappearing open space, increasing threats to natural resources, worsening traffic congestion, overburdened community facilities, proliferation of unattractive sprawl and strip development, and worst of all, a diminishment of the Town's unique countryside character that attracted so many residents in the first place.

Recognizing these opportunities and pressures, the Town Board, with the assistance of the Planning Board, embarked upon the preparation of this Comprehensive Plan in the late 1990s. Early on, the Town established a goal to develop a plan that fully takes into account the concerns of the community and strives for fair, balanced solutions to complex problems. Working with local consultants, the Town coupled extensive research and field work with a multifaceted community outreach process.

1.2 Contents of the Comprehensive Plan

The Comprehensive Plan is composed of eleven different elements, each dealing with a distinct topical area of the community. Each element contains goals and recommendations specific to that topic area. The Proposed Land Use Plan weaves together those goals and recommendations into a single, coherent plan for development and conservation, providing a snapshot of what the Town would be expected to look like in the future. The elements of the plan are organized as follows:

- Chapter 2: Land Use Element
- Chapter 3: Agriculture Element
- Chapter 4: Natural Resources Conservation Element
- Chapter 5: Scenic and Historic Resources Preservation Element
- Chapter 6: Business Districts Element
- Chapter 7: Economic Development Element
- Chapter 8: Housing Element

- Chapter 9: Transportation Element
- Chapter 10: Utility Service Element
- Chapter 11: Parks and Recreation Element
- Chapter 12: Community Facilities Element

Goals and recommendations to implement each of the eleven above-named plan elements were prepared for and included in the Town Comprehensive Plan. The nine elements pertinent to the project (the agricultural and community facilities elements are not relevant to the project) are presented in **Section 2.1.2** below, and are followed by brief discussions as to the project's conformance to each.

East Main Street Urban Renewal Plan Update (2008) - The following description of the genesis, reasons for, and preparation of the EMSURP Update has been taken from that document (see also **Appendix B-5**).

A. INTRODUCTION

In 1993, the Town of Riverhead Community Development Agency (CDA) prepared the *East Main Street Urban Renewal Plan* (1993 Plan). The impetus for the CDA, acting as the Town's urban renewal agency, to prepare the 1993 Plan was to propose redevelopment of certain areas of the downtown that were blighted and deteriorated and where numerous structures had been vacant or underutilized for an extended period of time. Historically, the East Main Street Urban Renewal Area (EMSURA) served as a commercial downtown center for Riverhead residents. The decline of this area, as stated in the 1993 Plan, was a direct result of the development of larger commercial centers, such as shopping malls and large single-use retail stores that are situated along Suffolk County Route 58.

Since the adoption of the 1993 Plan, the Town has introduced various programs and improvements to the downtown area in conformance with the recommendations of the plan. Some of these improvements include the development of new and attractive structures, elimination of blighted buildings, and several land use and zoning changes, including the development of the waterfront park. Notwithstanding these improvements, the area continues to be plagued with blight and vacancy as a result of the decline of commercial retail uses, and therefore, further redevelopment should be encouraged. However, since 1993, there have been several land use and public policy changes within the EMSURA that impact the character and intent of the EMSURA. Such changes include the development of a key commercial anchor— Atlantis Marine World Aquarium; the adoption of several planning documents, including the *Town of Riverhead 2003 Comprehensive Plan* (2003 Comprehensive Plan); and a change in the zoning within the EMSURA from Business D District to the Downtown Center 1: Main Street (DC-1) and Downtown Center 2: Waterfront (DC-2) Districts. Further, changes in the Town's socioeconomic environment and commercial and retail development patterns also affected the land use pattern within the EMSURA. These changes, combined with the Town's intent to continue revitalization of the EMSURA, warrant an update to the 1993 Plan.

The intent of this East Main Street Urban Renewal Plan Update 2008 (2008 Update) is to assess the present day issues and conditions within the EMSURA and make recommendations that are consistent with the Town's current planning goals and objectives. Further, this 2008 Update will serve as the future roadmap to continued urban renewal and economic revitalization, lead and coordinated by the CDA.

This 2008 Update has been written in full compliance with the General Municipal Law Article 15: Urban Renewal Law.

EAST MAIN STREET URBAN RENEWAL AREA
The EMSURA is located in the south-central portion of the Town of Riverhead, Suffolk County, New York. The total land area, including roadways, within the EMSURA boundary is approximately 41 acres and includes 90 separate Suffolk County Tax Map parcels. More than 98 percent of the land within the EMSURA is developed or in active use, including parking, and the remaining 2 percent is undeveloped.

The EMSURA is bounded on the north by East Second Street, on the east by land adjacent to the eastern property boundary of the Treasure Cove Resort and Marina, on the south by the Peconic River, and on the west by Peconic and Roanoke Avenues.

RECOMMENDATIONS AND STATEMENT OF PROPOSED LAND USES
It is the intent of this 2008 Update to encourage land uses that are consistent with the policies set forth in the 2003 Comprehensive Plan Update, the Town's zoning ordinance, and the *Revitalization Strategy for Downtown Riverhead*. The recommendations made in this update are intended to promote a mix of uses that foster a balance between residential, commercial, cultural, and tourist accommodations; reduce vacancy and blight; provide connectivity within the EMSURA; and incorporate the natural amenities of the area, including the waterfront.

A total of 60 recommendations to implement the EMSURP elements were prepared, of which eleven are pertinent the proposed project. These are presented in **Section 2.1.2** below, with a brief discussion of the project's conformance to each.

2.1.2 Anticipated Impacts

Land Use
As the site is presently considered to be Commercial and Residential land use, and the proposed project is also commercial and residential, there would be no significant change in the land use category of the site, or to the pattern of land uses in the area. The amount of residential development in the vicinity would be increased by the proposed project, as would the amount of commercial space in that same area. However, the Town prepared supporting plans, and created and adopted zoning specifically to address the needs of the Town of Riverhead as embodied in the DC-1 district. This zoning is intended to establish land use that will assist in the revitalization of downtown Riverhead and this resultant land use has been supported by the Comprehensive Plan Update (2003), the EMSURP (2008) and the BOA (2016). Therefore, since these uses characterize the hamlet downtown area, and these uses conform to the area's DC-1 zoning and the recommendations of the pertinent plans (as will be discussed below), neither of these increases would represent a significant adverse impact on land use.

Zoning
As the proposed project does not involve a change of zone of the site, there will be no impact on the pattern of zoning in the vicinity.

Table 2-1 lists the various building bulk and setback requirements of the DC-1 zoning district, along with the pertinent quantity of the proposed project. As can be seen, the proposed project will conform to nearly all the applicable requirements of the DC-1 district, with two exceptions: the floor area of the studio apartment units, and the maximum allowed lot coverage for a site served by sewers. Special permits from the Town Board will be required for these two items as well as ZBA approval for unit size.

Table 2-1
CONFORMANCE TO BULK, HEIGHT & SETBACK REQUIREMENTS
DC-1 Zoning District

Parameter	Required	Provided
Town Zoning Code Section 301-142		
Lot Area, Minimum (SF)	5,000	37,167
Lot Width at Front Street, Minimum (feet)	50	382
Building Lot Coverage, Maximum with Sewer (%)	80	93.0*
Impervious Surfaces, Maximum (%)	100	100
Building Height, Maximum (feet)	60	60
Floor Area Ratio, Maximum with Sewer	4.00	3.4
Front Yard Depth, Minimum (feet)	0	0
Side Yard Width, Minimum, Corner Lot (feet)	0	0
Side Yard Depth, Minimum, Combined (feet)	0	0
Rear Yard Depth, Minimum (feet)	0	0
Town Zoning Code Section 301-141		
Permitted Use:	---	---
Retail Store (Max., SF)	10,000	1,508
Restaurant	allowed	Complies
Studio Apartment (Min. to Max., SF)	300-450	410-520*
Town Zoning Code Section 301-231		
Off Street Parking	n/a	n/a

*Variance required from ZBA.

The variance for the size of the studio units is necessary to provide the type of unit that the applicant has determined would be appropriate to meet the market demand for such units; smaller studio units meeting the Town Code standard would not be as marketable or attractive to potential occupants as the units of the sizes proposed.

The special permit needed for the exceedance of 80% of the site to be covered by the structure is the result of the Town's request that the project provide some amount of on-site parking. The size of the parking stalls will also require a ZBA variance. It is noteworthy that on-site parking is not required for development in the DC-1 zoning district; nevertheless, the Applicant has agreed to satisfy this request. The project, as proposed, reflects the Applicant's effort to balance the need to produce a structure having a substantial number of rental apartments, each having a floor area of sufficient size to attract qualified tenants, as well as ground floor commercial spaces that are both appropriate for the downtown hamlet area and would support the Town's goals for the area. Because of this balancing and responding to the Town's request for on-site parking, it is necessary that the Town Code maximum allowed site coverage be exceeded.

Riverhead seeks residential occupancy for revitalization and a healthy downtown environment. Similarly, ground floor retail adds to the vibrancy to the downtown setting. The applicant has significant experience in designing successful projects with full occupancy. The economic feasibility of a project is critical to its success. Changes to the unit sizes/numbers, or commercial use are not advisable if the project is to be successful and meet the goals of the applicant and the Town of Riverhead to achieve the revitalization envisioned in the various Town land use plans.

Table 2-2 lists the Town Code standards under which the Town Board will review the special permit requested, to determine whether these standards have been met and the special permit can justifiably be approved and issued. The ZBA will make a determination om the two variances requested, based on the project's merits, as related to size of the studio units and the size of the parking spaces.

Land Use Plans

Town Comprehensive Plan (November 2003) - The plan recommended that the subject site be developed with uses conforming to the DC zoning district (see **Figure 2-3a**). Following are brief discussions as to whether and how the project conforms to the goals and recommendations of each of the nine Town Comprehensive Plan elements pertinent to the proposed project.

Land Use Element

Riverhead is already one of the most dynamic and exciting places on Long Island, and in the future, it will become a preeminent center for tourism, agriculture, business, shopping, recreation, and living on the East End. As in recent years, the Town will continue to experience growth and change in coming years. Economic development and environmental conservation should be balanced; to not only sustain expansion of Riverhead's strong economic base, but also promote livable communities, preserve farmland and agricultural activity, and protect Riverhead's natural, historic, and scenic resources.

The proposed project is intended to benefit from and contribute to the expansion and continued enhancement of downtown Riverhead. The project conforms to the mixed-use nature designated for the site by the Town Comprehensive Plan (as well as to the recommendations of the EMSURP; see below), in that it will provide for high-quality ground floor retail space and restaurant spaces (of which one would overlook the Peconic River corridor and Peconic Riverfront Park to the south). The proposed building will be designed to enhance the aesthetics of the area, by being built with an architectural styling that complements that of its surroundings. By incorporating a significant number of quality rental apartments for a mix of household income, the project would enhance the vitality and activity of the neighborhood. Inclusion of restaurant use overlooking the river would tend to enhance public appreciation and use of the Peconic Riverfront Park that lines the north bank of this natural feature.

Natural Resources Conservation Element

The natural resources present in Riverhead today - including stream corridors and wetlands, the Central Pine Barrens region, and the aquifer that provides high quality water to the Town - are integral to Riverhead's long-term health, safety, and well-being, as well as its identity and economic vitality. As such, the ecological integrity of Riverhead's natural resources must be maintained and protected.

Table 2-2
CONFORMANCE TO SPECIAL PERMIT STANDARDS

Standard	Building Lot Coverage Special Permit
§301-312 The Town Board and the Planning Board may consider, among other matters or factors which either Board may deem material, that:	
A. The site is particularly suitable for the location of such use in the community.	The project site is well-suited for the proposed mixed-use (i.e., upper-floor residential and ground floor commercial spaces) project, as such uses dominate successful downtown areas and are present in the Riverhead hamlet downtown area, and reflect the goals of established Town zoning and planning efforts specified for this area in land use plans.
B. The plot area is sufficient, appropriate and adequate for the use and the reasonably anticipated operation and expansion thereof.	The project site is adequately-sized to accommodate the proposed project. The project will provide 55 more parking stalls than are required by zoning, and the design and development of the building fits well within the proposed project site.
C. The characteristics of the proposed use are not such that its proposed location would be unsuitably near to a church, school, theater, recreational area or other place of public assembly.	The project site is located opposite both a church (to the north) and a public recreation area (to the south). However, the nature and magnitude of the project are such that neither of these public resources would be significantly or adversely impacted if the special permit were to be approved, and would in fact be enhanced by the types of development proposed.
D. Access facilities are adequate for the estimated traffic from public streets and sidewalks, so as to assure the public in relation to the general character of the neighborhood and other existing or permitted uses within it, and to avoid traffic congestion; and further that vehicular entrances and exits shall be clearly visible from the street and not be within 75 feet of the intersection of street lines at a street intersection except under unusual circumstances.	The project has been designed and engineered with proper geometry to conform to all applicable Town standards for vehicle access and provide a safe means of ingress and egress from the site. In this way, safe and proper roadway operations would be assured. The project site is located in the Riverhead hamlet downtown area, and so his provided with sidewalks along its northern and eastern boundaries.
E. All proposed curb cuts and street intersections have been approved by the street or highway agency which has jurisdiction.	The project has been designed and engineered to conform to all applicable Town standards for vehicle access, which design will be subject to detailed review by Town engineering staff during the site plan application review process, ensuring safe and proper roadway operations. All curb cuts will be approved by the appropriate agencies.
F. Adequate provisions have been made for emergency conditions.	The project has been designed and engineered to conform to all applicable Town standards for emergency vehicle access, as well as for operations related to emergency conditions. Further, the project's design will be reviewed and be subject to the approval of qualified Town planning and engineering staff, as well as by the Riverhead Fire Department and Riverhead Fire Marshal prior to the issuance of building permits. The project will conform with applicable building/fire code requirements for safety.
G. There are off-street parking and truck loading spaces at least in the number required by the provisions of this chapter, but in any case, an adequate number for the anticipated number of occupants, both employees and patrons or visitors; and further, that the layout of the spaces and driveways are convenient and conducive to safe operation.	It is noteworthy that the project site is within a Town-designated Parking District, wherein no on-site parking spaces would be required for a site in a DC-1 zoning district. However, at the request of the Town, the project includes 55 parking spaces on-site. These will be located an at-grade parking level beneath the structure. Providing these parking stalls where no such stalls are required is an important feature of the project that complements the use and its location in the Parking District. It is expected that sufficient spaces will be available in Town parking lots nearby to satisfy any parking needs over and above that addressed by the project's on-site spaces.
H. Adequate buffer yards, landscaping, walls, fences and screening are provided where necessary to protect adjacent properties and land uses.	The project has been designed and engineered to conform to all applicable Town standards for yard depths and building setbacks. The proposed building has been reviewed and approved by the ARB and conforms to applicable dimensional requirements of the Town DC-1 zoning district.
I. Where necessary, special setback, yard, height and building area coverage requirements, or easements, rights-of-way or restrictive covenants, shall be established.	It is not expected that any special setback, yard, height, easements, rights-of-way or covenants will be necessary or applicable to the proposed project. The project does require Town Board approval of a special permit for its lot coverage, but this exceedance (maximum 80% allowed, 91.5% requested) is due to the Town's request that the project include on-site parking which is a feature of the project. The project, as proposed, reflects the Applicant's effort to balance the need to produce a structure having a substantial number of rental apartments (as sought by the Town for the DC-1 zoning district), each having a floor area of sufficient size to attract qualified tenants, as well as ground floor commercial spaces that are both appropriate for the downtown hamlet area and would support the Town's goals for the area. As a consequence of this balancing and responding to the Town's request for on-site parking, it is necessary that the Town Code maximum allowed site coverage be exceeded.
J. Where appropriate, a public or semipublic plaza or recreational or other public areas will be located on the property.	The project site is contiguous to an established, substantial Town open space amenity (the Peconic Riverfront Park) and is near another such amenity (the East End Arts Park). As a result, there is no substantial need for additional public space on the project site.
K. Adequate provisions will be made for the collection and disposal of stormwater runoff from the site and of sanitary sewage, refuse or other waste, whether liquid, solid, gaseous or of other character.	The project will connect to the Riverhead Sewer District to treat and dispose of all wastewater generated on the site. All stormwater runoff will be retained on-site per Town design storm requirements and recharged to the ground through the project's drainage system. All solid waste will be removed and disposed of by a private carter operating under contract with the project ownership. The nature of the project is such that no hazardous, or other types of wastes, whether solid, liquid or gaseous, will be generated.
L. Existing municipal services and facilities are adequate to provide for the needs of the proposed use.	It is anticipated that all Town facilities, services and systems that the project will utilize have capacities adequate to properly serve the site. The project represents only an incremental increase in the overall usage of these facilities, services and systems. Utility service providers have been contacted and notified of the project through this VDEIS.
M. The use will tend to generate or accumulate dirt or refuse or tend to create any type of environmental pollution, including vibration, noise,	The nature of the project is such that no generation of dirt, refuse, or other type of environmental pollution are associated with its occupancy or operation. Temporary dust and noise may occur during construction, but this is not a permanent condition and will controlled and mitigated through proper construction management and adherence to

light, electrical discharges, electromagnetism, odors, smoke or irritants, particularly where they are discernible on adjacent properties or boundary streets.	applicable hours of operation (see N. below).
N. The construction, installation or operation of the proposed use is such that there is a need for regulating the hours, days or similar aspects of its activity.	During the construction period, all such operations will conform to all applicable Town restrictions on hours of demolition and construction activities, truck-related operations and movements, debris removal, and noise and dust controls. The proposed project is residential and commercial in nature; as such, only the commercial component would be subject to Town restrictions on its hours of operation, to which it will conform.
O. The proposed use recognizes and provides for the further special conditions and safeguards required for particular uses as may be determined by the Town Board or the Planning Board.	The project has been designed to conform as closely as practicable to the Town Zoning Code, given the implications on its design necessitated by the Town's request for on-site parking. It does not include any uses that are expected to merit further special conditions or safeguards, but the Applicant is ready to discuss such matters with Town Board if it deems further restrictions may be warranted.
P. The design, layout and contours of all roads and rights-of-way encompassed within the site of the application are adequate and meet Town specifications.	The project, including its vehicle access point, has been designed and engineered to conform to all applicable Town standards. The project's design will be subject to detailed review by Town engineering staff during the site plan application review process, ensuring safe and proper roadway operations. The project will be approved through site plan review and will be constructed consistent with approved plans including design, layout, contours of roads and related site design requirements.
Q. Adequate provisions have been made for the collection and disposal or solid wastes, including but not limited to the screening of all containers.	The project will provide for the collection and storage of its solid wastes in dedicated spaces interior to the structure, until such time that these containers are emptied by a licensed private carter. Adequate provisions will be provided for all such wastes in screened containers with frequent scheduled removal.
R. That the intensity of the proposed specially permitted use is justified in light of similar uses within the zoning district.	The land use types and associated intensities of the project match those of the Riverhead hamlet downtown area. The project is below the maximum number of units permitted in the downtown area, and conforms with the applicable dimensional requirements of the DC-1 district as related to intensity of use.
§301-314 The Town Board shall determine that:	
A. The use will not prevent or substantially impair either the reasonable and orderly use or the reasonable and orderly development of other properties in the neighborhood.	The requested special permit is necessary as a consequence of the Town's request that on-site parking, which is not required by the Town Code in the DC-1 district, be provided. Approval of this special permit request would not prevent the use of any adjacent or nearby properties, or impair the value of such properties. The physical impacts of the requested special permit will be limited only to the project site, and would not extend to any off-site areas. Consequently, the use will not prevent or impair the reasonable and orderly use or development of other properties in the downtown.
B. The hazards or disadvantages to the neighborhood from the location of such use at the property are outweighed by the advantage to be gained either by the neighborhood or the Town.	Approval of the special permit request would not present any hazard or disadvantage to the neighborhood. Further, the special permit regarding site coverage exceedance is due to the Town's request that on-site parking be provided, even though it is not required for a site zoned DC-1 and in a Town Parking District.
C. The health, safety, welfare, comfort, convenience and order of the Town will not be adversely affected by the authorized use.	The special permit is necessary because of the Town's request that on-site parking (a feature not required by the Town Code for a site in a DC-1 zone) be provided. Approval would not prevent the use of any adjacent or nearby properties, or impair the value of such properties. Any effects of this special permit would be limited to only the project site, so that the nature and magnitude of this special permit would not impact the safety, health, welfare, comfort, convenience or order of the Town.
D. Such use will be in harmony with and promote the general purposes and intent of this chapter.	The special permit requested is necessary due the Town's request for on-site parking. As such, this special permit, if approved by the Town Board, would provide a project that would be more harmonious and beneficial to the Riverhead hamlet downtown area than a similar project that does not have these features.

While the project site has no natural features or resources to protect, the proposed project will nonetheless help to preserve and enhance the natural features proximate to the site; specifically, of the Peconic River and its northern bank to the south. This will be accomplished by including quality restaurant space overlooking the river, which would tend to increase public and patron appreciation of the scenic and natural qualities of the river corridor, as well as of public use of the Peconic Riverfront Park and boardwalk.

Scenic and Historic Preservation Element

Riverhead has a distinctive scenic and historic character, comprised of farmland, open space, historic hamlet centers (including downtown Riverhead), historic structures and sites, and unique natural resource areas such as the Pine Barrens. Because these resources play a key role in maintaining Riverhead as a desirable tourist destination and as an attractive place to live and work, these resources should be protected and carried forward into the Town's future, as development continues to occur.

The proposed mixed-use building will be designed with an architectural styling that complements and enhances the built and aesthetic environment of the downtown commercial corridor, and thereby enhances the character of this community.

Business Districts Element

Commercial retail development should be well planned on a site basis instead of sprawled along Riverhead's roads. Downtown and hamlet centers should be promoted as centers for specialty shopping and civic life, building on their historic and pedestrian character. Route 58 should absorb most of the demand for regional and destination retail uses and thus should continue to be a mainstay for generating jobs and tax revenue.

The proposed project is well-located as both a commercial and residential development; the increased residents will add to the customer base of local businesses and add to the vitality of the downtown, and its commercial component will help draw customers to the site and to other local businesses.

Economic Development Element

With the increasing popularity of the North Fork as a tourist destination, Riverhead should develop attractions that can capture a significant portion of the emerging tourist industry in general and agro-tourism in particular. At the same time, Riverhead should continue to pursue a diverse economic base by promoting office and industrial development, agriculture, retail development, and entrepreneurial and small-business activity in appropriate locations. Economic development pursuits must be balanced with the conservation policies expressed in the other sections of this plan, particularly with regard to historic, scenic, and natural resources.

The proposed project will add to the economic base of downtown Riverhead by increasing employment and business spaces, with associated increased property tax generation and employee income.

Housing Element

As development pressures continue to increase, the Town should promote the preservation and development of work force housing for senior citizens, young adults, first-time homebuyers, seasonal workers, low-income individuals and households, and special needs populations. Work force housing should be distributed throughout the Town, should be in locations accessible via transit, and should have a design and be of a quality and character that are indistinguishable from that of market-rate housing.

The project will result in an increase in the number of quality housing units targeted for the housing market that is specifically intended by the Town Comprehensive Plan as in need of support. These units are in close and convenient proximity to public transit resources, for the use of its residents.

Transportation Element
Route 25 and Route 58 should remain Riverhead's primary east-west traffic corridors, while other east-west roads are discouraged from being used as bypass routes. Road improvements throughout Riverhead should be undertaken in a manner that is sensitive to the Town's residential neighborhoods and its historic, scenic, and natural resources. Downtown and the hamlet centers should be oriented to transit, pedestrians, and bicycles, and commercial sites through Riverhead should be accessible via bus, by bike, and on foot.
Traffic engineering analysis indicates that the vehicle trips generated by the proposed project would not require any substantial off-site roadway improvements. The project may help to minimize the potential increase in local roadway use because of its location in the downtown area adjacent to public transit resources. This would tend to increase potential bus and Long Island Rail Road (LIRR) ridership and intermodal transportation in general.

Utility Service Element
Utility infrastructure is critical to the health, safety, and welfare of the community. Water, sewer, electric, natural gas, and telecommunications facilities are relied upon by residents and businesses for day-to-date activity and contribute to the Town's economic wellbeing. Utilities should continue to be expanded to meet Riverhead's growing needs. At the same time, the Town should strive to limit any potential negative impacts from new infrastructure on the natural environment or Riverhead's historic or scenic resources.
The proposed project will not create any new utility resources, but will utilize available existing public utilities, particularly water (RWD) and wastewater treatment (RSD) services. In this way, the impacts on groundwater and surface water resources would be minimized.

Parks and Recreation Element
Parks and recreational facilities provide Riverhead residents and outdoor enthusiasts regionwide with opportunities to exercise, engage in team sports, and to access and experience the natural environment. Parks also provide balance to the built-up areas of the Town, adding to the visual character and quality of life in the community and enhancing property values. The Town should expand and improve parks in all parts of Riverhead and should establish a greenway system that links these parks together.
The proposed project will indirectly help to increase public use and enjoyment of the Peconic River and Peconic Riverfront Park along its northern bank south of the site, by incorporating a restaurant that overlooks this area. This would tend to increase public awareness of this natural and scenic resource.

East Main Street Urban Renewal Plan Update (2008) - The EMSURP recommended that the subject site be developed with ground floor shops and a central surface shared parking lot (see **Figure 2-3b**). Following are brief discussions as to whether and how the proposed project conforms to each of the eleven EMSURP recommendations pertinent to the proposed project.

1. Fill and redevelop existing vacancies with uses permitted under current zoning regulations. As applications for site plans, building permits, or certificates of occupancy for structure or uses are submitted, the CDA, consistent with Section 503(H) of the General Municipal Law, should ensure that the reuses are appropriate (e.g., uses near the waterfront should incorporate the scenic value and public space of the Peconic River and associated waterfront park as part of their overall design and use). Additionally, interaction between uses should encourage pedestrian walkability and promote shared public spaces. Buildings identified as vacant in this report should be given priority for all redevelopment projects.

The proposed project will eliminate an underutilized property by demolishing existing buildings (and an adjacent, occupied property), and redeveloping both sites in a cohesive way with a single new structure, under the existing DC-1 zoning code, as envisioned by the EMSURP.

2. Deteriorated and vacant structures that pose a risk to public safety and welfare, and impede economic viability should be considered for public and/or private acquisition and redevelopment. Redevelopment of these properties should be in conformance with zoning regulations and be considered for the highest and best use. Buildings identified as deteriorated in this report should be given priority for redevelopment projects.
   The existing vacant commercial structure at 221 East Main Street will be demolished by the proposed project, and will be replaced by a new structure architecturally designed to complement its surroundings.

4. Preserve and maintain buildings, sites, and structures of historical, cultural, or architectural interest. New development and uses should be cognizant of historic structures and other significant cultural buildings.
   The new structure will be designed with an architectural styling that complements the character of the structures in the adjacent portion of the East Main Street commercial corridor.

6. Strengthen the tax base while promoting the integration of commercial and residential uses through development of multi-family residential units with ground floor commercial uses; providing a mix of uses that tie the residential and cultural components of the EMSURA, and encouraging meeting and gathering places to accommodate tourists and residents.
   The proposed project, in conformance with the EMSURP and Town Comprehensive Plan, as well as with its DC-1 zoning, incorporates both commercial (i.e., retail and restaurant) spaces as well as a significant number of quality rental apartments for a mix of household incomes.

7. Provide multi-family residential developments that accommodate a mix of incomes. This could be accomplished through an incentive zoning program for affordable housing within multi-family developments.
   The proposed project includes a substantial number of quality rental apartment units for occupancy by households characterized by a mix of incomes qualified households.

11. Maintenance and enlargement of public space along the river corridor, south of East Main Street by reducing land dedicated to parking, should be considered a high priority; and the Town should seek public/private partnerships to make improvements and maintain view sheds. Further, development other than public open space should be discouraged within this area to eliminate a conflict of use.
    While the project would not directly affect any open spaces, the restaurant uses proposed would tend to benefit the open spaces along the Peconic River, by providing scenic overlooks of the river corridor for the restaurant patrons and site's residents, which would reinforce public appreciation of this valuable public open space resource.

13. Although current zoning permits a building height of no more than 60 feet or five stories, future development should consider the character of existing structures in conformance with existing heights on a block by block basis. Specifically, the buildings located on the east side of McDermott Avenue do not exceed two stories while buildings west of McDermott Avenue reach three stories in height. Future development should consider these existing building heights. Waterfront vistas or views from buildings on the north side of East Main Street should also be

maintained and, where possible, enhanced by ensuring that building heights on the south side are restricted and do not block access or prohibit these views.
The proposed new mixed-use structure will be 5 stories in height, or up to about 60 feet in height which does conform to zoning in terms of height/stories. Considering the rather restricted size of the property, a building of this height is necessary to provide the number of apartments in four levels above the required ground floor commercial spaces. It is noteworthy that the north-south orientation of the property (and therefore, of the building) is such that views for observers to the north would be restricted to the lowest degree practicable; these observers will view the new structure narrow edge-on, which would present the lowest degree of obscuration possible. Additional visual analysis is provided in ***Section 2.7.***

16. Encourage maritime uses, including retail, restaurants, boat and canoe rentals, and commercial use of the Peconic River, in the portion of the EMSURA that is west of Atlantis Marine World Aquarium. This block could also include workforce housing for employees of maritime trade and a museum dedicated to the history of the waterfront.
In conformance with this element, the proposed project includes restaurant space that overlooks the Peconic River and the Peconic Riverfront Park as an amenity for diners, as well as a substantial number of quality rental apartments for a mix of household incomes.

40. Revise the Code of the Town of Riverhead and/or to the Parking District guidelines to require that any development with a residential component of more than four units provide parking for those units on-site at a rate of at least one parking space per unit. Commercial components of mixed-use developments could be accommodated in the Town-owned parking provided by the Parking District.
This recommendation is inconsistent with DC-1 code that was later adopted which does not require any on-site parking for those parcels located within the parking district, due to the availability of centralized municipal parking. Nevertheless, the proposed project includes 58 parking spaces in a ground floor parking level beneath the building, in addition to several nearby public parking lots. The project conforms to the Town Code parking requirement for the DC-1 zoning district and in fact exceeds the requirements of the code and parking district by providing 58 on-site stalls.

50. Encourage private developers to provide incentives for patrons and employees to use public transportation to travel to and from the EMSURA. Movie and hotel discounts, free or discounted merchandise, shuttle service between the EMSURA and the LIRR station should be considered.
The subject site is within walking distance of employment opportunities, services, amenities, daily needs and transportation. Additional incentives do not appear needed; however, the applicant is willing to consider entering any such program that may come about for the overall EMSURA.

54. Garbage and other waste materials should be completely contained within the container. No accumulation of garbage or waste materials should be permitted outside the confines of the container, and garbage should not accumulate so that the container cover cannot be firmly closed as to prevent animals from gaining access to the container.
The applicant expects to provide a space interior to the building where all solid waste is gathered and stored to await removal and disposal by a licensed carter operation under contract.

2.1.3 Proposed Mitigation

- As no adverse impacts with respect to land use are anticipated, no additional mitigation measures with respect land uses are necessary or proposed.
- While the project will not conform to all the bulk requirements of the DC-1 zoning district (thereby necessitating two special permits and variances), analysis indicates that neither of these special permits or variances, if approved, would adversely impact the area, or set an unacceptable precedent for future development on other sites. These special permits/variances are needed to enable the project to move forward with as little potential for adverse effect regarding zoning as practicable. Thus, no additional mitigation with respect to zoning is necessary or proposed.
- The proposed project has been designed to conform to all applicable recommendations of both the Town Comprehensive Plan and the EMSURP as practicable. Thus, no additional mitigation in this regard is necessary or proposed.

2.2 Community Services

Figure 2-4 shows the locations of the public schools in the neighborhood, **Figure 2-5** is a map depicting the location of public safety and security-related services, **Figure 2-6** depicts water supply services in the area, **Figure 2-7** shows the locations of the public wastewater treatment and stormwater systems in the vicinity, **Figure 2-8** shows the locations of nearby park and recreational sites, and **Figure 2-9** shows the presence and local route of the public transportation services in the area.

For this application, letters were sent to the community service providers, soliciting information on services available and currently provided, as well as service provider input regarding the proposed project and their ability to provide services. **Appendix D** contains these letters, with the service provider response letters that were received.

2.2.1 Existing Conditions

The property taxes currently generated by the project site are distributed among the various community service providers discussed herein. It is expected that these service allocations help to offset at least a portion of any costs experienced by each service provider made necessary by the existing development on the project site.

<u>Public Schools</u>
The project site is within the Riverhead CSD. According to the district's website (www.riverhead.net), there are four schools serving Kindergarten through 4th Grade (the Roanoke Avenue, Riley Avenue, Phillips Avenue and Aquebogue Elementary schools), one school for 5th and 6th Grades (Pulaski Street), one school for 7th and 8th Grades (Riverhead Middle School), and one high school (Riverhead High School). For the 2016-2017 school year, the district has a total of about 5,400 students, as follows:

Roanoke Avenue Elementary School – 400
Riley Avenue Elementary School – 600 (est.)
Phillips Avenue Elementary School – 550 (est.)

Aquebogue Elementary School – 450
Pulaski Street School – 800
Riverhead Middle School – 800
Riverhead High School – 1,800

As the site is currently occupied by a vacant store, several occupied stores, and one small apartment, it is not expected that the site currently has any school-age residents, and so generates no impacts on either school district enrollments or expenditures.

Police Protection

The subject site is served by the Riverhead Police Department, whose headquarters is located at 210 Howell Avenue. The current Chief of the department is David J. Hegermiller, and the Department's webpage is: www.townofriverheadny.gov/.

Considering the site's current condition and occupancy, it is not expected that it represents any significant impacts on the patrol responsibilities of the Riverhead Police Department in terms of site security/oversight.

Fire Protection and Ambulance Services

Fire Protection - The subject site is within the Riverhead Fire District, and is served by the Riverhead Volunteer Fire Department, whose website is www.riverheadfire.org. The Department has its Headquarters at 540 Roanoke Avenue, in Riverhead, and has three additional facilities, on Hamilton Avenue (Station 1), Hubbard Avenue (Station 2), and Twomey Avenue (Station 3, in Calverton). The Department is served by a total of about 175 personnel, distributed as follows:

- Red Bird Hook & Ladder Company 1 (25 personnel assigned)
- Fire Police Patrol Company 1 (27 personnel assigned)
- Reliable Hose & Engine Company 1 (30 personnel assigned)
- Washington Engine Company 2 (32 personnel assigned)
- Ever-Ready Engine Company 3 (27 personnel assigned)
- Eagle Hose Company 4 (33 personnel assigned)

Ambulance Services - The subject site is served with emergency medical services by the Riverhead Volunteer Ambulance Corps, Inc., located at 1111 Osborn Avenue, in Riverhead. As indicated on its website (www.riverheadvac.com), the Corps has four ambulances and three Responder vehicles.

Public Water Supply

The project site is within the RWD and so is served with potable water by that entity. As shown in the **Topographical Survey**, the RWD has a main beneath East Main Street, off which distribution lines run southerly beneath McDermott Avenue. Based on information provided in the District's *"Water News"* for Spring 2016, the RWD pumped a total of about 252.25 million gallons of water in 2015, for an average of 691,100 gpd.

Based on the uses and yields of the structure at 31 McDermott Avenue, it is estimated that that building currently consumes 444 gpd of potable water; as the 221 East Main Street building is presently vacant, it consumes no potable water is supplied to or consumed in it. Thus, the project site presently accounts for 0.06% of the RWD's average daily water pumpage. It is noted that the vacant retail space could become occupied at any time.

Sanitary Wastewater Treatment and Disposal

The site and area are within the RSD, and so are connected to the sanitary sewer system that conveys all wastewater generated in the district to the STP on River Road, to the east of the subject site. The **Topographical Survey** shows that there is a sanitary sewer main beneath McDermott Avenue, as well as an east-west main that passes beneath the project site to the sewage pump station just east of the site.

According to information provided by the RSD superintendent (Mr. Mike Reichel, PE) during a telephone conversation on November 22, 2016, the STP has a permitted capacity of 1.5 million gpd, and currently treats an average of 1.0 million gpd of wastewater.

It is assumed that the 444 gpd of water consumed at the subject site is presently conveyed as wastewater to the RSD's STP via the Town sanitary sewer system. Thus, the project site presently accounts for 0.044% of the STP's daily influent.

Energy Suppliers

Electricity - PSE&G provides electricity in the area and to each of the two buildings that occupy the site, though only the 31 McDermott Avenue building presently consumes electricity (the 221 East Main Street structure is vacant). It is noted that the vacant retail space could become occupied at any time.

Natural Gas - National Grid provides natural gas in the area, via individual connections from its subsurface distribution system. The **Topographical Survey** indicates that there is a gas line beneath East Main Street, which connects to distribution lines beneath McDermott Avenue to serve the subject property.

Recreational Facilities

There are several public parks and other recreational sites in proximity to the publicly-owned open space (the Peconic Riverfront Park, along the south side of Heidi Behr Way) near the project site.

2.2.2 Anticipated Impacts

With respect to the community services discussed herein, it is expected that the project, when it is completed, occupied and fully operational, will participate in a PILOT (payment in lieu of taxes) program, which would increase public revenues generated by the site as compared to the revenues it currently generates. This revenue will be distributed among the various community services, which would help to offset at least a portion of any increased costs to provide services to the project site.

Public Schools

It is estimated that 14 school-aged children will reside at the proposed project. This will have a small incremental effect on enrollment and expenditures of the Riverhead CSD. The PILOT will assist in off-setting this incremental increase and it is noted that this is a relatively small number of potential school-aged children that would be distributed over multiple age groups. As stated in the Riverhead CSD Superintendent's response e-mail:

> As per council, we do not take positions on individual projects or make comments. We will comply with Education law in all instances.

Police Protection

It is expected that the project will result in an increased potential for need of Riverhead Police Department emergency services, due to the increased development and human presence on the property. The Department's response letter states:

> At this point in time, we should be able to assume the additional police services needed for your proposed project. Obviously, as with all development in our Township, the increase in population and vehicles will have a negative impact on our agency.

Fire Protection and Ambulance Services

It is expected that the project will result in an increased potential for need of the emergency services of both the Riverhead Volunteer Fire Department and the Riverhead Volunteer Ambulance Corps, Inc. The Fire Department's response letter states:

> This letter may not be taken to express any opinion about this/these project(s) or the Fire Department's ability to respond to emergencies now or in the future.
>
> It is the District's position that it is incumbent on the project(s) developer(s) to design and construct this/these project(s) in full compliance with all applicable laws, codes, regulations, standards, etc.
>
> At such time that this/these project(s) have been fully designed and engineered the District expects that the Town of Riverhead Fire Marshall shall present the same to the District and Department. The District and Department reserve their right to comment on the same at an appropriate future date.

The ambulance corps' response letter confirmed that it *"…can and will provide emergency medical services to your Riverview Lofts project…"*

Public Water Supply

As shown in **Table 1-3**, it is expected that the proposed project will consume a total of 39,871 gpd of potable water, to be supplied by the RWD. This increase in demand would represent 5.82% of the average daily pumpage of the RWD. The proposed project is not anticipated to impact the ability of the RWD to serve the subject site and existing customers. Each apartment will be equipped with software that monitors for leaks or water wastage

The project's design will be subject to detailed engineering review by the RWD as part of the Town's site plan review process, at which time final arrangements for infrastructure improvements will be made.

Sanitary Wastewater Treatment and Disposal

It is assumed that all 39,871 gpd of water supplied to the project site will leave the site daily as wastewater, to be conveyed via the Town's sewer district network to the STP on River Road. As this facility currently treats an average of about 1.0 million gpd, the proposed project would represent a 4.02% increase in loading at this facility. This STP has a permitted capacity of 1.5 million gpd, so that it has about 500,000 gpd of unfilled capacity; the proposed project represents an 8.04% reduction in the amount of available treatment capacity of this facility.

The RSD's response e-mail confirms that the district has capacity to serve the project and the applicant's plans to connect to the RSD are currently under review. A final letter of sewage treatment availability will be issued after an analysis of the flow impacts to the collection and conveyance systems is complete.

Energy Suppliers

It is expected that PSE&G and National Grid can and will serve the proposed project with electrical and natural gas services, respectively. Generally, PSE&G and National Grid provide services per their filed tariff and schedules in effect at the time service is required. As the project will remove both buildings presently on the site, the existing service connections will also be removed, to be replaced with new service connections; it is expected that the existing distribution system serving the site will not need to be replaced or supplemented to service the project.

Recreational Facilities

The proposed project will not encroach into or otherwise adversely impact any of the existing park or recreational facilities in the vicinity. The proposed project would increase the number of potential patrons of local and regional park and recreation sites, but this impact would be incremental in nature and is not expected to significantly impact the use of any of these sites, in consideration of the following:

- there are a substantial number of such facilities to choose from. This would tend to distribute these visits broadly and conversely reduce the number of these visits (and their associated impacts) at any one park/recreational site.
- the number of site residents is small in comparison to the number of local and regional residents, so that any increase in park/recreational site patronization attributed to the proposed project would be small as well.

2.2.3 Proposed Mitigation

- It is expected that the proposed project will increase the need for and usage of those community facilities and services pertinent to commercial and residential spaces, and, hence the costs that such services will expend. However, the expected increase in taxes generated and/or a PILOT will help offset at least portions of the increased needs for and costs of community services.
- The Riverhead CSD will benefit from an increase in annual school tax revenue and/or a PILOT as compared to the amount of school taxes generated by the site in its current condition. This increased revenue will assist in offsetting some of the increased district expenditures necessitated by the expected 14 new students generated by the project.

- The proposed project may increase the potential need for emergency security services of the Riverhead Police Department. However, to mitigate this potential increase in calls, the proposed building and parking level will be equipped with security lighting and emergency alarms.
- The proposed project may increase the potential need for emergency security services of the Riverhead Volunteer Fire Department and the Riverhead Volunteer Ambulance Corps, Inc. However, to mitigate these potential increases in calls, the proposed building and parking level will be equipped with fire and smoke alarms, emergency lighting systems, and sprinklers, as required by NYS Fire and Building Codes. These features will increase the level of safety from fires and minimize the potential for use of ambulance services.
- Pertinent input from the Riverhead Volunteer Fire Department will be solicited throughout the site plan application process to ensure that the site layout and the building are designed to provide adequate provisions for emergency vehicle access and adequate hydrant and standpipe locations.
- The project will increase the consumption of water on-site. In consideration of this increase in demand, water-conserving plumbing fixtures and mechanical systems will be utilized in construction, which will further minimize the volume of water required from the public water supply.
- Each apartment will be equipped with software that monitors for leaks or water wastage.
- While the project will increase the consumption of energy resources, it is anticipated that sustainable energy-conserving measures, including energy-saving wall insulations, triple-glazed windows and energy efficient mechanical systems will be utilized, thereby mitigating the anticipated increase in energy consumption.

2.3 Transportation

2.3.1 Existing Conditions

A Traffic Impact Study (TIS) was prepared for the proposed project by N&P, LLP in December 2016 and was updated in June 2017 (see **Appendix C**). The following description of the existing traffic-related resources of the subject site and the current operating characteristics of the local intersections has been taken from that study.

Purpose of Report

The revised report summarizes the results of a detailed investigation of the traffic impacts of the proposed project by reviewing the area's existing roadway characteristics and traffic conditions, estimating the vehicular volume and pattern that the development will generate during peak hours, and analyzing the effect of the additional volume on the surrounding roadway network. **Figure 2-10** shows the study area and the intersections evaluated.

Study Methodology

The study assesses the traffic and parking impacts associated with the proposed project and identifies mitigation measures if necessary. In executing the scope of work, the following steps were undertaken:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, location/geometry of existing driveways and intersections along with signing and pavement markings.
- In 2016 the Town of Riverhead Planning Department requested that any traffic data collection for the project should take into account events in the Town. In consultation with the Town, turning movement counts were conducted at the intersections of East Main Street at Peconic Avenue,

East Main Street and Roanoke Avenue and East Main Street at McDermott Avenue/Maple Avenue during the weekday AM (7-9AM), PM (4-6PM) and Saturday midday (10AM-2PM) peak periods on the following days:
  - Wednesday May 31th, 2016 from 7-9AM and 4-6PM to cover a typical weekday
  - Saturday August 20th, 2016 from 10 AM -2PM to cover the Polish Town Fair event (Special events in Riverhead).
  - Saturday August 29th, 2016 from 10AM -2PM to cover a typical Summer Saturday.
- In order to respond to the Town of Riverhead Planning Department's comment on the 2016 Traffic Study regarding weekday turning movement counts collected when schools were not in session, additional turning movement counts have been collected at the intersections listed above on Wednesday May 31, 2017 during the weekday AM (7-9AM) and PM (4-6PM) peak hours.
- The turning movement counts collected in 2017 during the weekday and the 2016 Saturday data were tabulated and utilized to revise the 2016 Traffic Study to account for weekday traffic impacts when schools are in session.
- An annual growth factor, obtained from the Long Island Transportation Plan (LITP) 2000 study, was applied to the existing volumes to estimate the increase in background traffic that would occur in 2019 Build Year (Ambient Traffic Volumes).
- The Town of Riverhead Planning Department was contacted to obtain information on other planned developments that may impact traffic flow in the study area.
- Traffic volumes from the other planned projects in the study area were added to the Ambient Traffic Volumes to generate the 2019 No Build Volumes.
- Estimates of traffic that would be generated by the proposed project were prepared utilizing trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Ninth Edition*. The site-generated traffic volumes were assigned to the adjacent street system based upon the anticipated directional trip distribution forecasted by N&P, LLP.
- The 2019 Build Condition volumes for the proposed development were developed by adding the site generated traffic volumes to the 2019 No Build Condition volumes.
- Capacity analyses were performed at the study intersections identified above for the Existing Condition, No Build Condition and Build Condition for weekday AM, weekday PM, and Saturday midday peak hours.
- The results of the analyses for the 2019 No Build Condition and 2019 Build Condition were compared to identify any significant traffic impact associated with the proposed project.

Roadway and Traffic Conditions

Main Street (NYS 25) is an east/west NYSDOT roadway within the study area and runs through the downtown area of the Town of Riverhead. Within the study area, Main Street provides one lane per travel direction. The posted speed limit on Main Street is 30 mph within the Riverhead downtown area. Sidewalks equipped with planters and decorative street lighting are provided on both sides of Main Street in the downtown area. Pedestrian crossings are painted across Main Street and supplemented with pedestrian crossing signs. Midblock crossings are located in front of the Suffolk Theater south of East Avenue and in front of Town Hall north of Howell Avenue.

Table 2-3 summarizes the lane configurations and traffic controls at the study intersections. The peak hour traffic volumes depicted in Figures 3 [see **Appendix C**] were used to determine the existing capacity and level of service (LOS; see **Appendix C** for a definition of this term) of the study intersections. **Tables 2-4a and 2-4b** contain the LOS summaries for the Existing Condition for the Signalized and Unsignalized intersections evaluated, respectively.

Table 2-3
INTERSECTION GEOMETRY

Intersection	Approach	Lane Designation*	Traffic Control
West Main Street at Peconic Avenue	EB	T-R	Traffic Signal
	WB	L-T	
	NB	L-R	
West Main Street at Roanoke Avenue	EB	L-T	Traffic Signal
	WB	L-TR	
	SB	R	
East Main Street at McDermott Avenue/Maple Avenue	EB	LTR	Traffic Signal
	WB	LTR	
	NB	LTR	
	SB	LTR	
Peconic Avenue at Parking Lot Access	WB	LR	Stop Control WB
	NB	TR	
	SB	L-T	

* L = Left turn lane; T = through lane; R = Right turn lane

Table 2-4a
LOS SUMMARY, Existing Conditions
Signalized Intersections

Intersection	Approach	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS
East/West Main St. at Peconic Ave.	EB	T	44.7	D	46.1	D	70.1	E
		R	24.0	C	22.4	C	21.2	C
	WB	L	7.8	A	11.2	B	19.1	B
		T	2.6	A	3.0	A	2.7	A
	NB	L	95.2	F	87.7	F	94.9	F
		R	34.6	C	29.3	C	27.7	C
		Intersection	31.2	C	28.2	C	37.7	D
East/West Main St. at Roanoke Ave.	EB	L	22.3	C	27.7	C	37.5	D
		T	3.5	A	2.8	A	2.7	A
	WB	TR	41.2	D	44.0	D	40.4	D
	SB	R	37.7	D	44.6	D	46.5	D
		Intersection	22.8	C	29.0	C	25.4	C
East/West Main St. at Maple/McDermott Ave.	EB	LTR	2.8	A	3.4	A	3.9	A
	WB	LTR	2.8	A	4.6	A	3.8	A
	NB	LTR	17.1	B	19.7	B	22.0	C
	SB	LTR	31.5	C	38.9	D	33.8	C
		Intersection	4.6	A	7.5	A	7.2	A

Table 2-4b
LOS SUMMARY, Existing Conditions
Unsignalized Intersection

Intersection	Approach	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS
Peconic Ave. at Parking Lot Access	WB	L	15.8	C	17.0	C	16.6	C
		R	13.5	B	14.2	B	14.0	B
	SB	LT	9.1	A	9.4	A	9.5	A

Main Street at Peconic Avenue/Roanoke Avenue - The intersections of West Main Street at Peconic Avenue and East Main Street at Roanoke Avenue are approximately 55 feet apart as measured between stop lines. The distance between the two intersections provides one westbound through lane, one westbound left turn lane and a 22-foot wide eastbound lane that currently operates as a separate eastbound left turn lane and an eastbound through lane. These two left turn lanes provide storage for two cars each. These two intersections are controlled by two traffic signals operating under the same controller.

Under the Existing Condition, the eastbound West Main Street through movement at Peconic Avenue operate at LOS D, D and E during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operate at LOS F during the weekday AM, PM and Saturday midday peak hours. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and D during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours.

East Main Street at McDermott Avenue/Maple Avenue - The northbound McDermott Avenue leg and southbound Maple Avenue leg at this intersection are slightly offset from each other (approximately 20 feet) with each approach providing one lane for all traffic movements. The intersection is controlled by a two-phase traffic signal.

Under the Existing Condition, all the approach movements to this intersection operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM, PM and Saturday midday peak hours.

Peconic Avenue at Parking Lot Access - The parking lot access intersects Peconic Avenue to form the Stop Controlled leg of a T-intersection. Peconic Avenue provides one lane per travel direction with a two-way left turn lane. The westbound parking lot access provides one left turn lane and one right turn lane. Under the Existing Condition, the southbound Peconic Avenue approach operates at LOS A. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM, PM and Saturday midday peak hours.

Parking

There is unstriped paved surface area sufficient for an estimated 55 parking spaces on the subject site, distributed as 42 unused spaces south of the vacant 221 East Main Street structure, and 13 spaces adjoining the occupied 31 McDermott Avenue building. There are also several Town parking lots in the vicinity (see **Figure 1-6),** off Heidi Behr Way to the east and west.

2.3.2 Anticipated Impacts

The findings of the N&P TIS dated June 2017 are summarized herein.

Trip Generation

In order to identify the impacts the proposed project will have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume generated during the peak hours and to estimate the directional distribution of the site traffic when entering and exiting the subject property. The trip generation estimates for the proposed project were prepared utilizing data found under Land Use Code 220 – Apartments, Land Use Code 820-Shopping Center and Land Use Code 931 –Quality Restaurant within the Institute of Transportation Engineers' [ITE] publication, *Trip Generation, Ninth Edition*. This publication sets forth trip generation data obtained by traffic counts conducted at sites throughout the country.

We also prepared a trip generation comparison for the project which consisted of performing estimates for 2 scenarios. Scenario 1: 116 apartment units, 1,508 SF of retail and 535 seats of quality restaurant. Scenario 2: 116 apartment units and 12,623 SF of retail. The comparison revealed that Scenario 1 is anticipated to have higher trip generation and therefore this is the scenario for which the analysis was prepared, representing a worst-case scenario.

It should also be noted that, according to studies conducted by the ITE, traffic associated with a retail and restaurant developments is not 100% newly generated, a significant portion of these trips will be "pass-by" traffic. It is expected that at least 40% of the peak hour trips generated by the retail and restaurant development on the site would originate from traffic already using the roadway traveling to or from another destination. No passby credit was applied to the retail portion of the project since it is only a small portion of the project. Passby credits were applied for the restaurant component of the proposed project in accordance with ITE guidelines.

The following **Table 2-5** summarizes the trip generation estimates for the proposed project. As can be seen, the proposed project is projected to generate 79 trips (21 entering and 58 exiting) during the weekday AM peak hour, 167 trips (109 entering and 58 exiting) during the weekday PM peak hour and 252 trips (142 entering and 110 exiting) during the Saturday midday peak hour.

Anticipated Level of Service (LOS) and Roadway Conditions

As stated previously, the intersection capacity and level-of-service (LOS) analyses were based on the procedures and guidelines presented in the *Highway Capacity Manual (2010)*, published by the *Transportation Research Board*. The Synchro Version 9 software was used to analyze the study intersections and provide a LOS measurement of the intersection operations. The six classes of LOS, ranging from LOS A (excellent) to F (worst), are defined in Appendix D [of **Appendix C**].

Table 2-5
TRIP GENERATION
Proposed Project

Time Period	Distribution	**Apartments** (116 units; ITE LUC 220)	**Retail** (1,508 SF; ITE LUC 820)	**Restaurant** (535 seats; ITE LUC 931)	Totals
Weekday AM Peak Hour	Enter	12	1	8	21
	Exit	50	0	8	58
	Total	**62**	**1**	**16**	**79**
Weekday PM Peak Hour	Enter	54	3	52	109
	Exit	29	3	26	58
	Total	**83**	**6**	**78**	**167**
Saturday Midday Peak Hour	Enter	34	4	104	142
	Exit	34	3	73	110
	Total	**68**	**7**	**177**	**252**

Source: Trip Generation,9th Edition, published by ITE

Tables 2-6a and 2-6b, 2-7a and 2-7b, and 2-8a and 2-8b illustrate the LOS summaries for the study intersections for the Weekday AM and PM Peak Hours, as well as the Saturday Midday Peak Hour, respectively.

Table 2-6a
LOS SUMMARY, Proposed Project
Weekday AM Peak Hour, Signalized Intersections

Intersection	Approach	Movement	No Build Condition		Build Condition	
			Delay	LOS	Delay	LOS
East/West Main St. at Peconic Ave.	EB	T	49.3	D	54.6	D
		R	27.3	C	27.3	C
	WB	L	16.7	B	18.7	B
		T	2.7	A	2.7	A
	NB	L	96.8	F	94.5	F
		R	32.2	C	31.9	C
		Intersection	32.6	C	33.2	C
East/West Main St. at Roanoke Ave.	EB	L	22.9	C	23.0	C
		T	3.7	A	3.8	A
	WB	TR	47.5	D	48.4	D
	SB	R	34.5	C	34.3	C
		Intersection	24.7	C	25.2	C
East/West Main St. at Maple/McDermott Ave.	EB	LTR	5.1	A	6.6	A
	WB	LTR	5.1	A	6.6	A
	NB	LTR	31.2	C	40.4	D
	SB	LTR	20.6	C	28.0	C
		Intersection	8.7	A	12.0	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-6b
LOS SUMMARY, Proposed Project
Weekday AM Peak Hour, Unsignalized Intersection

Intersection	Approach	Movement	No Build Condition		Build Condition	
			Delay	LOS	Delay	LOS
Peconic Ave. at Parking Lot Access	WB	L	18.2	C	19.1	C
		R	14.2	B	14.3	B
	SB	LT	9.4	A	9.4	A

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-7a
LOS SUMMARY, Proposed Project
Weekday PM Peak Hour, Signalized Intersections

Intersection	Approach	Movement	No Build Condition		Build Condition		Build Condition, w/Modifications	
			Delay	LOS	Delay	LOS	Delay	LOS
East/West Main St. at Peconic Ave.	EB	T	55.9	E	70.4	E		
		R	24.3	C	25.5	C		
	WB	L	25.6	C	36.5	D		
		T	3.3	A	3.5	A		
	NB	L	89.8	F	89.7	F		
		R	28.1	C	26.6	C		
		Intersection	32.6	C	36.8	C		
East/West Main St. at Roanoke Ave.	EB	L	29.1	C	30.0	C		
		T	3.0	A	3.2	A		
	WB	TR	50.6	D	53.2	D		
	SB	R	41.4	D	40.0	D		
		Intersection	30.6	C	31.1	C		
East/West Main St. at Maple/McDermott Ave.	EB	LTR	4.8	A	6.1	A	6.6	A
	WB	LTR	7.2	A	9.9	A	10.7	B
	NB	LTR	29.5	C	41.0	D	34.6	C
	SB	LTR	44.9	D	42.6	D	37.1	D
		Intersection	11.0	B	14.7	B	14.1	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-7b
LOS SUMMARY, Proposed Project
Weekday PM Peak Hour, Unsignalized Intersection

Intersection	Approach	Movement	No Build Condition		Build Condition	
			Delay	LOS	Delay	LOS
Peconic Ave. at Parking Lot Access	WB	L	18.2	C	19.1	C
		R	14.2	B	14.3	B
	SB	LT	9.4	A	9.4	A

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-8a
LOS SUMMARY, Proposed Project
Saturday Midday Peak Hour, Signalized Intersections

Intersection	Approach	Movement	No Build Condition		Build Condition		Build Condition, w/Modifications	
			Delay	LOS	Delay	LOS	Delay	LOS
East/West Main St. at Peconic Ave.	EB	T	117.4	F	122.4	F		
		R	24.8	C	25.2	C		
	WB	L	101.9	F	114.7	F		
		T	2.9	A	3.1	A		
	NB	L	94.9	F	94.9	F		
		R	24.2	C	24.0	C		
		Intersection	63.5	E	67.2	E		
East/West Main St. at Roanoke Ave.	EB	L	35.8	D	37.3	D		
		T	3.6	A	4.3	A		
	WB	TR	49.3	D	52.1	D		
	SB	R	42.0	D	41.4	D		
		Intersection	27.2	C	28.2	C		
East/West Main St. at Maple/McDermott Ave.	EB	LTR	7.0	A	10.8	B	12.4	B
	WB	LTR	7.2	A	10.2	B	11.6	B
	NB	LTR	40.2	D	67.9	E	52.8	D
	SB	LTR	36.8	D	37.3	D	33.0	C
		Intersection	12.9	B	21.2	C	19.8	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-8b
LOS SUMMARY, Proposed Project
Saturday Midday Peak Hour, Unsignalized Intersection

Intersection	Approach	Movement	No Build Condition		Build Condition	
			Delay	LOS	Delay	LOS
Peconic Ave. at Parking Lot Access	WB	L	20.5	C	25.0	D
		R	15.4	B	15.9	B
	SB	LT	10.0	B	10.3	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Main Street at Peconic Avenue/Roanoke Avenue - In the No Build Condition, the eastbound West Main Street through movement at Peconic Avenue operates at LOS D, E and F during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operates at LOS F during the weekday AM, PM and Saturday midday peak hours. The westbound left turn movement operates at LOS F during the Saturday midday peak hour. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and E during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall

LOS C during the weekday AM, PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at No Build LOS.

East Main Street at McDermott Avenue/Maple Avenue -].Under the No Build Condition, all the approach movements to this intersection operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM peak hour and at LOS B during the PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at LOS D or better except for the McDermott Avenue northbound approach which is anticipated to operate at LOS D and E during the weekday PM and Saturday midday peak hours, respectively. Minor signal timing adjustments will improve the northbound LOS D to LOS C during the PM peak hour and from LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours [see **Table 2-8a**].

Peconic Avenue at Parking Lot Access - Under the No Build Condition, the southbound Peconic Avenue left turn movement operates at LOS A during the AM and PM peak hours and at LOS B during the Saturday peak hour. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM and Saturday midday peak hours and at LOS C during the PM peak hour. After the completion of the project, the approach movements to the intersection will continue to operate at No Build LOS during all peak hours.

Conclusion
Nelson & Pope has investigated the potential traffic and parking impacts associated with the proposed development to be located at the southwest corner of East Main Street and McDermott Avenue in Riverhead, New York. The following is a summary of this investigation and the findings thereof:

Based on the results of the TIS, it is the professional opinion of N&P, LLP that the proposed project will not result in significant traffic impacts in the study area.

Parking

With respect to the number of parking spaces provided relative to the amount of development proposed, Town Zoning Code Section 301-231 I. states that, for a site within a designated Parking District, the requirements of the Town Zoning Code do not apply. That is, the presence and availability of sufficient free, public parking spaces off-site but nearby would satisfy Town conditions that parking will be available to residents of the development; the project is not required to provide any on-site parking spaces. However, at the request of the Town, the Applicant will provide 55 on-site parking spaces, and the balance of parking needs will be met by off-site spaces within the Riverhead Parking District area.

An inventory of available parking in proximity to the site is provided in the TIS and shown in **Figure 1-6**, to further support the finding that inclusion in the Downtown Parking District provides parking opportunities for residents and patrons of the Riverview Lofts and associated retail use on the subject site.

The anticipated parking needs of the proposed project with those of the other nearby sites proposed for development were evaluated in a cumulative Parking Analysis (see **Appendix C**).

That evaluation also considers the ability of the existing parking lots in the area to accommodate these cumulative parking needs (see **Section 3.2.4**).

2.3.3 Proposed Mitigation

- As recommended by the TIS, after completion of the project, minor signal timing adjustments at the intersection of East Main Street at McDermott Avenue/Maple Avenue will be made for the northbound McDermott Avenue approach, improve the northbound LOS E to LOS C during the PM peak hour and LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.
- The proposed project will provide 55 on-site parking stalls to complement the available public parking in existing municipal parking lots in the area of the proposed project, where no parking is required since the project is within the Riverhead Parking District.

2.4 Water Resources

2.4.1 Existing Conditions

Groundwater Conditions

The **Topographical Survey** shows that the subject varies in elevation from a high of 14 feet above mean sea level (asl), found along the site's northern border, along East Main Street, to a low of 4 feet asl, in the parking area south of the structure at 31 McDermott Avenue, in the site's southern portion.

Site-specific information on the elevation of the water table is contained in the Geotechnical Evaluation (**Appendix B-6**), which analyzes the results of a series of four soil borings installed in the central and southern portions of the site. Among the physical and engineering-related data related to these borings (discussed below in **Section 2.5**), observations of the depth to the water table encountered in these borings is also provided. The data show that the northernmost boring, designated Boring #1, installed in the parking area between the two structures, encountered the water table at a depth of 4 feet below ground surface (bgs). As the elevation of the ground surface at this point is about 6 feet asl, the elevation of the water table beneath this portion of the project site is about 2 feet asl. The southernmost boring, Boring #4, is in the parking area south of the 31 McDermott Avenue structure. Groundwater was encountered here at a depth of 3.5 feet bgs here. Since the **Topographical Survey** shows that the elevation in the area of Boring #4 is just over 4 feet asl, it may be inferred that the water table is at an elevation of about 0.5 feet asl here. This represents the shortest depth to the water table beneath the site.

The forgoing analysis indicates that the water table slopes downward toward the south beneath the site. Based on this conclusion, and supported by the orientation of the contours of the water table as shown in **Figure 2-11**, it is expected that groundwater in the water table and, therefore, in the shallow (i.e., Upper Glacial) aquifer, flows in a southerly direction, toward the Peconic River.

To estimate the depth to the water table for the site's highest area (i.e., along its East Main Street frontage, see above), it is necessary to estimate the elevation of the water table beneath that area as well. Assuming that the water table is flat but sloping upward toward the north, simple geometry would indicate that the water table is at an elevation about 4 feet asl beneath this portion of the subject site, so that the depth to the water table here is about 10 feet.

In summary, the depth to the water table beneath the site varies from 10 feet in the north to 0.5 feet at the southern boundary of the site.

Surface Water Conditions

There are no surface water bodies on the subject site. The nearest surface water is the Peconic River, which flows west-to-east south of the site, beyond the Town Peconic Riverfront Park. **Figures 2-12 and 2-13** depict the locations of the freshwater and tidal (i.e., marine/saltwater) wetlands in the vicinity, as designated by the NYSDEC and National Wetland Inventory (NWI), respectively. As can be seen, there are no freshwater wetlands proximate to the site, but there are substantial tidal wetlands designated by both the NYSDEC and NWI along both banks of the Peconic River.

Figure 2-14 depicts the FEMA compilation of Flood Hazard Zones for the area of the subject site. As can be seen, the site is split into two zones: the northern portion of the property (including the building at 221 East Main Street) is within an area designated "Zone X," while the southern part (encompassing the building at 31 McDermott Avenue) is designated "Zone AE." Zone X indicates an area outside the statistical 500-year flood plain. Zone AE means an area that is subject to the 1% annual flood ("100-year flood"), also known as the Base Flood. This is the flood that has a 1% chance of being equaled or exceeded in any given year. Specifically, the Base Flood Elevation of this part of the AE zone is established at 7 feet asl. The first floor of the building will be elevated such that the bottom of any structural member will be above 7 feet asl to comply with FEMA design as implemented by the Town.

2.4.2 Anticipated Impacts

The proposed project will connect to the Riverhead Sewer District and as a result, wastewater will be managed in a manner that ensures that no groundwater impacts will occur. Drainage will be stored and recharged on-site in conformance with Town requirements and subject to Town engineering review. Consequently, potential drainage impacts are also addressed through design. Discussion of these design features as related to water resources is provided herein.

Groundwater Conditions

The volume of water recharged on the site is not expected to significantly change by the project as compared to the site in its existing condition. This is because the site is presently covered entirely by impervious surfaces, and will continue to be entirely impervious-surfaced after the project is constructed. However, the proposed project will be designed to contain runoff from proposed new impervious surfaces; under current conditions, it is not expected that all stormwater is retained on site. This means that the volume of stormwater runoff generated on

the site is the same; but storage of stormwater will increase such that less off-site runoff is expected to occur.

All stormwater runoff generated on the site will be retained and recharged to groundwater by means of an on-site drainage system. Likewise, all wastewater generated on the site will be conveyed off-site via the Town sewer system for treatment and disposal. In this way, the existing elevation of the water table beneath the site would not significantly change, so that the direction of groundwater flow would not change from its current southerly direction.

Connection to the Town sewer system and the lack of landscaped surfaces would ensure that the potential for adverse impacts on groundwater quality are minimized for the proposed project. The proposed project will connect to the Town sanitary system, so that its wastewater would be conveyed off-site and treated to a tertiary level, thereby minimizing the amount of nitrogen from the site that ultimately is recharged to the water table, and at a location distant from the project site.

Surface Water Conditions

The project will not adversely impact any surface water resources. Generally, the primary source of such an impact would be from the escape of stormwater runoff from a site to a surface water resource (e.g., a pond/wetland, a creek or river, etc.). But, as noted above, the site will retain more stormwater under proposed conditions than current conditions so that all the runoff generated on the site will be recharged and not overflowed to surface waters. This means that for the design storm, no runoff from the site (along with any contamination that may be carried in that water) will reach the nearest surface water resource that is in a downslope location, the Peconic River.

The project is designed in conformance with FEMA flood plain elevation requirements, so that no adverse impacts in this regard are expected. As shown in **Figure 2-14**, the southern portion of the subject site is in FEMA Flood Hazard Zone AE, which designates an area that is subject to the 1% annual flood ("100-year flood"), also known as the Base Flood. This is the flood that has a 1% chance of being equaled or exceeded in any given year. Specifically, the Base Flood Elevation of this part of the AE zone is established at 7 feet asl. The first floor of the building will be elevated such that the bottom of any structural member will be above 7 feet asl to comply with FEMA design as implemented by the Town.

2.4.3 Proposed Mitigation

- As no adverse impacts to groundwater quality or quantity are anticipated to occur because of the project, no additional mitigation is necessary or proposed.
- As no adverse impacts on the elevation of the water table or direction of groundwater flow beneath the subject site are expected, from the project, no additional mitigation is necessary or proposed.
- No impacts on the quality or quantity of water in the Peconic River or any other surface water resource in the vicinity is anticipated to occur from the project, no additional mitigation s necessary or proposed.

- The proposed project will conform to the applicable building elevation requirements associated with its presence within the AE Zone (as delineated by the FEMA Flood Hazard Zone Map). Therefore, no adverse impacts in this regard are expected, and no additional mitigation is necessary or proposed.

2.5 Soils

2.5.1 Existing Conditions

The Soil Survey of Suffolk County, prepared by the US Department of Agriculture in 1975[1], is a useful source of soils information, which identifies soil types resulting from natural deposition and modification, as well as man-induced alterations associated with land use. The Soil Survey indicates that the soil types underlying the subject property is classified as "Urban" (see **Figure 2-15**). According to the Soil Survey, this soil type

> …consists of areas that are more than 80 percent covered by buildings and pavements. Examples are parking lots, business districts of larger villages, and densely-developed industrial parks. Examination and identification of the soils in these areas are impractical."

Because the Soil Survey could not determine the characteristics of the Urban soil type, the on-site test boring report (see **Appendix B-6**) was reviewed for information on the characteristics of the site's soils. The following has been taken from the test hole report.

> This report was developed from conventional and standard soil testing procedures and engineering analysis. Asphalt, brown sand/loam, medium to fine sand and gravel (fill) was recovered from grade to 4-feet below grade at boring location B-1 and from grade to 2-feet below grade at boring location B-2 [refer to the Boring Location Map in **Appendix B-6**]. Asphalt, brown sand, fine to medium sand, red brick and gravel (fill) was recovered from grade to 4-feet below grade at boring location B-3. Asphalt, brown sand, medium to fine sand, coarse to medium sand and trace gravel (fill) was recovered from grade to 2-feet below grade at boring location B-4. Dark brown peat, light brown sand, coarse to fine sand and gravel was recovered from 4-feet to 8-feet below grade at boring location; from 4-feet to 6-feet below grade at boring locations B-2 and B-3; and from 6-feet to 10-feet below grade at boring location B-4. Gray clay, sandy clay, silty clay and silty sand were recovered from 35-feet to 57-feet below grade at boring location B-1; from 25-feet to 37-feet below grade at boring location B-2; and from 35-feet to 47-feet below grade at boring location B-4. Trace silt was recovered from 30-feet to 37-feet below grade at boring location B-3. Fine to medium sand, coarse to medium sand and gravel was recovered at the remaining depths of all boring locations.

2.5.2 Anticipated Impacts

The test hole report indicates that the soils on the site are expected to be capable of properly supporting the proposed structure, with the use of appropriate piles. Thus, no adverse soil-related impacts in this this regard are anticipated.

[1] Updated/digitized maps used for figures from Soil Survey Geographic Database for Suffolk County, New York (SSURGO); USDA Natural Resources Conservation Service; 2010; updated September 24, 2015; the Suffolk County Soil Survey (**Warner, 1975)** provides soil descriptions/constraints.

Considering the small size of the site, its flat surface, and the fact that it is already fully developed, it is not expected that the necessary clearing and grading operations would be limited by any soil-related condition.

The Phase I ESAs prepared for the 221 East Main Street and 31 McDermott Avenue buildings (see **Section 1.3.2**) noted that a 1,000-gallon #2 fuel oil tank is present on the former site, and that a gasoline storage tank may exist on the latter site. Prior to initiating the demolition process, both tanks will be investigated and both tanks (if present) will be removed in accordance with proper county and state requirements, and any soil contamination that may have occurred will be properly remediated as part of that removal and certification process. Such potential contamination, if discovered, would not represent an adverse impact on the project, as any such contamination will be properly remediated.

Erosion control measures to be implemented during the construction phase are discussed in detail in **Section 1.5.3**, and are expected to include measures recommended in the NYSDEC Technical Guidance Manual, such as:

- Silt fence, storm drain inlet protection, hay bales and good housekeeping procedures will be used;
- Construction equipment and vehicles will be parked and loaded/unloaded within the site;
- "Rumble strips" at the site entrance will prevent soil on truck tires from being tracked onto the public road system;
- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures; and
- The drainage system will provide permanent stormwater controls once construction is completed.

2.5.3 Proposed Mitigation

- A detailed grading and drainage plan will be prepared for the site plan application, and will provide details of overall site grading and will require Town Division of Planning review and Planning Board approval prior to implementation.
- Any soil contamination that may have occurred because of oil storage tank leakage will be properly evaluated and remediated prior to initiation of the demolition phase. The remediation process will be subject to the review and approval of proper county and state entities, which will certify that such remediation was properly conducted, and that the process is complete.
- Erosion at the site and sedimentation at downslope locations may occur during the construction phase of the project. These potential impacts will be overcome by implementing erosion control measures and installing proper drainage facilities as part of the construction activities.

2.6 Cultural Resources

2.6.1 Existing Conditions

The term *"cultural resources"* refers to both pre-historic era and historic era resources such as buried evidences (such as campfires, waste "middens," foundations, and walls) and structures that merit preservation and protection for the benefit of future generations.

As shown in **Figure 2-16a**, the subject site is within the Town Main Street Historic District, which also encompasses the Main Street National Historic District; note that the subject site is not within the Main Street National Historic District, but abuts it to the south, across East Main Street. **Figure 2-16b** is portion of a State Historic Preservation Office (SHPO) map depicting the locations of established cultural resources proximate to the subject site. As can be seen, there are no such resources on the subject site; the nearest are within the Town Main Street Historic District (the Riverhead United Methodist Church and the Doroszka House, to the north across East Main Street), and in the Main Street National Historic District, along both sides of East Main Street in downtown Riverhead to the north and the west.

Correspondence received from the NYS Office of Parks, Recreation and Historic Preservation (OPRHP), Division for Historic Preservation confirms that the buildings currently found on the project site are not considered historically significant (see **Appendix B-7**):

> We note the site for this proposed project is directly across the street from the Riverhead Main Street Historic District, listed in the State and National Registers of Historic Places. More specifically, the buildings at 221 East Main Street and 31 McDermott Avenue have been determined "not eligible" for inclusion in the historic registers; we therefore have no concerns with their removal.

2.6.2 Anticipated Impacts

As the subject site is entirely developed, it is expected that no undiscovered pre-historic era resources remain on the site, as any such resources that may have been present would have been destroyed when the site was developed about 70 years ago. As the OPRHP correspondence confirms that there are no historic era cultural resources on the subject site, the proposed project would not directly impact such resources, nor would the removal of the two existing buildings result in an impact on cultural resources. The OPRHP letter confirms that the proposed project will not result in any adverse impacts to cultural resources, as follows:

> Based upon our review of the materials submitted and conversations with your office, it is the OPRHP's opinion that the proposed project, as designed and presented, will have No Adverse Impact upon historic resources.

2.6.3 Proposed Mitigation

- As no adverse impacts to cultural resources on the subject property can occur (there are no such resources on the subject site), no additional mitigation is necessary or proposed.

2.7 Visual Resources

2.7.1 Existing Conditions

The existing character of the area immediately surrounding the site involves a mix of uses, building types and heights. The area is described as follows:

North - NYS Route 25/Main Street, Riverhead including retail, office, church, bank, restaurant and other mixed uses, beyond which is parking, offices and residential.
South - Town parking and park areas beyond which is the Peconic River.
East - An empty retail/office, bakery, restaurant and residential uses, beyond which is a restaurant and other mixed uses.
West - A vacant lot recently demolished for a mixed-use (retail/residential) development project, Town parking, beyond which are retail uses and parking.

The existing church to the north of the subject site is the tallest structure in the immediate area, with generally one to two-story buildings present surrounding the site. Existing zoning permits five-story buildings, and the proposed use would conform to this zoning; however, further evaluation (see **Section 2.7.2**) is warranted in consideration of the potential visual change to the character of the area.

In addition, the current character of the site is that of a deteriorated retail building on Main Street, and a mix of at-grade parking and other degraded buildings across the site, characterized as a site in need of revitalization. The subject site is in a critical location for redevelopment and revitalization of East Main Street, with the potential to take advantage of Peconic River views to the south, and lying within the Town downtown parking district.

The Town SEQRA Staff Report dated April 17, 2017 provides further information on the characterization of land use and visual resources in proximity to the site. Excerpts from that report are provided below:

> The site is nearly opposite the Methodist Episcopal Church and Doroszka House, each designated in the East Main Street Urban Renewal Plan Update 2008 as historically significant resources. The five-story structure will alter the surrounding area's view sheds, streetscapes and community character.
>
> The buildings located on the east side of McDermott Avenue do not exceed two stories and buildings west of McDermott Avenue reach three stories but none in the immediate area are five stories. Consideration of the existing street scape and the (cumulative) visual impact potential and building mass of having the River Loft project and 203-213 project on East Main Street's south side requires further evaluations.

It is noted that there is precedent for five-story buildings in downtown Riverhead. The area east of the subject site is comprised of mixed-uses and many styles of architecture and heights of buildings. The most dominant use in the area is the Hyatt Place hotel and the Atlantis banquets and events center identified as "Sea Star" which are directly south of the subject site on the opposite side of East Main Street. The Hyatt is five stories in height and incorporates a variety of architectural textures including stucco, brick, glass façade and multiple architectural elements. The Sea Star building is nearly the same height as the Hyatt and incorporates concrete and arched window treatments. The aquarium west of Sea Star is lower in height and set back from East Main Street. These dominant and varying elements are east of and in proximity to the Riverhead Lofts site. The five-story Summerwind project is also found in the area, to the west of the site, at the corner of Peconic Avenue and West Main Street.

There is also precedent for approval of a five-story building near traditional structures. The site at 428 East Main Street is occupied by the Preston House, a structure within the downtown historic district, but not a designated historic structure. This site is also in the East Main Street Urban Renewal Area and is zoned DC-1, much like the subject site. A five-story hotel was proposed on this site including connection to the Preston House to retain the structure through adaptive reuse, and establish an economically beneficial use on the site. This was subject to Landmarks Preservation Committee (LPC) as well as Architectural Review Board (ARB) review. The hotel use at 428 East Main Street was approved by the LPC, ARB and Town Board for site plan review.

The proposed project is subject to review by the ARB but is not located in an historic district (it is across from the historic district) and so is not subject to LPC review. The purpose of the ARB is: to promote visual qualities in the environment which bring value to the community; to foster the attractiveness of the community as a place to live and work; to preserve the character and quality of our heritage by maintaining the integrity of those areas which have a discernable character or are of special historic significance; to protect public and private investments in the area; and to raise the level of community awareness and expectations for the quality of its environment. Review by the ARB is critical in evaluating potential visual resource impacts.

2.7.2 Anticipated Impacts

The proposed project is expected to change the visual character of the site and views of the site by replacing two smaller low structures with a single, larger and taller structure proximity. The existing character of the subject property as a site in need of revitalization will be removed and replaced with an attractive five-story mixed use building that conforms to the DC-1 zoning, provides housing for various income levels, provides a street presence in the form of commercial use along the sidewalk, and provides an anchor to revitalize this portion of East Main Street. It is noted that an additional development is proposed to the west of the subject site at 203-213 East Main Street.

The change in visual character that will result from the proposed project and the adjoining proposed development is consistent with the Town's intended use of the site and area, pursuant to the EMSURP and DC-1 zoning. The EMSURP outlined a program to revitalize East Main Street through urban renewal which is part of the Town's comprehensive plan initiative for downtown Riverhead. The EMSURP combined with the DC-1 zoning envisions mixed use buildings up to five stories in height to provide incentives for re-development, and stimulate revitalization of the downtown area. This initiative is grounded in the Town Comprehensive Plan Update (2003), the EMSURP (2008) and the BOA (2016). The proposed use of the subject site as well as the site at 203-213 East Main Street provides a means of realizing this urban renewal and revitalization initiative that the Town has envisioned through these studies and zoning code provisions. The economic and social benefits of revitalization are numerous and formed the basis for the Town's planning initiatives that are being implemented through redevelopment of 221 East Main Street and other sites in the area pursuant to existing zoning. The redevelopment of this site will anchor the south side of East Main Street west of McDermott

Avenue and promote the planning goals of the Town for revitalization and provision of apartments for various income levels.

Additional assessment of visual resources is provided to further examine the proposed project in the context of the site and area. The most effective way to assess the change in visual character is to provide illustrations of how the proposed project will appear from various vantage points, and as a result, a series of architectural graphics have been prepared to portray the character of the site in the context of the area. **Appendix B-8** presents a number of computer-simulated views of the proposed building. As can be seen, the building will feature an architectural style complementary to that of the commercial buildings adjacent and to the east of the site (see also **Appendix B-2**).

With respect to the visual context of the project site and its surroundings along McDermott Avenue and East Main Street, the figures in **Appendix B-9** compare the site's existing character to its (simulated) appearance after construction of the proposed building. The figures show that, while the proposed building will change the appearance of the site for observers, the building has been designed with an architectural style that complements that of the neighborhood, and so will be attractive and appropriate within the East Main Street downtown area.

The building is larger than other buildings in the area; however, the proposed architecture provides an attractive complement to the south side of East Main Street. The building height is consistent with the DC-1 zoning, and the appearance of the building is overall residential, with first floor storefronts, both features characteristic of a main street setting. The new building will be placed on its site with an orientation that presents its narrow side facing the existing uses to the north. Overall, the proposed use will be larger than existing buildings in the immediate vicinity of the site; however, the impact of these differences will be reduced in consideration of the trend toward development in the vicinity and the intended revitalization through Town planning initiatives.

An additional photo-simulation has been prepared to assist in visualizing the proposed project and the massing of the adjacent 203-213 East Main Street proposal, in the context of the character of the community **(Appendix B-10)**. This analysis includes views of the project site from seven (7) viewing angles and shows architectural details of the proposed project and the massing of the two proposals. Note that more detailed views of the 203-213 East Main Street structure (so that its architectural treatment, material colors and textures, fenestration, etc.) are not available, so that only its proposed dimensions can be added to the simulations. However, the graphics clearly identify the massing of this building in the context of its surroundings which include the proposed project site at 221 East Main Street.

As noted above, the proposed project is subject to review by the ARB (the LPC would have no jurisdiction, as the subject site in not within an historic district). The project was subject to ARB review and discussion at various meetings, the latest of which occurred on April 19, 2017. On May 17, 2017, the ARB recommended approval of the proposed project to the Town Board (see **Appendix B-11**), with the following two minor comments:

- More development should be made of the cornice
- Please submit final working drawings with all necessary details when available

The Applicant will forward these comments to the project architect and ensure that both comments will be addressed to ARB and Town Board satisfaction.

This visual impact assessment considers the following key points:

- The area is comprised of a mix of uses, architectural styles and heights of buildings
- There is precedent for five-story buildings on East Main Street, specifically east of the site at the Sea Star building and Hyatt Place hotel which are equal to five stories (and greater to the east part of the Hyatt) and varying architectural styles.
- There is precedent for a five-story building near a traditional structure with historic context, specifically the approved five-story hotel at the Preston House site at 428 East Main Street.
- The proposed use conforms to zoning in terms of height and all dimensional requirements related to site design/alignment.
- The proposed project will redevelop a deteriorated site in need of revitalization.
- The proposed project includes a five-story mixed use building conforming to DC-1 zoning and consistent with the Town's goals for downtown revitalization as embodied in studies dating back to 2003 including: the Town Comprehensive Plan Update, the EMSURP, and the BOA.
- The project will anchor the portion of East Main Street west of McDermott Avenue with an attractively styled building that complements the main street setting and promotes revitalization.
- The project will further the Town's housing goals by providing units for a range of income levels.
- The proposed project will further social and economic goals of the Town by stimulating revitalization of East Main Street to support existing businesses in the downtown, increase spending, provide tax revenue and/or PILOT, sales tax revenue, employment and related benefits.
- The building will be sited to present its narrow side facing the uses to the north.
- The architecture of the project has been approved by the Town ARB a primary entity responsible for architectural review to *"promote visual qualities in the environment which bring value to the community; to foster the attractiveness of the community as a place to live and work; to preserve the character and quality of our heritage by maintaining the integrity of those areas which have a discernable character or are of special historic significance; to protect public and private investments in the area; and to raise the level of community awareness and expectations for the quality of its environment."*

Based on the visual assessment, no significant adverse impacts to visual resources are anticipated. The site is in need of revitalization, and the proposed use is consistent with Town planning goals for redevelopment of the area to achieve this revitalization. The appearance of the build has been carefully considered and will establish a use characteristic of a main street setting that will complement this area of East Main Street.

2.7.3 Mitigation Measures

- Potential adverse impacts have been mitigated to the maximum extent practicable by use of an architectural styling that complements the other structures in the neighborhood (so that it would not contrast with the context of the resources), and by orienting the building so that its narrow side faces the cultural resources (to minimize impacts on views to and from the resources).

- The Applicant will ensure that the project architect addresses the ARB comment regarding the building's cornice.
- The ARB's recommendation to the Town Board for approval indicates that it has determined that the architecture of the proposed project is appropriate for the site and context through project architectural design. Therefore, no additional mitigation in this regard is necessary or proposed.

SECTION 3.0

OTHER REQUIRED SECTIONS

3.0 OTHER REQUIRED SECTIONS

3.1 Construction-Related Impacts

It is expected that temporary inconvenience and minor construction impacts will occur in the area of the site during the demolition and re-construction phase of the proposed project. However, such impacts are unavoidable and not permanent, and any redevelopment of the site would cause impacts during demolition/construction. Further consideration of construction-related impacts is outlined herein.

The site will first be subject to demolition, clearing and grading. Noise, erosion and dust are potential impacts during this phase. Noise will occur only during hours when construction is allowed by the Town and therefore is mitigated as much as possible through proper site management. Erosion may occur in exposed soil areas; however, erosion control devices such as silt fencing, groundcovers, drainage diversions, soil traps and conformance with Town construction requirements applicable to site development will mitigate these impacts to the maximum extent practicable. The potential for dust exists when exposed surfaces are subject to wind forces; however, use of water sprays and minimization of the time span that bare soil is exposed to erosive elements is expected to minimize the potential for impacts to sensitive on- or off-site natural or developed areas. It is noted that all of these potential impacts would occur during any redevelopment, would be temporary in nature, and would occur only during the limited duration of the construction phase of the project.

Construction activities would be subject to Town regulations. Construction activities will not occur outside weekday daytime hours (7 AM to 8 PM), and will conform to applicable Town regulations regarding construction noise generation and hours.

The use of "rumble strips" (which cause truck tires to shed any mud trapped within the tire treads) at the construction entrances will reduce soil on truck tires from being tracked onto adjacent roadways, thereby minimizing the potential for dust to be raised.

It is not anticipated that there will be a decrease in the existing level of safety in regard to school bus operations from construction phase truck traffic, for the following reasons: 1) school bus activities occur during early morning and early afternoon hours, when only a limited number of trucks are utilizing the roads; 2) bus drivers as well as truck drivers are trained and specially licensed to operate their vehicles in a safe manner, observing appropriate traffic laws; and 3) a safe and efficient site access will be established so that trucks can enter the site without causing delays on local roadways. As a result, short-term construction impacts may cause some temporary inconvenience, but proper site construction management and normal vehicle precautions as well as the temporary nature of the work to be completed will minimize these impacts.

In summary, redevelopment of the subject property is not anticipated to result in significant erosion/sedimentation or stormwater impacts due to the use of proper site grading procedures, implementing erosion controls and, for the long-term, use of a properly-designed drainage system.

3.2 Cumulative Impacts

Cumulative impacts are the potential impacts of a proposed project taken in conjunction with those of other active or anticipated nearby development projects, where the sum of the individual impacts may potentially result in cumulative impacts that are greater than the individual impacts from each project. An analysis of cumulative impacts is generally required within a Draft EIS when it is expected that multiple projects within the same area may result in a greater cumulative impact than is suggested by impact analyses of the individual actions.

As described in The SEQR Handbook, cumulative impacts are:

> Cumulative impacts occur when multiple actions affect the same resource(s). These impacts can occur when the incremental or increased impacts of an action, or actions, added to other past, present and reasonably foreseeable future actions. Cumulative impacts can result from a single action or from a number of individually minor but collectively significant actions taking place over a period of time. Cumulative impacts do not have to all be associated with one project sponsor or applicant. They may include indirect or secondary impacts, long-term impacts and synergistic effects.

The Town has specified that the proposal for development on the site abutting the project site (at 203-213 East Main Street, on the site that was previously occupied by the Sears store; see **Figure 1-8**) should be evaluated for its potential cumulative impacts.

3.2.1 Brief Description of the Project at 203-213 East Main Street

The redevelopment project at 203-213 East Main Street is a 1.41-acre property proposed for a five-story mixed-use structure featuring 3,800 SF of first-floor commercial space (along and at-grade with East Main Street) and 170 apartments distributed on floors 1 (part of) through 5. Its northern boundary lies along the south side of East Main Street, and its southern boundary is along Heidi Behr Way. The site is presently vacant; it had previously been occupied by a retail structure, but it was demolished and the site was re-graded in 2016.

Like the proposed project and because the site slopes downward toward to south from East Main Street, the proposed lower level for parking beneath the structure of the other project will be accessed via Heidi Behr Way on the southern site frontage. No vehicle access directly onto East Main Street is proposed. The plan includes three landscaped interior courtyards to be constructed between buildings above the parking area. A fire truck access path is proposed along the west side of the property.

The other project conforms to the 2003 Town Comprehensive Plan and to the goals and intent of the 2008 Update of the EMSURP, and will conform to the applicable Town Zoning Code bulk, height and setback requirements for development in the site's DC-1 zoning district.

The site of the 203-213 East Main Street project is within the Riverhead Parking District and therefore is not required to provide on-site parking. However, this project will provide 113 on-site parking spaces. Based on the design flow rate provided by the SCDHS, the 203-213 East

Main Street project is expected to generate a total of 38,630 gpd of sanitary wastewater. The sanitary wastewater will be conveyed off-site via the existing network of the RSD, and treated at the existing municipal sewage treatment plant on River Road, to the east.

This proposal includes 0.41 acres of landscaping, to be installed over the underground parking level. It is estimated that 16 inches of irrigation water will be applied (supplied by the RWD) to this landscaping over a 5-month period, for an annualized (i.e., assuming a 365-day year) average of 488 gpd of irrigation demand. Assuming that the 38,630 gpd of wastewater also represents the amount of water consumed in the structure, the total amount of water to be used by this proposal is 39,118 gpd.

3.2.2 Land Use, Zoning and Plans

Land Use

Each of the sites for the projects being considered here had long been in commercial use, though the amounts of building floor space on each site had been less than those currently proposed. It is acknowledged that each proposal would add a residential use to each site, which is a usage type not previously present on these specific sites, but is encouraged by zoning and supporting plans to add vitality in the revitalization of downtown Riverhead. Thus, there will be beneficial cumulative impacts in terms of housing opportunities and additional consumers and occupants of the downtown, which has been demonstrated in other downtown areas to lead to improved conditions. It is noted that the proposed project and the 203-213 East Main Street projects are complementary in terms of land use in that the proposed project will provide quality housing for a mix of household incomes, and 203-213 East Main Street will provide market rate housing, thus adding to the diversity of available housing in the downtown. The combined projects will change the pattern of land uses in the vicinity by introducing residential uses to the mix of uses in the area, resulting in an incremental increase in the overall residential land use in the area. This is then intended outcome of over a decade of planning studies and is subject to a maximum of 500 units in the downtown area. Theses uses are also encouraged and permitted by current zoning as is described below.[1]

Zoning

There will be no cumulative impact to zoning in the area, as each of the two proposals are designed to conform to the requirements of the DC-1 zoning district, though the use at 203-213 East Main Street requires relief for residences on the first floor. The proposed project requires ZBA variances for units slightly larger than required by zoning and parking stalls slightly smaller than required by Town requirements. In addition, a Board special permit is necessary for the minimal exceedance of site coverage; however, this is presumed approvable as the project conform to the standards under which the Board will review the special permit application. Approval of the special permit is not expected to result in any significant impacts to zoning; as discussed in **Section 2.1.2**, the special permit is necessary to enable the Applicant to provide the type of residences sought by the DC-1 district and EMSURP:

[1] It is noted that 203-213 East Main Street proposes some residential use on the ground floor which does not conform to DC-1 zoning and will need to change to retail or obtain relief.

The special permit needed for the exceedance of 80% of the site to be covered by the structure is the result of the Town's request that the project provide some amount of on-site parking. It is noteworthy that on-site parking is not required for development in the DC-1 zoning district; nevertheless, the Applicant has agreed to satisfy this request. Alternatively, the Applicant could provide on-site parking and meet the allowed maximum site coverage by: reducing the number of residences, by making the residences smaller in size, by reducing the ground floor commercial spaces, or by a combination of these measures (the proposed building could not be made taller, as it is already at the maximum height allowed). However, the Applicant indicates that such reductions would not be acceptable based on commercial and residential market considerations. The project, as proposed, reflects the Applicant's effort to balance the need to produce a structure having a substantial number of rental apartments (as sought by the Town for the DC-1 zoning district), each having a floor area of sufficient size to attract qualified tenants, as well as ground floor commercial spaces that are both appropriate for the downtown hamlet area and would support the Town's goals for the area. Because of this balancing and responding to the Town's request for on-site parking, it is necessary that the Town Code maximum allowed site coverage be exceeded.

Riverhead seeks residential occupancy for revitalization and a healthy downtown environment. Similarly, ground floor retail adds to the vibrancy to the downtown setting. The applicant has significant experience in designing successful projects with full occupancy. The economic feasibility of a project is critical to its success. Reducing unit sizes/numbers, and/or reducing commercial use would not be advisable if the project is to be successful and meet the goals of the applicant and the Town of Riverhead to achieve the revitalization envisioned in the various Town land use plans.

Land Use Plans

As both the proposed project and the 203-213 East Main Street project are intended to conform to the recommendations of the Town Comprehensive Plan and the EMSURP, there will be no adverse cumulative impacts with respect to Town planning efforts; and to the contrary, these projects will advance the planning goals of the Town as embodied in these studies and the resulting DC-1 zoning. In addition, each proposal is subject to environmental review under SEQRA. These reviews will ensure that these projects will be consistent with the Town's overall goals, and both projects will be evaluated to ensure that impacts will either not occur or will be mitigated to the maximum extent practicable.

3.2.3 Community Services

Public Schools

Details on the breakdown of the residences for the other project are not available so, assuming the same breakdown of studio, one-bedroom and two-bedroom units as the proposed project, an estimated 307 people would reside in the other project, of which 20 would be school-age children. In combination with the estimated 213 residents and 14 school-age children in the proposed project, totals of 529 residents and 34 school-age children are expected. Population is a planned result of the zoning of these sites and is intended to provide consumers for existing and future businesses as well as vitality to the downtown area. With respect to the Riverhead CSD, the cumulative effect of these two projects will increase the district enrollment and expenditures for education of students; however, this will be at least partially offset by the increased taxes (or PILOT payments, in the case of the proposed project) generated.

Police Protection

Both sites require some level of police protection at present, either for past use or present vacant conditions which may encourage vandalism. The occupancy of both sites by residential use will increase the level of presence and activity on the sites which will assist in curtailing vandalism. It is expected that each of the two projects will result in some increased potential for Riverhead Police Department emergency services (due to the increased development and human presence on the property); however, this increase is expected to be limited and within the capabilities of the Department such that the Riverhead Police will be able to accommodate the additional potential need of police services. In addition, the Police Department will benefit from an increase in tax revenue from these two projects.

Fire Protection and Ambulance Services

In a manner similar to that of police services, each of the projects reviewed here would separately, incrementally increase the potential need of fire and ambulance services (of the Riverhead Volunteer Fire Department and the Riverhead Volunteer Ambulance Corps, Inc.), so that the cumulative effect of the two proposals would be heightened in comparison to existing conditions. However, new construction will conform to current fire and building codes and will be subject to site plan review which will include Fire Marshal/Fire Department input. It is expected that the Riverhead Fire Department and the Riverhead Volunteer Ambulance Corps, Inc. will be able to accommodate the additional potential need of fire and ambulance services and as noted with respect to police services, fire/ambulance service providers will benefit from an increase in tax revenue from these two projects.

Public Water Supply

Former uses on both sites were connected to the RWD and resulted in demand for water supply. This demand will be incrementally increased by both projects; however, the demand is expected to be within the capability of the RWD to provide given the existing RWD facilities. It is expected that the proposed project will consume a total of 39,871 gpd of potable water, and the other project would consume an estimated 39,118 gpd, for a cumulative impact on the RWD of 78,989 gpd. This would represent an increase in demand of 11.4% on the average daily pumpage of the RWD. Considering the large volume of water currently supplied by the RWD, and that the distribution system is already present in the area, the increased demand is not anticipated to significantly cumulatively impact the RWD. Each project will be subject to review and connection to the water district, and will pay their proportional share of the design, connection and tariffs for water supply provided thus generating revenues for the District.

It should be noted that each project's design will be subject to detailed engineering review by the RWD as part of the Town's site plan review process, which would ensure that adequate consideration is given to the water supply needs of each project, as well as to address any supply concerns of the RWD.

Sanitary Wastewater Treatment and Disposal

The existing/former uses at both project sites are connected to the Riverhead Sewer District and have been provided with wastewater treatment services. An incremental increase wastewater will occur as a result of these two planned projects. It is assumed that all 39,871 gpd of water supplied to the proposed project, and the 38,630 gpd of water supplied to the other project will

be conveyed off-site daily as wastewater. The combined 78,501 gpd will be conveyed via the RSD's network to its STP on River Road. As this facility currently treats an average of about 1.0 million gpd, the 78,501 gpd would represent a 7.8% increase in wastewater at this facility. This STP has a permitted capacity of 1.5 million gpd, so that it has about 500,000 gpd of unfilled capacity; the cumulative impact of the two projects would represent a 15.7% reduction in the amount of available treatment capacity of this facility. Considering the RSD's large available capacity at the STP, and the presence of the public sanitary sewer network in the vicinity, the increased demand is not anticipated to significantly cumulatively impact the RSD.

Each of the two projects under consideration here will submit detailed, engineered plans to the RSD for review of the flow impacts to the collection and conveyance systems and, if approved, a letter of sewage treatment availability will be issued. Such a review will ensure that adequate consideration is given to the wastewater treatment needs of each project. In addition, project sponsors will offset the cost of design and the projects will each be charged in accordance with connection and treatment fees of the District such that revenues will be provided to offset costs of treatment.

Energy Suppliers

It is expected that PSE&G and National Grid can and will serve both the proposed project and the other project with electrical and natural gas services, respectively. Generally, PSE&G and National Grid provide services per their filed tariffs and schedules in effect at the time services are required. As the proposed project will remove both buildings presently on the site (the site of the other project was previously cleared), new service connections will be necessary. Except for these new service connections, it is not expected that the existing distribution systems will need to be upgraded to serve either project site. Considering the available capacity of these utility services and the presence of distribution networks, it is not expected that the cumulative impact on each utility will be significant.

Each project will submit detailed, engineered plans to each utility for review and approval for services. Such reviews will ensure that adequate consideration is given to the electricity and natural gas needs of each project. PSEG and National Grid have established connection fees and rate schedules which both projects will be subject to, thus providing revenues commensurate with utility demand.

Recreational Facilities

Neither of the two projects will encroach into or otherwise adversely impact any of the existing park or recreational facilities in the vicinity. Each project will incrementally increase the number of potential patrons of local and regional park and recreation sites, but this cumulative impact would not significantly impact the use of any of these sites, in consideration of the following:

- it is acknowledged and expected that Peconic Riverfront Park, being adjacent to each project site, would tend to attract the majority of new visits generated. However, this facility is large enough to accommodate this increase, particularly in that only a low percentage of these new residents would patronize this facility at any one time.

- there are a substantial number of recreational facilities for the new residents to choose from. This would tend to distribute these visits broadly and conversely reduce the number of these visits (and their associated impacts) at any one park/recreational site.
- the number of new site residents is small in comparison to the number of local and regional residents, so that any increase in park/recreational site patronization attributed to these two projects would be small as well.
- Adding to residents in the area that enjoy the existing downtown setting which includes the waterfront park and street environment is a planned condition that benefits the downtown and adds vibrancy and assists with revitalization.

Summary

While these two applications would combine to incrementally increase the demand upon local community services (e.g., schools, police, fire and ambulance services, water supply, sanitary wastewater treatment, energy supplies and recreational facilities), significant cumulative impacts are not anticipated, as:

- each service provider has available capacity to adequately serve the two projects, and
- each service provider will receive increased funds (from taxes, PILOT payments or fees), which would offset at least a portion of the increased costs of those services.

3.2.4 Transportation

In addition to those of the proposed project, the TIS also considers a number of other pending projects in the vicinity, thus ensuring that potential traffic impacts of these are analyzed cumulatively, and are addressed through mitigation and improvements, if necessary. The TIS includes the 203-213 East Main Street project in its analyses (see **Appendix C** and **Section 2.3**).

The cumulative traffic analysis recommends the following mitigation measure:

> As recommended by the TIS, after completion of the project, minor signal timing adjustments at the intersection of East Main Street at McDermott Avenue/Maple Avenue will be made for the northbound McDermott Avenue approach, improve the northbound LOS E to LOS C during the PM peak hour and LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.

As noted in **Section 1.3.1**, the project site is within the Town Peconic River/Route 25 Corridor Step II BOA, in which Town initiatives to revitalize downtown Riverhead have been planned and evaluated. This evaluation included a traffic impact analysis that compared existing zoning and a reasonable development scenario that included additional residential units in the downtown and thus, the Town has expected an increase in density and planned accordingly for this additional development in the downtown, finding it appropriate and necessary to achieve the planning goals of the Town.

It should be noted that each of the other pending projects considered in the TIS analysis will be subject to a separate Town review to determine potential traffic impacts, and so will build on the analysis provided herein with respect to their cumulative impacts. Site plan review and curb cut

permits from the State will provide forums for further consideration of traffic and appropriate mitigation. As a result, there is a framework for consideration of actions under site-specific review to ensure that adverse cumulative traffic-related impacts would not occur.

Section 2.3.2 notes that the parking needs of the proposed project and those of the other nearby sites proposed for development were evaluated in the TIS (see Parking Analysis, in **Appendix C**). That evaluation also considers the ability of the existing parking lots in the area to accommodate these cumulative parking needs. The evaluation concluded:

1. A parking assessment was conducted for the proposed project and an adjacent planned project (203-213 East Main Street) to determine if there is adequate parking near the study area to support the proposed project. As part of the Transit Oriented Development (TOD) Growth Plan in the Riverhead BOA project, Nelson & Pope, LLP conducted a detailed Parking and Public Transportation Study of Downtown Riverhead. The Downtown Riverhead parking study inventoried the parking supply and parking restrictions in the study area. It also identified the peak parking periods and associated peak occupancy by location, calculated the average parking duration and turnover by location. For the purpose of the proposed project, additional parking counts were conducted in the parking areas closer the proposed project to identify current parking utilization.

2. Parking accumulation survey was conducted at the parking areas between the hours of 10:00 AM and 8:00 PM on a half-hourly basis on the following dates:

    - Friday August 19th, 2016 to cover a typical summer weekday
    - Saturday August 29th, 2016 to cover a typical Summer Saturday.

3. The parking data was summarized to identify the peak parking demand in the vicinity of the proposed project.

4. Peak parking demand of the proposed uses was estimated using parking data contained with the Institute of Transportation Engineers Parking Generation Manual 4th Edition, data within the files of Nelson & Pope, LLP and Town parking requirements for developments outside the Downtown Parking District.

5. Based on the peak parking demand, the proposed project and adjacent planned project will require a total of 481 parking spaces. With the peak parking utilization within the study area, there will be at least 504 parking spaces available during the weekday and weekend peak periods. The available parking exceeds the peak parking demand.

3.2.5 Water Resources

Generally, the primary sources of impact to groundwater quality are by the on-site recharge of nitrogen in sanitary wastewater, and by the on-site recharge of stormwater. As described in this document, the proposed project and the 203-213 East Main Street projects will connect to the public sanitary sewer system, so that all wastewater generated on each site will be conveyed to an off-site facility for treatment and recharge, by the RSD. As each site is already connected to this system (or, for the other project site, is unoccupied), there is presently no source of nitrogen impact to groundwater quality on either site. The two development proposals under

consideration in this analysis will continue to not represent sources of cumulative groundwater impact.

In general, both of the projects reviewed here will be subject to the review and approval of the RSD, ensuring that no impacts to groundwater quality would occur from either proposal, thereby minimizing the potential for adverse cumulative impacts to groundwater from nitrogen in wastewater.

All stormwater generated on these two development sites will be handled in on-site drainage systems based on Riverhead engineering design guidelines. The design and installation of these systems will be subject to the review of the Town, thereby ensuring that these systems will operate properly. In this way, the potential for adverse cumulative impacts to groundwater resources from stormwater will be minimized.

The only surface water body that could be impacted by either or both of the projects being analyzed herein is the Peconic River, which abuts each site, to the south (across Heidi Behr Way). The potential for cumulative impacts to this surface water resource would be from runoff from either site flowing in the downslope direction and into the river. However, as described above, each project will include an on-site drainage system engineered to accumulate all potential runoff generated on these sites and direct it into on-site recharge facilities. Town engineering requirements prohibit a site design that would allow runoff from exiting a site, which ensures protection of surface water resources. By use of these systems, the potential for cumulative impacts to this surface water resource will be obviated.

3.2.6 Soils

Soils are a site-specific characteristic having potential limitation that would be dealt with on a site-specific basis as each development application is reviewed by Town engineering staff. Each individual site should be subject to evaluation of its soils to ensure that any constraints are addressed in project design. Town engineering staff will review and must approve grading, drainage and erosion control plans as part of its site plan review; each applicant will implement these controls and thereby ensure stabilization of erodible soils and minimization of potential impacts to soils. The combination of pending projects does not represent a significant loss of unique or agricultural soils, and therefore can be evaluated and protected as needed based on specific project designs.

3.2.7 Cultural Resources

Cultural (i.e., archaeological and/or historic) resources are a site- and area-specific resource for which potential impacts would be dealt with as part of individual project reviews. As both sites under review here have been disturbed and developed, it is not expected that there are any cultural resources on either. This has been confirmed for the proposed project site by the OPRHP. As a result, no cumulative impact on on-site cultural resources is anticipated, as no such resources are present on either site.

3.2.8 Visual Resources

Each of these two projects will change the appearance of their sites. Consequently, there will be a cumulative impact on the visual resources of the immediate vicinity and on character of the community (see **Appendices B-10 and B-11**). These uses are subject to the dimensional requirements of the DC-1 zoning that was created by the Town to promote these projects and spur revitalization of the downtown. The context of these sites in the area is regulated under the Town Zoning Code, and site plans are subject to review by the Town Board and Architectural Review Board. In addition, the pending projects are appropriate (in terms of type of use proposed, building bulk and height, etc.) to their locations and surroundings, which would tend to minimize the potential for adverse impacts on the character of the community. As a result, while it is acknowledged that cumulative impacts upon community character will occur, it is not expected that this impact will be adverse in nature. **Section 2.7** addresses visual resources in detail, and includes graphic representations of the community character based on the implementation of these two projects. On balance, the projects conform to the zoning dimensional requirements, particularly with respect to height, as provided for in the DC-1 zone which resulted from planning studies and assists with the implementation of Town planning goals for the sites and area. Visual change is inevitable; however, this change is planned for and will catalyze the revitalization and land use community character and aesthetic conditions that the Town envisioned through planning and zoning.

It is acknowledged that impacts on the visual context of cultural resources in the vicinity may occur along East Main Street to the north and west of the subject site, because of the size and proximity of the proposed five-story structures. These impacts have been mitigated to the maximum extent practicable by use of architectural stylings that complement the other structures in the neighborhood (so that these new structures would not add a contrasting use upon the context of these resources), and by orienting the buildings so that their narrow sides face the cultural resources (to minimize impacts on views to and from the resources). The proposed project has received the approval of the ARB. The 203-213 East Main Street project must still be subject to ARB review for architectural styling and building characteristics. Overall, these two sites will be redeveloped in conformance with existing DC-1 zoning for either the proposed uses or if not these proposed projects, then some other project that would conform with zoning as intended by the Town. Visual change is an inevitable consequence of redevelopment of these sites; however, this change will catalyze revitalization, generate jobs and tax (or PILOT) revenue and will provide retail shopping opportunities as well as diverse housing opportunities in the downtown.

3.2.9 Conclusions

Based on the necessity to conform to zoning and the various land use plans and development regulations (applied at the Town and County levels), the governmental scrutiny each project will undergo in order to receive the necessary approvals and permits, and in consideration of the types and extents of impacts anticipated from these projects, it is not expected that significant cumulative impacts would result. The implementation of these projects in conformance with zoning will achieve the planning goals of the Town in conformance with DC-1 zoning and

supporting plans, and when considering social, economic and environmental factors, on balance, these projects are beneficial in addressing Town needs and planning goals for downtown Riverhead.

3.3 Adverse Impacts that Cannot Be Avoided

The existing site conditions have been characterized and the potential impacts of the proposed project have been assessed. Some impacts may still exist for which no mitigation is available. The impacts themselves have been quantitatively and qualitatively discussed in previous sections of this document. The impacts of the proposed project will be minimized where possible, but this section acknowledges those impacts which may still occur:

Short-Term/Construction Period Impacts

- Despite implementation of the proposed mitigation measures, localized erosion impacts may occur but will be controlled to the maximum extent practicable.
- Despite implementation of the proposed mitigation measures, fugitive dust may still be generated though water truck spray and on-site management will seek to control any such impacts.
- Construction vehicle-related traffic will occur, which may adversely impact local traffic conditions though this will be temporary and not permanent.
- Despite implementation of the proposed mitigation measures, noise associated with construction activities will be generated, which may adversely impact local residents; however, construction will comply with hours of operational requirements of the Town.

Long-Term/Post-Construction Impacts

- Increased intensity of land use on the site (over current site conditions).
- Clearing, grading, and redevelopment on the entire 0.85-acre site.
- Increased total anticipated water consumption and wastewater generation on the site, from 444 gpd at present to 39,871 gpd associated with the project. Water will be supplied by the RWD and wastewater treatment will be provided by the RSD.
- Increase in vehicle trips generated on the site and on area roadways over existing conditions (minor off-site signal timing adjustment proposed).
- Assuming that all 14 of the school-aged children anticipated to reside in the proposed project would attend local schools in the Riverhead CSD, with associated increase in school district expenditures.
- There will be an increased potential need for emergency services of the Riverhead Police Department and the Riverhead Fire Department (offset by increases in tax revenues generated by the proposed project).
- There will be increased demand on the energy services of PSE&G and National Grid (to be paid for according to rate tariffs).

3.4 Irreversible and Irretrievable Commitment of Resources

This section is intended to identify those natural and human resources listed in **Section 2.0** that will be consumed, converted or made unavailable for future use as a result of the proposed project. Development of the proposed project will result in irreversible and irretrievable commitment of resources. The importance of this commitment of resources is not anticipated to

be significant however, due to the fact that these losses do not involve any resources that are in short supply, semi-precious or precious to the community or region, or are otherwise substantial.

It is difficult to quantify the exact commitment of resources; however, once the project is complete, the following irreversible and irretrievable losses of resources are expected:

- Building materials used for construction, including but not limited to: wood, asphalt, concrete, fiberglass, steel, aluminum, brick, etc.
- Energy and related resources used in the construction, operation and maintenance of the proposed project, including fossil fuels, electricity and water.
- Potable water to be consumed by the operation of the project, totaling an estimated 39,871 gpd.

3.5 Effects on the Use and Conservation of Energy Resources

An increase in the consumption of energy resources would typically be expected from the intensification of land use on a site, particularly for sites which had been undeveloped or underutilized. The proposed development site is already developed, so that the property currently consumes energy resources, in the forms of electricity and natural gas. Nevertheless, the proposed project will increase the amount of development on the site, so that an increase in the overall amount of energy resources is expected. However, use of new, energy-efficient building materials (e.g., insulations, windows, weather stripping, door seals, etc.) and mechanical systems, (e.g., air conditioners, heating systems, HVAC systems, water heaters, heat pumps, etc.) is anticipated, which would mitigate the increased usage of energy resources. Incorporation of such energy-conserving measures is not only required by New York State and the Town of Riverhead, but is a sensible business practice, particularly in light of the increasing cost of energy resources. It is expected that the existing public utility services of PSE&G and National Grid will be more than adequate to meet the expected increased demand.

There may be a short-term increase in energy use during the construction phase of the proposed project. These impacts are expected to be of short duration, and the long-term energy demand is expected to remain stable or decline.

In summary, it is not anticipated that the increased energy demands of the project will result in any significant adverse impacts on the use and conservation of energy resources.

3.6 Growth-Inducing Aspects

Growth-inducing aspects of a proposed development are those project characteristics which would cause or promote further development in the vicinity, either due directly to the project, or indirectly as a result of a change in the population, markets or potential for development in that community. Direct impacts might include, for example, the creation of a major employment center or institutional facility, installation or extension of infrastructure improvements or the development of a large residential project, particularly if that project were designed for a specific

age group. An indirect impact would cause an increase in the potential for further development in an area, which in turn would result in direct impacts.

The proposed project is a mixed commercial and residential development. The proposed project will not create a major employment center or institutional use, install or extend infrastructure improvements (other than what is necessary for the proposed use). Nor is the project expected to result in an indirect impact that would induce direct impacts. The proposed project is complementary to the general commercial/residential development pattern of downtown Riverhead hamlet, conforms to the site's DC-1 zoning, and conforms to the EMSURP recommendation for the site.

It is anticipated that the project would contribute to an incremental beneficial increase in activity for local businesses. The project will increase the number of potential shoppers in an area where commercial and service-oriented businesses are available in easy walking distance and by relatively short auto trips. These businesses, especially those serving the needs of family-oriented customers, would tend to experience incrementally increased activity due to the increase in their customer base; this is viewed as a benefit and does not require new facilities but supports existing ones.

Construction will create both short-term and long-term job opportunities. In the short-term, development will create construction jobs, and indirectly jobs may be created based on increased patronage of material suppliers. In the long-term, the proposed project will create a number of permanent jobs for employees of the retail space and restaurants. These jobs may be filled first from within the local labor pool. These job opportunities would not require relocation of specialized labor forces or influx of large businesses from outside the area to provide construction support. This jobs creation is expected to represent a positive employment and economic impact on the local employment environment.

SECTION 4.0

ALTERNATIVES CONSIDERED

4.0 ALTERNATIVES CONSIDERED

SEQRA requires the consideration of alternatives to the proposed project. Alternatives should represent reasonable and feasible land use, technology and other options to the proposed project that would achieve the applicant's objectives and remain within the applicant's capabilities. The purpose of this analysis is to determine the merits of the proposed project as compared to those of other possible uses, sites and technologies that would also achieve the applicant's objectives and potentially reduce environmental impacts. The discussion and analysis of the alternatives should be conducted at a level of detail sufficient to allow for this informed comparison, to be conducted by the decision-making agencies. Alternative 1 is the "No Action" alternative, which is required by SEQRA and is intended to represent site conditions if the proposed project is not implemented.

For the subject application, the following alternatives were evaluated:

- **Alternative 1: No Action** - assumes that the site remains unchanged from its current use and condition; no re-development occurs.
- **Alternative 2: Mixed-Use Development** - assumes re-development of the site under its existing zoning, with a structure similar to the proposed project, of a mixed commercial and residential project having 12,622± SF of ground floor commercial space and 116 apartments on floors 2 through 5.
- **Alternative 3: Hotel Development** – assumes re-development of the site under its existing zoning, with a structure similar to the proposed project, of a hotel having 12,622± SF of ground floor administrative/maintenance/mechanical spaces and 110 rooms on floors 2 through 5. A special permit for this scenario will be required from the Town Board.

Table 4-1 compares the site and development characteristics and impacts of the proposed project and those of the three alternatives considered herein.

4.1 Descriptions of Alternatives

4.1.1 Description of Alternative 1: No Action

This alternative assumes that the proposed project is not implemented, so that the subject site remains in its existing use and condition. Under this scenario, the subject parcel would continue the current levels of water use and wastewater generation, traffic generation, commercial activity, and employment, and would retain the potential for re-development in accordance with its existing DC-1 zoning.

4.1.2 Description of Alternative 2: Mixed-Use Development

This scenario assumes that re-development of the site occurs with a mixed commercial and residential project, in a five-story structure similar in size and design as the proposed project.

Table 4-1
COMPARISON OF SITE AND PROJECT CHARACTERISTICS & IMPACTS
Proposed Project and Alternatives 1-3 (1)

Parameter		Alt. 1: No Action/Existing Conditions	Alt. 2: Mixed-Use	Alt. 3: Hotel	Proposed Project (1)
Use/Yield	221 East Main St.	9,460 SF Commercial (vacant)	12,622± SF Commercial (1st floor); 116 Apartments (2nd – 5th floors)	12,622± SF Hotel-Related (1st floor); 110 Rooms (2nd – 5th floors)	1,508 SF Retail & 11,114 SF/535 seats (Restaurants) (1st floor); 116 Apartments (2nd – 5th floors)
	31 McDermott Ave.	4,772 SF Commercial, 1 Unit			
Special Permit (Town Board)		---	Site coverage	Site coverage & hotel use	Site coverage
Variance (ZBA)		---	Studio unit size & parking space size	Parking space size	Studio unit size & parking space size
Zoning		DC-1			
Wastewater Treatment System		Riverhead Sewer District			
Coverages (SF)**:**		---	---	---	---
Building		14,232	34,673		
Paved/Impervious		19,194	2,494		
Grassy/Bare Soil		3,741	0		
TOTAL		37,167			
Water Resources:		---	---	---	---
Water Use/Wastewater (gpd) (2)		444	24,463	17,455	39,871
Peak Hour Trips (vph)**:**		---	---	---	---
Weekday AM		15	159	74	90
Weekday PM		53	187	41	195
Saturday Mid-Day		80	220	96	298
Miscellaneous:		---	---	---	---
Total Residential Units:		0	116	110	116
Studio Units		0	31	0	31
One-Bedroom Units		0	57	0	57
Two-Bedroom Units		0	28	0	28
Total Residents (capita)		1	213 (3)	0	213 (3)
School-Age Children (capita)		0	14 (4)	0	14 (4)
Parking Provided (spaces)		55±	55		

Notes: vph-vehicles per hour; FTE-full time equivalents.

(1) **Sheet A-013** shows two restaurants: Restaurant 1 has 5,000 SF/235 seats, and Restaurant 2 has 6,115 SF/300 seats. However, these spaces may ultimately be occupied by other types of commercial uses.

(2) Based on SCDHS rates; see **Table 1-3**.

(3) Assuming 1.67 capita/studio or one-bedroom unit, and 2.31 capita/two-bedroom unit.

(4) Assuming 0.08 school-age children/studio or one-bedroom unit, & 0.23 school-age children/two-bedroom unit.

Specifically, the second through fifth floors would be residential in nature, providing 116 rental apartments, with the ground floor occupied by 12,622± SF of commercial spaces (for impact comparison purposes, this commercial space is assumed to be comprised of 2,622± SF of office spaces, 4,000 SF of personal service spaces, 5,000 SF of retail spaces, and 1,000 SF for retail/food sales). There would be a lower level for 55 parking spaces beneath the building. Like the proposed project, no other use of this basement level would be allowed, due to the risk of flooding; the applicable FEMA Base Flood Elevation, is 7 feet, but the basement level would be between 5 and 6 feet. Use of this level for building maintenance, utility, etc. spaces is not needed, as these spaces would be located (like in the proposed project), on the ground floor level.

This scenario would conform to the uses permitted in the DC-1 zoning district. Finally, it is assumed that the apartments in this scenario would be occupied by "workforce" households, under terms and conditions that copy those of the proposed project.

Like the proposed project, this scenario would conform to the 2003 Town Comprehensive Plan and to the goals and intent of the 2008 Update of the EMSURP, and will conform to nearly all the applicable Town Zoning Code bulk and setback requirements for development in the site's DC-1 zoning district; a Town Board special permit would be needed, to exceed the maximum allowed site coverage, and two ZBA variances would be needed, to exceed the allowed floor area range of the studio units, and for the parking space size.

4.1.3 Description of Alternative 3: Hotel Development

For Alternative 3, it is assumed that a hotel having a size similar to that of the proposed project would occupy the site. There would be 110 hotel room on floors two through 5, with the ground floor reserved for hotel-related spaces such as a lobby, office, storage, utility, maintenance, etc. spaces (12,622± SF). Similar to the proposed project and Alternative 2, there would be a lower level for 55 parking spaces beneath the building. Like the proposed project and Alternative 2, no other use of this basement level would be allowed, due to the risk of flooding. Use of this level for hotel maintenance, utility, etc. spaces is not needed, as these spaces are assumed for the ground floor level.

Like the proposed project, this scenario would conform to the 2003 Town Comprehensive Plan and to the goals and intent of the 2008 Update of the EMSURP, and will conform to nearly all the applicable Town Zoning Code bulk and setback requirements for development in the site's DC-1 zoning district. It should be noted that a hotel is a special permit use in the DC-1 district; in addition to the special permit needed to exceed the maximum allowed site coverage, Alternative 3 assumes that these two special permits would be obtained from the Board.

4.2 Comparison of Impacts vs. the Proposed Project

4.2.1 Land Use, Zoning and Plans

All three alternatives, like the proposed project, would produce a land use on the subject site that complements the pattern of land uses in the vicinity and would contribute to the revitalization of downtown Riverhead. Alternatives 2 and 3, like the proposed project, would increase the intensity of use on the site compared to its current usage, so that while there would be no adverse impact to the pattern of land uses, there would be an increase in the intensity of land use in the vicinity.

With respect to zoning, the uses evaluated are allowed in the DC-1 zone (though the hotel in Alternative 3 would require a Board special permit), so that no change in the site's zoning category is necessary. As such, there would be no impact on the pattern of zoning in the area from any of the scenarios evaluated. It is noted that, like the proposed project, Alternative 2 would require a Town Board special permit (to exceed the maximum allowed site coverage), and two ZBA variances (to exceed the allowed floor area range of the studio units., and for the parking space size), and Alternative 3 would need two Board special permits (to exceed the maximum allowed site coverage, and for the hotel use).

Finally, the uses represented by the proposed project and all three alternatives conform to the recommendations of the EMSURP, and so no impacts in relation to it are expected.

4.2.2 Community Services

Alternative 2 and the proposed project would generate an estimated 14 school-age residents, while Alternatives 1 and 3, having no residential component, would have no school-age children present. As such, only the former could cause any enrollment increase for the Riverhead CSD.

It is expected that police, fire and ambulance services would be impacted to a similar degree by Alternatives 2 and 3 as well as the proposed project; that is, the potential need of these emergency services would be increased because of the increased development of the site and the associated increased human presence on the site.

Like the proposed project, each of the three alternatives would connect to the RWD. Based on SCDHS design rates for wastewater system design, and assuming that the amount of wastewater generated must equal the volume of water supplied, the values in **Table 4-1** indicate that Alternative 1 would consume the least water of all four scenarios evaluated, followed by Alternative 3, then by Alternative 2. The proposed project would consume the most water.

Each of the alternative scenarios, like the proposed project, would connect to the public sanitary sewer system of the RSD. It is assumed that all of the water supplied to the site would leave the site as wastewater, for treatment and disposal at the Town STP facility. As shown in **Table 4-1**, Alternative 1 would generate the least wastewater of all four scenarios evaluated, followed by Alternative 3, then by Alternative 2. The proposed project would generate the most wastewater.

Similar to the proposed project, it is expected that PSE&G and National Grid can and will serve any of the alternatives with electrical and natural gas services, respectively. Except for Alternative 1 (wherein no changes to site conditions are assumed), the proposed project and Alternatives 2 and 3 will remove both buildings presently on the site, so that the existing service connections will also be removed, to be replaced with new service connections. It is expected that the existing distribution system immediately upstream of these new connections will not need to be replaced or supplemented to service the proposed project or Alternatives 2 or 3.

Because the square footages of the structure assumed for the proposed project and Alternatives 2 and 3 are similar, it is expected that the amounts of electricity and natural gas required to power and heat the structure would be similar. Alternative 1, because it represents a lesser amount of floor space in active use than the other scenarios, is expected to consume substantially less electricity and natural gas than the other scenarios.

Neither the proposed project nor any of the alternatives will encroach into or otherwise adversely impact any of the existing park or recreational facilities in the vicinity, particularly of Peconic Riverfront Park. To the contrary, the proposed project and Alternatives 2 and 3 would increase the number of potential patrons of local and regional park and recreation sites. The impact of this potential increase in park visitation would be incremental, as not all residents would attend these facilities at the same time, there are a number of differing recreational sites to choose from, and the increase represented by the proposed project or alternatives is small compared to the large number of residents already in the area.

4.2.3 Transportation

As shown in **Table 4-1**, it is expected that the number of peak hour vehicle trips generated by the proposed project would exceed those for Alternatives 1 and 3 for all peak hours evaluated, so that the potential impacts of the proposed project on local roadway conditions or intersection operations would exceed those for Alternatives 1 and 3. The TIS (which was prepared for the proposed project) reviewed the anticipated impacts at local intersections, and recommended only minor signal timing adjustments for the northbound McDermott Avenue approach at the intersection of East Main Street at McDermott Avenue/Maple Avenue. Such a mitigation would enable this intersection to operate at LOS B during all peak hours. Since Alternatives 1 and 3 would generate fewer peak hour vehicle trips than the proposed project, it is expected that provision of the mitigation for trips generated by the proposed project for either of these two alternatives would adequately address their potential adverse impacts.

Alternative 2, however, would generate more trips than the proposed project during the weekday AM peak hour, a similar number during the weekday PM peak hour, and fewer trips than the proposed project for the Saturday Midday peak hour. Thus, implementing the mitigation designed for the proposed project for Alternative 2 would more than adequately address impacts of Alternative 2 for the weekday PM and Saturday Midday peak hours, and may be sufficient to address its impacts during the weekday AM peak hour as well.

4.2.4 Water Resources

Based on the SCDHS design rates for sanitary wastewater generation (see **Table 4-1)**, Alternative 1 would consume the lowest amount of water of all four scenarios evaluated, and would therefore generate the least sanitary wastewater. Alternative 3 would use the next-lowest amount of water, followed by Alternative 2. The proposed project would consume the most water in its operation, and so would generate the most sanitary wastewater.

It is expected that similar volumes of stormwater runoff would be generated by the three development scenarios, so that on-site drainage systems having similar layouts and capacities would be constructed for all three scenarios. As a result, similar impacts to groundwater and surface water resources would be expected.

4.2.5 Soils

Because the buildings assumed for Alternatives 2 and 3 would be similar to that of the proposed project (in regard to footprint and presence of a lower parking level), it is expected that similar impacts to soil resources would occur, from excavation for the building foundation.

4.2.6 Cultural and Visual Resources

It is expected that, since the structures assumed for Alternatives 2 and 3 would be similar in size, height and general appearance as that of the proposed project, the potential impacts on the cultural and visual resources of the vicinity would be impacted to a degree similar to that of the proposed project.

SECTION 5.0

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5.0 REFERENCES

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FIGURES



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FIGURE 1-1a
REGIONAL LOCATION MAP

Source: ESRI Web Mapping Service

Scale: 1 inch = 1,000 feet

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FIGURE 1-1b
LOCAL LOCATION MAP

Source: ESRI Web Mapping Service

Scale: 1 inch = 100 feet

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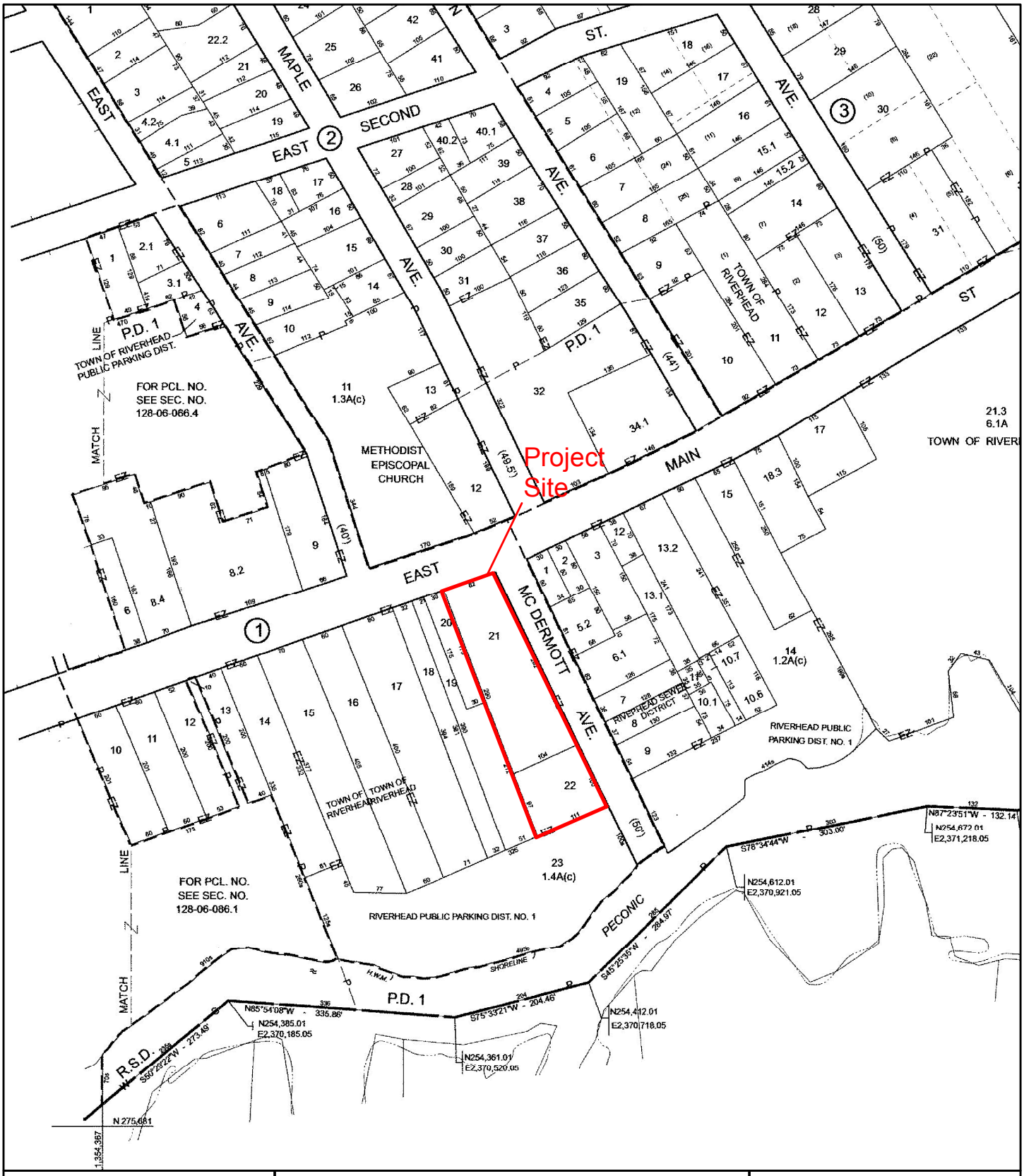


FIGURE 1-2
TAX LOT MAP

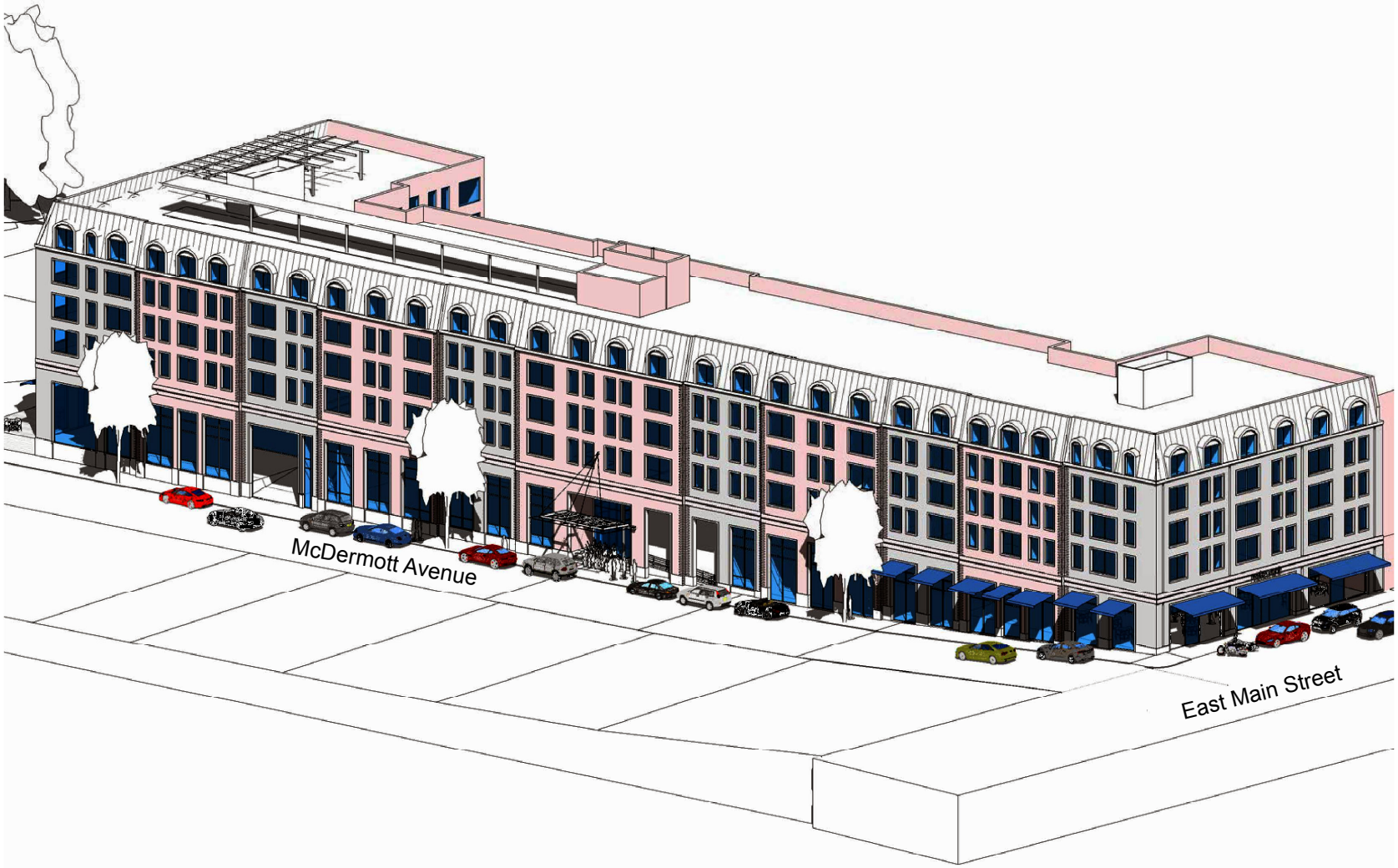
Source: ESRI wms; Suffolk County records
Scale: 1 inch = 200 feet

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FIGURE 1-3
ARCHITECT'S RENDERING

Source: Architect
Not to Scale

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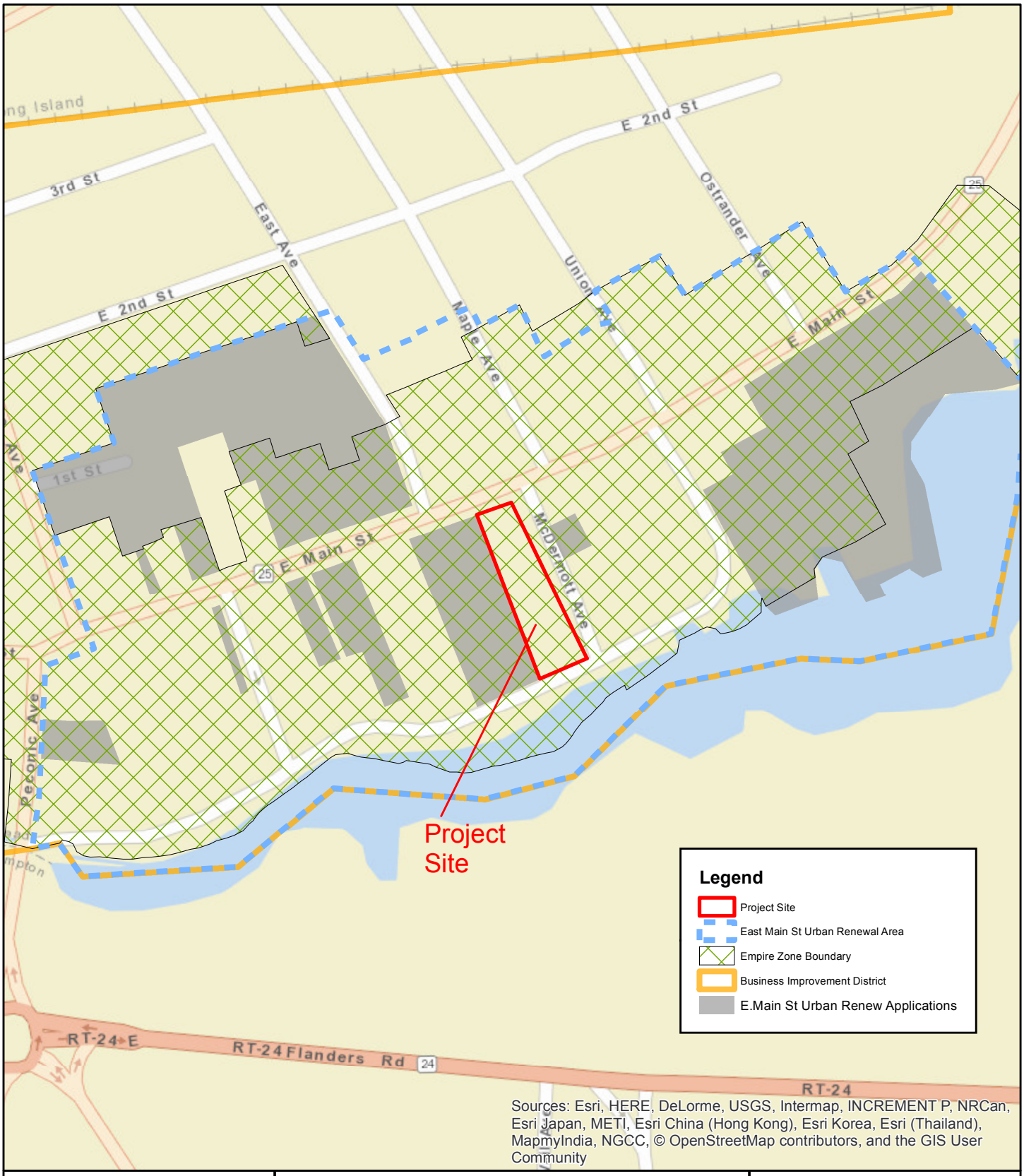
FIGURE 1-4
EAST MAIN STREET
URBAN RENEWAL AREA MAP

Source: NYS Orthophotography, 2013;
Riverhead Town
Scale: 1 inch = 300 feet

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FIGURE 1-5
BUSINESS IMPROVEMENT DISTRICT (BID) MAP

Source: ESRI wms;
Town of Riverhead records
Scale: 1 inch = 300 feet

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FIGURE 1-6
PARKING DISTRICT MAP

Source: ESRI wms;
Town of Riverhead records
Scale: 1 inch = 300 feet

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FIGURE 1-7
BROWNFIELD SITES MAP

Source: ESRI wms;
Town of Riverhead records
Scale: 1 inch = 500 feet

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FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

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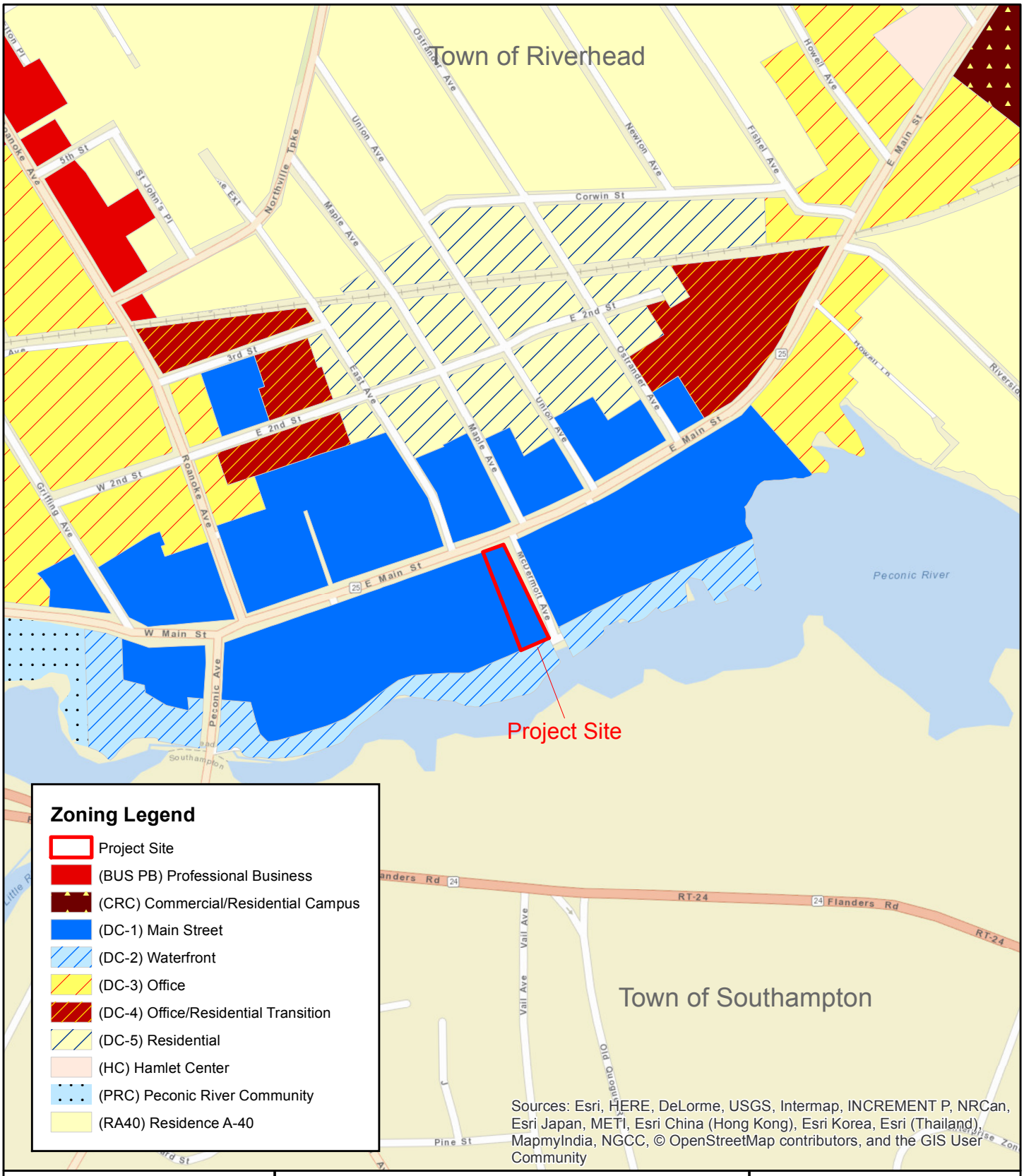
FIGURE 2-1
LAND USE MAP

Source: NYS Orthophotography, 2013
Scale: 1 inch = 100 feet

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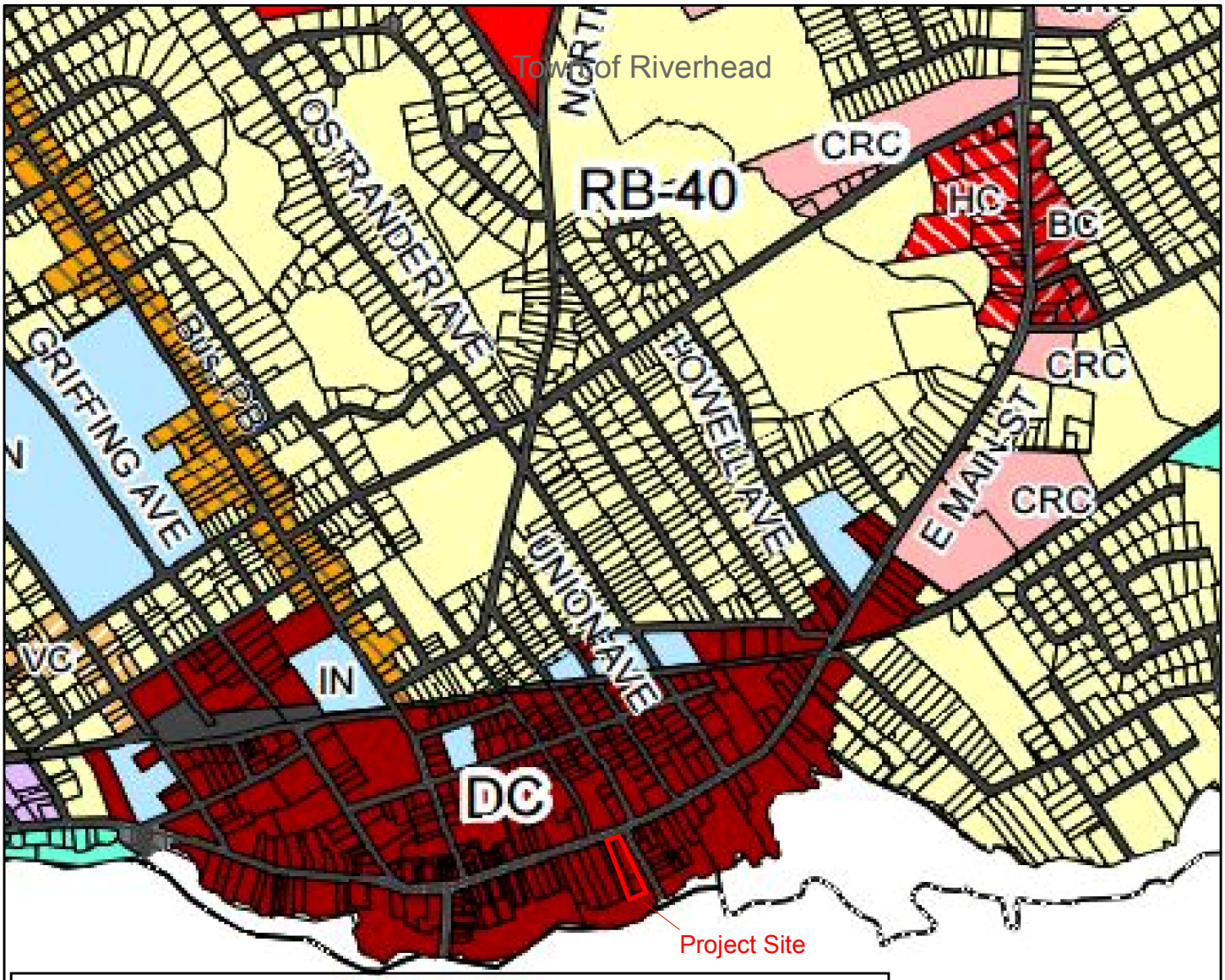
FIGURE 2-2
ZONING MAP

Source: ESRI wms; Town of Riverhead
Scale: 1 inch = 500 feet

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Legend

Project Site

Residential:
- RA-80 Residence A-80 (TDR Receiving)
- RA-40 Residence A-40 (TDR Receiving)
- RB-80 Residence B-80
- RB-40 Residence B-40
- RAB-80 Residence AB-80 (TDR Sending & Receiving)
- RRC Residence RC
- MRPO Multifamily Residential Professional Office

Agriculture:
- APZ Agricultural Protection Zone (TDR Sending)

Recreation, Open Space & Conservation:
- NRP Natural Resources Protection
- OSC Open Space Conservation
- RN Recreation
- PRP Planned Recreational Park

Industrial:
- IA Industrial A
- IB Industrial B
- IR Industrial/Recreational
- PIP Plannned Industrial Park

Institutional:
- IN Institutional

Commercial:
- DC Downtown Center
- DRC Destination Retail Center
- SC Shopping Center
- BC Business Center
- CRC Commercial/Residential Campus
- VC Village Center
- HC Hamlet Center
- RLC Rural Corridor
- TRC Tourism/Resort Campus
- Bus. CR Business CR (Rural Neighborhood Business)
- Bus. F Business F (Manufacturers Outlet Center)
- Bus. PB Business PB (Professional Service Building)

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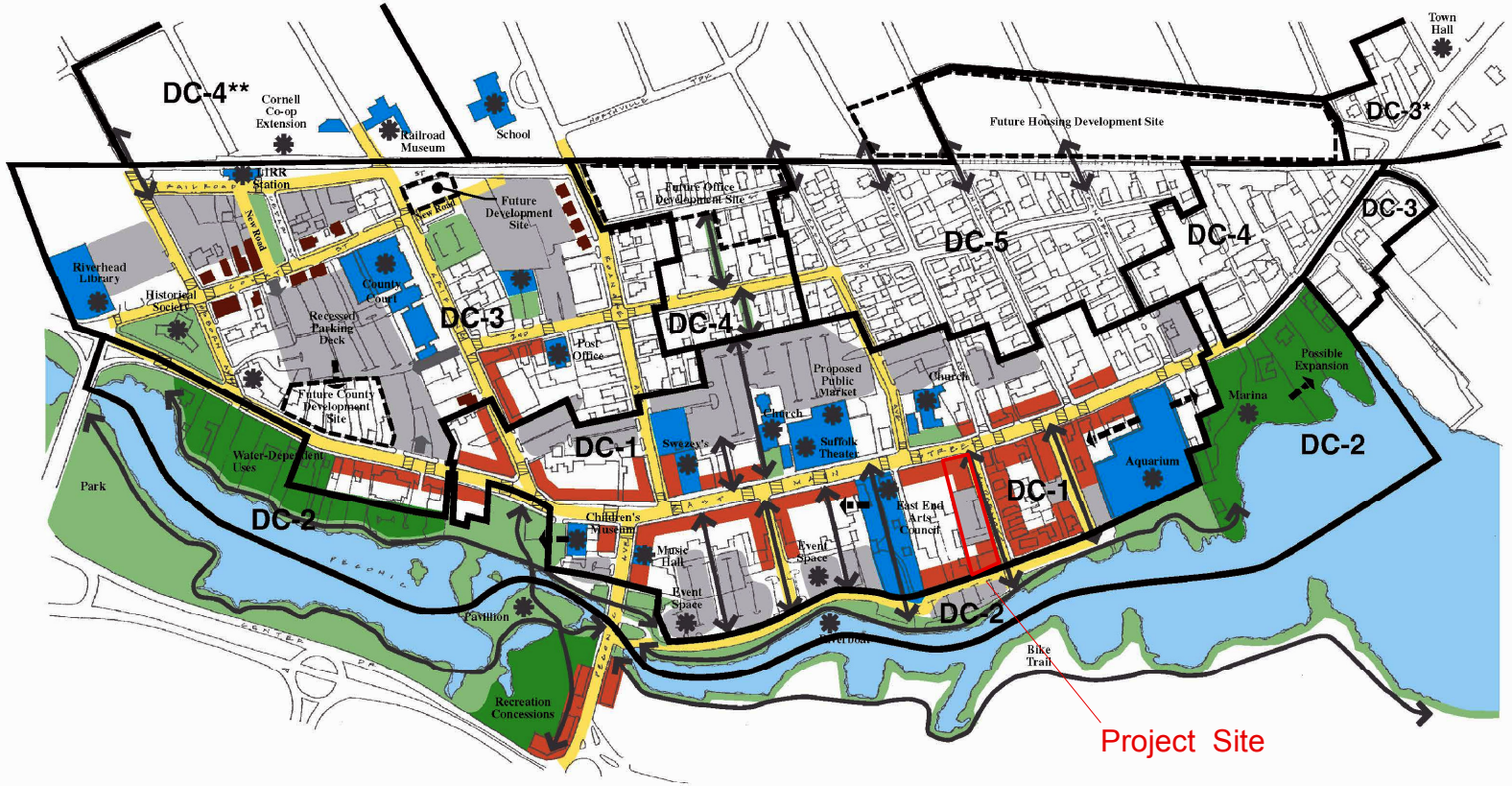
FIGURE 2-3a
RECOMMENDED LAND USE, TOWN COMPREHENSIVE PLAN

Source: ESRI wms; Town of Riverhead
Scale: 1 inch = 1,000 feet

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TOWN OF RIVERHEAD
Figure 6-1: Downtown

DC-1 Main Street
DC-2 W aterfront
DC-3 Office
DC-4 Of fice/ResidentialTransition
DC-5 Residential

* Continued on Figure 6-8
** Continued on Figure 6-9

- Parks/Open Space
- Water-Dependent Uses
- Landmarks/Activity Centers
- Shared Parking
- Ground Floor Shops
- Infill Buildings
- Priority Crosswalks
- Possible Expansion
- Streetscape Improvements
- Pedestrian Corridors

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FIGURE 2-3b
PROPOSED DOWNTOWN LAND USE PLAN

Source: Architect
Not to Scale

N

Riverview Lofts
Riverhead

Voluntary DEIS



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FIGURE 2-4
COMMUNITY SERVICES MAP, PUBLIC SCHOOLS

Source: ESRI wms; Suffolk County records
Scale: 1 inch = 1,500 feet

N

Riverview Lofts
Riverhead

Voluntary DEIS



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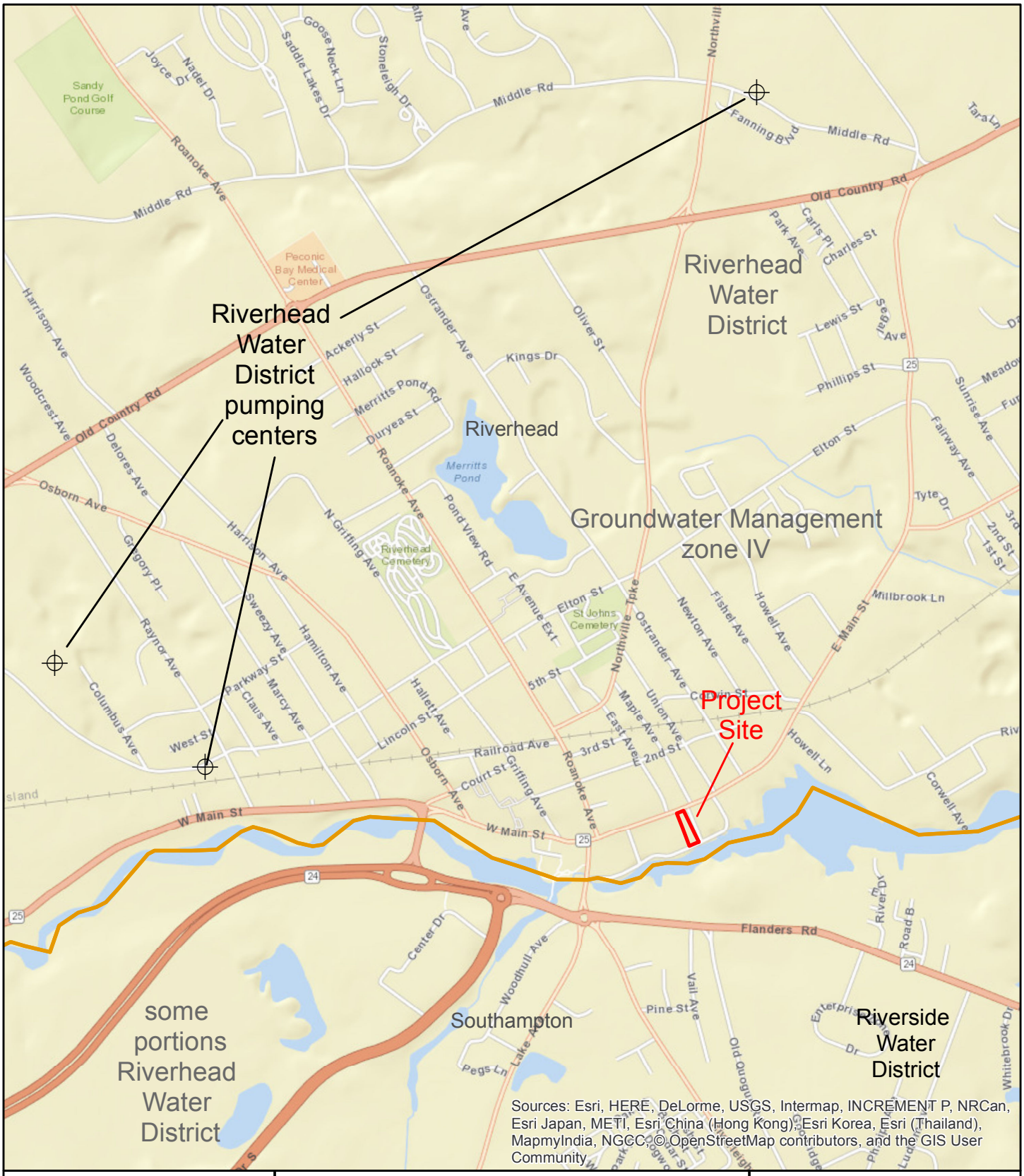
FIGURE 2-5
COMMUNITY SERVICES MAP, SAFETY AND SECURITY SERVICES

Source: ESRI wms; Suffolk County records
Scale: 1 inch = 1,500 feet

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Riverview Lofts
Riverhead

Voluntary DEIS



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

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FIGURE 2-6
COMMUNITY SERVICES MAP, PUBLIC WATER SUPPLY

Source: ESRI WMS; Suffolk SCWA maps

Scale: 1 inch = 1,500 feet

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Riverhead

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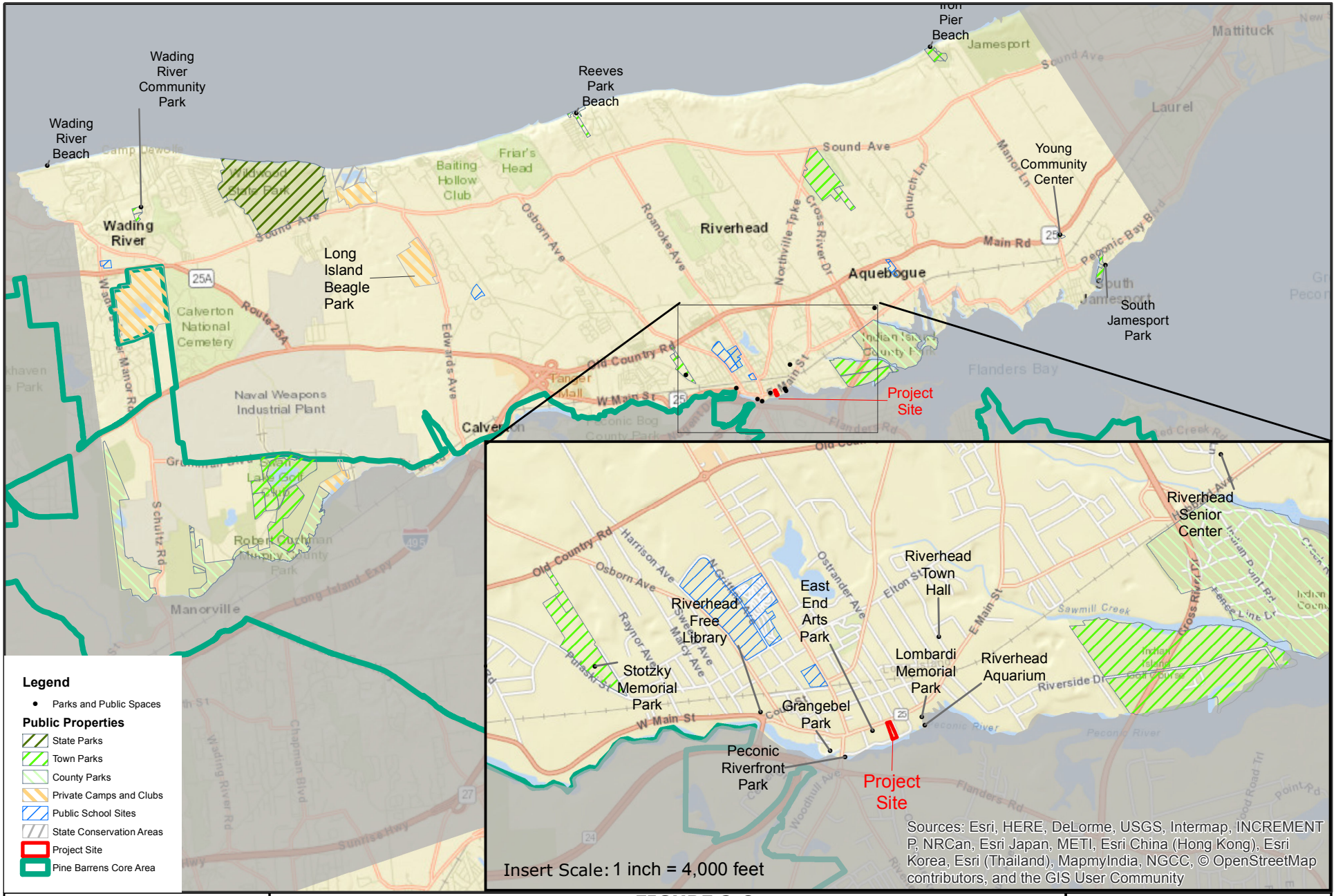
FIGURE 2-7
COMMUNITY SERVICES MAP
SANITARY & STORMWATER SYSTEMS

Source: ESRI wms; Suffolk County, Town of Riverhead records
Scale: 1 inch = 300 feet

N

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Riverhead

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ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 2-8
COMMUNITY SERVICES MAP,
COMMUNITY & PUBLIC RECREATIONAL SITES

Source: ESRI wms; Town of Riverhead
Scale: 1 inch = 10,000 feet

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Riverhead

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FIGURE 2-9
COMMUNITY SERVICES MAP
PUBLIC TRANSIT

Source: ESRI wms;
Town of Riverhead records
Scale: 1 inch = 500 feet

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Riverhead

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FIGURE 2-10
INTERSECTIONS STUDIED, TIS

Source: ESRI Webmapping Service

Scale: 1 inch = 300 feet

N

221 East Main St
Riverhead

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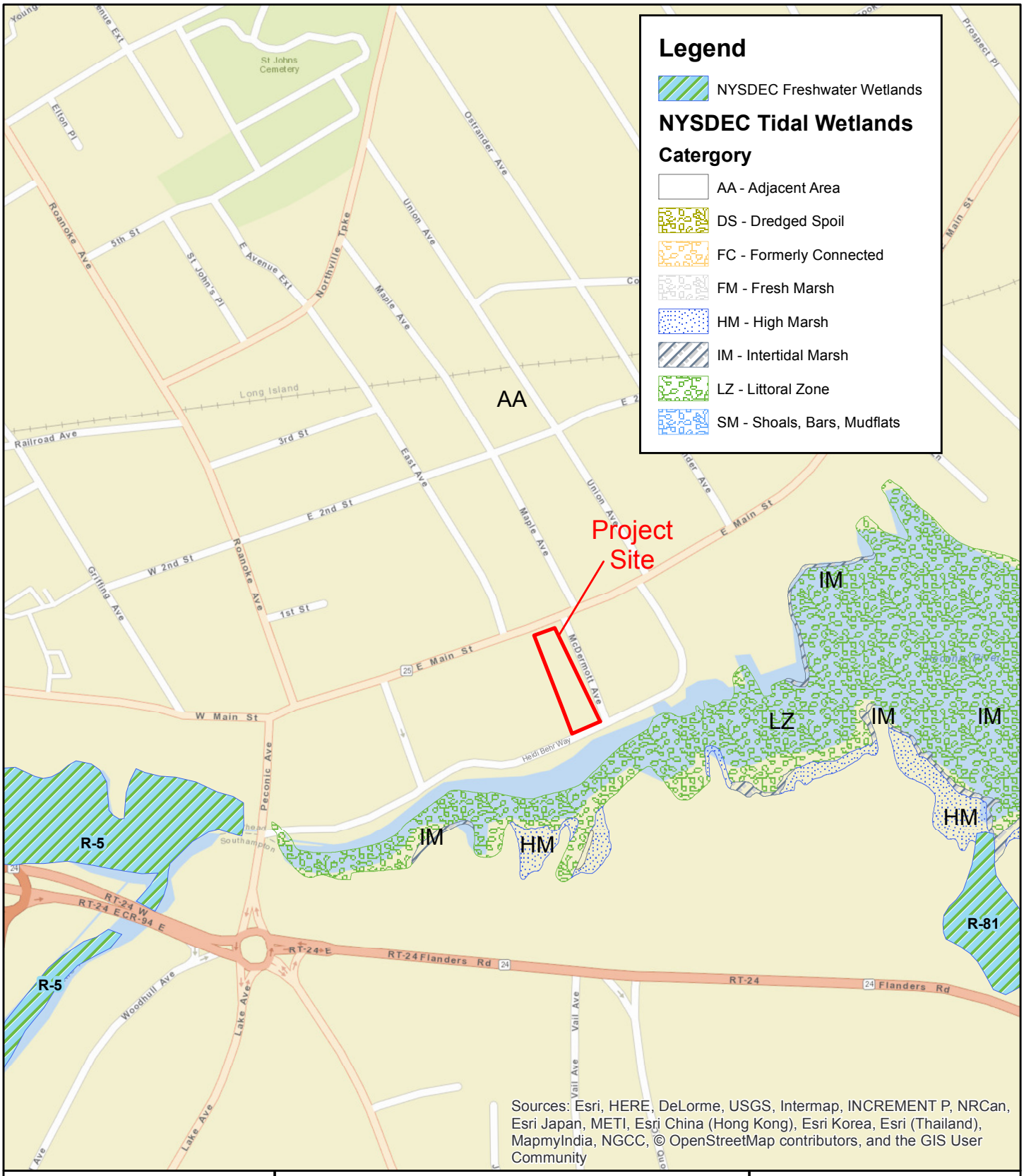
FIGURE 2-11
WATER TABLE CONTOUR MAP

Source: ESRI Web Mapping Service, USGS
Scientific Investigations Map 3270, 2010 data
Scale: 1 inch = 1,500 feet

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Riverview Lofts
Riverhead

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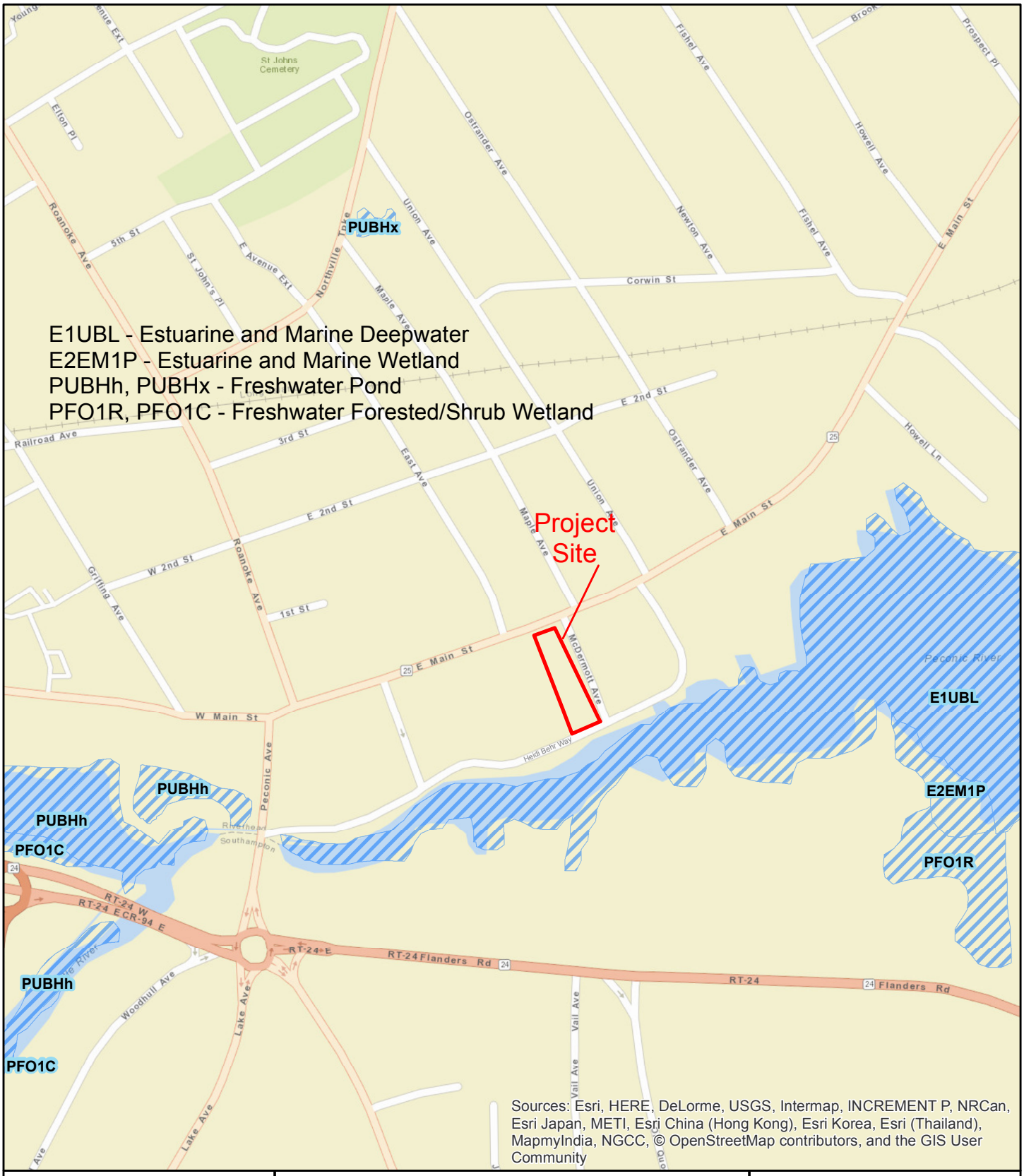
FIGURE 2-12
WETLANDS MAP, NYSDEC

Source: ESRI Web Mapping Service, NYSDEC Freshwater & Tidal Wetlands Maps
Scale: 1 inch = 500 feet

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Riverhead

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FIGURE 2-13
WETLANDS MAP, NWI

Source: ESRI wms; US Fish & Wildlife, National Wetlands Inventory maps
Scale: 1 inch = 500 feet

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Riverhead

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FIGURE 2-14
FLOOD HAZARD ZONE MAP, FEMA

Source: ESRI Web Mapping Service, FEMA

Scale: 1 inch = 100 feet

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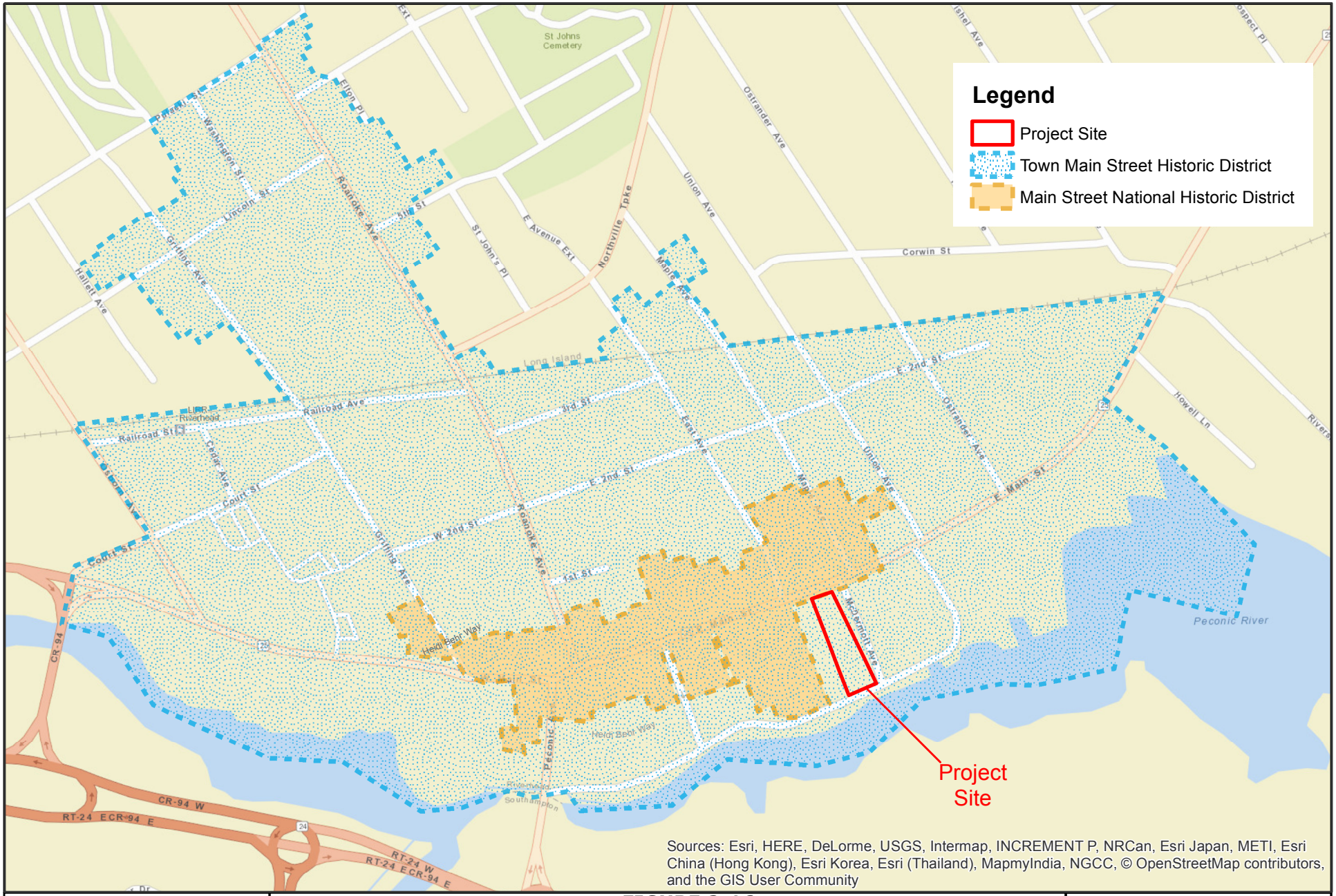
FIGURE 2-15
SOIL MAP

Source: ESRI WMS; NRCS WMS
Scale: 1 inch = 200 feet

N

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Riverhead

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NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

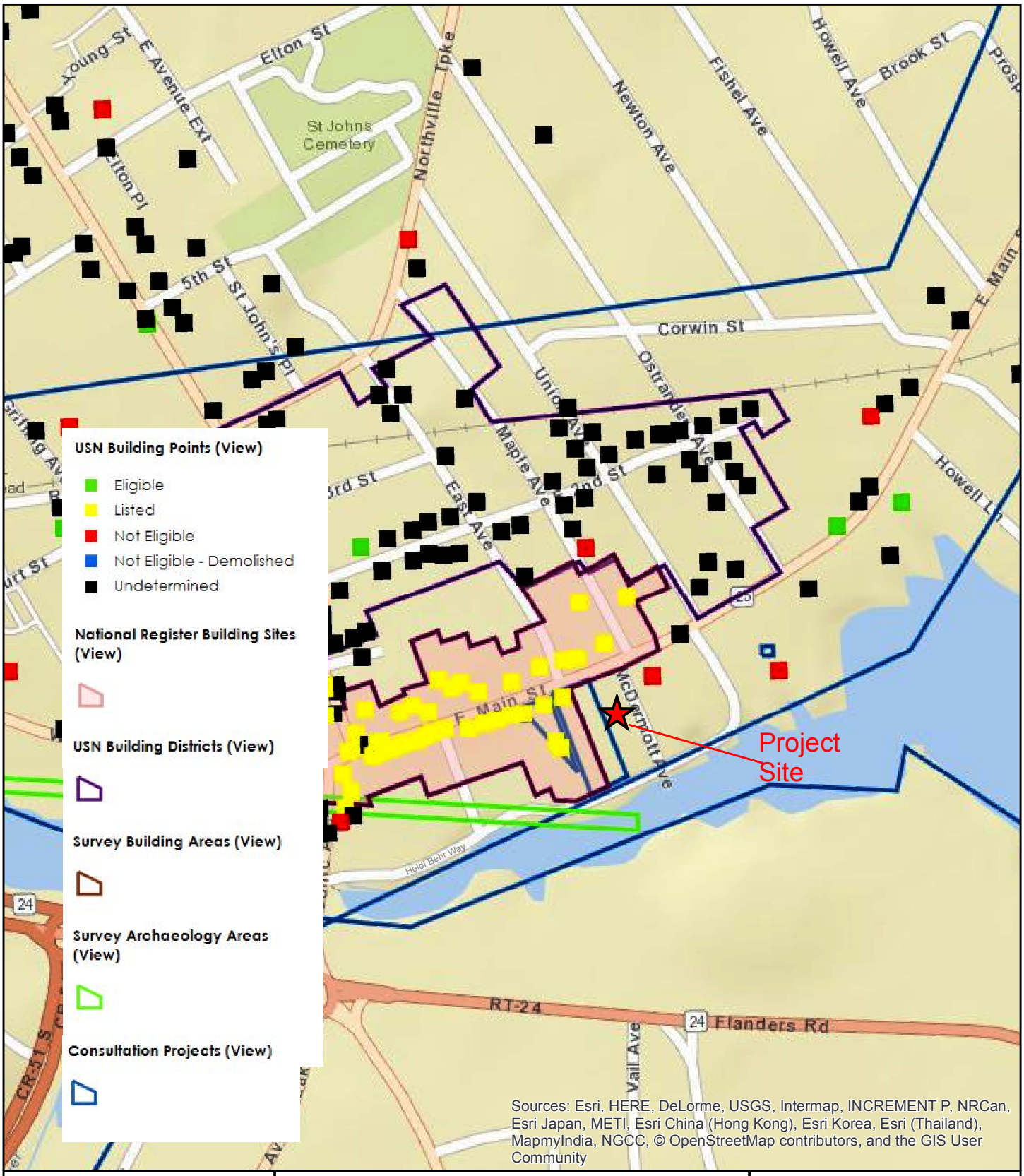
FIGURE 2-16a
CULTURAL RESOURCES
NATIONAL AND TOWN HISTORIC DISTRICTS

Source: ESRI wms; Town of Riverhead
Scale: 1 inch = 500 feet

N

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Riverhead

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FIGURE 2-16b
CULTURAL RESOURCES SENSITIVITY MAP, SHPO

Source: State Historic Preservation Office, ESRI Webmapping Service
Scale: 1 inch = 500 feet

N

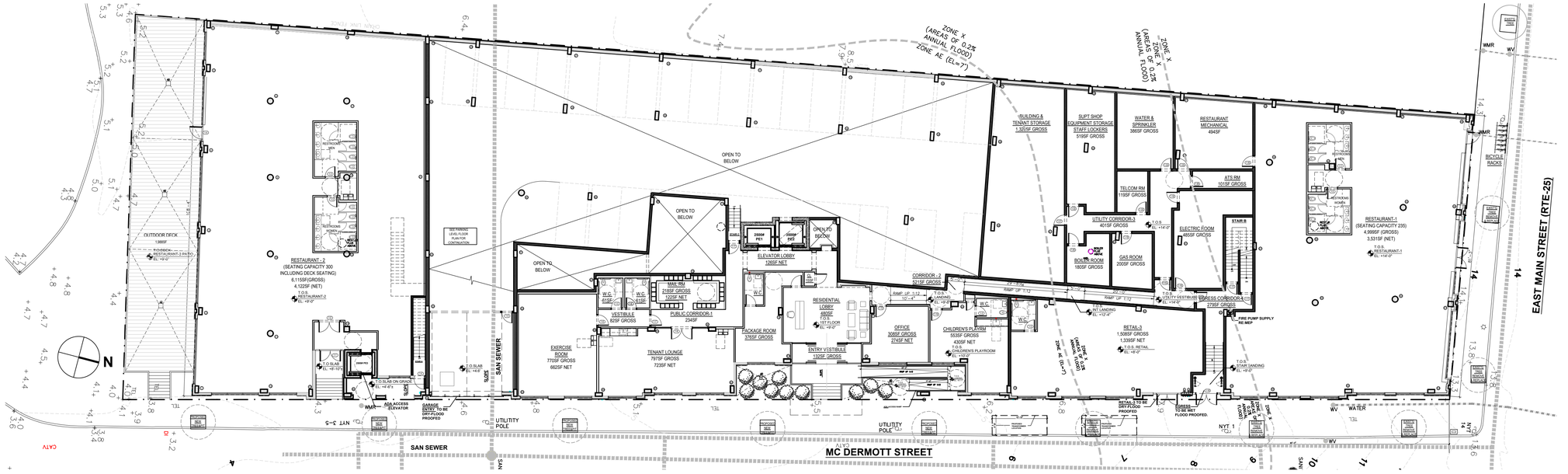
Riverview Lofts
Riverhead

Voluntary DEIS

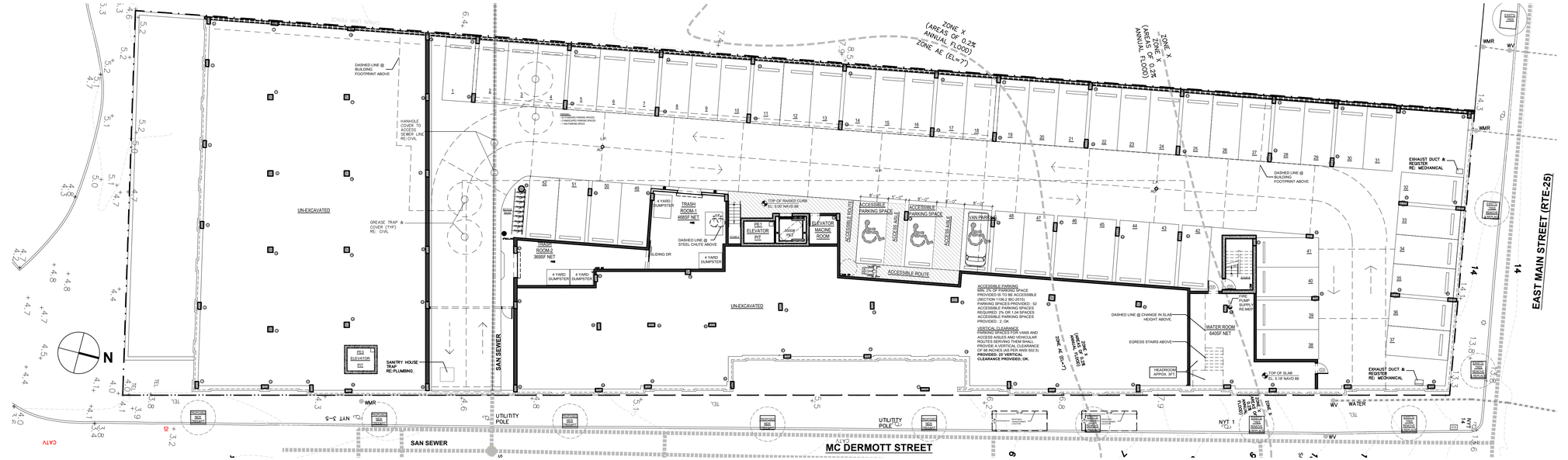
APPENDICES

APPENDIX A

MAPS & PLANS



2 1ST FLOOR PLAN
SCALE: 1" = 16'-0"



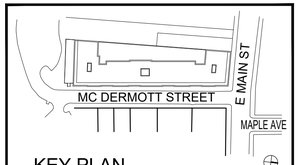
1 PARKING LEVEL PLAN
SCALE: 1" = 16'-0"

TOWN BOARD CERTIFICATION

This is to certify that this site plan has been approved by the Town Board of the Town of Riverhead by Town Board Resolution number_____ dated_____

Signature of Town Supervisor _____

Date of signature_____



KEY PLAN

06/09/17	SITE PLAN REVIEW - 3RD SUBMISSION
02/17/17	SITE PLAN REVIEW - 2ND SUBMISSION
01/24/17	SPECIAL PERMIT
12/19/16	SITE PLAN REVIEW

Architect:
The Stephen B. Jacobs Group, P.C.
381 Park Avenue South
New York, N.Y. 10016
212-421-3712

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Structural Engineer:
Wexler Associates
12 West 32nd Street, 8th Floor
New York, New York, N.Y. 10001
212 - 643 - 1500

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Civil Engineer:
Galli Engineering, P.C.
35 Pinelawn Road - Suite 209E
Melville, New York 11747
631-272-9292

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MEP Engineer:
Sideris Kefalas
217-22 Northern Boulevard
Bayside, New York 11361
718-224-9091

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Owner:
Georgica Green Ventures LLC
50 Jericho Quadrangle - Suite 200
Jericho, New York 11753
(516) 488-3000

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221 East Main Street
Riverhead, NY

Drawing Title:
PARKING LEVEL PLAN
1ST FLOOR PLAN

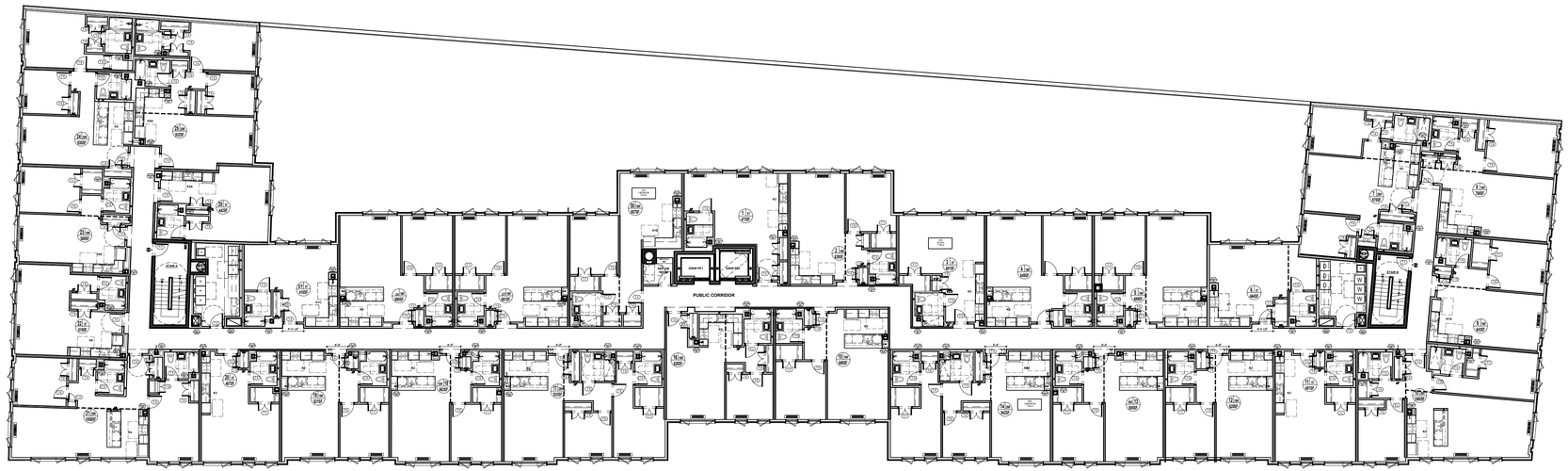
SEAL & SIGNATURE:

DATE: 09.27.16
PROJECT#: 1617
DRAWING SCALE: AS NOTED
DRAWING NO:

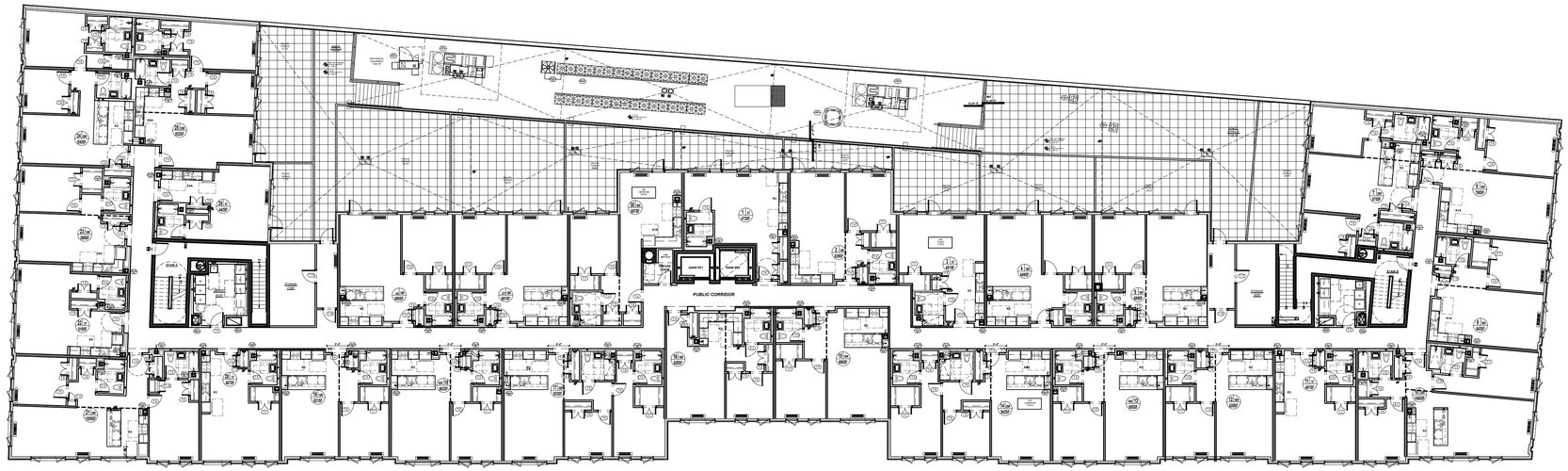
A-013.00

CAD REF:

G/1617_A-013 PARKING & 1ST FLOOR PLANS-REV-3.dwg



2 3RD - 4TH FLOOR PLAN
SCALE: 1" = 16'-0"



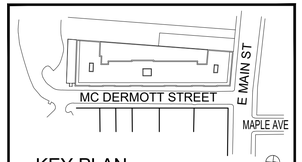
1 2ND FLOOR PLAN
SCALE: 1" = 16'-0"

TOWN BOARD CERTIFICATION

This is to certify that this site plan has been approved by the Town Board of the Town of Riverhead by Town Board Resolution number_____ dated_____

Signature of Town Supervisor _____

Date of signature_____



KEY PLAN

06/09/17	SITE PLAN REVIEW - 3RD SUBMISSION
02/17/17	SITE PLAN REVIEW - 2ND SUBMISSION
01/24/17	SPECIAL PERMIT
12/19/16	SITE PLAN REVIEW

Architect:
The Stephen B. Jacobs Group, P.C.
381 Park Avenue South
New York, N.Y. 10016
212-421-3712
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Structural Engineer:
Wexler Associates
12 West 32nd Street, 8th Floor
New York, New York, N.Y. 10001
212 - 643 - 1500
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Civil Engineer:
Galli Engineering, P.C.
35 Pinelawn Road - Suite 209E
Melville, New York 11747
631-272-9292
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MEP Engineer:
Sideris Kefalas
217-22 Northern Boulevard
Bayside, New York 11361
718-224-9091
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Owner:
Georgica Green Ventures LLC
50 Jericho Quadrangle - Suite 200
Jericho, New York 11753
(516) 488-3000
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221 East Main Street
Riverhead, NY

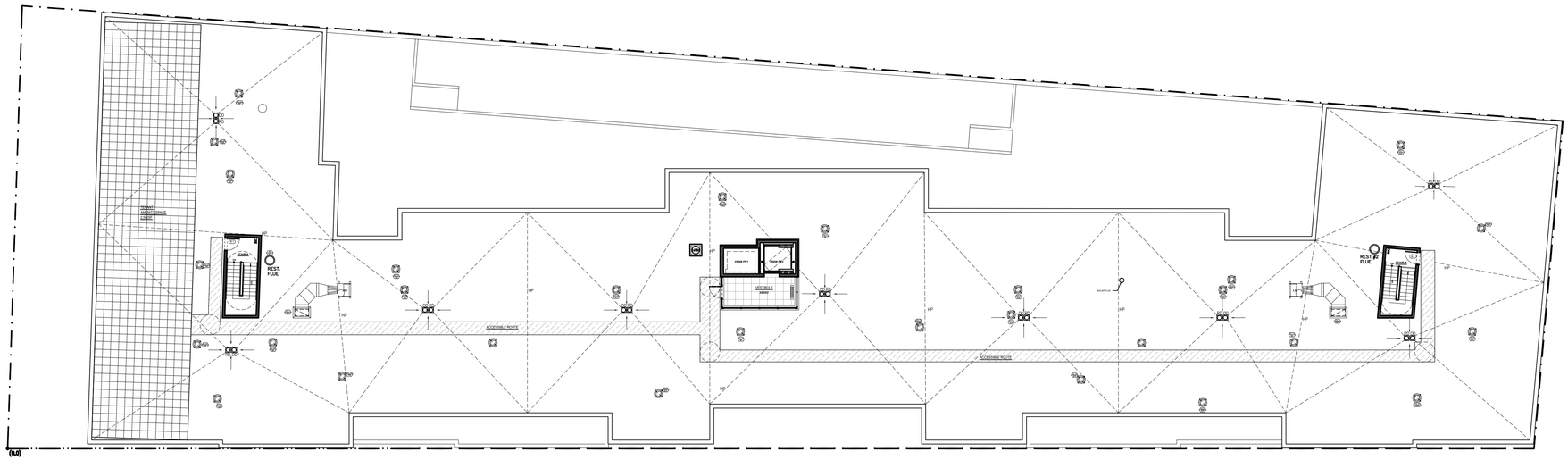
Drawing Title:
2ND FLOOR PLAN &
3RD-4TH FLOOR PLANS

SEAL & SIGNATURE:

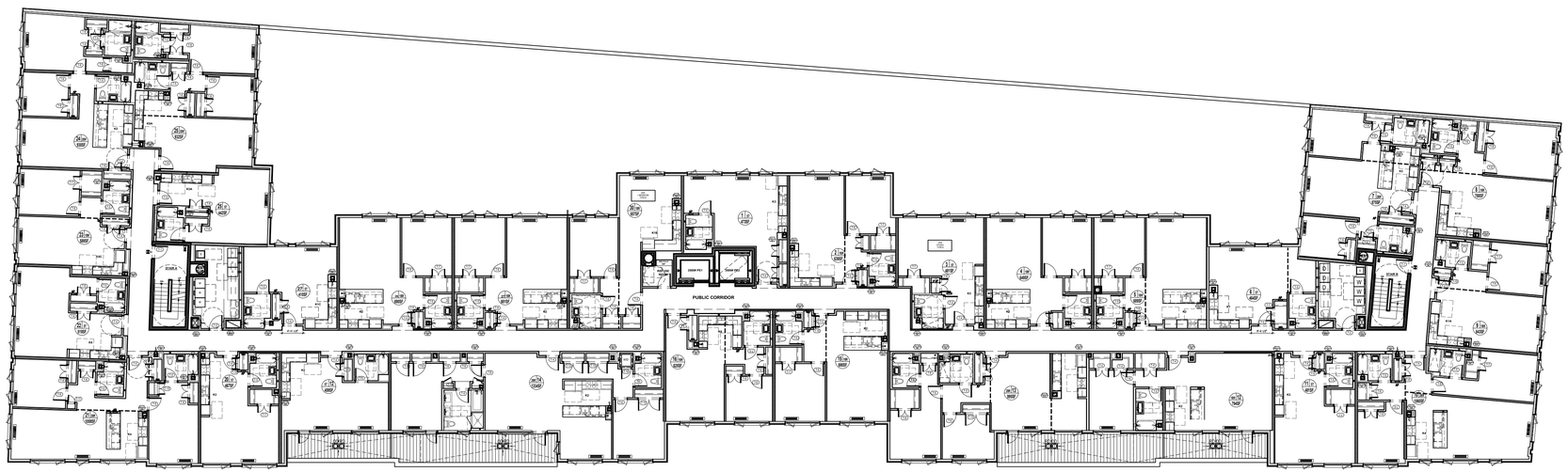
DATE: 09.27.16
PROJECT#: 1617
DRAWING SCALE: AS NOTED
DRAWING NO:

A-014.00

CAD REF:
G/1617_A-014 2ND, 3-5TH FLOOR PLANS-REV-3.dwg



2 ROOF PLAN
SCALE: 1" = 16'-0"



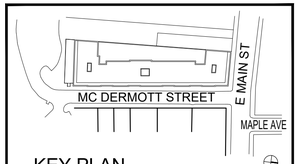
1 5TH FLOOR PLAN
SCALE: 1" = 16'-0"

TOWN BOARD CERTIFICATION

This is to certify that this site plan has been approved by the Town Board of the Town of Riverhead by Town Board Resolution number_____ dated_____

Signature of Town Supervisor _____

Date of signature_____



KEY PLAN

06/09/17	SITE PLAN REVIEW - 3RD SUBMISSION
02/17/17	SITE PLAN REVIEW - 2ND SUBMISSION
01/24/17	SPECIAL PERMIT
12/19/16	SITE PLAN REVIEW

Architect:
Stephen B. Jacobs Group, P.C.
381 Park Avenue South
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Structural Engineer:
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Civil Engineer:
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Bayside, New York 11361
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Jericho, New York 11753
(516) 488-3000
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221 East Main Street
Riverhead, NY

Drawing Title:
5TH FLOOR PLAN &
ROOF PLAN

SEAL & SIGNATURE:

DATE: 09.27.16
PROJECT#: 1617
DRAWING SCALE: AS NOTED
DRAWING NO:

A-015.00

CAD REF:
G/1617_A-015 ROOF PLAN-REV-3.dwg



4 WEST ELEVATION
SCALE: 1" = 16'-0"



2 SOUTH ELEVATION
SCALE: 1" = 16'-0"



3 NORTH ELEVATION
SCALE: 1" = 16'-0"



FACE BRICK VENEER
MANUFACTURER - METROBRICK
COLOR-1: #320 SCHOOLHOUSE RED
MANUFACTURER - GLEN GERY
COLOR-2: TUSCAN SERIES - OYSTER GREY



WINDOW FRAME & SURROUND
WINDOW FRAME 1 - CHAMPAGNE- METROBRICK
WINDOW FRAME 2 - ZINC GREY

OUTDOOR DECK WOOD FINISH
COLOR - STAINED MAHOGANY

5 EXTERIOR MATERIALS
SCALE: NTS



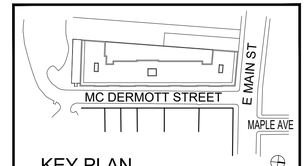
1 EAST ELEVATION
SCALE: 1" = 16'-0"

TOWN BOARD CERTIFICATION

This is to certify that this site plan has been approved by the Town Board of the Town of Riverhead by Town Board Resolution number_____ dated_____

Signature of Town Supervisor _____

Date of signature_____



06/09/17	SITE PLAN REVIEW - 3RD SUBMISSION
02/13/17	SITE PLAN REVIEW 2ND SUBMISSION
01/24/17	SPECIAL PERMIT
12/19/16	SITE PLAN REVIEW

Architect:
Stephen B. Jacobs Group, P.C.
381 Park Avenue South
New York, N.Y. 10016
212-421-3712

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MEP Engineer:
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217-22 Northern Boulevard
Bayside, New York 11361
718-224-9091

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Owner:
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50 Jericho Quadrangle - Suite 200
Jericho, New York 11753
(516) 488-3000

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221 East Main Street Riverhead, NY

Drawing Title:
EAST, NORTH, SOUTH & WEST - ELEVATIONS

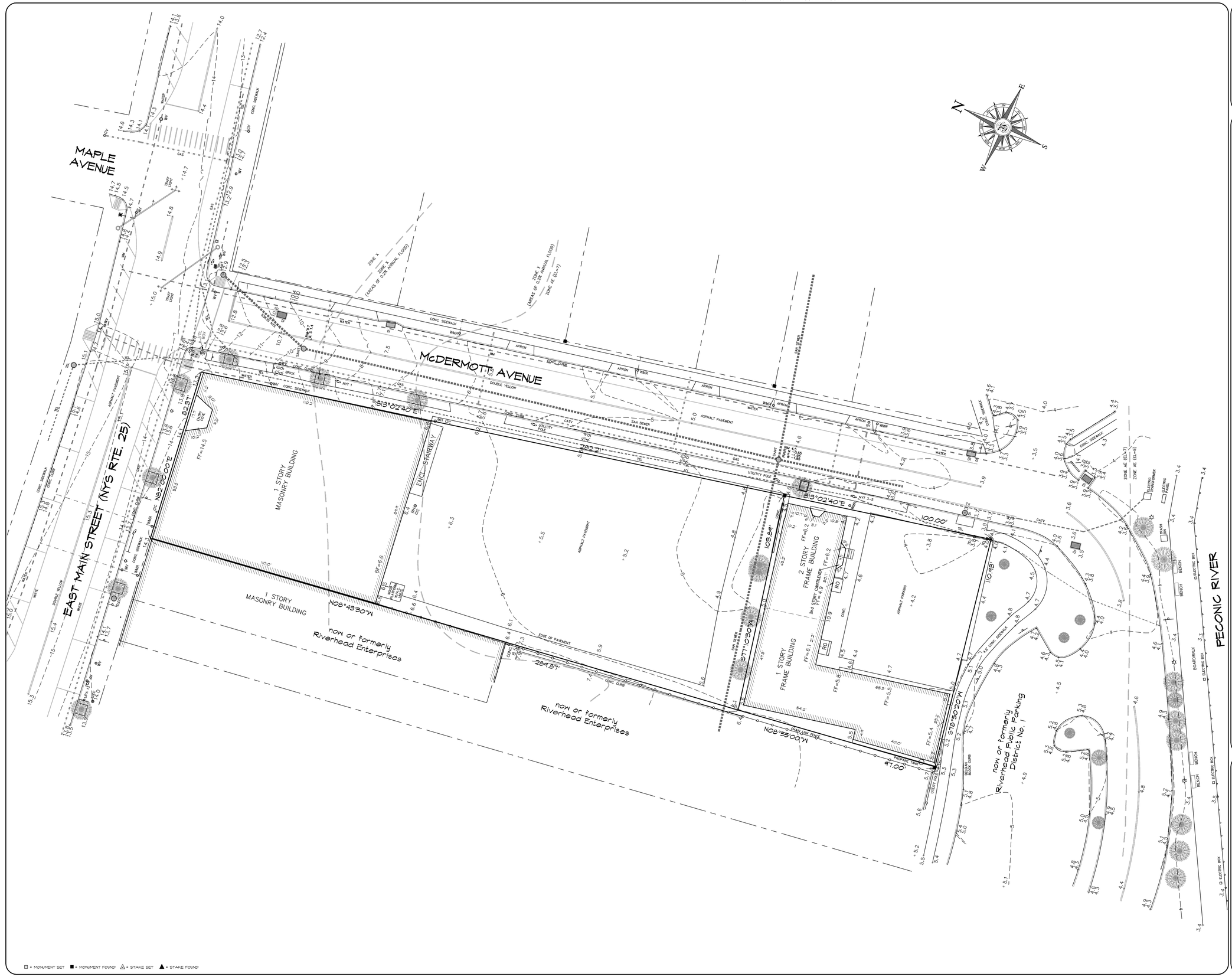
SEAL & SIGNATURE:

DATE: 09.27.16
PROJECT#: 1617
DRAWING SCALE: AS NOTED
DRAWING NO:

A-016.00

CAD REF:
G/1617_A-016 ELEVATIONS-REV-3.dwg

(1) UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. (2) DISTANCES SHOWN HEREON FROM PROPERTY LINES TO EXISTING STRUCTURES ARE FOR A SPECIFIC PURPOSE AND ARE NOT TO BE USED TO ESTABLISH PROPERTY LINES OR FOR ERECTION OF FENCES. (3) COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S INKED SEAL OR EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID TRUE COPY. (4) CERTIFICATION INDICATED HEREON SHALL RUN ONLY TO THE PERSON FOR WHOM THE SURVEY IS PREPARED AND ON HIS BEHALF TO THE TITLE COMPANY, GOVERNMENTAL AGENCY AND LENDING INSTITUTION LISTED HEREON, AND TO THE ASSIGNEES OF THE LENDING INSTITUTION. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS. (5) THE LOCATION OF WELLS (W), SEPTIC TANKS (ST) & DEDSPOOLS (DP) SHOWN HEREON ARE FROM FIELD OBSERVATIONS AND OR DATA OBTAINED FROM OTHERS.



○ = MONUMENT SET ■ = MONUMENT FOUND △ = STAKE SET ▲ = STAKE FOUND

DWG FILE: N:\2014\2014_0205\dwg\2016_0133\2014_0205_2016_0133_topo.dwg

PLOT DATE: Oct 12, 2016 - 11:50am

PLOTTED BY: Diane Lopez

400 Ostrander Avenue, Riverhead, New York 11901
tel. 631.727.2300 fax. 631.727.0144
admin@youngengineering.com

Young & Young

Howard W. Young, Land Surveyor
Thomas C. Wolpert, Professional Engineer
Douglas E. Adams, Professional Engineer

Robert C. Tast, Architect

SITE DATA

- S.C.T.M. NO. 600-129-01-21 AREA = 26596 SQ. FT.
- S.C.T.M. NO. 600-129-01-22 AREA = 10570 SQ. FT.
- VERTICAL DATUM = N.A.V.D. 1988

* SEE FLOOD INSURANCE RATE MAP PANEL NO. 36103C0466 H LAST DATED SEPT. 25, 2009.

SURVEYOR'S CERTIFICATION

* WE HEREBY CERTIFY TO **GEORGICA GREEN VENTURES, LLC** THAT THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS.

HOWARD W. YOUNG, N.Y.S. L.S. NO. 45849

SURVEY FOR
GEORGICA GREEN VENTURES, LLC

at Riverhead, Town of Riverhead
Suffolk County, New York

TOPOGRAPHICAL SURVEY

	District	Section	Block	Lot
County Tax Map	600	129	01	21
	600	129	01	22

MAP PREPARED JAN. 05, 2015

Record of Revisions

REVISION	DATE
ADDITIONAL TOPO	OCT. 04, 2016

20 0 10 20 40 60
Scale: 1" = 20'

JOB NO. 2016-0133
DWG. 2014_0205_2016_0133_topo

APPENDIX B

MISCELLANEOUS DOCUMENTS

Appendix B-1
Environmental Assessment Form, (EAF) Part 1

NP&V, LLC

December 8, 2016

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Riverview Lofts		
Project Location (describe, and attach a general location map): Southwest corner, East Main Street (#221) and McDermott Avenue (#31), Riverhead (SCTM#: 0600-129-01-21 & 22)		
Brief Description of Proposed Action (include purpose or need): see attached		
Name of Applicant/Sponsor: Georgica Green Ventures, LLC, Matthew Ardito	Telephone: (516) 390-9384 E-Mail: matthewardito@georgicagreen.com	
Address: 50 Jericho Quadrangle, Suite 200		
City/PO: Jericho	State: NY	Zip Code: 11753
Project Contact (if not same as sponsor; give name and title/role): (same)	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): (same)	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

RESET FORM



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-1a
REGIONAL LOCATION MAP

Source: ESRI Web Mapping Service

Scale: 1 inch = 1,000 feet

N

Riverview Lofts
Riverhead

Supplemental EAF

PROJECT DESCRIPTION

The proposed project is known as **Riverview Lofts** (hereafter, the "proposed project"). The site of this proposal is in the downtown area of Riverhead hamlet, Town of Riverhead (hereafter, "the project site" or "the subject site"). Note that the site is occupied by two structures, whose street addresses are 221 East Main Street and 31 McDermott Avenue.

The site is composed of two contiguous developed tax lots, designated as follows:

PROJECT SITE IDENTIFICATION

Parameter	221 East Main Street [(1)] (Section/Block/Lot)	31 McDermott Avenue [(1)] (Section/Block/Lot)	Total
Tax Lot Designation [(2)]	129/1/21	129/1/22	---
Square Feet (SF)	26,596	10,570	37,166
Current Use	Commercial (vacant)	Commercial (occupied)	---

(1) Both tax lots are in District 0600 (Town of Riverhead).
(2) Per Suffolk County Tax Map (SCTM) designation.

The approximately 0.85-acre project site is located at the southwestern corner of the intersection of East Main Street and McDermott Avenue; the site is roughly rectangular in shape, with its narrow northern side fronting on the south side of East Main Street, while its longer eastern side fronts on the west side of McDermott. The site is currently developed and occupied on the north by a vacant, one-story brick commercial structure that fronts on East Main Street (the "221 East Main Street building"), and on the south by an occupied two-story frame commercial/residential building (the "31 McDermott Avenue structure"). The central portion of the property features an at-grade parking lot for the 221 East Main Street structure. This parking area is accessed only from McDermott Avenue; there is no vehicle access from East Main Street.

The Applicant, Georgica Green Ventures, LLC, seeks Riverhead Town Board approval to demolish the two existing structures and construct a single five-story mixed-use structure featuring 15,908 SF of first-floor commercial spaces (at-grade with East Main Street) and four floors of apartments (118 units). Because the subject site slopes downward toward to south from East Main Street, the proposed lower level for parking beneath the structure will be accessed via McDermott Avenue.

Of the 118 apartments, 117 will be rented, and one (1) apartment will be set aside for occupancy by the building superintendent. As described below and as sought by the Town for the DC-1 district, the 117 rental apartments will be leased based upon the household income of the tenant. **Table 1** details the individual spaces and floor areas of the project.

On-site parking will consist of 58 spaces; however, the subject site is within the Riverhead Parking District. With respect to the number of parking spaces provided relative to the amount of development proposed, Town Zoning Code Section 301-231 I states that, for a site within a designated Parking District, the parking requirements of the Town Zoning Code do not apply. That is, the presence and availability of sufficient free, public parking spaces off-site but nearby would satisfy Town conditions that parking will be available to residents of the development; the project is not required to provide any on-site parking spaces. However, at the request of the Town, the Applicant will provide 58 on-site parking spaces, and the balance of parking needs will be met by off-site spaces within the Riverhead Parking District area. The two existing driveways onto McDermott Avenue will be closed, and the site will be accessed via a

single, new driveway onto McDermott Avenue that leads directly into the internal groundlevel parking area beneath the building. This access will be "stop"-controlled for departing vehicles.

Table 1
USES, UNITS & YIELDS IN BUILDING
Proposed Project

Retail Space (SF)	**Other Commercial Spaces** (SF) [1]	**Residences** [2] (units)	**Residential Space** (SF)	**Other Spaces** (SF)	**Total Floor Spaces** (SF)
Lower Level (58 Parking Spaces)					
---	---	---	---	1,605 [3]	1,605
First Floor					
1,429	14,479	---	---	7,898 [4]	23,806
Second Floor					
---	---	6 studio 15 one-bedroom 7 two-bedroom 28 units	2,916 10,335 6,839 20,090	5,590 [5]	25,680
Third Floor					
---	---	8 studio 15 one-bedroom 7 two-bedroom 30 units	3,888 10,335 6,839 21,062	4,618 [5]	25,680
Fourth Floor					
---	---	8 studio 15 one-bedroom 7 two-bedroom 30 units	3,888 10,335 6,839 21,062	4,618 [5]	25,680
Fifth Floor					
---	---	8 studio 15 one-bedroom 7 two-bedroom 30 units	3,888 10,335 6,839 21,062	4,618 [5]	25,680
Totals					
1,429	14,479	30 studio 60 one-bedroom 28 two-bedroom [6] 118 units	14,580 41,340 27,356 83,276	28,947 [5]	128,131

(1) The Plot Plan shows two restaurants: Restaurant 1 has 6,351 SF/235 seats, and Restaurant 2 has 8,128 SF/296 seats. However, these spaces may be occupied by other types of commercial uses.
(2) The studio units average 486 SF; the one-bedroom units average 689 SF; and the two-bedroom units average 977 SF.
(3) Includes Utilities and Lobby spaces.
(4) Includes Utilities, Lobby, Building Amenities, and Building Storage spaces.
(5) Includes Laundry, Storage, and Hallway spaces.
(6) Of which one unitis set aside for building superintendent use.

Sanitary wastewater from the project will be conveyed off-site via the existing network of the Riverhead Sewer District, and treated and discharged at the existing municipal facility. The project will conform to all applicable flow and design requirements of the Suffolk County Department of Health Services and the Riverhead Sewer District.

In addition to the Applicant, there are number of agencies providing public funding for the project. These include:

- New York State (NYS) Homes & Community Renewal
- NYS Housing Finance Agency
- Governor's Office of Storm Recovery
- Suffolk County Department of Economic Development and Planning

The project conforms to the 2003 Town Comprehensive Plan and to the goals and intent of the 2008 Update of the Town's East Main Street Urban Renewal Plan (EMSURP), and will conform to nearly all applicable Town Zoning Code bulk and setback requirements for development in the site's DC-1 zoning district. Specifically, the project will require two (2) special permits from the Town Board: for an exceedance of the maximum allowed site coverage, and for an exceedance of the allowed floor area range of the studio apartments. Analysis indicates that the project conforms to the standards on which the Town Board will review the special permit requests and determine whether those standards are met.

The applicant has designed the project to:

- Conform to the Town Comprehensive Plan in terms of providing workforce and downtown housing opportunities and ground floor retail spaces;
- Conform to the goals and intent of the EMSURP for the area;
- Increase pedestrian traffic in the hamlet downtown area, to support commercial activity and enhance the hamlet downtown area aesthetic;
- Strike a balance between the yield permitted by the DC-1 zoning while remaining within a density that would not adversely impact the downtown hamlet character of the area and still support an economically viable project;
- Minimize potential adverse impact to groundwater resources by connecting to the public sanitary sewer system;
- Provide an aesthetically attractive development;
- Obviate a potential impact to local stormwater runoff patterns, by retaining all site-generated stormwater runoff on-site, to be recharged in the project's drainage system;
- Provide safe pedestrian and vehicle access in conformance with Town and County highway access limitations;
- Conform to all other appropriate land use requirements; and
- Provide superior site design, including appropriate on-site recreational amenities; walkability and sense of place through attractive community architecture and landscaping.

B. Government Approvals

B. Government Approvals Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☑Yes ☐No	Special Permits (2) Site Plan Approval	Pending Pending
b. City, Town or Village Planning Board or Commission ☐Yes ☑No		
c. City Council, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No (Riverhead Sewer District & Riverhead Water District)	Sewer connection approval Water Supply connection approval	Pending Pending
e. County agencies ☑Yes ☐No (SCDHS)	Sewer System connection Water Supply System Connection	Pending
f. Regional agencies ☑Yes ☐No (SCPC)	Referral	Pending
g. State agencies ☑Yes ☐No	NYS HCR	Pending
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☑Yes ☐No

If Yes,

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes ☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

EMSURA, Parking District, Business Improvement District

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

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C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
DC-1

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Riverhead CSD

b. What police or other public protection forces serve the project site?
Riverhead PD

c. Which fire protection and emergency medical services serve the project site?
Riverhead FD and Ambulance Corps

d. What parks serve the project site?
East End Arts Park; Peconic Riverfront Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Mixed-Use (Residential and Commercial)

b. a. Total acreage of the site of the proposed action? 0.85 acres
b. Total acreage to be physically disturbed? 0.85 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 0.85 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 24± months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

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f. Does the project include new residential uses? ☑ Yes ☐ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				118
At completion of all phases				118

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 1

ii. Dimensions (in feet) of largest proposed structure: 60 (max) height; 82± width; and 300± length

iii. Approximate extent of building space to be heated or cooled: 128,000± square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

i*v.* Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

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ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☐ No

If Yes, describe: _____

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☐ No

If Yes:

- acres of aquatic vegetation proposed to be removed _____
- expected acreage of aquatic vegetation proposed to be removed _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):

  _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☑ Yes ☐ No

If Yes:

i. Total anticipated water usage/demand per day: 40,273 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑ Yes ☐ No

If Yes:

- Name of district or service area: Riverhead Water District
- Does the existing public water supply have capacity to serve the proposal? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No
- Do existing lines serve the project site? ☑ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☑ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

  _____
- Source(s) of supply for the district: Riverhead Water District

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑ No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

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

d. Will the proposed action generate liquid wastes? ☑ Yes ☐ No

If Yes:

i. Total anticipated liquid waste generation per day: 40,273 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): Sanitary wastewater

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑ Yes ☐ No

If Yes:

- Name of wastewater treatment plant to be used: Town STP, River Road
- Name of district: Riverhead Sewer District
- Does the existing wastewater treatment plant have capacity to serve the project? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No

RESET FORM

- Do existing sewer lines serve the project site? ☑ Yes ☐ No
- Will line extension within an existing district be necessary to serve the project? ☐ Yes ☑ No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐ Yes ☑ No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

_____

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

N/A

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐ Yes ☑ No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐ Yes ☐ No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐ Yes ☐ No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☑ Yes ☐ No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

N/A

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

Generators

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

Building heating/cooling systems

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐ Yes ☑ No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐ Yes ☐ No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

RESET FORM

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☑Yes ☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☑Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: unknown

iii. Parking spaces: Existing 55± Proposed 58 Net increase/decrease +3

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

N/A

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☑No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☑Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: Unknown at present

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

PSE&G (electricity), National Grid (natural gas)

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7AM-5PM
- Saturday: N/A
- Sunday: N/A
- Holidays: N/A

ii. During Operations:

- Monday - Friday: 24/7
- Saturday: 24/7
- Sunday: 24/7
- Holidays: 24/7

RESET FORM

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

_____

_____

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

Describe: _____

_____

n.. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

_____

_____

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

Describe: _____

_____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

_____

_____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products (185 gallons in above ground storage or an amount in underground storage)? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities: _____

_____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

_____

_____

_____

_____

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☑ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____

  _____
- Operation: _____

  _____

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

- Construction: _____

  _____
- Operation: _____

  _____

RESET FORM

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

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

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☑ Aquatic ☐ Other (specify): Residential; Institution; Open Space, Vacant

ii. If mix of uses, generally describe:

Commercial primarily along East Main Street corridor; residential north & south of corridor, with interspersed institutional and vacant sites; Open Space along north bank of Peconic River.

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.85	0.85	0
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____	0	0	0

RESET FORM

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

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

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☐ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

RESET FORM

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 1,200± feet

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

c. Predominant soil type(s) present on project site: (Urban Land) 100 %
_____ _____%
_____ _____%

d. What is the average depth to the water table on the project site? Average: 10± feet

e. Drainage status of project site soils:
☑ Well Drained: 100 % of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 100 % of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☐ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☑ Yes ☐ No

j. Is the project site in the 100 year Floodplain? ☑ Yes ☐ No

k. Is the project site in the 500 year Floodplain? ☑ Yes ☐ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:

i. Name of aquifer: ***Upper Glacial & Magothy***

RESET FORM

m. Identify the predominant wildlife species that occupy or use the project site: _____
N/A _____ _____ _____
_____ _____ _____

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation): _____
_____
ii. Source(s) of description or evaluation: _____
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No
If yes, give a brief description of how the proposed action may affect that use: _____
_____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No
If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No
i. If Yes: acreage(s) on project site? _____
ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____
_____
_____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No
If Yes:
i. CEA name: _____
ii. Basis for designation: _____
iii. Designating agency and date: _____

RESET FORM

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☑ Historic Building or District

ii. Name: ***Town Main Street Historic District; Main Street Natural Historic District***

iii. Brief description of attributes on which listing is based:

Main Street structures

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

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

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

G. Verification

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

Applicant/Sponsor Name ***Phil Malicki,; AICP, CEP, LEED® AP (NP&V, LLC)*** Date 12/8/16

Signature Phillip A. Malicki Title ***Senior Environmental Planner***

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Appendix B-2
Photographs of Site and Vicinity

NP&V, LLC

Photographs taken in October 2016



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

PHOTO LOCATION KEY

Source: ESRI Web Mapping Service

Scale: 1 inch = 100 feet

N

Riverview Lofts
Riverhead

Voluntary DEIS

1. View from northwest corner of East Main Street/McDermott Avenue toward south, showing front (north side) of the 221 East Main Street building.



2. View from west side of McDermott Avenue toward northwest, across center of project site; rear of 221 East Main Street building on right, vacant lot (former Sears store site) on left.



3. View from east side of McDermott Avenue toward southwest, of front and north side of 31 McDermott Avenue building.



4. View from east side of McDermott Avenue toward west, of parking lot of and front sides of 31 McDermott Avenue building; public parking lot on left.



5. View from southeast corner of McDermott Avenue/Heidi Behr Way toward northwest, of the 31 McDermott Avenue building.



6. View from center of McDermott Avenue/Heidi Behr Way toward north, along axis of McDermott Avenue; East Main Street in the center distance, project site on the left.



7. View from west side of McDermott Avenue opposite the project site toward the northeast, depicting residential character of east side of McDermott Avenue.



8. View from north side of Heidi Behr Way towards the northeast, of and across the parking area behind the site of the demolished Sears store; 221 East Main Street building in center.



9. View from north side of East Main Street toward southwest, of northern side of vacant lot (site of demolished Sears store; 221 East Main Street building on left.



10. View from south side of East Main Street toward south, of East End Arts Park; Heidi Behr Way and Peconic Riverfront Park in center distance.



11. View from north side of Heidi Behr Way toward north, of East End Arts Park.



12. View from north side of East Main Street toward west, of signage in front of Riverhead United Methodist Church.



13. View from southwest corner of East Main Street/McDermott Avenue toward north, of Doroszka House.



14. View from the north side of East Main Street opposite the northern end of McDermott Avenue toward the southeast, of commercial character along the south side of East Main Street corridor east of the project site.



15. View from the north side of East Main Street east of the project site toward the west, showing the commercial character of the East Main Street corridor; east side of the 221 East Main Street building (brown) on left.



16. View from the north side of East Main Street east of the project site toward the west, showing the commercial character of the East Main Street corridor; east side of the 221 East Main Street building (brown) in center.



17. View from Peconic Riverfront Park southeast of Heidi Behr Way/McDermott Avenue, toward east., showing promenade along north bank of river



18. View from Peconic Riverfront Park south of Heidi Behr Way/McDermott Avenue, toward west, showing promenade along north bank of river.



19. View from promenade along north bank of river toward the east., showing typical public art amenity; Peconic Riverfront Park on the left.



20. View from north side of Heidi Behr Way at the southwestern corner of East End Arts Park toward southwest, of Peconic Riverfront Park and promenade.



Appendix B-3
Phase I Environmental Site Assessment (ESA) for 221 East Main Street (text and Appendix I only)

Cashin Associates, P.C.

November 7, 2014

PHASE I ENVIRONMENTAL SITE ASSESSMENT

for the property located at:

221 East Main Street
Riverhead, New York 11901

prepared for:

Georgica Green Ventures LLC
50 Jericho Quadrangle, Suite 200
Jericho, New York 11753

prepared by:

Cashin Associates, P.C.
Engineering •Planning •Construction Management

1200 Veterans Memorial Highway, Hauppauge, New York 11788 - (631) 348-7600
80 SW 8th Street, Suite 2809, Miami, Florida 33130 - (305) 579-2006

NOVEMBER 7, 2014

PHASE I ENVIRONMENTAL SITE ASSESSMENT

FOR THE PROPERTY LOCATED AT:

221 EAST MAIN STREET
RIVERHEAD, NEW YORK 11901

PREPARED FOR:

GEORGICA GREEN VENTURES LLC
50 JERICHO QUADRANGLE, SUITE 200
JERICHO, NEW YORK 11753

PREPARED BY:

CASHIN ASSOCIATES, P.C.
1200 VETERANS MEMORIAL HIGHWAY
HAUPPAUGE, NEW YORK 11788

14003.062 **November 7, 2014**

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PHASE I ENVIRONMENTAL SITE ASSESSMENT
FOR THE PROPERTY LOCATED AT:

221 EAST MAIN STREET
RIVERHEAD, NEW YORK 11901

EXECUTIVE SUMMARY

This report outlines the findings of a Phase I Environmental Site Assessment (ESA) conducted by Cashin Associates, P.C. (CA) for the subject property located at 221 East Main Street, Riverhead, New York (District 600, Section 129, Block 1, Lot 21). The 0.5 acre subject property is currently developed with a 9,369 square foot building with an asphalt parking area in the rear of the building. The current building was built in 1947. The field inspection was conducted on October 27, 2014 by Mr. Keith Brewer; an Environmental Scientist from CA. CA accessed and inspected all areas of the subject property. Mr. Brewer was accompanied by Mr. Robert Knotoff (current owner for the past 35 years) and Ms Commie Lassandro (Consultant).

Based on the Sanborn Maps, it was determined that the subject property was initially developed between 1885 and 1891 with a two-story residential building. The existing 9,369 square foot building was built sometime in 1947. The subject property was listed in the city directories from 1977 through 2013 (intermittent) with a commercial tenant (McCabes Office Products).

The subject property (221 East Main Street) is not listed on any of the reviewed databases. While nearby properties in the surrounding area did appear in some of the reviewed databases (Section 3.0), CA found no evidence in the reports that any of the listed properties in the surrounding area have directly or negatively affected conditions at the subject property.

No Recognized Environmental Conditions (RECs) or Business Environmental Risk issues were identified for the subject property.

Recognized Environmental Conditions (RECs)

None Identified.

Business Environmental Risk Issues

Suspected and Potential Asbestos-Containing Material (ACM): The original age of the subject buildings (1947) indicates that ACM may be present in both exposed and unexposed building construction materials and components, particularly in older, un-renovated portions of the buildings. An ACM survey should be performed prior to building demolition or major renovation to identify ACM abatement needs.

NYSDEC PBS Tank: The subject property (221 East Main Street) is not listed as a registered NYSDEC Petroleum Bulk Storage (PBS) site. During the site visit and discussions with Mr. Robert Knotoff (property owner) it was brought to CA's attention that there is a 1,000-gallon #2 fuel oil tank located under East Main Street in front of the subject property. A 1,000-gallon tank is below the 1,100-gallon threshold required for registration under State and County requirements. (Although the type and age of the tank is unknown, it is likely a single-wall steel tank possibly over 30 years old). The tank vent is located on the outside wall in the northwest corner of the building. If the tank is to remain in use, it should be tightness tested to confirm that it is not leaking. If the building is to be demolished, than the tank should be properly abandoned or removed. Old single-

wall steel tanks can be associated with subsurface contamination of soils and groundwater from leaks and spills.

Potential Lead-Based Paint (LBP): Based on the original age of the subject buildings (1947), the potential exists for the presence of lead paint in the underlayers of paint throughout older, un-renovated portions of the buildings. The presence of lead paint should be considered during major renovation or demolition.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

FOR THE PROPERTY LOCATED AT:

221 EAST MAIN STREET
RIVERHEAD, NEW YORK 11901

1.0 INTRODUCTION & METHODOLOGY

1.1 Purpose of the Phase I Environmental Site Assessment

This report has been prepared in accordance with the recommended guidelines as presented in American Society for Testing and Materials (ASTM) E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The goal of this assessment is to identify recognized environmental conditions on the site, as defined by ASTM E 1527-13. The term "Recognized Environmental Conditions" means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

CA has performed this Phase I ESA of the subject property located at 221 East Main Street, Riverhead, New York in compliance with the scope and limitations of ASTM Practice E 1527-13. The purpose of this report is to provide Georgica Green Ventures LLC, as the User of this report under the ASTM Practice, with Phase I

ESA findings, conclusions and recommendations to support its business practices regarding the property. Any exceptions to, or deletions from, this practice are described in Sections 1.2.7 and 1.2.8 of this report.

1.2 Methodology

The methodology of this assessment consists of four basic components, as recommended in ASTM E 1527-13, Section 7 Phase I Environmental Site Assessment, plus the completion of several additional tasks provided by CA, as part of the evaluation of "Business Environmental Risk", as defined under ASTM. This methodology is summarized below.

1.2.1 Records Review

A search of available records is performed to obtain and review information that will help to identify recognized environmental conditions in connection with the property. Records are reviewed for the site itself as well as for the area around the site within a minimum search distance recommended by ASTM E 1527-13, Section 8 Records Review. This records review includes standard Federal and State environmental record sources such as the Federal National Priorities List (NPL), Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) lists, Resource Conservation and Recovery Act (RCRA) lists, and the Emergency Response Notification System listing. State environmental record source listings

include State-equivalent NPL listings, State-equivalent CERCLIS listings, State landfill or solid waste disposal site lists, State registered underground storage tank (UST) listing, State leaking underground storage tank (LUST) lists, and additional State or local environmental record sources.

ASTM E 1527-13 requires that the User of this report provide the environmental professional with documentation of any environmental liens filed against the property so that this information can be included within. By mutual agreement between the User and the environmental professional, research involving environmental liens placed upon the subject property may be transferred to the environmental professional; however, any prior User knowledge of in-place environmental liens must be shared with the environmental professional, for inclusion herein.

No information regarding environmental liens associated with the subject property was provided to CA for review by the User. CA did not perform an environmental lien search for the subject property. CA also did not provide comment on the perceived value of the real property as part of this assessment.

Additional evaluations of current or historical recognized environmental conditions may include a review of records obtained through the following sources:

- The current United States Geologic Survey (USGS) 7.5-Minute Topographic Map and other physical setting maps.
- Historical use maps, such as Sanborn Fire Insurance maps, if available.
- Historical Aerial Photographs.
- Other historical land use records.
- Local municipal building department records.
- Other municipal agency records.

1.2.2 Site Reconnaissance

A site visit is performed to visually and physically observe the site and any associated structures, facilities, or materials on the site, to obtain information on the likelihood of identifying recognized environmental conditions, as recommended by ASTM E 1527-13, Section 9 Site Reconnaissance. A general reconnaissance of surrounding properties is also performed to determine the potential of off-site conditions to affect the subject site.

The site visit conducted for this property was performed by an Environmental Professional as defined under ASTM E 1527-13. The site visit includes inspection for potential recognized environmental concerns including: presence of hazardous substance and petroleum products; storage tanks; drums and other containers for hazardous materials; PCB-containing equipment; drains; sumps; stained soil and pavement; stressed vegetation;

solid waste; liquid wastes; and on-site septic systems. The site visit was also conducted to obtain field information on general site geologic conditions, topography, utility supplies, and nature/condition of any on-site structures, facilities and equipment.

1.2.3 Interviews with Owners, Occupants and Other Knowledgeable Individuals

Interviews are typically conducted to obtain information relating to current and former site uses, site history, and possible environmental conditions associated with the site. In general, individuals interviewed as part of this work include: property representatives; key site personnel; occupants/tenants; and lender officers, as needed. A list of contacts made for this assessment is provided in Section 7. An Environmental Questionnaire is provided in Appendix VI.

1.2.4 User Supplied Information

In order for a prospective purchaser to claim CERCLA landowner liability protections, under section 101 (35)(B) of CERCLA, as amended by the Small Business Liability Relief and Brownfields Revitalization Act, such persons and businesses are required to conduct all appropriate inquiries prior to or on the date of obtaining ownership of the property. The USEPA, in its Final Rule, Standards and Practices for All Appropriate Inquiries, established

federal standards and practices for conducting all appropriate inquiries, found in 40 CFR Part 312. Under § 312.11 (c), the ASTM Phase I ESA is identified as an industry standard which may be used to comply with all appropriate inquiries.

The performance standards required for all appropriate inquiries include inquiries by an Environmental Professional, and additional inquiries by persons seeking to establish one of the CERCLA liability protections. Under § 312.22, additional inquiries by persons seeking to establish one of the CERCLA liability protections, if not otherwise provided to the Environmental Professional, includes in substance: an evaluation of environmental cleanup liens against the subject property; consideration of specialized knowledge or experience of the person seeking to claim liability protection; evaluation of the relationship of the purchase price to fair market value of the subject property, if the property was not contaminated; or other commonly known or reasonably ascertainable information about the property. If such information is not provided to the Environmental Professional, the all appropriate inquiry report prepared by the Environmental Professional must include a determination as to whether the lack of this information affects his or her ability to identify conditions of releases or threatened releases under the Final Rule, and discuss this condition as a significant Data Gap (See Section 5 of this report).

1.2.5 Business Environmental Risk Investigations

Although not within the scope of ASTM E 1527-13 for recognized environmental concerns, the environmental assessment prepared by CA includes an evaluation of several additional environmental issues to provide an evaluation of Business Environmental Risk, as identified under the ASTM practice as warranted for consideration by parties to a commercial real estate transaction. This evaluation is not intended to provide a thorough or comprehensive analysis of the respective conditions, but instead provide a preliminary indication of the potential for conditions of concern. These additional tasks include:

- A preliminary visual inspection of the site and any building interiors to determine if friable asbestos-containing building materials (ACMs) may be present. If appropriate, samples of suspected ACM are collected for laboratory analysis. The inspection performed as part of this assessment does not constitute a full asbestos survey.
- A preliminary inspection for major sources of electromagnetic fields (e.g. high tension wires, electrical sub-stations, etc.) in the vicinity.
- Determination of the potential for existence of radon in soil at the subject site.
- A preliminary visual inspection of painted surfaces (if any) to determine if lead-based paint (LBP) may be present. If appropriate, samples of suspected lead-based paint are collected for laboratory analysis. The

inspection performed as part of this assessment does not constitute a full lead paint survey.

- Review of area maps to determine if wetlands, flood plains, and other environmentally sensitive areas are present on the site.

1.2.6 Evaluation and Report Preparation

The information obtained under the above tasks is evaluated to assess Recognized Environmental Conditions (RECs) and Business Environmental Risk conditions associated with the subject site. This report includes opinions rendered regarding the presence of these conditions, and represents the end product of this analysis. This report includes a summary of findings, conclusions and recommendations. Documentation including references, test results, maps and other important materials are presented as appendices.

1.2.7 Exceptions to ASTM E 1527-13

This report complies with the recommendations of ASTM E 1527-13, with no exceptions.

1.2.8 Assessment Limitations

As specified in ASTM E 1527-13, an environmental site assessment cannot wholly eliminate uncertainty regarding the potential for recognized

environmental conditions in connection with a property. Performance of the assessment is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with the property, within reasonable limits of time and cost. The Phase I Environmental Site Assessment is a visual, non-intrusive assessment where investigation includes review of records, interviews with site personnel and inspection of visible conditions. The conclusions of the assessment are based upon readily accessible and visible areas. No conclusions are provided on items hidden behind construction or completely underground and without visible evidence.

1.2.9 Reliance

The User alone may rely upon this report. This information also may be used by any actual or prospective purchaser, transferee, assignee, or servicer of the Loan, any actual or prospective investor, including an agent or advisor in any securities evidencing a beneficial interest in or backed by the Loan, any rating agency rating any such securities, any indenture trustee, and any institutional provider(s) of any liquidity facility or credit support for such financing. In addition, this report or a reference to this report may be included or quoted in any offering circular, registration statement, or prospectus in connection with a securitization or transaction involving the Loan and/or such securities. This report has no other purpose and should not be relied upon by any other person

or entity. Anyone wanting information about the condition or characteristics of the site or operation should consult an appropriate professional.

1.2.10 Conflict Certification

Cashin Associates, P.C. has no present or contemplated future ownership interest or financial interest in the real estate that is the subject of this Environmental Assessment Report; Cashin Associates, P.C. has no personal interest with respect to the subject matter of the Environmental Assessment Report or the parties involved; and Cashin Associates, P.C. has no relationship with the property or the owners thereof which would prevent an independent analysis of the environmental or other conditions of the property.

2.0 SITE DESCRIPTION AND HISTORY

The following site description is based upon a field inspection that was conducted on October 27, 2014 by an Environmental Scientist from CA. This description is also based on CA's review of the applicable USGS 7.5-Minute Topographical Map (Riverhead, NY Quadrangle) and other physical setting sources including soil type maps, geological reports and road maps. CA accessed and inspected all areas of the property at 221 East Main Street, Riverhead, New York

2.1 Site Location and Description

The subject property is located on the south side of East Main Street on the western corner of McDermitt Avenue. The 0.5 acre subject property is currently developed with a two-story 9,369 square foot building. The rear (southern) portion of the subject property consists of a asphalt parking area. The site is located in the Town of Riverhead, Suffolk County, New York. Site location maps and a site sketch are provided in Appendix I.

2.2 Present Use(s) of the Site

The subject property is currently developed with a 9,369 square foot building with an asphalt parking area located in the rear of the building. The current building was constructed in 1947 and is currently vacant. Prior to its current vacancy it housed a dinosaur museum.

2.3 Surrounding Land Use

The subject property is located in a developed suburban area of mixed residential and commercial usage. Land uses immediately adjacent to the site are as follows:

- Two three-story residential buildings and a church are located to the north of the subject property, across East Main Street.
- Single-family residences are located to the south.
- Commercial buildings adjoining the subject building located to the west of the subject property.
- Two commercial buildings located to the south of the subject property.

The surrounding area features commercial uses, along with some residential uses. Site location maps and a site sketch have been included in Appendix I.

Section 3.0 contains regulatory information regarding facilities in the surrounding area.

2.4 Topography and Geological Setting

A review of the applicable USGS topographic map (Riverhead, NY Quadrangle) reveals that the subject property is located at an approximate elevation of 13 feet above mean sea level (msl). The subject property slopes to the south. Groundwater

flow in the subject area is expected to generally follow surface topography, which slopes gradually to the south towards the Peconic River. A copy of the topographic map showing the subject property is included in Appendix I.

The subject property is located at the apex between the North and South Forks of Long Island, and is part of the Atlantic Coastal Plain Physiographic Province. The geology of the subject area is expected to consist of a sequence of loose and permeable clastic sediments consisting of recent age soils on Pleistocene age glacial deposits of gravel, sand, and clay layers that unconformably overlay a thick sequence of Cretaceous age gravel, sand, and clay alluvial deposits. These unconsolidated sediments unconformably overlay a suite of metamorphic rocks of Paleozoic-Precambrian age that slope to the south to form the basement of the Continental Shelf.

2.5 Site History

History of the site was determined based on interviews with knowledgeable individuals, available property and building document review, CA's review of previous site reports (Section 2.8), and CA's review of historical aerial photographs and Sanborn Maps obtained from Environmental Data Resources Inc. CA reviewed Sanborn Maps for the years 1885 through 1969 (intermittent), City Directory for years 1972 through 2013 (intermittent), and aerial photographs from 1970 through 2011 (intermittent).

A chronological listing of the historical data found for the property is as follows:

YEAR	SOURCE	DESCRIPTION/USE
1885	Sanborn Map	The subject property appears undeveloped in this data set. There are some residential dwellings in proximity of the subject property. The surrounding area consists of mainly residential dwellings with some commercial buildings and a church located to the north west of the subject property.
1891	Sanborn Map	The subject property appears to be developed with a two-story residential dwelling. There are some residential dwellings in proximity of the subject property and a livery stable along the southern boundary of the subject property. The surrounding area consists of mainly residential dwellings, some commercial buildings, churches and Riverhead Public School building.
1897	Sanborn Map	The subject property appears to be developed with a two-story residential dwelling that appears slightly larger than the one depicted in the 1891 Sanborn Map. There are some residential dwellings in proximity of the subject property and two carriage houses along the southern boundary of the subject property. The surrounding area appears more developed and consists of mainly residential dwellings, some commercial buildings, churches and Riverhead Public School building.
1902	Sanborn Map	The subject property appears to be developed with a two-story residential dwelling. There are some residential dwellings in proximity of the subject property and two livery stables along the southern boundary of the subject property. Also, there appears to be coal and wood yard (S.M. Foster) located to the southeast and down gradient of the subject property. The surrounding area appears more developed and consists of mainly residential dwellings, some commercial buildings, and religious institutions. The Riverhead Public School building appears vacant in this data set.
1909	Sanborn Map	The subject property appears to be developed with a two-story residential dwelling. There are some residential dwellings in proximity of the subject property. There is an automobile storage building located southwest and down gradient of the subject property with an underground gasoline storage tank. The surrounding area continues to become developed and consists of mainly residential dwellings, some commercial buildings, and religious institutions.
1920	Sanborn Map	The subject property appears to be developed with a two-story residential dwelling. There are some residential dwellings in proximity of the subject property. The surrounding area continues to become developed and consists of mainly residential dwellings, some commercial buildings, and religious institutions.
1929	Sanborn Map	The subject property appears to be developed with a two-story residential dwelling. There are residential dwellings in proximity of the subject property. There appears to be a building materials building located south and down gradient of the subject property which includes wall paper and paint products. The surrounding area continues to become developed and consists of mainly residential dwellings, some commercial buildings, and religious institutions.

YEAR	SOURCE	DESCRIPTION/USE
1947, 1969	Sanborn Map	The subject property appears to be developed with the existing structure. There are residential dwellings in proximity of the subject property. There appears to be a building materials building located south and down gradient of the subject property which includes wall paper and paint products. There also appears to be a petroleum service station located approximately 300 feet to the east of the subject property. The surrounding area continues to become developed and consists of mainly residential dwellings, some commercial buildings, and religious institutions. .
1970	Aerial Photograph	The subject property appears to be developed with the existing structure. The surrounding area continues to become developed and consists of mainly residential dwellings, commercial buildings, and religious institutions. .
1972	City Directory	The subject property is not listed in this data set.
1976	Aerial Photograph	The subject property appears to be developed with the existing structure. The surrounding area continues to become developed and consists of mainly residential dwellings, commercial buildings, and religious institutions. Areas to the south that appeared vacant in past aerial now appear to have been converted into parking areas.
1977, 1995	City Directory	The subject property is listed with one commercial tenant (McCabes Office Products).
1980	Aerial Photograph	The subject property appears to be developed with the existing structure. The surrounding area continues to become developed and consists of mainly residential dwellings, commercial buildings, and religious institutions. The area in proximity appears unchanged since the 1976 aerial.
1982	City Directory	The subject property is listed with one commercial tenant (McCabes Office Products).
1985	Aerial Photograph	The subject property appears to be developed with the existing structure. The surrounding area continues to become developed and consists of mainly residential dwellings, commercial buildings, and religious institutions. The area in proximity appears unchanged since the 1976 aerial.
1987, 1992	City Directory	The subject property is listed with one commercial tenant (McCabes Office Products).
1994	Aerial Photograph	The subject property appears to be developed with the existing structure. The surrounding area continues to become developed and consists of mainly residential dwellings, commercial buildings, and religious institutions. The area in proximity appears unchanged since the 1976 aerial.
1999, 2003	City Directory	The subject property is not listed in this data set.
2006, 2008	Aerial Photograph	The subject property appears to be developed with the existing structure. The surrounding area continues to become developed and consists of mainly residential dwellings, commercial buildings, and religious institutions. The area in proximity appears unchanged since the 1976 aerial.
2008	City Directory	The subject property is listed with one commercial tenant (McCabes Office Products).
2009, 2011	Aerial Photograph	The subject property now appears to contain the current development (Section 2.2). The surrounding area contains residential, commercial and institutional land uses and development, as today.

YEAR	SOURCE	DESCRIPTION/USE
2013	City Directory	The subject property is listed with one commercial tenant (McCabes Office Products).

Based on the Sanborn Maps, it was determined that the subject property was initially developed between 1885 and 1891 with a two-story residential building. The existing 9,369 square foot building was built sometime in 1947. The subject property was listed in the city directories from 1977 through 2013 (intermittent) with a commercial tenant (McCabes Office Products) and in the aerial photographs from 1970 through 2011.

CA spoke to the current owner (for the past 35 years) of the subject property, Mr. Robert Knotoff, during the inspection and he indicated that the existing building was built in 1947. Currently, the building is vacant but was previously occupied by a dinosaur museum and office supply company (respectively).

Historically, the surrounding area has included residential, commercial, scholastic and religious institutional uses and development. While some area uses may have contributed to the general degradation of local soil and/or groundwater quality in the area, CA has found no evidence that the subject property has been directly or negatively impacted by any surrounding area properties. Section 3.0 contains regulatory information regarding facilities in the surrounding area.

The gaps in the historical data exceeding five year intervals represent data failures. However, the available records are considered sufficient to document the past uses of the site, and the data gaps do not affect the conclusions of this review.

Copies of the historical aerial photographs and city directories have been included in Appendix V.

2.6 Municipal Records Review

CA has submitted Freedom of Information requests to the New York State Department of Environmental Conservation (NYSDEC) Region 1, Suffolk County Department of Health Office of Pollution Control requesting an opportunity to review any readily available records regarding the historical uses and any environmentally significant information for the subject property. To date, CA has not received any significant replies or information from this agency. Any responses containing useful and pertinent information regarding the past or current conditions of the site will be forwarded as an addendum to this report. Copies of the requests have been included in Appendix VII.

A review of Federal, State and local records pertaining to potential recognized environmental conditions was performed based on an Environmental Data Resources Inc. search acquired for the subject site and surrounding area. The search distances comply with those recommended by ASTM E 1527-13. A description of the database

review is provided in Section 3.0, and an abridged copy of the search output has been provided in Appendix IV.

2.7 Environmental Lien Information

No information regarding environmental liens associated with the subject property was provided to CA for review by the User (Georgica Green Ventures LLC), and CA did not perform an environmental lien search for the subject property as part of this assessment.

3.0 FINDINGS OF RECORDS REVIEW

A review of Federal, State and local records pertaining to potential recognized environmental conditions was performed based on an Environmental Data Resources Inc. database search acquired for the subject site and surrounding area. The search distances comply with those recommended by ASTM E 1527-13. A brief description of the database review is provided below, and an abridged copy of the search output is given in Appendix IV.

3.1 Federal Records Search

3.1.1 National Priorities List (NPL) or Superfund

The subject property is not listed as a Federal Superfund site. No such sites were identified within a one mile radius of the subject property.

The NPL Report, also known as the Superfund List, is a USEPA listing of uncontrolled or abandoned hazardous waste sites. This list is primarily based upon a score which the site receives from the USEPA's hazardous ranking system. These sites are targeted for possible long-term remedial action under the Superfund Act.

3.1.2 Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

The subject property does not appear in the CERCLIS database. No such sites were identified within a one-half mile radius of the subject property.

CERCLIS is a list of potential hazardous waste sites that the USEPA is investigating for hazardous substance releases. Each site is given a hazardous ranking score which determines its standing on the NPL and priorities for cleanup. The higher the score, the greater the threat to the environment, and the more rapidly the site will be addressed by the USEPA.

3.1.3 Resource Conservation and Recovery Act (RCRA) Hazardous Waste Treatment, Storage, and Disposal (TSD) Sites

The subject property does not appear on this USEPA RCRA list. No such sites were identified within a one-half mile radius of the subject property.

RCRA facilities are permitted by the USEPA to generate hazardous waste and dispose of the waste legally. These facilities generally abide by USEPA regulations for storage, handling and disposal of hazardous materials.

3.1.4 RCRA Hazardous Waste Generators and Transporters

The subject property does not appear on the RCRA Hazardous Waste Generator site list. There were three such sites were identified within a one-half mile radius of the subject property. The closest site is listed as such:

Sears Service Center located at 107 Flanders Road approximately 0.228 miles south and down gradient of the subject property is listed as a RCRA-CESQG site. This facility is a conditionally exempt small quantity generator which generates 100kg or less of hazardous waste at any time. This facility will most likely not directly or negatively impact the subject property.

RCRA facilities are permitted by the USEPA to generate hazardous waste and dispose of the waste legally. These facilities generally abide by USEPA regulations for storage, handling and disposal of hazardous materials.

3.1.5 Emergency Response Notification System (ERNS)

The subject property is not listed in the Federal database of spills compiled by the Emergency Response Notification System.

3.1.6 Toxic Release Inventory Sites (TRIS)

The subject property is not a listed Toxic Release Inventory Site.

Toxic release sites are manufacturing facilities that are required, pursuant to Section 313 of the Federal Emergency Planning and Community Right-To-Know Act, to report releases of any listed toxic chemical into the air, water, or onto the land.

3.1.7 CORRACTS (Corrective Action Report)

The subject property is not listed as a CORRACTS site. No such sites were identified within a one mile radius of the subject property.

The CORRACTS database represents a list of RCRA hazardous waste generator, treatment, transporter and disposal facilities that have been identified by the USEPA for corrective action.

3.2 State and Local Records Search

3.2.1 NYSDEC Inactive Hazardous Waste Disposal Sites (State Superfund)

The subject property does not appear on the State Superfund list. No such sites were identified within a one mile radius of the subject property.

The list of NYSDEC Inactive Hazardous Waste Disposal Sites contains summary information pertaining to those facilities that are deemed

hazardous by the New York State Department of Environmental Conservation (NYSDEC).

3.2.2 NYSDEC Hazardous Substance Waste Disposal Sites (HSWDS)

The subject property does not appear on this State Hazardous Substance Waste Disposal site list. No such sites were identified within a one-half mile radius of the subject property.

NYSDEC maintains a database of waste disposal sites that may pose threats to public health or the environment, but cannot be remediated using monies from the Hazardous Waste Remediation Fund.

3.2.3 NYSDEC Solid Waste Facilities

The subject property is not on the NYSDEC Solid Waste Facilities list. There is one site listed within one-half mile of the subject property that is on the Solid Waste Facility/Landfill list. No such sites were identified within a one-half mile radius of the subject property.

3.2.4 NYSDEC Registered Petroleum Bulk Storage (PBS) Sites

The subject property is not listed as a registered NYSDEC Petroleum Bulk Storage (PBS) site. However, it should be noted that Mr. Knotoff (current

property owner) did inform CA that there is a 1,000-gallon #2 fuel oil UST located under East Main Street that fuels the heating system to the building. Heating oil tanks under 1,100-gallons do not require registration.

There are 14 New York Underground Storage Tank listed in the NYSDEC PBS Database within one-quarter mile of the subject property. The Riverhead Fire Department located at 2nd Street approximately 0.206 miles WNW and up gradient of the subject property. This facility is appears to have eight bulk storage tanks: one 1,000-gallon waste oil tank, three #2 fuel oil tanks totaling 2,550-gallons, two diesel fuel tanks totaling 1,050-gallons and two gasoline tanks totaling 1,500-gallons. This facility will most likely not directly or negatively impact the subject property.

3.2.5 NYSDEC Spills and Leaking Underground Storage Tanks

The subject property is not listed on the NYSDEC Leaking Underground Storage Tank Lists or New York Spills List.

A total of seventeen New York Leaking Underground Storage Tank incidents were identified within one-half mile of the subject property. **NY Spills No. 8401337:** The closest reported incident occurred at the SUNOCO service station located at 147 Route 25A approximately 0.059 miles WSW and up gradient of the subject property. Reportedly, on August 13, 1984 a tank test failure occurred which created a potential for fire or hazard and

corrective action was taken. The case associated with this event was considered **Closed** by the NYSDEC as of May 14, 2003. CA found no evidence in the report that this issue had any effect on the subject property.

A total of nine sites were listed on the New York Spills list within one-quarter mile of the subject property. The closest incident occurred at the corner of East Main Street and McDermott Avenue, which is 0.033 miles ENE of the subject property. **New York Spills No. 0705735:** Reportedly, on August 8, 2007 a diesel fuel leak occurred from a private boat. It was noted that there may have been a release with minimal potential for fire or hazard. The case associated with the event is considered **Closed** by NYSDEC as of January 28, 2008. CA found no evidence in the report that this issue had any effect on the subject property.

The spill lists can include relatively small incidents, such as equipment or human errors, tank overfills, and poor housekeeping. In general, the spill list records sites that were reported to the NYSDEC and are classified as "active", "cleaned up", or "unspecified". The ultimate goal of the NYSDEC is to resolve all reported spill sites to a classification of "cleaned up" and/or "closed" after investigation, monitoring or remediation activities. CA found no evidence in the reports that any of the listed spill events in the surrounding area have directly or negatively affected conditions at the subject property.

3.2.6 NYS Permitted Air Discharge Facilities

The subject property/facility is not identified as a source of permitted air pollutant discharges.

The EPA maintains a database containing information regarding each air emission facility and the type of air pollutant being emitted. Compliance information is also provided for each pollutant as well as the facility itself.

3.2.7 NYSDOH Radon Results

Based on CA's experience in conducting Phase I Environmental Site Assessments throughout the region, and our knowledge of the area's hydrogeology, radon is not generally present or expected to be found at elevated levels on Long Island. This is corroborated by a Statewide testing program recently conducted (October 2012) by the New York State Department of Health's (NYSDOH) Bureau of Environmental Radiation. In Riverhead, Suffolk County, the basements of 11 homes were tested by charcoal screening for the presence of radon gas. The average quantity of radon present in these houses was 1.1 picocuries per liter (pCi/L). The USEPA has set 4.0 pCi/L as the acceptable level for homes. Based on this standard, the average quantity of radon gas in the area is well below the USEPA action level.

A copy of the NYSDOH study results is provided in Appendix III of this report.

4.0 INFORMATION FROM SITE RECONNAISSANCE AND INTERVIEWS

4.1 On-Site Inspection of Hazardous Material Usage

As a vacant building, no hazardous materials were observed by CA during the site inspection. The subject property is not listed as a RCRA Hazardous Waste Generator site.

4.2 On-Site Storage Tanks

The subject property is not listed in the NYSDEC Registered Petroleum Bulk Storage (PBS) Site data set. However, CA was advised by the current property owner Mr. Knotoff that there is a 1,000-gallon #2 fuel oil tank (UST) located under East Main Street that provides fuel to the building's heating system, which is located in a utility room in the northern end of the lower level. Mr. Knotoff did not know the age or the tank or the exact location under East Main Street, but it is presumably single-wall steel possibly over 30 years old. Testing would be required to confirm that the tank is leak-free.

4.3 On-Site PCB's

No dielectric fluid-containing electrical transformers were observed or reported at the subject property during the site inspection.

Polychlorinated biphenyls (PCBs) can be present in dielectric fluids, coolants, and lubricating oils used in older electrical transformers, hydraulic systems, and other similar equipment, as well as building materials (e.g. caulking, ceiling tiles, adhesives) and fluorescent light ballasts within older buildings. The manufacture of PCBs was federally banned in the 1970's.

4.4 Asbestos-Containing Material (ACM) in the Buildings

CA did not observe any areas on the subject property where asbestos containing materials would be present. However, due to the original age of the subject buildings (1947) indicates that additional potential-ACM may be present in both exposed and unexposed building construction materials and components, particularly in older, un-renovated portions of the buildings. An asbestos survey should be conducted prior to major restoration or demolition.

4.5 Lead-Based Paint (LBP)

CA did not observe any locations of significantly damaged or deteriorated paint during the site inspection. However, based on the original age of the subject buildings (1947), the potential exists for the presence of lead paint in the underlayers of paint throughout older, un-renovated portions of the buildings.

Peeling, chipping, or cracking paint can release lead-contaminated dust which is potentially toxic, especially to children. The presence of lead paint is a concern

mainly for residential buildings occupied by children, and child care or school facilities. Structures built prior to 1980, when the Federal ban on lead paint became effective, are likely to contain lead paint in underlying layers.

4.6 Solid Waste Handling

The subject property utilizes a private carting company to collection of solid waste from the property. .

4.7 Electromagnetic Fields

There were no sources of EMFs (e.g. high tension wires, electrical substations, etc.) observed adjacent to the subject site.

Although there are currently no regulations concerning the proximity of residential structures to major sources of electromagnetic fields (EMFs) such as overhead high tension wires, high levels of EMFs are an unresolved public health issue. Some recent studies have linked the presence of elevated EMFs to increased risk of certain cancers and other illnesses. Although studies are ongoing and no definitive conclusions have been reached, the existing evidence indicates that a potential health risk may exist for individuals who are exposed to these fields. In any case, the general perception of a risk associated with major sources of EMFs can reduce the marketability and value of real estate.

4.8 Pits, Ponds, or Lagoons

No pits, ponds, or lagoons were observed on or adjacent to the subject property.

4.9 Storage Drums

CA did not observe any storage drums at the subject property during the site inspection.

4.10 Stained Soils or Pavement

CA did not observe any areas of significant or indicative staining of soils or pavement at the subject property during the site inspection.

4.11 Stormwater and Sanitary Systems

The subject property uses Riverhead's combined sewer system to collect sanitary and stormwater.

4.12 Floor Drains and Sumps

No sump pumps or floor drains were observed at the subject property during the site inspection.

4.13 Water Supply

The subject property/building uses municipal water supply system.

4.14 Stressed Vegetation

CA observed several areas of stressed vegetation on the subject property which was indicative of previous land disturbances on the subject property. The land disturbance included unpaved pathways and paths, and formerly cleared areas.

4.15 Evidence of Mold

During CA's site inspection, no mold issues were observed at the subject property.

4.16 Wetlands and Floodplains

There are no designated wetlands located on or immediately adjacent to the subject property. According to CA's review of Federal Emergency Management Agency (FEMA) information, the subject property is not located within a designated flood hazard area. Mr. Knotoff indicated that the lower lever of the building did have some water/flood damage as a result of Hurricane Sandy. All of these areas have been renovated and repaired.

4.17 Potential for Vapor Intrusion in the Building

Vapor intrusion is the migration of chemicals, primarily volatile organic chemicals (VOCs), from subsurface soil or groundwater into the indoor air of buildings overlying a contaminated site. Primarily because of a difference between interior and exterior pressures, vapor can enter a building through cracks or perforations in slabs or basement floors and walls, and through openings around sump pumps or where pipes and electrical wires go through the foundation. This intrusion is similar to how radon gas enters buildings from the subsurface. When such vapor intrusion occurs, it can potentially have harmful health effects on building occupants.

In determining the potential for vapor intrusion at the subject site/building due to subsurface contamination emanating from the subject and/or adjoining/nearby properties, CA assessed subject, adjoining and nearby land uses (Section 2.3), site history (Section 2.5), and reviewed environmental regulatory databases, including the Spills database (Section 3.2.5). Based on this review, CA's assessment did not find evidence to suggest that vapor intrusion is a concern at the subject property.

5.0 DATA GAPS

According to ASTM E 1527-13, a *Data Gap* is defined as an inability to obtain information during the Phase I ESA process, as required under this standard, despite a good faith effort by the Environmental Professional to obtain this information. As required under the ASTM standard, Section 12.7, the Environmental Professional must include in the ESA report a discussion identifying significant Data Gaps which prevent the Environmental Professional from identifying recognized environmental conditions associated with the subject property.

If Data Gaps identified during the all appropriate inquiry prevent the Environmental Professional's ability to render an opinion as to whether recognized environmental concerns associated with the subject property, then such Data Gaps are considered significant, according to the ASTM E 1527-13, Section 12.7. The Environmental Professional must identify significant Data Gaps in the report, identify the sources consulted to address the Data Gap, and comment on the significance of the Data Gap in affecting the opinion as to whether recognized environmental conditions are associated with the subject property. The Environmental Professional may then provide recommendations to the User of the report for further actions which may be necessary to address these significant Data Gaps.

However, a Data Gap itself is not inherently significant. If the Environmental Professional is able to render an opinion as to whether or not recognized environmental conditions are associated with the subject property, based on the professional's experience and other information collected during an all appropriate inquiry even where Data Gaps exist, then such Data Gaps are not considered significant and do not need to be discussed in the report.

CA has performed this Phase I Environmental Site Assessment of the subject property in compliance with the scope and limitations of ASTM Practice E 1527-13, as an all appropriate inquiry under the Final Rule. The findings of this Phase I ESA are based on: an inspection of the subject property and adjacent properties; interviews with knowledgeable parties representing the current property owner; review of available reports and records relating to earlier environmental investigations; review of available historical records; and a review of available environmental regulatory agency records.

CA's Environmental Professional found no significant Data Gaps during this Phase I ESA investigation. The gaps in the historical data (Section 2.5) exceeding five year intervals represent data failures. However, the available records are considered sufficient to document the past uses of the site, and the data gaps do not affect the conclusions of this review.

6.0 FINDINGS AND CONCLUSIONS

Cashin Associates, P.C. has performed a Phase I Environmental Site Assessment, in conformance with the scope and limitations of ASTM Practice E 1527-13. Any exceptions to, or deletions from, this practice are described in Sections 1.2.7 and 1.2.8 of this report. Any pertinent information provided to CA from local municipality FOIL requests will be provided to the client upon receipt.

No Recognized Environmental Conditions (RECs) or Business Environmental Risk issues were identified for the subject property.

Recognized Environmental Conditions (RECs)

None Identified.

Business Environmental Risk Issues

Suspected and Potential Asbestos-Containing Material (ACM): The original age of the subject buildings (1947) indicates that ACM may be present in both exposed and unexposed building construction materials and components, particularly in older, un-renovated portions of the buildings. An ACM survey should be performed prior to building demolition or major renovation to identify ACM abatement needs.

NYSDEC PBS Tank: The subject property (221 East Main Street) is not listed as a registered NYSDEC Petroleum Bulk Storage (PBS) site. During the site visit and discussions with Mr. Robert Knotoff (property owner) it was brought to CA's attention that there is a 1,000-gallon #2 fuel oil tank located under East Main Street in front of the subject property. A 1,000-gallon tank is below the 1,100-gallon threshold required for registration under State and County requirements. (Although the type and age of the tank is unknown, it is likely a single-wall steel tank possibly over 30 years old). The tank vent is located on the outside wall in the northwest corner of the building. If the tank is to remain in use, it should be tightness tested to confirm that it is not leaking. If the building is to be demolished than the tank should be properly abandoned or removed. Old single-wall steel tanks can be associated with subsurface contamination of soils and groundwater from leaks and spills.

Potential Lead-Based Paint (LBP): Based on the original age of the subject buildings (1947), the potential exists for the presence of lead paint in the underlayers of paint throughout older, un-renovated portions of the buildings. The presence of lead paint should be considered during major renovation or demolition.

SECTION 7
REFERENCES AND CONTACTS

REFERENCES AND CONTACTS

Robert Knotoff, Property Owner, Personal Communication, October 2014.

Connie Lassandro, Site Contact (Consultant), Personal Communication, October 2014.

Suffolk County Department of Health Services, Application for Public Access to Records, September 2014.

New York State Department of Environmental Conservation (NYSDEC) Region 1, Freedom of Information Request from CA, September 2014.

New York State Department of Environmental Conservation, July 2014. Inactive Hazardous Waste Disposal Sites in New York State, Albany, New York.

New York State Department of Environmental Conservation, July 2014. Petroleum Bulk Storage Facilities, Albany, New York.

New York State Department of Environmental Conservation, July 2014. Spills Information Database, Albany, New York.

United States Environmental Protection Agency, March 2014. Resource Conservation and Recovery Act (RCRA) Information, Washington, D.C.

United States Environmental Protection Agency, October 2013. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), Washington, D.C.

United States Environmental Protection Agency, March 2014. Corrective Action Report (CORRACTS), Washington, D.C.

United States Environmental Protection Agency, September 2013. Emergency Response Notification System (ERNS), Washington, D.C.

United States Environmental Protection Agency, October 2013. National Priority List (NPL), Washington, D.C.

Federal Emergency Management Agency (FEMA), Flood Zone Data.

United States Fish & Wildlife Service, National Wetlands Inventory (NWI).

SECTION 8
SIGNATURE PAGE

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FOR THE PROPERTY LOCATED AT:

221 EAST MAIN STREET
RIVERHEAD, NEW YORK 11901

CASHIN ASSOCIATES, P.C. REFERENCE NO. 14003.062

Environmental Professional / Inspector:

Keith W. Brewer **Date: 11/7/2014** **Inspection Date: 10/27/2014**

Director of Environmental Programs:

Gregory T. Greene **Date: 11/7/2014**

SECTION 9
QUALIFICATIONS INFORMATION

QUALIFICATIONS

Environmental Professional's Statement

I, Keith W. Brewer, declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312 of 40 CFR 312. I have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312, for the purposes identified.

Keith W. Brewer

CASHIN ASSOCIATES, P.C.

GREGORY T. GREENE
Director of Environmental Programs

EDUCATION/REGISTRATION
B.A., Geological and Geophysical Sciences, Princeton University, 1975
M.S., Marine Environmental Sciences, SUNY at Stony Brook, 1978
Certified Environmental Specialist, Environmental Assessment Association

PROFESSIONAL AFFILIATIONS
National Groundwater Association
National Association of Environmental Professionals
National Shellfisheries Association
American Society of Safety Engineers
Sigma Xi Scientific Society

EXPERIENCE
As Director of Environmental Programs at Cashin Associates, Mr. Greene serves as project director for major environmental planning, site assessment projects and hazardous material management programs. He has directed the preparation of numerous site assessments, environmental impact statements, planning studies, field investigations, master plans and technical studies for governmental agencies and authorities on the local, state and federal levels, as well as CA's banking and insurance company clients. Mr. Greene has technical expertise in issues relating to site remediation, resource protection, hazardous materials management, groundwater and surface water management, and State/Federal environmental review requirements.

Recent environmental projects completed under Mr. Greene's direction included:

- Environmental assessments of commercial, residential and industrial sites for banks, lending institutions and other corporate clients, including asbestos and lead investigation and abatement, throughout the eastern United States and Puerto Rico.
- Assistance to the Valley Stream School District on issues relating to groundwater contamination, school safety, exposure to potential contaminants from off-site sources.
- Development/implementation of health/safety, emergency response and hazardous materials management plans for the Town of Oyster Bay.
- Environmental review and risk assessment for a major pesticide management and vector control program for Suffolk County, including environmental and human health risk assessment.
- Environmental studies for re-use and enhancement of a former industrial property as a harborfront park for the Village of Port Jefferson, NY.
- Environmental studies relating to solid waste recycling and energy recovery for the Solid Waste Management Authority of Puerto Rico.
- Evaluation and assessment of property and other collateral on behalf of CA's banking, real estate investment, and insurance company clients.
- Feasibility study including safety inspections, groundwater investigation and water supply report for redevelopment of Camp Hero, a decommissioned army base for the NYS Office of Parks, Recreation & Historic Preservation.

- Flood Hazard Mitigation and Emergency Response Plan, for the Town of Brookhaven, NY.
- Health and safety investigation and regulatory compliance reviews for a major bank client, involving branches and corporate offices.
- Human health and environmental risk assessment for the Peconic River, Suffolk County, NY.
- Implementation of fuel storage tank testing and remediation programs for the Towns of Oyster Bay, Babylon and Islip, including several hundred underground tanks, and associated groundwater investigations.
- Phase I environmental site assessments for numerous properties under consideration by Suffolk County for open space and groundwater recharge area acquisition.
- Phase II investigations and follow-up remedial activities at industrial and commercial sites with environmental issues for banking and real estate investment firms.
- Preparation of a draft solid waste management plan and comprehensive recycling analysis for the Town of Oyster Bay, NY.
- Environmental risk assessment for the Carmans River, For Suffolk County Department of Health Services.
- Supervision of investigation and remediation of leaking underground storage tank sites in New York and New Jersey for various banking and corporate clients.
- Supervision of lead paint abatement programs performed under FREDDIE MAC requirements for buildings in New York and New Jersey.
- Supervision of site remediation and monitoring for a leaking underground gasoline tank for the Village of Amityville, NY.
- Development and implementation of a groundwater remediation program for an underground hydrocarbon spill at Montauk Downs State Park, for NYS Department of Parks, Recreation and Historic Preservation.
- Groundwater and soil monitoring and development of a remediation program at a former brick manufacturing facility at Bristol Bay State Park, for the Palisades Interstate Park Commission.
- PCB remediation at the Brooklyn Air Station for the U.S. Coast Guard.

Mr. Greene was also employed for four years at a national environmental consulting firm where he was involved in the preparation of environmental impact studies for the U.S. EPA. He acquired extensive experience in project planning, field work, data analysis, EIS preparation and expert testimony in this position. He served as project manager for a major EIS on the proposed remediation of PCB-contaminated sediments from the Hudson River, and for an assessment of impacts of sewering on marine resources of the Great South Bay, NY. He prepared EIS's for regional wastewater disposal systems on Long Island, upstate New York, New Jersey, and Puerto Rico.

Keith Brewer
Senior Environmental Scientist

Education
B.S. / Environmental Biology / Long Island University
A.A.S. / Marine Laboratory Technology / Suffolk Community College

Licenses / Certification
Hazardous Waste Operations and Emergency Response Certificate
PADI-SCUBA Certificate
YMCA-SCUBA Certificate

Overview
Mr. Brewer has 20 years of experience. He serves as a senior environmental scientist at CA who specializes in projects relating to environmental permit applications, wetland delineation and restoration, ecological/resource investigations, health and safety compliance, site assessments, coastal zone management, marine studies, permit compliance, land use management, and environmental impact assessment. He has conducted numerous field surveys identifying and recording flora and fauna throughout Long Island, NY/NJ Harbor, Lower Hudson River, and New Jersey Shoreline.

Mr. Brewer's areas of expertise include:

- Coastal zone management and wetland analysis
- Ecological/resource investigations
- Essential Fish Habitat (EFH) Assessments
- Endangered Species Act (ESA) Assessments

In addition, Mr. Brewer is thoroughly familiar with the requirements of the New York State Environmental Quality Review Act (SEQRA) and the National Environmental Policy Act (NEPA). He has assisted numerous clients in complying with SEQRA and NEPA over the past 15 years and completed numerous environmental and safety compliance inspections of municipal facilities for many Long Island townships.

Relevant project experience includes:

Environmental Compliance, Monitoring, Site Assessments, and Safety Inspections

- Federal Energy Regulatory Commission (FERC): Environmental compliance and safety inspections for ongoing and completed natural gas pipeline projects constructed under FERC's jurisdictions. Inspections were conducted throughout the United States.
- Environmental site assessments to assess hazardous material conditions for real estate including commercial, industrial, institutional and residential properties.
- Town of Southampton: Environmental and health/safety inspection for site remediation and waste management projects including soil remediation projects.
- Town of Oyster Bay: Environmental and health/safety inspection for site remediation projects including soil remediation and underground tank removal projects.
- United States Fish and Wildlife Services and U.S. Army Corps of Engineers: Environmental monitoring for endangered species protection in Westhampton.

Property inspections and condition surveys

- Property inspections as part of due diligence investigations for CA's banking and governmental clients.
- Chelsea Piers Facility: Condition survey

Dredging Permit Applications

- New York State Office of Parks, Recreation and Historic Preservation: Technical assistance with preparation of dredging permit applications, including EFH, for Nissequogue and Robert Moses marinas.
- Danfords Inn and Marina, Port Jefferson: Technical assistance with preparation of dredging permit applications, including EFH.
- Numerous dredge projects involving habitat evaluation for Suffolk County, New York State Parks and local municipalities including Fredrick Canal, Belmont Lake, East Jamesport Marina, Meetinghouse Creek.

Bathymetric Survey and Sediment Sampling

- Suffolk County Department of Health Services: Bathymetric survey and sediment sampling at Fredericks Canal, Babylon
- New York State Office of Parks, Recreation and Historic Preservation: Bathymetric survey and sediment sampling at Belmont Lake

Harbor Management Plans, Local Waterfront Revitalization Plans, Watershed Management Plans

- Town of Oyster Bay: Harbor management plan and no discharge zone application
- Town of Oyster Bay: Harbor management plan for South Oyster Bay (wildlife habitat, wetlands protection, and water quality protection)
- City of Beacon: Harbor management plan
- Village of Lindenhurst: Local waterfront revitalization plan
- Town of Oyster Bay: Assistance with preparation of watershed management plans for Mill River and Massapequa Creek

Miscellaneous

- Wertheim Wildlife Refuge: Field operations for an Open Water Marsh Management (OMWM) study conducted in conjunction with Suffolk County and USFWS.
- Vector Control and Wetlands Management Plan for Suffolk County: Technical studies of wetlands and environmental quality performed as part of the including endangered species impact assessments (wildlife habitat impacts; wetlands protection, and water quality monitoring).
- Town of Southampton, Suffolk County and United States Fish and Wildlife Service: Preparation of Essential Fish Habitat Assessments.
- Town of Oyster Bay: Assistance with South Shore Estuary Plan Implementation, including clam resource assessment and stormwater management.

APPENDICES

APPENDIX I
LOCATION/TOPOGRAPHIC MAP AND SITE PLAN

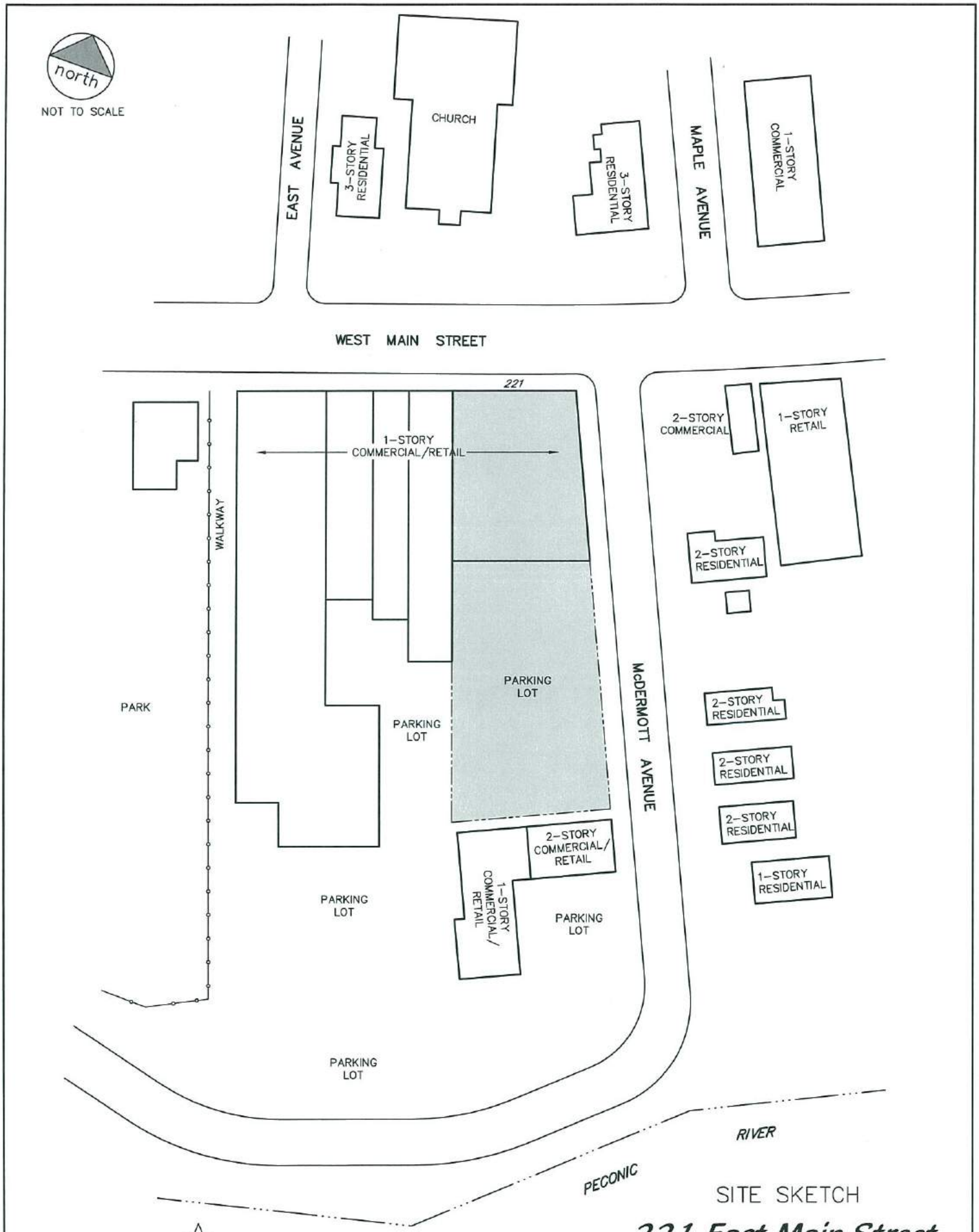


New York State Department of Transportation
Riverhead Quadrangle, New York
7.5 Minute Series, 1991, Digital Edition
Scale 1:24000

TOPOGRAPHIC LOCATION MAP

221 East Main Street
Riverhead, New York

14003.062



SITE SKETCH

221 East Main Street
Riverhead, New York

Cashin Associates, P.C.
ENGINEERING·PLANNING·CONSTRUCTION MANAGEMENT

14003.062

Appendix B-4
Phase I Environmental Site Assessment (ESA) for 31 McDermott Avenue (text only)

NP&V, LLC

October 6, 2016

Phase I

Environmental Site Assessment

31 McDermott Avenue

Riverhead, New York

NP&V Job # 16124

October 6, 2016

CONFIDENTIAL AND PRIVILEGED

Phase I

Environmental Site Assessment

31 McDermott Avenue

Riverhead, New York

THIS DOCUMENT CONTAINS 28 PAGES OF TEXT

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NELSON POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

Phase I

Environmental Site Assessment

31 McDermott Avenue

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Phase I
Environmental Site Assessment

31 McDermott Avenue

1.0 SUMMARY

The subject property has been inspected and reviewed independently by Nelson, Pope & Voorhis, LLC in order to determine potential environmental or public health concerns. This report is intended to identify Recognized Environmental Conditions (as defined in Standard Practice for Environmental Site Assessment; ASTM E 1527-13 and United States Environmental Protection Agency (USEPA) Standards and Practices for All Appropriate Inquiries (AAI)) on the subject property based on four (4) components of a Phase I Environmental Site Assessment (ESA): records review, site reconnaissance, interviews and evaluation and reporting. **Appendix A** provides a statement of limiting conditions. **Appendix B** includes the resumes of key personnel.

The subject property lies in the Hamlet of Riverhead, Town of Riverhead, Suffolk County, New York. The subject property, which is 0.25 acres in size, is located on the west side of McDermott Avenue, approximately 285 feet south of East Main Street, and just north of the Peconic River and Town parking lots along the river. The property is more particularly described as Suffolk County Tax Map # 0600-129-01-22. The physical address of the property is 31 McDermott Avenue.

The subject property is developed with a two (2) story commercial/residential structure with a paved parking lot area. The building is divided into four (4) sections which contain an apparel store, an acupuncturist's office, an upholstery store and an apartment. The apparel store, which is located on the first floor of the east side of the building, also has two (2) rooms on the second floor. The upholstery store is located on the west side of the first floor, the acupuncturist is in the central portion of the building and the apartment is located on the second floor. The building consists of a wood framed structure situated on a concrete slab foundation, with wood and vinyl shingle siding, and an asphalt shingle roof. The interior of the stores consists of hardwood, bare concrete and carpeted floors, as well as, painted sheetrock and wood paneling walls. The building is connected to the Town of Riverhead sewage collection system and the Riverhead Water District for potable water.

A 275 gallon above ground fuel oil storage tank is located on the west side of the building which is utilized to supply the heating system of the upholstery store. No areas of staining, evidence of discharge, areas of stressed vegetation, residue of oils or other toxic substances, pools of discharge, petroleum or chemical odors, or other such indicators were noted during the site reconnaissance.

Sanborn map coverage from 1891, 1897, 1902, 1909, 1920, 1929, 1947 and 1969 was available for the subject property and maps were reviewed in order to determine the prior uses of the subject property and surrounding area. The subject property was not depicted on the 1891-1920 maps. The 1929 map revealed that an "L" shaped building identified as wallpaper and paints and

storage of building materials was located along the north and west portions of the subject property. In 1947 and 1969, an addition had been had to the southwest portion of this building bring the building to its present configuration. A gasoline tank was depicted off the northeast corner of the building from 1929 to 1969. It is uncertain if this tank is presently located on the subject property. The surrounding area was densely developed with residences and commercial buildings as well as a church and bank.

Aerial photographs from 1938, 1940, 1947, 1957, 1962, 1966, 1970, 1976, 1980, 1985, 1994, 2006, 2008, 2009 and 2011 were available for the subject property. A review of the aerials revealed that the existing building was present on the subject property in all of the aerials. The surrounding area consisted of East Main Street to the north, residential land, and undeveloped wooded land to the southeast and Peconic Avenue to the west.

USGS Riverhead topographic maps from 1903, 1904, 1943, 1947, 1956 and 2013 were available for review for the subject property. The scale was too small to determine if the subject property contained any improvements in the 1904 topographic map. The 1943 and 1947 map revealed that the subject property was developed. The remaining maps indicated that the subject property was located in a developed area. Please refer to Section 4.3 for additional information regarding site history.

An extensive government records search found no potential sources of environmental degradation on the subject property. Several Federal, State and County documented regulated sites were noted in the vicinity of the subject property. Specifically, ten (10) active and eighty-three (83) closed spill incidents and one (1) active and eleven (11) closed LUST incidents are located within one-half (0.5) mile; and twenty-seven (27) Petroleum Bulk Storage listings, fourteen (14) RCRA Generators and one (1) Wastewater Discharges (PCSTWD) are located within one-quarter (0.25) mile of the subject property.

A Tier 1 Vapor Encroachment Condition (VEC) Assessment was conducted as part of this Phase I ESA due to the proximity of several spill incidents. The assessment was conducted in accordance to the methods and procedures outlined within ASTM E2600-15, Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions.

For this assessment under conditions where the direction of groundwater flow can be ascertained critical search distances are used to determine if a VEC exists. Specifically the following distances are applied to the Tier I Assessment:

Upgradient Sources
1,760 feet for Chemical of Concern (COC)
520 feet for petroleum hydrocarbons

Cross-gradient Sources
365 feet for COC
165 feet for petroleum hydrocarbon LNAPL sources & 95 feet dissolved petroleum hydrocarbon sources with plume considerations

Down-gradient Sources
100 feet for COC/petroleum hydrocarbon LNAPL sources
30 feet dissolved petroleum hydrocarbon sources

Review of the regulatory agency database report provided for the subject property did not identify any sites within the critical distances for potential contamination sources. Based on this finding and the lack of potential impacted sites in the vicinity of the subject property, a VEC can be ruled out because it does not exist or is not likely to exist.

This assessment has identified the following with respect to recognized environmental conditions, controlled recognized environmental conditions, de minimus conditions and historic recognized environmental conditions in connection with the subject property, subject to the methodology and limitations of this report.

One (1) recognized environmental condition was noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

1. The Sanborn Maps from1929 to 1969 identified a gasoline storage tank off the northeast corner of the existing building. It is unknown if tank has been removed from the subject property.

No controlled recognized environmental conditions were noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

One (1) de minimus condition was noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

1. A 275 gallon above ground fuel oil storage tank is located on the west of the building.

No historic recognized environmental conditions were noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

This report was completed in accordance with the standards set forth in the ASTM E 1527-13 and the USEPA AAI. ASTM protocols identify asbestos containing material (ACM) and mold as non-scope issues. In the interest of serving the client, observations concerning ACM and mold are included herein. This visual assessment should not be considered an asbestos survey or a mold assessment, which would be required for building demolition and/or identification of all possible sources of ACM and mold, regardless of health danger.

The observation noted above is not intended to eliminate any other possible sources which may or may not be present.

NP&V has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 and USEPA AAI for the 31 McDermott Avenue in Riverhead, New York. Any exceptions to, or deletions from, this practice are described in Section 11.0 of this report. In conclusion, this assessment has revealed evidence of one (1) recognized environmental condition and one (1) de minimus condition in connection with the subject property, subject to the methodology and limitations of this report.

2.0 INTRODUCTION

2.1 PURPOSE

This report is intended to meet the format and requirements of the ASTM Standard Practice for Environmental Site Assessments, as published in ASTM E 1527-13 and USEPA AAI standards. Banks, insurance companies and prospective property purchasers require an understanding of existing and past property conditions and uses in order to assess the potential liabilities associated with a site. This assessment has been completed by a qualified environmental professional as defined in ASTM Standards. The objectives of this Environmental Site Assessment are stated as follows:

- Establish a basis of understanding of past and present use in order to determine potential environmental and/or public health risk.
- Establish a basis of understanding of surrounding uses, and area environmental resources in order to determine if the property is affected by such uses or resources.
- Identify, to the extent feasible, *recognized environmental conditions* (i.e., potential risk caused by the presence of Hazardous Substances or Petroleum Products) in connection with the site and adjoining properties.
- Identify any known or potential items in noncompliance with applicable Local, State or Federal laws and regulations.
- Specify how any items in noncompliance with applicable Local, State or Federal laws and regulations can be brought into compliance.
- Confirm the absence of environmental problems or quantify potential environmental liabilities. In the event such findings cannot be made, recommend further environmental sampling.

The final purpose of the report is to utilize the information gained to report "Recognized Environmental Conditions", a very important term defined and utilized in the ASTM Standards. Recognized Environmental Conditions are defined as follows:

> *The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimus conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.*

2.2 DETAILED SCOPE OF SERVICES

This ESA has been completed by Nelson, Pope & Voorhis, LLC, in accordance with ASTM standards. The following documentation is intended to provide the financing institution with the information related to the environmental and public health integrity of the subject property.

The report was completed utilizing a variety of techniques and sources of information. The following is a procedural account of the methodology for report preparation:

1) Field inspection of the site was conducted including indoor and outdoor facilities and interview of site personnel and property owners, to document facilities and operations, and to determine applicable Federal, State and Local laws and regulations.
2) Inspection of areas surrounding the site was conducted in order to document surrounding uses as related to the integrity of the subject site.
3) Federal government records were researched including the NPL site list, the CERCLIS site list, and RCRA Hazardous Waste TSD Facilities and Generator Lists, and ERNS lists to determine if the site or adjacent sites are included in listings.
4) State government records were researched including NYS Department of Environmental Conservation (NYSDEC) Inactive Hazardous Waste Disposal site lists, landfills and solid waste disposal facilities, registered underground storage tanks (USTs), wastewater disposal sites, air emission sources, and leaking USTs/materials spill lists, to determine if the site or adjacent sites are included in listings.
5) County government records were researched including tank and drum registration, violations/enforcement action files, and for sites in Suffolk County, the CLEARS remote sensing site inventory.
6) Local government records were researched including zoning, assessor's records, building permit and Certificate of Occupancy to determine site compliance and history.
7) Records involving Transfer of Property were reviewed as available to determine site ownership and history where possible.
8) Published literature concerning on-site soils, and groundwater resources were reviewed as related to environmental audits to establish environmental resource information.
9) Additional interviews of past owners and operators, surrounding property owners/users were conducted as necessary.
10) Conclusions regarding the site were formulated based upon the above tasks.
11) No sampling of suspected recognized environmental conditions was completed as part of this report.
12) Non-scope issues such as asbestos, radon, lead based paint, wetlands, lead in drinking water, cultural and historic resources, endangered species, indoor air quality, mold, etc. are addressed with certain limitations noted herein. If obvious signs of such issues were observed during the site reconnaissance, such observations are indicated in the report. However, this report should not be considered a full asbestos survey, lead based paint report, wetlands delineation survey, mold assessment, etc. The recommendations of this will indicate if a full survey or report should be undertaken to fully determine if such issues exist on the subject property.

2.3 LIMITATIONS AND EXCEPTIONS

This report is dated, and is only valid for activities which occurred prior to the date of facility inspection. Activities, liabilities and alterations to environmental conditions documented in this report that may have occurred subsequent to the date of inspection are not included in this analysis.

There are several limitations of this study which should be understood. The study is intended to assess the potential for public health or environmental liabilities based upon examination of the subject property in accordance with the ASTM Standards. The ASTM Standards provide specific guidance with regard to radon, asbestos, lead in drinking water and lead based paint.

Analysis of the CERCLA implications with regard to the innocent purchaser defense under Superfund, finds that naturally occurring radon is not subject to CERCLA liability and is appropriately considered as a non-scope issue. Accordingly, this survey will not address radon gas, and will not involve or recommend air monitoring for radon gas. As a point of information for users of this report, radon is a colorless, odorless, inert gas which has become a common air contaminant of concern in certain geographic areas. Radon is a natural isotope, which is present most commonly in association with crystalline bedrock and at times other geologic deposits. Natural isotope decay, can emit radiation which causes health concerns due to inhalation **(Sax and Lewis, 1987).** Radon levels generally increase in areas where bedrock is close to the land surface, and generally creates a health related problem only where underground basements are constructed which may allow radon gas to accumulate in a manner which would cause exposure. Geographically, radon may be of concern in some portions of western Long Island, New York City and nearby counties. Absent these conditions radon gas presents less of a concern. Similarly, the ASTM Standards do not recognize liability with regard to asbestos that is part of the building materials of a structure, in accordance with CERCLA innocent purchaser defense under Superfund. If asbestos containing material is disposed of on a site however, such practice would be subject to Superfund response actions and should be identified. In the interest of serving the client, and addressing the needs of lending institutions, this report will identify observed asbestos containing material (ACM) on the site which may cause a health danger or is considered friable, as a non-scope issue. This report is not a full asbestos survey as would be required for building demolition, or identification of all possible sources of ACM, regardless of health danger.

Lead in drinking water and lead based paint are also issues which are considered to be non–scope under CERCLA innocent purchaser defense under Superfund. Lead based paint has been in use for many years, and it is likely that most older buildings will contain this paint. As a general rule, painted surfaces should be maintained and ingestion of paint products should be avoided. If disposal of these materials is involved, disclosure of this practice would be subject to the scope of this environmental audit. Lead in drinking water occurs generally as a result of past use of high lead content solder. Water left stagnant in pipes overnight or longer, may leach lead from these joints and affect drinking water quality. As a general rule, water should be run for several minutes in the morning where such plumbing is present.

This report cannot identify all sources of PCB containing oils. Common sources of these materials include transformers and fluorescent lamp ballast. Electric service transformers may include ground level or pole mounted units. These transformers are owned and maintained by the Long Island Power Authority (LIPA), the entity responsible for their use and integrity. Transformers are inventoried and periodically inspected. LIPA environmental engineer Mike Lauro reported in conversation that LIPA transformers were not manufactured to contain PCB

contaminated oils. Aggressive and destructive testing which would be required for definitive identification of PCB's is beyond the scope of this study. The study will however identify observed potential sources, fluid leaks, hazardous materials and/or petroleum substance disposal and other environmental or health hazards appropriate the scope of the survey.

It must be noted that the accuracy of any Environmental Site Assessment is limited to the information available during the time of the site survey, and from the records, files and drawings provided by the owner and released by governmental agencies; and, the accuracy and completeness of the information provided during interviews. **Appendix A** of this report contains a Supplemental Statement of Conditions for Phase I Environmental Audits. This list was established by the Environmental Assessment Association (EAA) in order to standardize procedures and understanding with regard to the scope of environmental audits. Charles J. Voorhis is an active member of the EAA and is a Certified Environmental Inspector (CEI). Nelson, Pope & Voorhis, LLC (NP&V), may be contacted if there are any questions regarding this analysis or the methods involved. The resumes of key personnel involved in the preparation of this report are included in **Appendix B**.

2.4 SPECIAL TERMS AND CONDITIONS

It is the responsibility of the user of this report (for example, the purchaser, potential tenant, owner lender or property manager) to provide certain segments of information utilized in the report. This would include reporting of any *environmental liens* (i.e. consideration against property for response action, cleanup or remediation of hazardous substances or petroleum product) encumbering the property or specialized knowledge or experience that would assist in identifying *recognized environmental conditions*.

It must be recognized that the level of inquiry is variable for each Phase I Environmental Site Assessment, depending upon the availability of information and quality of information received. As per the ASTM Standards, it should also be noted that the "environmental professional is not required to verify independently the information provided but may rely on information provided unless he or she has actual knowledge that certain information is incorrect or unless it is obvious that certain information is incorrect based on other information obtained in the Phase I Environmental Site Assessment or otherwise actually known to the environmental professional". Personnel involved in report preparation will make judgments on the accuracy of information and conduct additional research as necessary in order to meet the requirement of identifying recognized environmental conditions on the site. ASTM Standards provide a number of standards sources of historic information, any one of which may be sufficient. Nelson, Pope & Voorhis, LLC will seek to research as many sources of historic information as may be available as a means cross confirmation. Based on ASTM Standards, the Phase I Environmental Site Assessment is not intended to include any sampling or testing of materials associated with the project site (i.e. soil, water, air or building materials). Accordingly, this report will conform with this intent and no testing will be conducted.

2.5 USER RELIANCE

Nelson, Pope & Voorhis, LLC (NP&V) understands that our client (and their successors or assigns) are relying upon the contents of this Phase I Environmental Site Assessment report for the above referenced property in making a loan secured by or affecting the property and/or acquiring the property as the case may be. The format of this Phase I Environmental Site Assessment was predicated upon general guideline requirements established by individual lending institutions, American Society for Testing and Materials Standards (1527-13) and United States Environmental Protection Agency (USEPA) All Appropriate Inquiries (AAI) standards, various professional organizations, and our professional judgment.

The date of inspection, key personnel in the preparation of the report, and a list of persons interviewed is provided below in order to provide further insight into methodology:

Project Commenced:	June 8, 2016
Inspection Date:	September 26, 2016
Report Date:	October 11 , 2016
Inspector/Preparer:	Charles J. Voorhis, CEP Steven J. McGinn, CEI Jonathan McGinn
Persons Interviewed	Property Owner

3.0 SITE DESCRIPTION & RECONAISSANCE

3.1 OBJECTIVES

The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the subject property. The site reconnaissance typically involves observing all areas of the subject property in order to determine if any potential recognized environmental conditions are present.

3.2 METHODOLOGY

All areas of the existing building and the subject property were inspected during the site reconnaissance in order to identify any potential recognized environmental conditions associated with the property and the uses surrounding the subject property.

3.3 LIMITATIONS

There were no limitations encountered during the site reconnaissance of the subject property. All areas of the property were inspected without impediments.

3.4 LOCATION, SETTING AND LEGAL DESCRIPTION

The subject property lies in the Hamlet of Riverhead, Town of Riverhead, Suffolk County, New York. The subject property, which is 0.25 acres in size, is located on the west side of McDermott Avenue, approximately 285 feet south of East Main Street, and just north of the Peconic River and Town parking along the river. The property is more particularly described as Suffolk County Tax Map # 0600-129-01-22. The physical address of the property is 31 McDermott Avenue.

Figure 1 provides a location map depicting the subject property and the surrounding area. The subject property is rectangular in shape. *All figures are located in a separate section immediately following the text of this report.*

3.5 EXISTING AND PAST SITE USES

The subject property is developed with a two (2) story commercial/residential structure with a paved parking lot area. The building is divided into four (4) sections which contain an apparel store, an acupuncturist's office, an upholstery store and an apartment. The apparel store, which is located on the first floor of the east side of the building, also has two (2) rooms on the second floor. The upholstery store is located on the west side of the first floor, the acupuncturist is in the central portion of the building and the apartment is located on the second floor. The building consists of a wood framed structure situated on a concrete slab foundation, with wood and vinyl shingle siding, and an asphalt shingle roof. A copy of a recent aerial illustrating the development on the subject property is provided as **Figure 2**.

In terms of available records, historical use can be documented using a variety of standard records. The intent is to trace land use to a period prior to 1940. For the purpose of this Environmental Site Assessment, as many sources as are reasonably available have been consulted. The following are considered standard historical sources:

Aerial Photographs
Fire Insurance Maps (Sanborn Maps)
Property Tax Files
Recorded Land Title Records
USGS 7.5 Minute Topographic Maps
Local Street Directories (Cole Directories)
Building Department Records
Zoning/Land Use Records

3.5.1 Aerial Photography

Aerial photographs from 1938, 1940, 1947, 1957, 1962, 1966, 1970, 1976, 1980, 1985, 1994, 2006, 2008, 2009 and 2011 were available for the subject property. A review of the aerials revealed that the existing building was present on the subject property in all of the aerials. The surrounding area consisted of East Main Street to the north, residential land, and undeveloped wooded land to the southeast and Peconic Avenue to the west. Refer to **Appendix E** for a copy of the aerial photographs.

3.5.2 Sanborn Maps

Sanborn map coverage from 1891, 1897, 1902, 1909, 1920, 1929, 1947 and 1969 was available for the subject property and maps were reviewed in order to determine the prior uses of the subject property and surrounding area. The subject property was not depicted on the 1891-1920 maps. The 1929 map revealed that an "L" shaped building identified as wallpaper and paints and storage of building materials was located along the north and west portions of the subject property. In 1947 and 1969, an addition had been had to the southwest portion of this building bring the building to its present configuration. A gasoline tank was depicted off the northeast corner of the building from 1929 to 1969. It is uncertain if this tank is presently located on the subject property. The surrounding area was densely developed with residences and commercial buildings as well as a church and bank.

3.5.3 USGS Quadrangle Maps

USGS Riverhead topographic maps from 1903, 1904, 1943, 1947, 1956 and 2013 were available for review for the subject property. The scale was too small to determine if the subject property contained any improvements in the 1904 topographic map. The 1943 and 1947 map revealed that the subject property was developed. The remaining maps indicated that the subject property was located in a developed area. Please refer to Section 4.3 for additional information regarding site history. Refer to **Appendix F** for a copy of the topographic maps.

3.5.4 Other Sources

The EDR City Directory Abstract was consulted for the years 1972, 1977, 1982, 1988, 1992, 1995, 1999, 2003, 2008, and 2013 to identify occupants of the subject property and surrounding properties. A review of these listings revealed that the subject property has contained several different listings throughout the years. The earliest listing for the subject property, 1972, indicated that Retarded Children Association and Freddie Clinton were occupants of the property. The listings for 1977 indicated that New Jersey Precision occupied the subject property. In 1982, Calree Co., Inc., New Jersey Precision and David Staib occupied the subject property. In 1988. Calree Co., Inc., N.L. Froehlich, Heirloom Collectibles and MC Powers occupied the property. In 1992, Calree Co. Inc. Screen Printing, N.L. Froehlich, Robert L. Gammon and Heirloom Country Collectibles occupied the property. In 1995, the occupants were listed as Calree Co. Inc., Screen Printing, Heirloom Country Collectibles and New Jersey Precision Instrument Co., Inc. The occupant were same in 1999 with the addition of Nu Threads Embroidery. In 2003, Heirloom Country Collectibles and John Rose occupied the property. In 2008, the listings indicated that Mike Cataldo, New Jersey Precision Instruments Co., Peconic River Antiques & Things and Pieceful Quilting occupied the property. The final listing in 2013 identified Calree Designs, L Simmons and Pieceful Quilting on the subject property. Refer to **Appendix H** for a copy of the City Directory Abstract.

3.5.5 Data Gaps

The aerial photographs reviewed exceeded the five (5) year interval in several consecutive photographs in the series as noted above. The data gap has been evaluated and it is noted that the subject property contained the existing building from prior to 1929 until the present.

3.6 SITE AND VICINITY CHARACTERISTICS

The subject property is developed with a two (2) story commercial/residential structure with a paved parking lot area. The building is divided into four (4) sections which contain an apparel store, an acupuncturist's office, an upholstery store and an apartment. The apparel store, which is located on the first floor of the east side of the building, also has two (2) rooms on the second floor. The upholstery store is located on the west side of the first floor, the acupuncturist is in the central portion of the building and the apartment is located on the second floor. The building consists of a wood framed structure situated on a concrete slab foundation, with wood and vinyl shingle siding, and an asphalt shingle roof.

The area immediately surrounding the subject property is comprised mainly of commercial, aquatic and residential uses. **Appendix D** contains site photographs which depict typical views of the subject property. An aerial photograph depicting the existing conditions of the subject property is provided as **Figure 2**.

3.7 DESCRIPTION OF SITE IMPROVEMENTS & FACILITIES

The subject property is currently improved with a two (2) story retail/apartment structure and a paved parking area. Following, is a specific description of construction materials and building characteristics:

Construction - The two (2) story building consists of a wood framed structure situated on a concrete slab foundation. The exterior of the building consists of wood and vinyl shingles and an asphalt shingle roof.

Interior - Interior surfaces in the apparel store consists of hardwood and carpet floors along with wood panel painted sheetrock walls. The upholstery store consists of painted sheetrock and wood panel walls and bare concrete floors. The acupuncture center consisted of painted sheetrock walls and carpeted floors. The apartment consisted of painted sheetrock walls and hardwood floors.

Heating/Air Conditioning Equipment - The majority of the structure is heated by natural gas heaters. The upholstery store contains an oil burner which is supplied by a 275 gallon above ground fuel oil storage tank located on the west side of the building.

Asbestos Containing Material (ACM) - No suspected ACM was observed during the reconnaissance of the subject property. According to Industrial Code 56, if major renovation or demolition of any of the buildings is contemplated, a complete asbestos survey for both friable and non-friable ACM is required. This report is not a substitute for a complete demolition asbestos survey.

Storage Tanks - A 275 gallon above ground fuel oil storage tank was observed on the west side of the building. No other underground or above ground storage tanks were observed during the reconnaissance of the subject property.

Drum Storage - No drums were observed during the reconnaissance of the subject property.

Sanitary Disposal - The subject property is serviced by the Town of Riverhead sewage collection system.

Water Supply - The subject property is served by the Riverhead Water District.

Utilities - Electrical service is available to the subject property is provided by PSEG-LI.

PCBs - No sources of PCBs were observed during the reconnaissance of the subject property.

Floor Drains - No floor drains were observed during the reconnaissance of the subject property.

Stormwater - No stormwater drainage features were observed during the reconnaissance of the subject property.

No areas of staining, or evidence of discharge, areas of stressed vegetation, residue of oils or other toxic substances, pools of discharge, petroleum or chemical odors, or other such indicators were noted during the site reconnaissance.

3.8 Adjacent Land Use

Current land use at the subject property and surrounding area is described based on aerial photographs and visual observations.

South: Peconic River, beyond which is Kander Academy of Long Island and Flanders Road.
West: Commercial uses, beyond which is Peconic Avenue.
North: Main Street, beyond which is Riverhead Methodist Church.
East: McDermott Avenue, beyond which are residential uses and the Long Island Aquarium.

3.9 NATURAL SETTING

3.9.1 Soils and Topography

The surficial geology of a site can often provide insight into the past activities on a given parcel of land. The Soil Survey of Suffolk County, conducted by the U.S. Department of Agriculture in 1975 is a useful source of soils information, which identifies soil types resulting from natural deposition and modification, as well as man-induced alterations associated with land use.

The subject property is comprised of soil type identified as Ur - Urban Land. The characteristics of this soil type are identified as follows **(Warner et al., 1975)**:

> *Urban Land (Ur): The urban land areas consist of areas that are more than 80 percent covered with buildings and pavement. Examples are parking lots, business districts of larger villages, and densely developed industrial parks. Examination and identification of the soils in these areas are impractical.*

The nature of the surrounding area is that of undeveloped woodland, residential land, and local roads. The subject property has undulating topography with some areas of gentle slopes. Neither soils nor topography appear to pose a constraint to the current use of the subject property. Bedrock in the vicinity of the subject property is approximately 900 feet below grade.

The soil types overlying the subject property are illustrated in **Figure 5**. The topography of the subject property is provided in **Figure 6**.

3.9.2 Groundwater Resources

Groundwater on Long Island is entirely derived from precipitation. Precipitation entering the soils in the form of recharge, passes through the unsaturated zone to a level below which all strata are saturated, referred to as the water table. The groundwater table is equal to sea level on the north and south shores of Long Island, and rises in elevation

toward the center of the Island. The high point of the parabola is referred to as the groundwater divide. The changes in elevation of the water table create a hydraulic gradient which causes groundwater to flow, dependent upon potential.

The subject property is south of the groundwater divide, indicating that in the horizontal plane, flow is generally toward the south. Groundwater will ultimately be discharged from the subsurface system into the Peconic River. The major water bearing units beneath the subject property include: the Upper Glacial aquifer, the Magothy aquifer, and the Lloyd aquifer **(Smolensky et al, 1989).**

The elevation of groundwater beneath the subject property is less than 5 feet above msl, depending on meteorological conditions associated with the water year. The topographic elevation of the subject property is approximately 5 feet. Therefore, the depth to groundwater is less than 5 feet. The water table elevations and generalized direction of flow are illustrated in **Figure 7**.

The Suffolk County Comprehensive Water Resources Management Plan (SCCWRMP) provides information on water quality from 0 to 400 feet below the water table, based upon observation as well as public and private water supply and well monitoring. The general area in proximity to the subject property is depicted as having good water quality with respect to nitrate-nitrogen (0-6 mg/l) at between 0 and 100 feet. With regard to organic compounds, SCDHS water quality data presented in the Suffolk County Comprehensive Water Resources Management Plan indicates that Volatile Organic Compound levels at 0-100 feet below the water table are good (<60% of standard) and found not to exceed drinking water standards the majority of the time; however, there are several areas in proximity to the site that exceed drinking water standards for organic parameters. The Suffolk County Department of Health Services (SCDHS) conducted an eighteen (18) month long study of the impact pesticides have had on the groundwater. The study obtained water quality information from across the full geographic area of both counties in order to identify if any pesticides and metabolites had leached into the groundwater. The data from the wells in Nassau County and the five (5) western Towns of Suffolk show that only 1.5 and 2.0%, respectively, exceeded the pesticide related drinking water MCL and 15.4% of the wells in the five (5) eastern Suffolk Towns exceeded the MCL. Private wells in the five (5) eastern towns are at the highest risk of pesticides contamination. Based on the maps provided in the appendix of the SCDHS revealed the subject property is not located in the vicinity of any wells which are contaminated with pesticides. The subject property is in the Town of Riverhead water supply distribution area.

3.9.3 Wetlands

The subject property was inspected to identify the possible presence of any wetland vegetation and/or water surfaces that would sustain wetland vegetation. Review of NYSDEC Freshwater Wetland Maps indicated that there are no designated wetlands on the subject property; however, freshwater wetlands are depicted in the vicinity of the subject property, including the Peconic River. The National Wetland Inventory (NWI)

Maps indicated that there are no freshwater wetlands on the subject property but, wetlands were identified along the Peconic River in the vicinity of the subject property. The portion of the NYSDEC Freshwater Wetland Maps and National Wetlands Inventory Maps that cover the subject property and surrounding area are provided as **Figure 9** and **10**, respectively.

3.9.4 Coastal Barrier Improvements/Flood Plains

The subject property is located in the vicinity of a coastal area; however, no coastal barrier improvements exist or are required for the subject property. The subject property is located in Flood Zone AE. The portion of the Flood Insurance Rate Map that covers the subject property is provided in **Figure 11**.

3.9.5 Critical Habitat/Endangered Species

The NYSDEC Environmental Resource Mapper verified that there are rare and threatened plant species listed for the North Sea area where the subject property is located. The species listed include the swamp sunflower (threatened), the small-flowered pearlwort (endangered), and the velvety bush-clover (threatened). None of these species have been documented since 1946 and since the land has undergone clearing and disturbance since 1946, it is not expected that these species would be present on the subject property. No rare or endangered species were observed during the site reconnaissance. This report is not a substitute for a study of the site by a qualified biologist.

4.0 USER PROVIDED INFORMATION AND INTERVIEWS

The purpose of this section as defined in Section 6 of the ASTM E1527-13 is to describe tasks to be performed by the user (the individual or entity for which this document has been prepared) that will help identify the possibility of recognized environmental conditions in connection with the subject property. This information does not require the technical expertise of an environmental professional and is generally not performed by environmental professionals who prepare Phase I Environmental Site Assessments. The information provided in this section is the sole responsibility of the user and has been included in this report if provided by the user.

4.1 Title Records

A Title Report was not provided for review as part of this Phase I ESA.

4.2 Environmental Liens or Activity and Use Limitations

No environmental liens appear to have been imposed on the subject property. No other activity or use limitations have been imposed on the subject property to best of our knowledge.

4.3 Specialized Knowledge

No specialized knowledge or information was available regarding the subject property.

4.4 Commonly Known or Reasonably Ascertainable Information

No commonly known or reasonably ascertainable information was provided or available to be included as part of this Phase I ESA.

4.5 Property Valuation Reduction for Environmental Issues

Based on the inspection of the property and review of available documentation no reduction in the price of the land appears to be warranted due to the presence of past or existing hazardous or toxic materials provided the items described in Section 6.0 are satisfactorily addressed.

4.6 Owner, Property Manager and Occupant Information

The subject property is currently owned by Robert H. Gammon.

4.7 Reason for Performing Phase I ESA

This Phase I ESA has been completed as part of the due diligence of purchasing the subject property.

5.0 ENVIRONMENTAL RECORDS AND AGENCY DATA REVIEW

With the understanding of the facilities at the subject property, it is important to establish the environmental and regulatory conditions of the subject property and surrounding area, as related to public health and environmental issues. This section of the report includes a review of agency records, soils and groundwater resources and historical data review. The site inspection and the environmental and regulatory conditions form the basis for conclusions regarding the risks and liabilities associated with this site.

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

A search of Federal, State and Local databases was performed in order to provide a profile of the site and surrounding area with regard to published government agency records. The procedures employed adhere as closely as possible to ASTM standards.

Contact was made with the United States Environmental Protection Agency (USEPA), the New York State Department of Environmental Conservation (NYSDEC), the Suffolk County Department of Health Services (SCDHS), and local government regarding environmental and/or public health concerns associated with the subject property.

5.1.1 United States Environmental Protection Agency

The United States Environmental Protection Agency was contacted in order to obtain information regarding the National Priorities List (NPL), and sites documented on the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS). The NPL defines all known hazardous material waste sites, which are described by the Federal Government as needing immediate cleanup action. All hazardous material waste sites considered for addition to the NPL are listed in the CERCLIS list.

Review of the NPL Site List (search distance 1.0 mile), and the CERCLIS) lists (search distance 0.5 miles) finds the following with respect to the subject property and surrounding area:

1. Subject property did not appear on the NPL, Delisted NPL or CERCLIS lists.
2. There were no sites appearing on the NPL list located within one (1.0) mile of the subject property.
3. There were no sites appearing on the Delisted NPL list located within one half (0.5) mile of the subject property.
4. There were no sites appearing on the CERCLIS Non-NFRAP list located within one-half (0.5) mile of the subject property.
5. There were no sites appearing on the CERCLIS NFRAP list located within one-half (0.5) mile of the subject property.

The USEPA was also contacted in order to obtain information concerning RCRA TSD facilities (treatment, storage, and disposal of hazardous wastes, as defined and regulated by the Resource Conservation and Recovery Act, RCRA), and RCRA Generators (of hazardous wastes as defined and regulated by RCRA). RCRA TSD facilities are sites that treat, store or dispose of wastes that can be toxic, flammable, corrosive, explosive or otherwise hazardous; and, RCRA Generators are sites that generate or transport wastes of the above noted characteristics. The search also included review of the Emergency Response Notifications System (ERNS) list, which is a list of reported releases or spills in quantities greater than reportable quantities, Federal Permit Compliance System Toxic Wastewater Discharges (PCSTWD) which permits toxic wastewater discharges and Federal Civil Enforcement Docket (CED) which lists judiciary cases filed on behalf of the EPA by the Department of Justice.

Review of the RCRA TSD Facilities List (search distance 1.0 mile), the PCSTWD and CED facilities (search distance 0.25 mile), the RCRA Generator List (search distance, subject property and adjoining properties), and the ERNS List (search distance, subject property only) finds the following with respect to the subject property and surrounding area:

1. The subject property did not appear on the RCRA TSD Facilities List, or the ERNS List.
2. The subject property did not appear on the RCRA Generator list.
3. The subject property was not listed as a Civil Enforcement Docket Facility.
4. The subject property was not listed for Permit Compliance System Toxic Wastewater Discharges.
5. The subject property was not identified on the ERNS list.
6. There were no sites listed as RCRA TSD facilities identified within one (1.0) mile of the subject property.
7. There were five (5) RCRA Generators within 1,000 feet of the subject property. Information regarding the nine (9) other generators located within one quarter (0.25) mile of the subject is included in **Appendix C**.
    a. Print Options Incorporated (Facility ID# NYD987000627), located 306 feet to the north at 301 East Main Street is historically listed as a small quantity generator of 90 gallons of silver in 1995.
    b. Pergament Home CTR Stores (Facility ID# NYR000099150), located 502 feet to the northwest at 138 East Main Street is historically listed small quantity generator of 2,500 pounds of 2,4-Dichlorophenoxyacetic acid in 2001.
    c. Mobil Oil Corporation (Facility ID# NYD981877103), located 640 feet to the northeast at 415 East Main Street generated 49 gallons of solid waste that exhibits the characteristic of ignitability in 1987.
    d. Town of Riverhead Main Street Aquarium Site (Facility ID# NYR000073452), located 647 feet to the east northeast at 431 East Main Street is historically listed as a large quantity generator of arsenic (40 cubic yards in 1999) and silver (15 gallons of 2008).
    e. Town of Riverhead Engineering Dept. (Facility ID# NYR000073452), located 935 feet to the northeast at 467 East Main Street is historically listed as a large quantity generator of arsenic (40 cubic yards in 1999) and silver (15 gallons of 2008).
8. There were no CED facilities within one-quarter (0.25) mile of the subject property.

9. There were no PCSTWD facilities located within one-quarter (0.25) mile of the subject property.

The RCRA Generator program is intended to track the origin and destination of hazardous waste, and there is no indication that listing on this inventory constitutes an environmental threat. The generator noted above is located cross gradient and at a sufficient distance from the subject property and, therefore, is not expected to adversely impact the subject property. In addition, the Federal Facilities Index that includes resources conservation and Recovery Corrective Action Sites (CORRACTS) was reviewed.

1. There were no RCRA CORRACTS facilities located within one (1) mile of the subject property.

5.1.2 New York State Department of Environmental Conservation (NYSDEC)

The NYSDEC is charged with the responsibility of registering inactive hazardous waste disposal sites, and administering the investigation and cleanup of such sites. The NYSDEC inventory is contained in the publication, Inactive Hazardous Waste Disposal Sites in New York State. The inventory provides the location, extent of contamination and remediation status of each listed site in New York State. Accordingly, the registry of the NYSDEC was consulted for information on Inactive Hazardous Waste Disposal Sites (IHWDS). The NYSDEC provides information regarding Hazardous Substance Waste Disposal Sites (HSWDS) that are sites contaminated with toxic substances but are not eligible for state cleanup funding programs. The NYSDEC provides information regarding Brownfield cleanup site - these are sites that are abandoned, idled or under-used industrial and/or commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination. Similarly, the NYSDEC is responsible for permitting Solid Waste Facilities (SWF) - these are facilities including landfills, incinerators, transfer stations and other solid waste management sites. The NYSDEC also registers Petroleum Bulk Storage (PBS) where the total storage capacity at the facility exceeds 1,100 gallons, Chemical Bulk Storage (CBS), Major Oil Storage Facilities (MOSF) and Toxic Release Inventory Sites (TRI). Finally, the NYSDEC regulates and monitors Air Discharges and NYS Toxic Spills which include Leaking Underground Storage Tanks (LUSTs).

Review of the IHWDS, Brownfield Sites and HSWDS Lists (search distance 1.0 mile), SWF, CBS and MOSF lists, and LUST Lists (search distance 0.5 miles), TRI and Air Discharge sites (search distance 0.25 miles) and the PBS List (search distance, subject property and adjoining properties) finds the following with respect to the subject property and surrounding area:

1. The subject property was not listed as an IHWDS, Brownfields or HSWDS site.
2. The subject property was not listed on the SWF, CBS or MOSF Lists.
3. The subject property was not listed as a PBS facility.
4. The subject property was not listed on the NYS Toxic Spill site list.

5. The subject property was not listed as a TRI Site.
6. The subject property was not listed on the NYS Air Discharge list.
7. The subject property was not listed as having a LUST incident.
8. There were no IHWDS facilities located within one (1.0) mile of the subject property.
9. There were no HSWDS facilities located within one (1.0) mile of the subject property.
10. There were no Brownfields Sites located within one (1.0) mile of the subject property.
11. There were no SWF listing identified within one-half (0.5) mile of the subject property.
12. There were five (5) PBS facilities located within 500 feet of the subject property. Information regarding the twenty-two (22) facilities located within one quarter (0.25) mile is included in **Appendix C**.
    a. Riverhead Town Sewer District Pump Station (Facility ID# NYSF12539), located 265 feet to the northeast on Defriest Street currently utilizes and 275 gallon above ground diesel fuel storage tank. A 550 gallon underground diesel fuel storage tank was removed from the property in June, 1999.
    b. Jetset Printing (Facility ID# NYSF12360), located 303 feet to the north at 301 East Main Street did not provide any tank information.
    c. Sears Roebuck & Co. (Facility ID# NYSF12576), located 323 feet to the northwest at 203 East Main Street had a 275 gallon above ground waste oil storage tank removed in September 1993. A 550 gallon #6 fuel oil underground storage tank and 1,500 gallon #2 fuel oil storage tank were present on the property in the past. No information was provided regarding the status of these tanks.
    d. Senebo Realty Inc. (Facility ID# NYSF12351), located 540 feet to the north northeast at 312-324 Main Street currently has six (6) 275 gallon above #2 fuel oil storage tanks which were installed in 1999.
    e. Riverhead Enterprises (Facility ID# NYSF12526), located 545 feet to the west northwest at 128 East Main Street had a 3,000 gallon underground #2 fuel oil storage tank removed in May 1990.
13. There were no CBS sites within one-quarter (0.25) mile of the subject property.
14. There were no State Registered MOSF facilities within one-half (0.5) mile of the subject property.
15. There were no TRI sites within one-half (0.5) mile of the subject property.
16. There were no Air Dischargers located within one-quarter (0.25) mile of the subject property.
17. There were one (1) active and eleven (11) closed LUST incidents identified within one half (0.5) mile of the subject property.

The NYSDEC also responds to incidents involving hazardous waste spills. The Department maintains a logbook and files on all reported and actual incidents at the NYSDEC offices at Stony Brook. This file was reviewed in conjunction with the subject property. Review of the file revealed that ten (10) active and eighty-three (83) closed spill incidents were identified within one-half (0.5) mile of the subject property. All of the closed incidents were reported to be relatively minor and addressed to the satisfaction of the NYSDEC and most of the closed and active incidents were not in close vicinity and/or either cross or down gradient of the subject property. One spill located 344 feet to the north of the subject property impacted storm drains going down to the Peconic River. None of these incidents are expected to impact the subject property.

Information regarding all of the reported incidents is contained in **Appendix C**, beginning on page 14.

5.1.3 Suffolk County Department of Health Services (SCDHS)

The SCDHS performs many important functions in environmental resource protection. These include inspection of facilities that use or store significant quantities of toxic or hazardous material or generate waste. The computer database for tank registrations was reviewed and found to contain no information regarding the subject property.

Also of interest with regard to Health Department functions is a study completed in conjunction with Cornell University, referred to as the CLEARS study (Cornell Laboratory for Environmental Applications of Remote Sensing). This research involves stereoscopic analysis and interpretation of historic aerial photographs for the purpose of identifying past and present hazardous waste disposal sites, solid waste disposal sites, disturbed areas, chemical storage, and other potential sources of contamination. The study has been ongoing since approximately 1986. The CLEARS study was consulted with regard to the area surrounding the subject property.

No CLEARS study sites were identified within the general vicinity of the subject property.

The CLEARS Study assists with an historical perspective of the site and surrounding area. Little interpretation can be made with regard to the findings of the CLEARS study. There is no confirmation of activities which may have caused environmental degradation with regard to any of the sites. The SCDHS contracted the CLEARS study and will continue to interpret the results and take remedial action as necessary. The subject property is not listed as a CLEARS study site and the above sites are not expected to impact the subject property.

5.1.4 Local Agencies

Freedom of Information requests were submitted to the Town of Southampton Department of Fire Prevention, Building Department, and Planning Department. A response from the Department of Fire Prevention indicated that they didn't have any records on file for the subject property. Any pertinent information obtained from the Building Department and Planning Department will be forwarded as an addendum to this report. The zoning of the subject property and surrounding area is provided in **Figure 4**. The Town Tax Assessors records identified the subject property as being owned by one entity which is summarized in **Section 4.6**.

6.0 FINDINGS

NP&V has performed a Phase I Environmental Site Assessment for 31 McDermott Avenue, located on the west side of McDermott Avenue, approximately 285 feet south of East Main Street, Riverhead, Suffolk County, New York. This environmental inspection report, has been conducted in order to provide the prospective purchaser and/or lending institutions with accurate and complete information regarding the subject property, surrounding area, historic uses, agency records and regulations, and additional environmental considerations. Based upon this report, the limitations of this report and the methodology employed, the following statement is provided:

NP&V has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 and USEPA AAI for 31 McDermott Avenue located in Riverhead, New York. Any exceptions to, or deletions from, this practice are described in Section 9.0 of this report.

This assessment has identified the following with respect to recognized environmental conditions, controlled recognized environmental conditions, de minimus conditions and historic recognized environmental conditions in connection with the subject property, subject to the methodology and limitations of this report.

One (1) recognized environmental condition was noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

1. The Sanborn Maps from1929 to 1969 identified a gasoline storage tank off the northeast corner of the existing building. It is unknown if tank has been removed from the subject property.

No controlled recognized environmental conditions were noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

One (1) de minimus condition was noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

1. A 275 gallon above ground fuel oil storage tank is located on the west of the building.

No historic recognized environmental conditions were noted on the subject property based on the site reconnaissance, interviews and regulatory agency records review.

7.0 OPINIONS

It is the opinion of the environmental professional who completed this assessment that there is evidence of one (1) recognized environmental condition, one (1) de minimus condition, no controlled recognized environmental conditions, and no historic environmental conditions in connection with the subject property, based on the reconnaissance, interviews or regulatory agency records review conducted as part of this Phase I ESA, subject to the methodology and limitations of this report. As a result of the observations noted in this report, the following recommendations are provided.

1. The subject property should be subject to a Ground Penetrating Radar (GPR) survey to determine if the tank which appears on the Sanborn maps is still present, and sampling in the vicinity of the previously identified tank should be completed to determine the environmental quality of subsoils on the property in this area.

2. If the 275 gallon above ground fuel oil storage tank is no longer in use, the tank should be emptied and removed from the subject property and properly disposed of in order to prevent a future release from occurring.

3. If the structure is to undergo major renovation or demolition, an Asbestos Survey should be completed in accordance with the New York State Department of Labor Industrial Code 56.

8.0 CONCLUSIONS

This assessment was performed at the Client's request using the methods and procedures consistent with good commercial or customary practice designed to conform with acceptable industry standards.

This report is expressly and exclusively for the sole use and benefit of the Client identified on the first page of this report and is not for the use or benefit of, nor may it be relied upon by, any other person or entity without the advance written consent of NP&V.

The independent conclusions represent NP&V's best professional judgment based on information and data available to the consultant during the course of this assignment. NP&V's evaluations, analyses and opinions are not representations regarding either the design integrity, structural soundness or actual value of the property. Factual information including operations, site conditions and available test data provided by the Client or their representative have been assumed to be correct and complete. The conclusions presented are based on the data provided, observations and conditions that existed on the date of the assessment.

9.0 DEVIATIONS & ADDITIONAL SERVICES

9.1 Deviations

This report was completed in accordance with the standards set forth in the ASTM E 1527-13 and the USEPA AAI. No deviations from these standards were undertaken during the completion of this report.

9.2 Additional Services

A Tier 1 Vapor Encroachment Condition (VEC) Assessment was conducted as part of this Phase I ESA due to the proximity of several spill incidents. The assessment was conducted in accordance to the methods and procedures outlined within ASTM E2600-15, Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions.

For this assessment under conditions where the direction of groundwater flow can be ascertained critical search distances are used to determine if a VEC exists. Specifically the following distances are applied to the Tier I Assessment:

Upgradient Sources
1,760 feet for Chemical of Concern (COC)
520 feet for petroleum hydrocarbons

Cross-gradient Sources
365 feet for COC
165 feet for petroleum hydrocarbon LNAPL sources & 95 feet dissolved petroleum hydrocarbon sources with plume considerations

Down-gradient Sources
100 feet for COC/petroleum hydrocarbon LNAPL sources
30 feet dissolved petroleum hydrocarbon sources

Review of the regulatory agency database report provided for the subject property did not identify any sites within the critical distances for potential contamination sources. Based on this finding and the lack of potential impacted sites in the vicinity of the subject property, a VEC can be ruled out because it does not exist or is not likely to exist.

No other additional services were provided as part of the report.

10.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312, and

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the "All Appropriate Inquiries" in conformance with the standards and practices set forth in 40 CFR Part 312.



10/6/16
Date

Charles J. Voorhis, CEP, AICP
Manager Partner

10/6/16
Date

Steven J. McGinn
Partner/Division Manager

11.0 REFERENCES

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United States Environmental Protection Agency (USEPA), 2013, Federal Register Volume 70, No 210, 40 CFR Part 312 Standards and Practices for All Appropriate Inquiries: Final Rule, Washington D.C.

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FIGURES



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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FIGURE 1
LOCATION

Source: ESRI Web Mapping Service

Scale: 1 inch = 100 feet

N

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Riverhead

Phase I ESA



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FIGURE 2
AERIAL PHOTOGRAPH

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

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FIGURE 3
LAND USE MAP

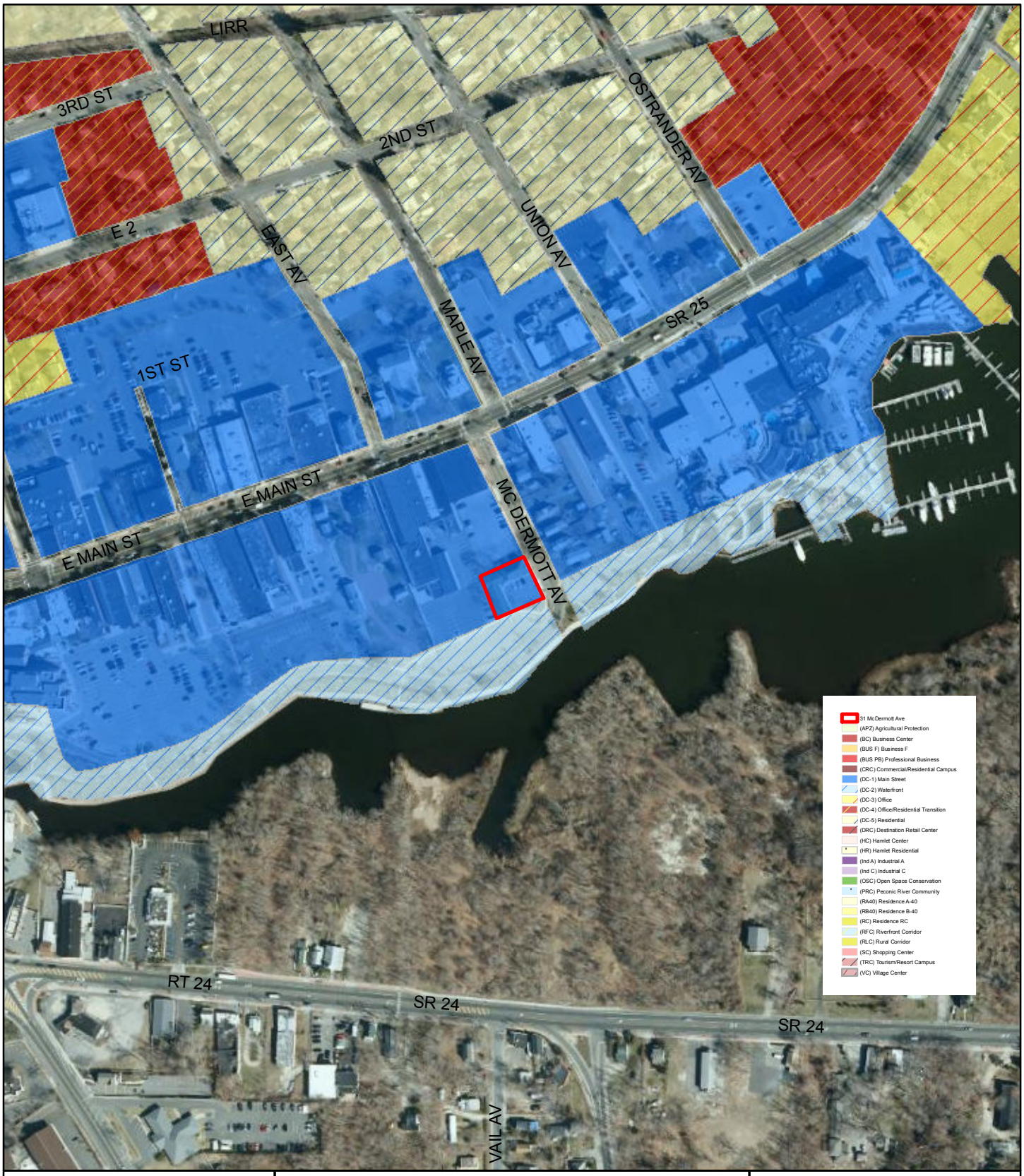
Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

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FIGURE 4
ZONING MAP

Source:ESRI wms; Town of Riverhead Zoning

Scale: 1 inch = 300 feet

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FIGURE 5
SOIL MAP

Source: ESRI Web Mapping Service, NRCS Soils Suffolk County, NY
Scale: 1 inch = 200 feet

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FIGURE 6
TOPOGRAPHIC MAP

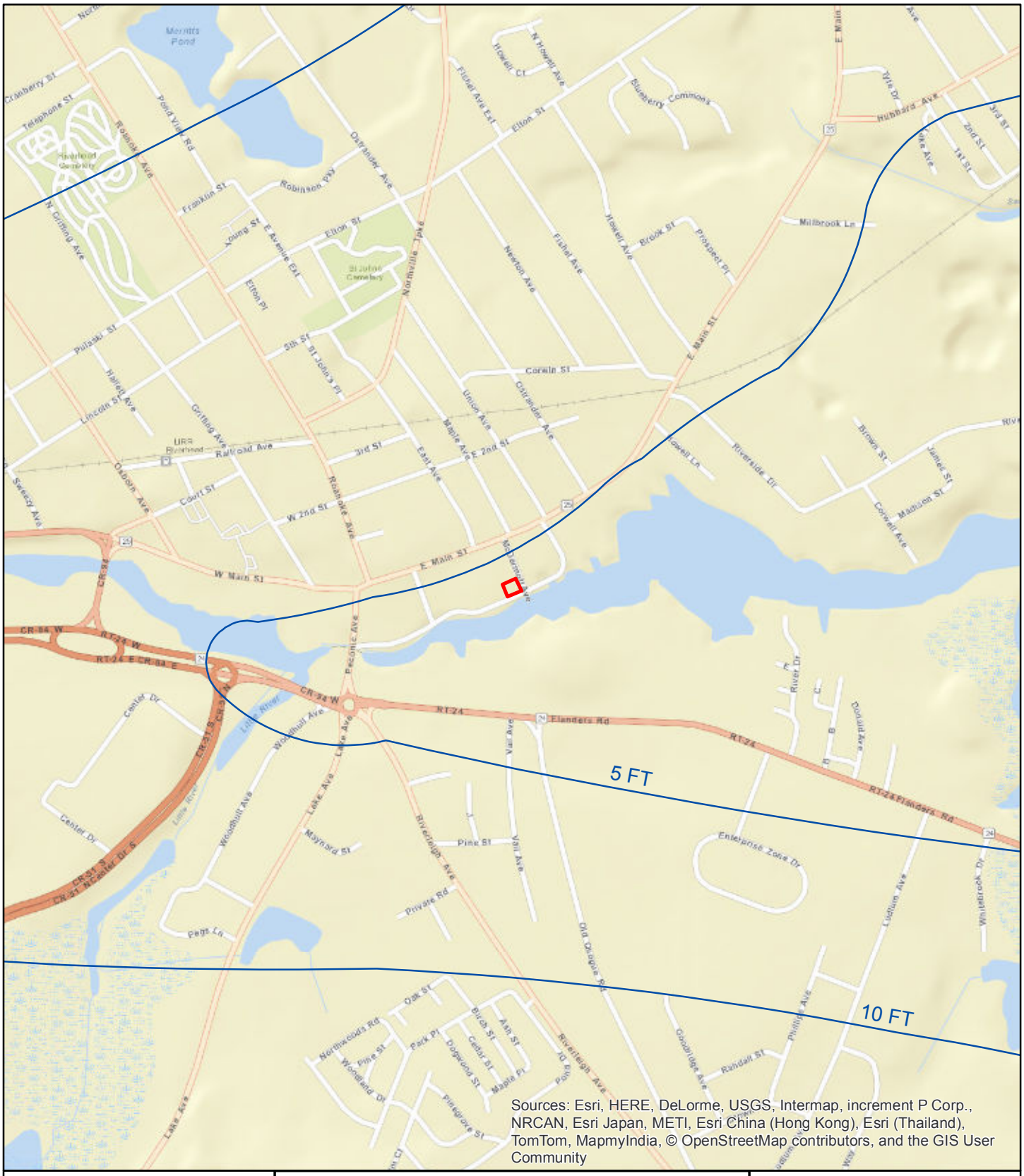
Source: ESRI Web Mapping Service, USGS

Scale: 1 inch = 500 feet

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FIGURE 7
WATER TABLE CONTOUR MAP

Source: ESRI Web Mapping Service, USGS 2013 data release, http://dx.doi.org/10.5066/F7RVOKSD
Scale: 1 inch = 1,000 feet

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FIGURE 8
WATER SUPPLY MAP

Source: ESRI Web Mapping Service,Suffolk SWAP dataset
Scale: 1 inch = 1,000 feet

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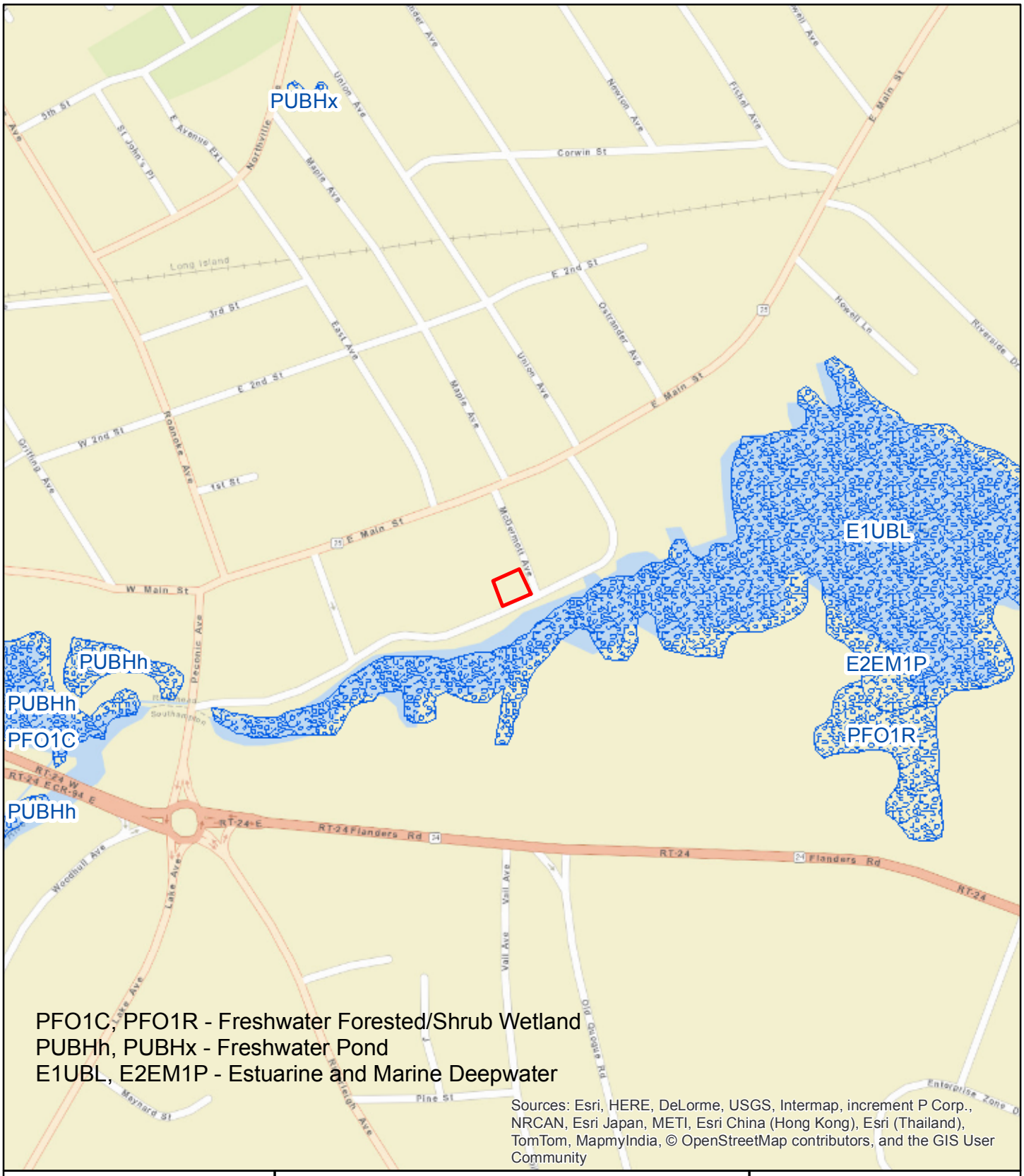
FIGURE 9
NYSDEC
WETLANDS MAP

Source: ESRI Web Mapping Service, NYSDEC Freshwater & Tidal Wetlands Maps
Scale: 1 inch = 500 feet

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PFO1C, PFO1R - Freshwater Forested/Shrub Wetland
PUBHh, PUBHx - Freshwater Pond
E1UBL, E2EM1P - Estuarine and Marine Deepwater

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FIGURE 10
NATIONAL WETLANDS INVENTORY MAP

Source: ESRI Web Mapping Service, National Wetlands Inventory Map (NWI, USF&WService)
Scale: 1 inch = 500 feet

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FIGURE 11
FEMA FLOOD MAP

Source: ESRI Web Mapping Service, FEMA

Scale: 1 inch = 500 feet

N

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Appendix B-5
Town of Riverhead East Main Street Urban Renewal Plan Update 2008 (text only)

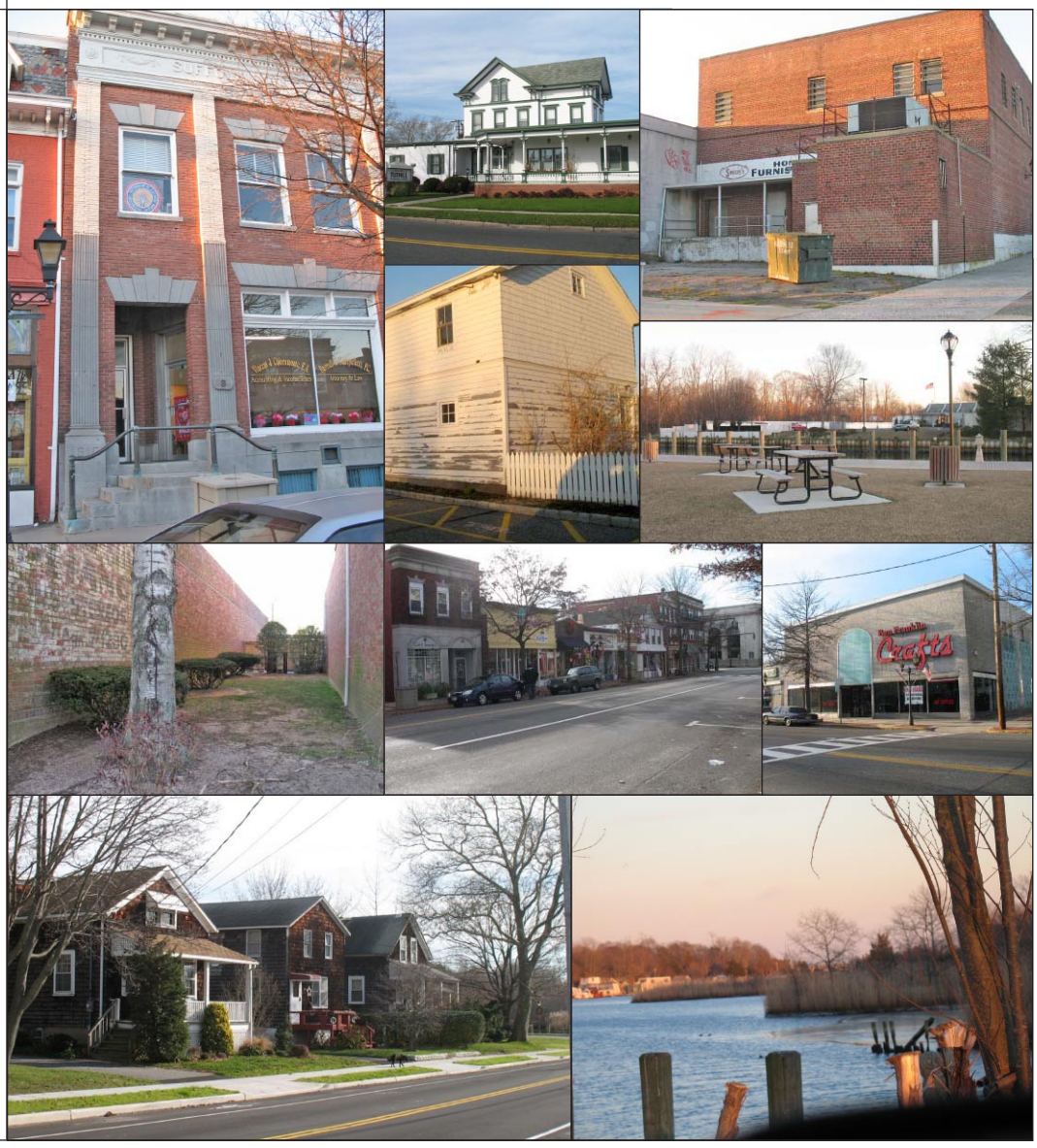
Town of Riverhead Community Development Agency

October 2008

NELSON POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

Town of Riverhead

East Main Street Urban Renewal Plan Update 2008



Prepared by:
Town of Riverhead Community Development Agency
with assistance from
AKRF, Inc.
and
Dunn Engineering Associates, P.C.

October 2008

Town of Riverhead

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September 2008

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A. INTRODUCTION

In 1993, the Town of Riverhead Community Development Agency (CDA) prepared the *East Main Street Urban Renewal Plan* (1993 Plan). The impetus for the CDA, acting as the Town's urban renewal agency, to prepare the 1993 Plan was to propose redevelopment of certain areas of the downtown that were blighted and deteriorated and where numerous structures had been vacant or underutilized for an extended period of time. Historically, the East Main Street Urban Renewal Area (EMSURA) served as a commercial downtown center for Riverhead residents. The decline of this area, as stated in the 1993 Plan, was a direct result of the development of larger commercial centers, such as shopping malls and large single-use retail stores that are situated along Suffolk County Route 58.

Since the adoption of the 1993 Plan, the Town has introduced various programs and improvements to the downtown area in conformance with the recommendations of the plan. Some of these improvements include the development of new and attractive structures, elimination of blighted buildings, and several land use and zoning changes, including the development of the waterfront park. Notwithstanding these improvements, the area continues to be plagued with blight and vacancy as a result of the decline of commercial retail uses, and therefore, further redevelopment should be encouraged. However, since 1993, there have been several land use and public policy changes within the EMSURA that impact the character and intent of the EMSURA. Such changes include the development of a key commercial anchor—Atlantis Marine World Aquarium; the adoption of several planning documents, including the *Town of Riverhead 2003 Comprehensive Plan* (2003 Comprehensive Plan); and a change in the zoning within the EMURA from Business D District to the Downtown Center 1: Main Street (DC-1) and Downtown Center 2: Waterfront (DC-2) Districts. Further, changes in the Town's socioeconomic environment and commercial and retail development patterns also affected the land use pattern within the EMSURA. These changes, combined with the Town's intent to continue revitalization of the EMSURA, warrant an update to the 1993 Plan.

The intent of this East Main Street Urban Renewal Plan Update 2008 (2008 Update) is to assess the present day issues and conditions within the EMSURA and make recommendations that are consistent with the Town's current planning goals and objectives. Further, this 2008 Update will serve as the future roadmap to continued urban renewal and economic revitalization, lead and coordinated by the CDA.

This 2008 Update has been written in full compliance with the General Municipal Law Article 15: Urban Renewal Law.

EAST MAIN STREET URBAN RENEWAL AREA

The EMSURA is located in the south-central portion of the Town of Riverhead, Suffolk County, New York (see Figure 1). The total land area, including roadways, within the EMSURA

boundary is approximately 41 acres and includes 90 separate Suffolk County Tax Map parcels. More than 98 percent of the land within the EMSURA is developed or in active use, including parking, and the remaining 2 percent is undeveloped.

Figure 2 shows the geographic boundaries of the study area. The EMSURA is bounded on the north by East Second Street, on the east by land adjacent to the eastern property boundary of the Treasure Cove Resort and Marina, on the south by the Peconic River, and on the west by Peconic and Roanoke Avenues.

B. LEGISLATIVE HISTORY

ARTICLE 15: URBAN RENEWAL LAW

The Article 15 of the New York State General Municipal Law grants all New York State municipalities the authority to plan and undertake urban renewal projects as well as the power to carry out or effectuate such projects. As stated, the CDA has been designated as the Town's urban renewal agency. The 1993 Plan and the 2008 Update have been prepared pursuant to the State's Urban Renewal Law.

Sections 501 through 503 of Article 15 describe the circumstances that warrant the preparation of an urban renewal plan as well as the authority granted to an urban renewal agency. According to Section 501, slum or blighted conditions occur "because of substandard, unsanitary, deteriorated, or deteriorating conditions, factors, and characteristics, without tangible physical blight." Section 502 of Article 15 defines a substandard or unsanitary area as:

> *interchangeable with a slum, blighted, or deteriorated or deteriorating area, or an area which has a blighting influence on the surrounding area, whether residential, non-residential, commercial, industrial, vacant, or land in highways, railway and subway tracks, bridge and tunnel approaches and entrances, or other similar facilities, over which air rights and easements or other rights of user necessary for the use and development of such air rights, to be developed as air rights sites for the elimination of the blighting influence, or any combination thereof and may include land, buildings or improvements, or air rights and concomitant easements or other rights of user necessary for the use and development of such air rights, not in themselves substandard or unsanitary, the inclusion of which is deemed necessary for the effective undertaking of one or more urban renewal programs.*

According to Section 503(h), the Town Board has the authority to require, for a maximum period of three years, the consent of the urban renewal agency before issuing building permits, alteration permits, or certificates of occupancy for a structure or use within the urban renewal area for which the urban renewal plan has been approved. The purpose of this provision is to allow the Town to preserve and secure the integrity of the newly adopted urban renewal plan.

ARTICLE 15-A: MUNICIPAL URBAN RENEWAL AGENCIES, ORGANIZATION AND POWERS

Article 15-A, Section 554 of the State's General Municipal Law provides urban renewal agencies with broad powers to plan and undertake urban renewal projects. Urban renewal agencies are given the powers "necessary or convenient" to complete urban renewal projects. Such controls include the power to prepare urban renewal plans; to sue and be sued; to use municipal employees and facilities with the municipality's permission; to enter contracts; to borrow money; to issue bonds, notes, and mortgages; to acquire and transfer property; to provide

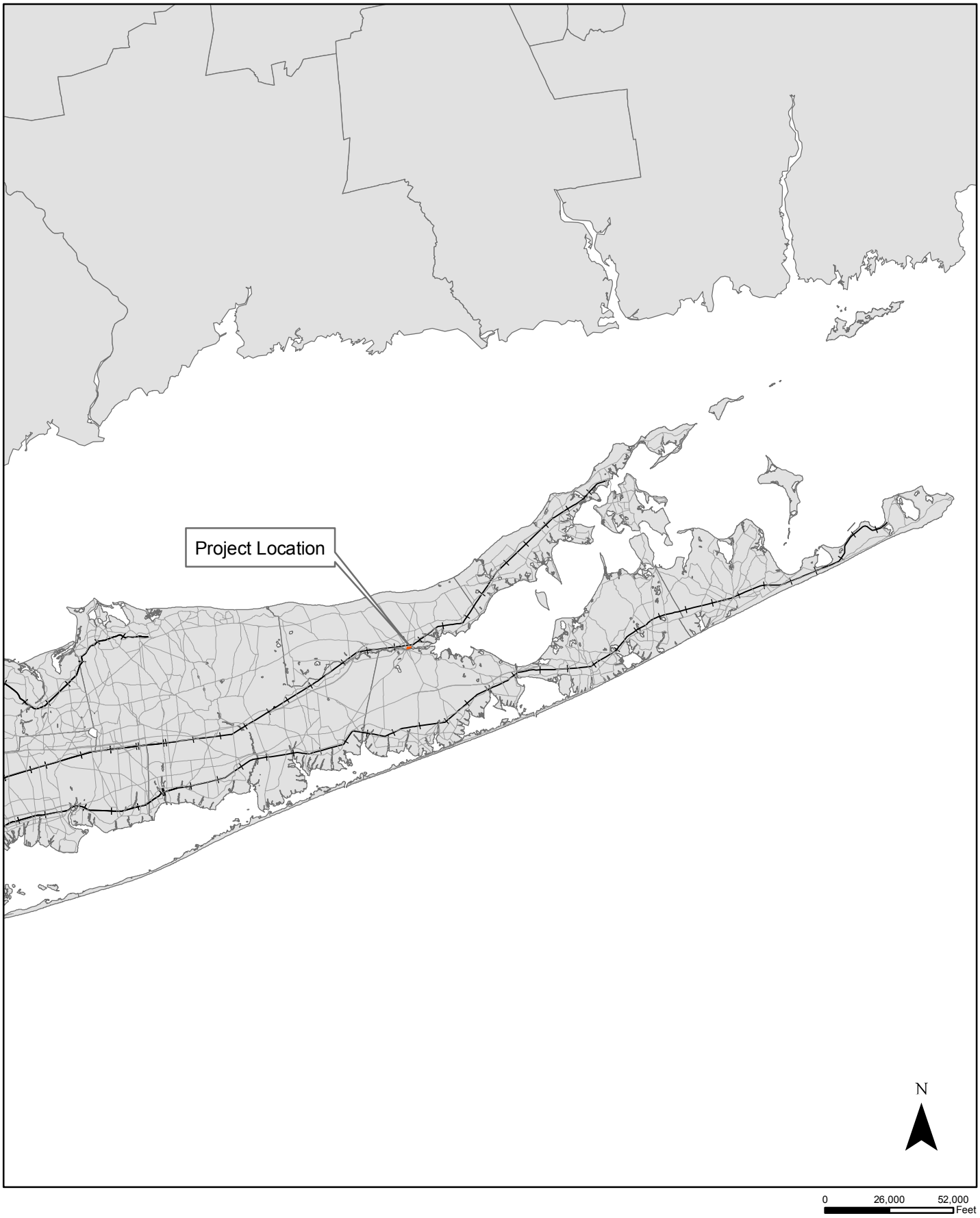


Figure 1
Regional Project Location



Figure 2
ESMURA Boundary

for demolition, clearance, and improvement of property; and to accept financial assistance from public and private sources.

ARTICLE 15-B: MUNICIPAL URBAN RENEWAL AGENCIES, CREATED

Pursuant to Title 116 of Article 15-B of the General Municipal Law (Section 680-c), the CDA was designated as the urban renewal agency for the Town of Riverhead in 1982.

TOWN BOARD RESOLUTION

Since its inception, the CDA has undertaken a number of steps to implement the policies and goals of the Urban Renewal Law. Specifically, the CDA has implemented the goals and objectives of the 1993 Plan through the undertaking of several projects between 1993 and 2008. Some of these projects include:

- In the mid 1990s, the CDA acquired property along the riverfront previously utilized as a lumber yard and identified in the plan as underutilized and appropriate for redevelopment as a tourist related destination.
- After undertaking significant predevelopment, architectural, and environmental studies for the development of an aquarium, the CDA sold the property and project development plans to a private sponsor following the requisite hearings and process. The result is the Atlantis Marine World Aquarium, a thriving economic development activity in the EMSURA.
- In 1994, the Town acquired Suffolk Theatre intending to renovate and operate the facility as a performing arts theatre. After determining that public support for public financing of the endeavor was insufficient, the Town transferred the theatre to the CDA and a request for proposals followed to identify a private sponsor for purchase and renovation of the theatre. The theatre was sold in 2005 to the entity determined best suited for restoration of the 1937 structure based upon the criteria in the Urban Renewal Law and policy of the CDA for disposition of real property.
- Again in the 1990s, the Town assembled properties for the development of a flagship department store. Upon transfer by the CDA to the private company, a change in corporate policy resulted in a decision not to proceed. The CDA then held new hearings to determine a new qualified and eligible sponsor pursuant to the law, and in 2005 transfer was authorized to a private developer for the construction of a facility to house the culinary arts program of the Suffolk Community College by lease from the developer. This use serves to further the goals and objectives of the Urban Renewal Law and the 1993 Plan.

CDA RESOLUTION 7

On May 18, 2004, the Town Board of the Town of Riverhead adopted CDA Resolution 7 setting forth the rules and procedures for designation of sponsors (pursuant to Article 15 of the General Municipal Law) for the implementation of urban renewal projects. Those rules and procedures will govern the implementation of projects within the EMSURA.

In 2005, following rezoning of the EMSURA by the Town Board, the CDA published a Request for Expressions of Interest for distribution to the development community to encourage redevelopment of this area. Several responses were received, and in October 2006 a Request for Proposals was issued by the CDA requesting additional information from three development groups including financial documentation, developer experience, and proposed plans for the

EMSURA. Responses were received in January, evaluated by the CDA and a determination to proceed was made.

CDA RESOLUTION 2

The Town Board, on March 7, 2006, passed CDA Resolution 2 authorizing the CDA Chairman to commence negotiations with Apollo Real Estate Advisors, LP to develop a plan to revitalize downtown Riverhead.

CDA RESOLUTION 9

On September 9, 2006, the Town Board of the Town of Riverhead adopted CDA Resolution 9, authorizing the CDA to update the 1993 Plan and prepare a GEIS as mandated by the State Environmental Quality Review Act (SEQRA). CDA Resolution 9 is provided as Appendix A. Among the reasons given for the 2008 Update was the adoption of the Town's comprehensive plan in November 2003 and the subsequent amendment to the Town's zoning ordinance. It was determined that these two actions alone warranted an update of the 1993 Plan to ensure its consistency with the Town's recently enacted land use policies for the EMSURA.

CDA RESOLUTION 15

On October 17, 2006, the Town Board designated Riverhead Renaissance, LLP as the East Main Street Urban Renewal project Qualified and Eligible Sponsor, see Section F, "Proposed Land Use Plan" for additional information. According to Article 15 Section 507, a person who proposes to develop municipally owned property within an urban renewal area must be designated as a Qualified and Eligible Sponsor. A sponsor must agree to pay the minimum price or rental fee fixed by the agency for identified real property, and effectuate the proposed development within a definite and reasonable timeframe.

C. PUBLIC POLICY

Provided below is a discussion of public policies relevant to the EMSURA, including the 1993 Plan. Public policy serves as the basis for understanding past practices that have influenced the EMSURA as well as provides the foundation for future recommendations for the study area. In accordance with CDA Resolution 9, and as stated earlier, the public policies described below provide the purpose and need for preparing the 2008 Update.

EAST MAIN STREET URBAN RENEWAL PLAN (1993)

The 1993 Plan proposed a number of recommendations and implementation strategies for the EMSURA. The recommendations mainly proposed new land uses that encourage economic development consistent with the *Town of Riverhead Comprehensive Master Plan of 1973*, the zoning designation for the EMSURA, and the goals and objectives made in the 1993 Plan. Generally, the recommended land use changes were intended to fill existing vacancies with uses already permitted; encourage tourism; promote development associated with hotels, movie theaters, restaurants, and retail; promote waterfront uses; encourage maritime redevelopment of the Peconic Riverfront; foster the acquisition of deteriorated or blighted properties for clearance and redevelopment; redevelop and reuse buildings that are historically and/or culturally significant; and provide for the improvement of additional parking areas and public facilities and/or develop a multi-level parking facility.

Specifically, the 1993 Plan recommended the following land uses within the EMSURA pursuant to the Business D District (then the zoning classification of the EMSURA):

- Retail-commercial;
- Personal service-commercial;
- Office, business, professional;
- Financial institutions;
- Radio/television broadcasting studio;
- Food establishment/tavern;
- Marina;
- Theater;
- Single-family residential; and
- Recreational uses.

The 1993 Plan's density and parking recommendations for the proposed land uses were consistent with the Business D District regulations.

In addition to the uses listed above, the 1993 Plan stated that residential use of second- and third-story building space be provided by special permit. The plan also recommended the concurrent use of studio and artist residences in accordance with the following criteria: 1) artists be certified by an independent board, 2) the studio be the principal use with an accessory residential use occupying an area no less than 900 square feet, and 3) the studio may include a gallery.

The 1993 Plan identified several buildings that were used as multi-family residences, then a nonconforming use within the Business D District. All nonconforming and underperforming uses were considered "to imperil the success of the community plan and injure property values," and "offensive to the zoning ordinance due to their intensity of use." The 1993 Plan recommended that the Town consider either condemnation or amortization as a means to eliminate nonconforming and underperforming uses. Another recommendation was to encourage reuse of vacant structures.

The 1993 Plan also recommended that the Town maximize the public's visual and pedestrian access to the Peconic River by way of securing easements and air rights. The Peconic River is recognized as an invaluable resource that attracts visitors and tourists to the area. Thus, the Town created a waterfront park along the river, which is described in more detail in Section E of this report. As stated, the 1993 Plan also focused on real property acquisition of specific parcels for redevelopment of or improvement to the Riverhead Parking District as well as demolition and clearance of deteriorated structures. The CDA is the Town's lead agency for property acquisition within the EMSURA. Other recommendations set forth in the 1993 Plan included improvements to parking, lighting, signage and traffic patterns; placing overhead utilities underground; sidewalk improvements; and prohibiting the outdoor display of merchandise along East Main Street. All of these recommended improvements remain relevant and appropriate today.

Implementation strategies identified in the 1993 Plan include rehabilitation, demolition and clearance, acquisition, disposition, and redevelopment.

REVITALIZATION STRATEGY FOR DOWNTOWN RIVERHEAD

The Town of Riverhead adopted the *Revitalization Strategy for Downtown Riverhead* in August 2000. This downtown strategy was developed to be incorporated into the 2003 Comprehensive Plan and relied upon public focus groups and surveys conducted for the 2003 Comprehensive Plan. The strategy set forth the following goals and policies relative to the downtown area, including the EMSURA:

- Develop tourist and specialty shopping niches and a variety of tourist attractions;
- Expand and improve the waterfront park;
- Establish a land use framework, while preserving and promoting an appropriate and improved mix of uses;
- Promote housing revitalization and artist housing;
- Preserve and enhance historic character;
- Preserve and promote traditional building layouts and development patterns, while allowing variety in building design;
- Promote pedestrian and bicycle access and circulation;
- Manage traffic circulation while maintaining auto access;
- Ensure adequate parking;
- Design parking lots that are walkable, attractive, and integrated with downtown buildings; and
- Enhance gateways and arrival points.

PECONIC ESTUARY PROGRAM COMPREHENSIVE CONSERVATION AND MANAGEMENT PLAN

The *Peconic Estuary Program Comprehensive Conservation and Management Plan* (CCMP) was adopted by the Peconic Estuary Program in 2001. The Peconic Estuary comprises more than 125,000 acres of land and 158,000 acres of surface water, including those within the Towns of Riverhead (including the EMSURA), Southold, Shelter Island, Southampton, and East Hampton, as well as a small portion of the Town of Brookhaven. The CCMP was established to help preserve, protect, restore, and enhance natural resources and water quality. The plan indicates that the management of habitats and living resources in the Peconic Estuary will require a combination of education, protection of existing natural areas, and restoration or enhancement of other areas to achieve a high quality ecosystem.

The CCMP suggests that the most effective means of protecting natural resources is for government or private conservation organizations to acquire property or purchase conservation easements and manage them for preservation purposes. However, if neither of these options is viable, the plan recommends that local government work with landowners and developers to maximize protection of resources through creative land use controls. According to the CCMP, the responsible entities for carrying out this initiative include New York State Department of Environmental Conservation, New York State Office of Parks, Recreation and Historic Preservation, the Suffolk County Planning Department, the five East End towns, and the Town of Brookhaven. The plan also indicates that coordinated and comprehensive land use planning at the local level can be used to ensure protection of natural resources and habitats from cumulative impacts on the East End. Consistency and agreement among the towns in the development of the

individual plans would ensure uniform implementation of policies affecting such a large and diverse estuary. It further states that the development of a master plan in each town and minimization of allowed variances are good measures for achieving such control.

TOWN OF RIVERHEAD 2003 COMPREHENSIVE PLAN

As a result of an intense community outreach process that involved public workshops and interviews and community surveys, the Riverhead Town Board, in November 2003, adopted the comprehensive plan update. Early in the planning process, the Town gathered input from focus groups, residents, merchants, and community leaders on their vision for Riverhead and the issues related to land use and development in the Town. With regard to the downtown area, there was a general agreement that emphasis should be placed on the revitalization of the downtown as a critical issue in the overall improvement of the Town. It was recommended that the downtown be primarily developed as an entertainment, tourism, and cultural center.

The 2003 Comprehensive Plan set forth recommendations and policies specific to the area in and around the EMSURA, including the Peconic River waterfront. As a result of the adoption of the 2003 Comprehensive Plan, the Town amended their zoning code in accordance with the recommendations in the plan. This included rezoning the EMSURA from the Business D District to the Downtown Center (DC) District. This district was separated into five distinct categories (DC-1 through -5), "each tailored to a distinct part of the downtown area, intended to carefully balance downtown land uses and development patterns in a manner that fits into the historic and natural context of the area."

The intent of the DC district is to limit sprawl, thereby protecting open space; promote and develop the downtown as the cultural, civic, and tourist center of Riverhead by providing a vital, high-density, mixed-use environment; accentuate the visual quality of the waterfront as well as increase public access to the waterfront; promote transit, pedestrian, and bicycle use; embrace the historic character of the area through preservation of significant historic structures and architectural review of new structures; and provide community facilities.

LOCAL WATERFRONT REVITALIZATION PLAN (DRAFT)

The Town of Riverhead and New York State Department of State are in the process of preparing the Local Waterfront Revitalization Plan (LWRP) in accordance with Article 42 (Waterfront Revitalization and Coastal Resources Act) of the New York State Executive Law. The LWRP is a plan developed for the stewardship and management of the Town's waterfront areas including issues related to shoreline erosion, flooding, and land uses. Initiated with a $20,000 grant procured from the Department of State, the LWRP has incorporated input and information from the Riverhead Conservation Advisory Council, Riverhead Planning Board, Bay Constable, and other interested parties, and will be the subject of a public hearing prior to adoption by the Town Board and Department of State. The LWRP would be consistent with the 1993 Urban Renewal Plan Update, DGEIS, and FGEIS (prepared to assess impacts of the Update), and will incorporate the findings of these reports, support the recommendations, and provide guidance for implementation.

CODE OF THE TOWN OF RIVERHEAD

CHAPTER 108: ZONING

Subsequent to the adoption of the 2003 Comprehensive Plan, the Town Board held a series of public hearings and special meetings in the spring and fall of 2004 to receive public comment on each of the new districts proposed in the plan. The outcome was an amended zoning ordinance that rezoned the EMSURA to the Downtown Center District. The majority of the EMSURA was rezoned to DC-1 while a small swath of land along the Peconic River waterfront was rezoned as DC-2 (see Figure 3). The DC-1 district was intended to foster a traditional downtown character along East Main Street with a mix of uses and a pedestrian friendly streetscape. The full DC-1 zoning code is included as Appendix B. The DC-2 district similarly encourages walkability as well as pedestrian access to the waterfront and open space and watershed protection. See Section D, "Existing Conditions," below for a detailed discussion of the use and bulk restrictions within the DC-1 zone.

CHAPTER 73: LANDMARKS PRESERVATION

Article III: Designation of Landmarks and Historic Districts

On July 5, 2006, the Town of Riverhead designated an area encompassing East Main Street and nearby neighborhoods as the Town's first historic district (see Figure 4). The newly formed historic district covers the entire EMSURA as well as the areas to the north and west. As shown in Figure 4, the district extends from the railroad crossing at Riverside Drive (the easternmost border) to just west of Osborn Avenue (the westernmost border), to Pulaski Street between Roanoke and Osborn Avenues (on the north), and to the Peconic River (on the south).

The historic district is regulated by Chapter 73, "Landmarks Preservation," of the *Code of the Town of Riverhead*, which states that the "protection, enhancement, and perpetuation of landmarks and historic districts is necessary to promote the economic, cultural, educational, and general welfare of the public." This legislation, which was revised on June 20, 2006, gives the Town's Landmark Preservation Commission the authority to oversee and provide input on all alterations, demolition, construction, repairs, or relocation of structures within the district. Owners of individual landmarks or structures within the historic district do not face any additional notification requirements. The Town's building department maintains a map showing all designated landmarks and historic districts. Whenever a property owner requests a building or demolition permit for a structure in a historic district or a designated structure, the building department automatically notifies the Landmark Preservation Commission. The Landmark Preservation Commission has 60 days to approve, modify or disapprove the application. The Town Board may call a hearing to review the Landmark Preservation Commission actions.

Figure 4 also depicts a number of parcels that are listed on the National Register of Historic Places, the State Register of Historic Places, and the Town's designated landmarks inventory. In addition, Figure 4 identifies properties of historic significance within the EMSURA. Sites of historic significance are those sites that have been nominated by the Town of Riverhead Landmarks Commission for potential landmark status and are recognized by the CDA as contributing to the historical quality of the EMSURA. These structures are a part of the Town's development history and include Vail Leavitt Music Hall, Suffolk Theater, Davis-Corwin House, Benjamin House and Barn, Star Confectionary building, Suffolk County Trust Company building, First Congregational Church, Methodist Episcopal Church, Tuthill Funeral Home,



Figure 3
Project Zoning

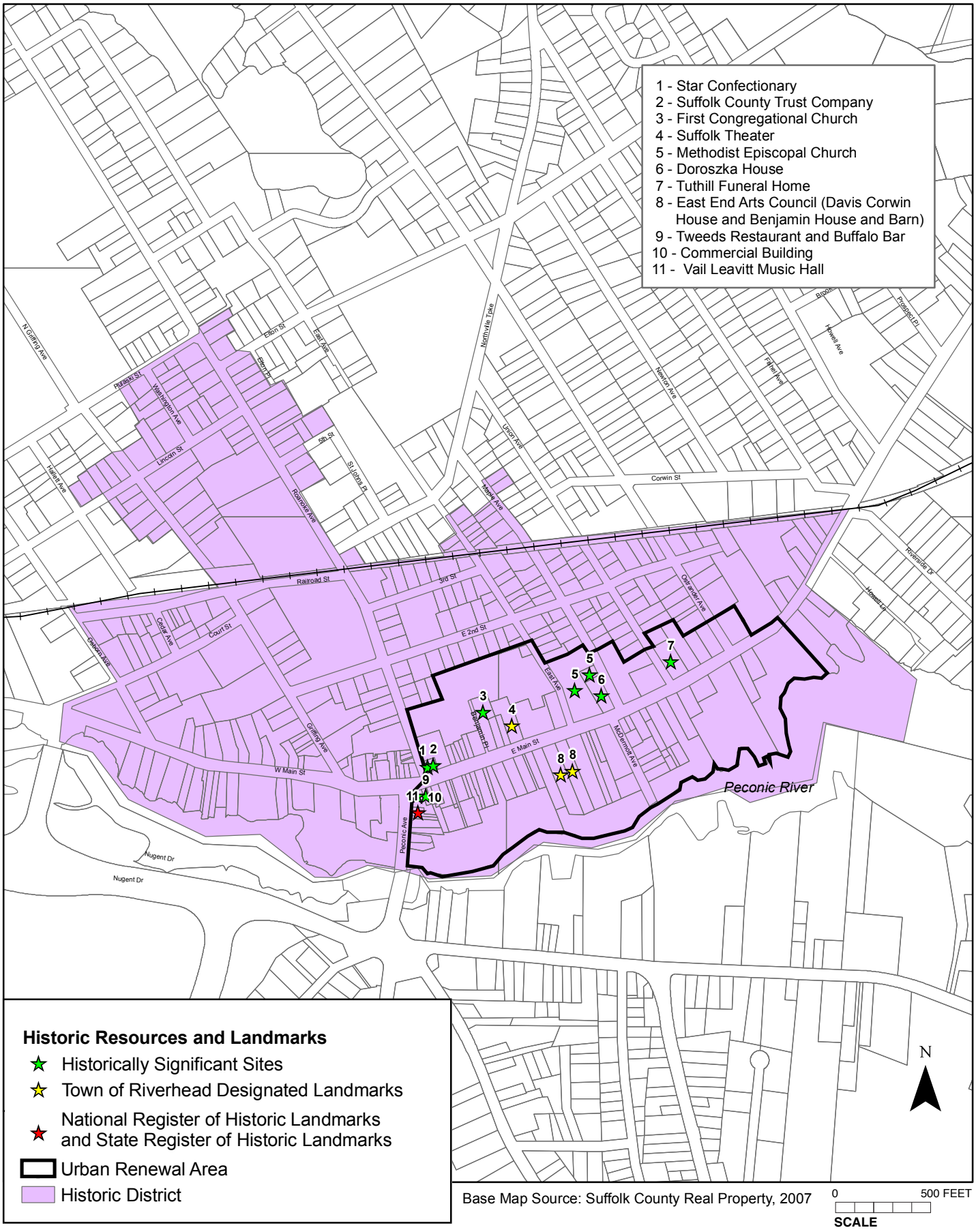


Figure 4
Historic Resources

Tweeds Restaurant and Buffalo Bar, a single-family home owned by the Doroszka family, and a commercial structure located on the corner of Peconic Avenue and East Main Street.

PARKING DISTRICT

The Riverhead Parking District No. 1 was adopted as an official Town of Riverhead Special District regulated by Article 12, Section 190 of the New York State Town Law. The district is a taxing jurisdiction that levies taxes on all property owners within the district on an ad valorem basis. Figure 5 depicts the geographic boundaries of the district, which have been extended since its inception. The district is not required to provide parking for all uses located downtown. Rather, the purpose of the district is to demand and create additional parking spaces that serve the downtown area. According to §108-60(I) of the *Code of the Town of Riverhead*, owners of property within a parking district do not have to provide off-street parking. The Town Board, which serves as the regulating board of the district, may vote on issues including changing the district boundaries and maintenance and improvement projects. An extension of the district requires a public hearing prior to a vote by the Town Board. Decisions made must be based on the overall benefit of the district to downtown.

NEW YORK STATE EMPIRE ZONE PROGRAM

In 2003, the Town of Riverhead received approval for the designation of 61 acres as eligible for tax credits under the New York State Empire Zone program. The boundary amendment, effective September 18, 2003, designated five distinct geographic areas within the Suffolk County/Town of Riverhead Empire Zone, including the EMSURA (see Figure 6). The *Suffolk County/Town of Riverhead Empire Zone Development Policy* found that

> *…the high cost of operating a business and the substantial increase in property taxes in this area creates a hurdle for small businesses to remain competitive. The ability to provide incentives for development in this area makes it more attractive to entrepreneurs in the tourist industry opening small businesses that compete with big box retail in the surrounding area, and provides existing businesses the ability to compete and expand. By further using this policy to benefit real estate investors, the Zone Administrative Board intends on encouraging the rehabilitation of blighted and/or vacant buildings for mixed use.*[1]

The EMSURA is referred to as Sub Zone 2: Downtown Riverhead, and encompasses 61 acres. The stated objective for Sub Zone 2 is to reduce vacancy rates; encourage redevelopment; revitalize deteriorated and underutilized space and structures; revitalize the East Main Street corridor; encourage small business growth and affordable housing; and increase entrepreneurship.

D. EXISTING CONDITIONS

LAND USE AND ZONING

This section provides a discussion of land uses that presently exist within the EMSURA, as well as presents an inventory of blighted properties. It is important to note that not all properties within the EMSURA need to exhibit blight for the area to be considered blighted. Assessing the extent of blight within the EMSURA requires an evaluation of the area's existing land uses,

[1]Town of Riverhead Empire Zone, http://www.riverheadzone.com/development-policy.pdf

soundness of building structures, and underutilization of properties; identification of vacancy rates; and consideration of the effect that the blight may have on the area's economic stability as well as public health and safety issues.

LAND USE

The EMSURA is largely characterized by commercial uses (such as retail, office, and restaurants) with some residential units interspersed throughout the area (see Figure 7). Outside the EMSURA, commercial development, primarily big-box stores and shopping centers on Suffolk County Road 58 (CR 58), has increased significantly in the last several years, changing CR 58 into a regional commercial corridor for the East End of Long Island. This increased development outside of the EMSURA has resulted in a deterioration of the downtown area.

Although land uses within the EMSURA are primarily commercial in nature, recent land use trends in the area show a growth in cultural and recreation oriented uses, including Atlantis Marine World Aquarium, East End Arts Council, Suffolk County Community College Culinary Art Institute, the Dinosaur Museum, restoration of the Vail Leavitt Music Hall, and development of the John Lombardi and Grangebel Parks and the waterfront boardwalk.

Limited residential uses are found within the EMSURA. Currently, there are five single-family units on individual lots and at least five apartments on second and third floors above commercial space. These uses constitute the smallest overall proportion of land uses that characterize the area.

Provided as Appendix C is a land use inventory for the EMSURA, organized by section, block and lot and presented in table format (Tables C-1 through C-5). The inventory was derived from a combination of sources, including field surveys as well as data provided by the Town of Riverhead Tax Receiver and Assessor. Tables C-1 through C-5 denote the tax parcels that had and/or currently have a vacant and/or deteriorated structure. The data presented in the tables is based on information presented in the 1993 Plan and/or on recent field surveys of existing conditions.

Architecture and Design

Architecture and design have a direct relationship on the overall streetscape of an area. The following paragraphs describe the façade and building orientation by specific blocks on East Main Street and area side streets. Photographs depicting the blocks as discussed below are provided as Appendix D.

South Side of East Main Street from Peconic Avenue to McDermott Avenue

Exhibits D-1 through D-18 in Appendix D provide a visual depiction of this section of the EMSURA. Peconic Avenue, the western boundary of the EMSURA, serves as the primary access point into the public parking lot (south of East Main Street) and the waterfront park. Building façades along Peconic Avenue include brick, shingle, and vinyl siding, while roof styles vary from pitched and mansard with dormers to flat roofs. Building heights range from one to three stories and buildings abut the sidewalk and form a common street wall.

On East Main Street, the attached structures located in the western portion of this block form an urban type streetscape. Building heights range from one to three stories and form a common street wall. The interior of ground floor uses are visible by way of large glass windows.

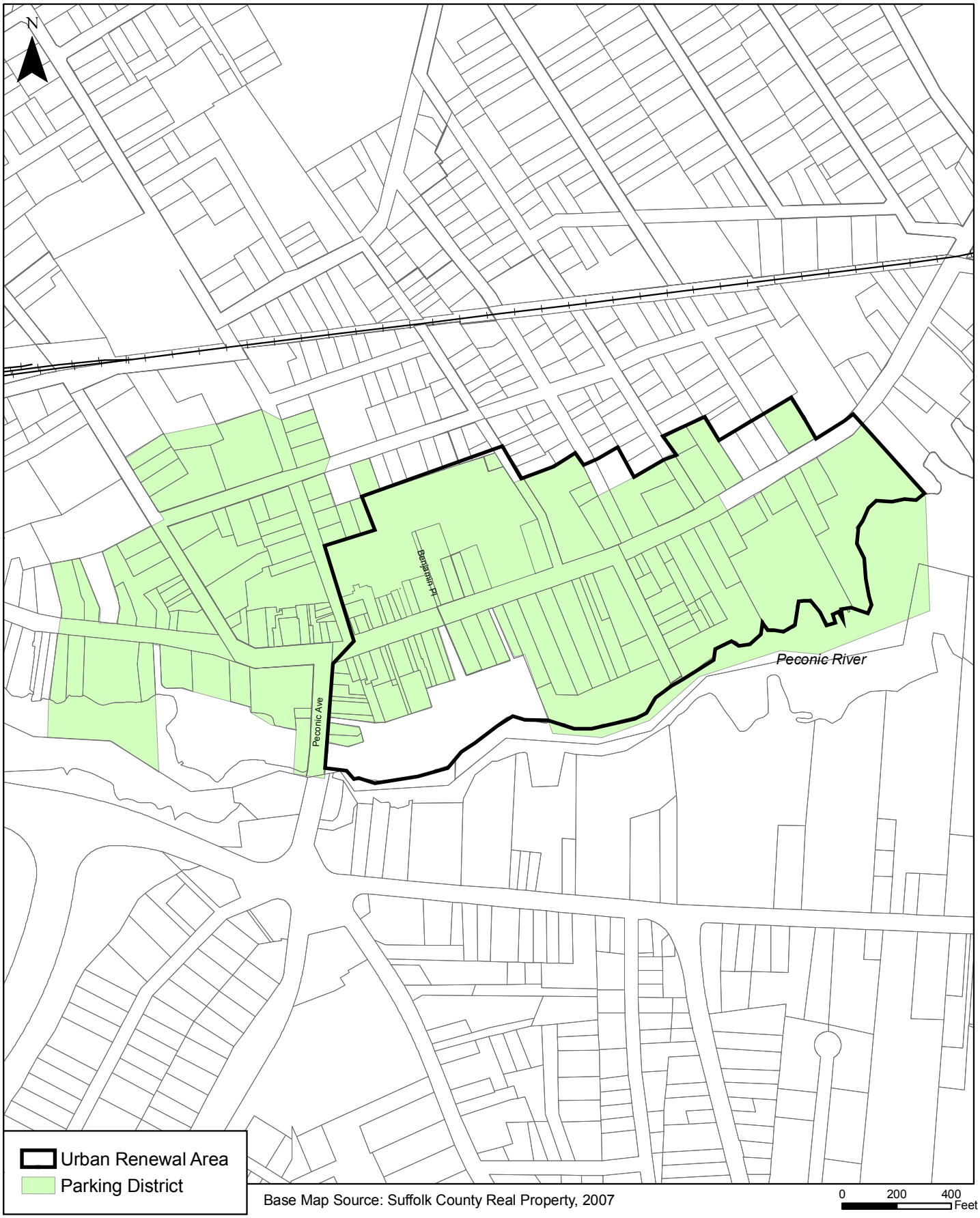


Figure 5
Riverhead Parking District No. 1

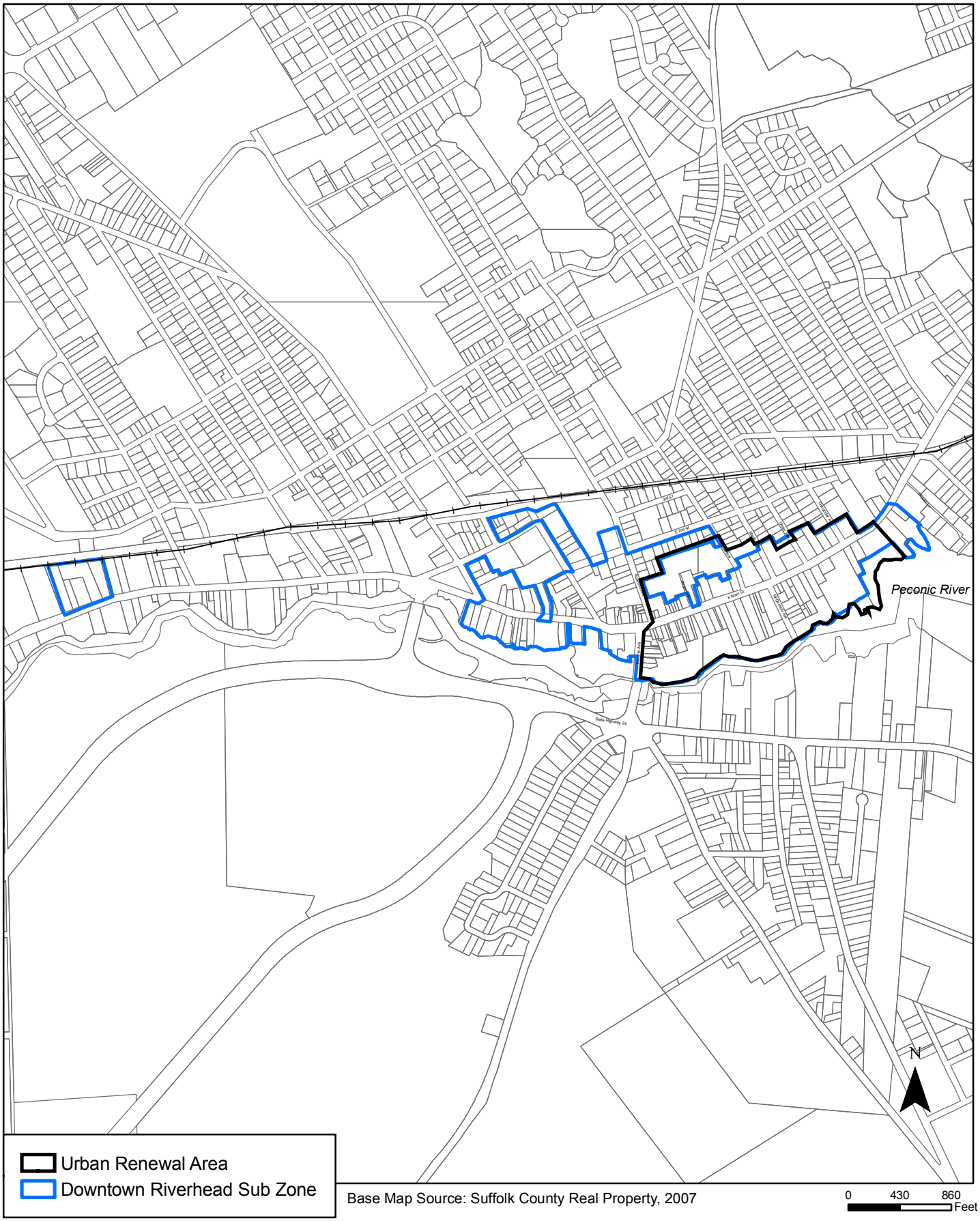


Figure 6
Empire Zone

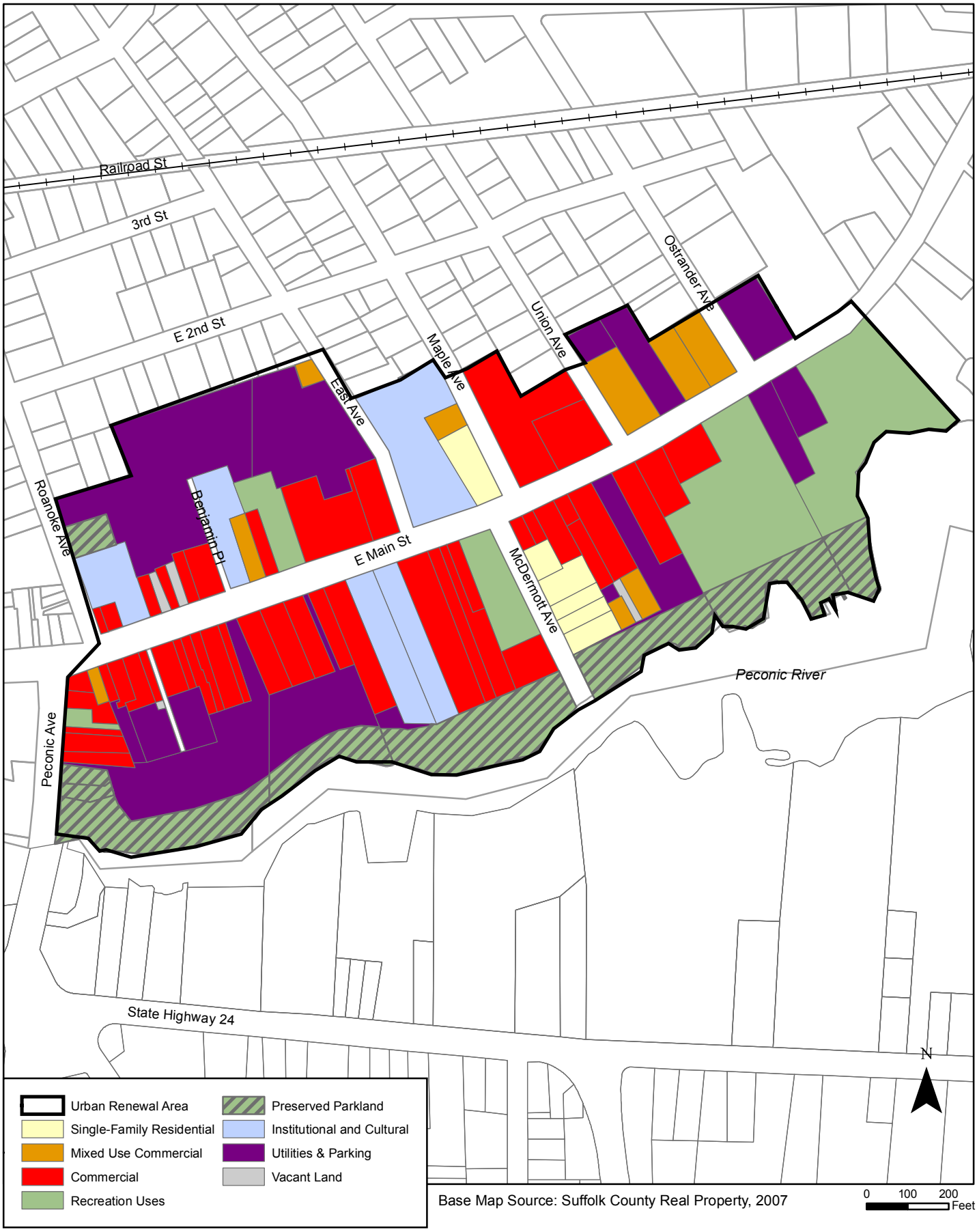


Figure 7
Land Use Map

In the eastern portion of this block, there is increased vacancy, free standing structures, and several alleys. Within this portion of the block, the area is occupied by a strip of single-story structures that are currently vacant. The variety of rooflines and building façades gives the appearance of a fragmented and disjointed architectural style.

South Side of East Main Street from McDermott Avenue to the Treasure Cove Resort Marina

The east side of McDermott Avenue comprises single-family residential units built in colonial revival architecture with associated landscaped front and side yards.

On East Main Street, buildings are free standing with relatively large single-occupancy stores with varying layouts and designs. The condition of buildings ranges from poor to good. The eastern end of this block is occupied by Atlantis Marine World Aquarium and Treasure Cove Resort Marina, which are vital anchors within the EMSURA. The streetscape on this block is lacking in cohesive design due to the disconnected building setbacks, façades, and uses. See Exhibits D-19 through D-36 for a visual depiction of this section of the EMSURA.

North Side of East Main Street from Eastern End of EMSURA to Maple Avenue

Buildings on this row of blocks are predominantly converted residences that now serve as office space and a funeral home. The architectural style of these buildings is colonial revival. Buildings are set back from the road, buffered by landscaped lawns. A Town parking lot is situated between the two converted residences and the funeral home. Within this section, there are a total of three parcels utilized for parking, with two of the parcels owned by the Town of Riverhead.

The western portion of this section is occupied by a single-story multi-occupant commercial use, a large bank, and associated parking lots. The building materials are brick and concrete. Glass windows allow passersby to view the interior of each use.

Exhibits D-37 through D-46 are the photographs that represent this section of the EMSURA.

North Side of East Main Street from Maple Avenue to East Avenue

Exhibits D-47 through D-52 provide a visual depiction of this section of the EMSURA. A large church, an associated parish house, and a large single-family residence, all with white exteriors, front East Main Street and are set back from this roadway. The properties on this block are elevated above the sidewalk where a stone retaining wall divides the property and the sidewalk.

North Side of East Main Street from East Avenue to Roanoke Avenue

This area maintains a variety of uses and structures (see Exhibits D-53 through D-69). The building types vary from single-story detached single-occupancy to multi-story attached buildings. The façades of these buildings are almost a mirror image of the south side of East Main Street just east of Peconic Avenue. Some buildings on this block are free standing with greenspace dividing the buildings.

On the east side of Roanoke Avenue, within the EMSURA, is the future location of Suffolk County Community College Culinary Institute, which is currently under construction. Behind this use, along Roanoke Avenue, is a Town park with a wooden gazebo and an access point to the Town owned parking lot.

Peconic River Waterfront

Exhibits D-70 through D-80 provide a visual depiction of this section of the EMSURA. The Peconic River waterfront is located at the southern border of the EMSURA, behind the buildings

on the south side of East Main Street. Along the waterfront is a recently constructed park and boardwalk and further north is an extensive area of public parking owned by the Town. Contiguous to and north of the parking lot are the rear of the buildings, which form an unattractive view from the waterfront.

Vacancy Rates

According to page 7 of the 1993 Plan, the EMSURA contained approximately 350,000 square feet of total building area, of which approximately 54,000 square feet was identified as vacant. This represents a vacancy rate of 15 percent. Specifically, Appendix C of the 1993 Plan identified 8 of the 90 tax parcels within the EMSURA as having vacant structures. Those parcels have been depicted in Figure 8.

A vacancy survey of the EMSURA was performed for the 2008 Update in November and December of 2006. For the purposes of this analysis, buildings identified during field reconnaissance as being partially vacant were classified as being entirely vacant. The existing vacancy rate is comparatively higher than the 1993 rate of 15 percent. As shown in Figure 8, buildings that are partially or entirely vacant in 2008 were situated on 23 of the 90 developed Suffolk County Tax parcels. According to the Town's property record cards, provided by the Assessor's office in December 2006, there are 465,252 square feet of building area in the EMSURA, an increase of 124,982 square feet over the 1993 condition. Of the total existing 465,252 square feet existing, approximately 178,982 square feet are either partially or entirely vacant. This represents a vacancy rate of 38 percent, an increase of 23 percent over the 1993 condition. This increase may be attributed to the increase in commercial development in other areas of the Town, including development along the CR 58 corridor. For comparative purposes, vacancy rates in 1993 and 2008 are provided by tax parcel in Appendix C and in Figure 8. Additionally, provided in Appendix D are photographic illustrations of several of the vacant structures within the EMSURA. Examples of vacant structures within the EMSURA are shown in Exhibits D-2, D-17, D-28, D-38, and D-57.

Deteriorated (Substandard) Structures

According to the 1993 Plan, 31 of the tax parcels in the EMSURA had deteriorated buildings or structures (see Figure 9). A recent survey of the existing building condition was performed in November and December of 2006. Several of the deteriorated buildings identified have either structural damage or are in need of façade and building design improvement. Buildings identified as having structural damage were photographed and have been included in Appendix E. These buildings are situated on 18 of the 90 parcels in the EMSURA (see Figure 9), and were identified by the presence of cracks in the structure, boarded-up windows or doors, roof damage, rusting, and other safety or structural issues. Figure 9 also identifies those parcels with buildings that are found to be aesthetically unsound or in need of overall improvement but do not necessarily have structural damage. These structures impede the economic viability of the area, and contribute to the overall blight and are situated on 13 of the 90 parcels in the EMSURA.

For comparative purposes, the number of tax parcels with deteriorated or substandard structures in 1993 and 2008, have been provided in a table format in Appendix C. Based on the recent field survey, the number of deteriorated structures since 1993 have remained the same.

Alleys and Narrow Access Streets

Approximately 18 alleys, driveways to parking lots, and narrow areas were identified between structures found throughout the EMSURA, including 12 alleys/driveways that are poorly lit.

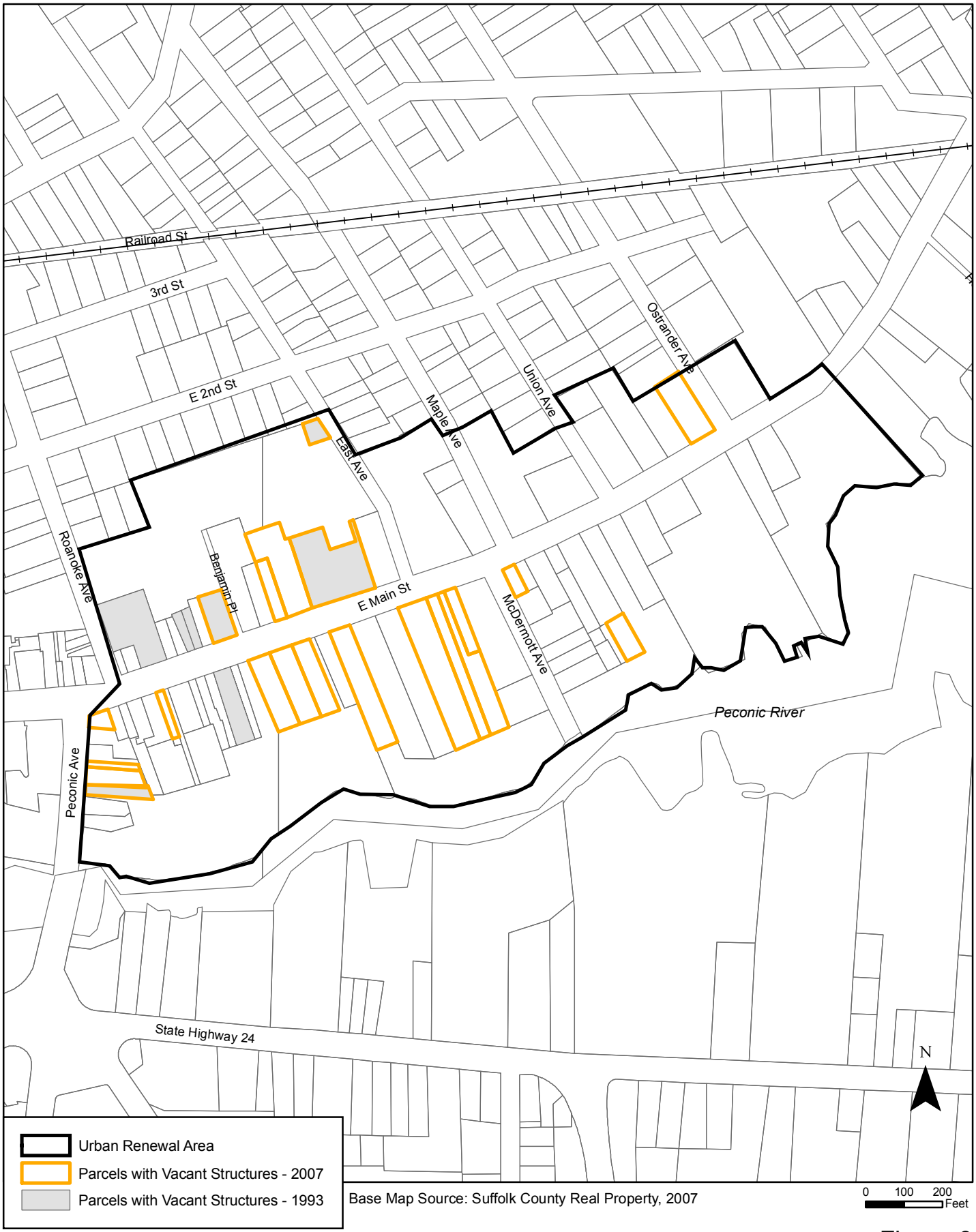


Figure 8
Parcels with Vacant
Structures in 1993 and 2007

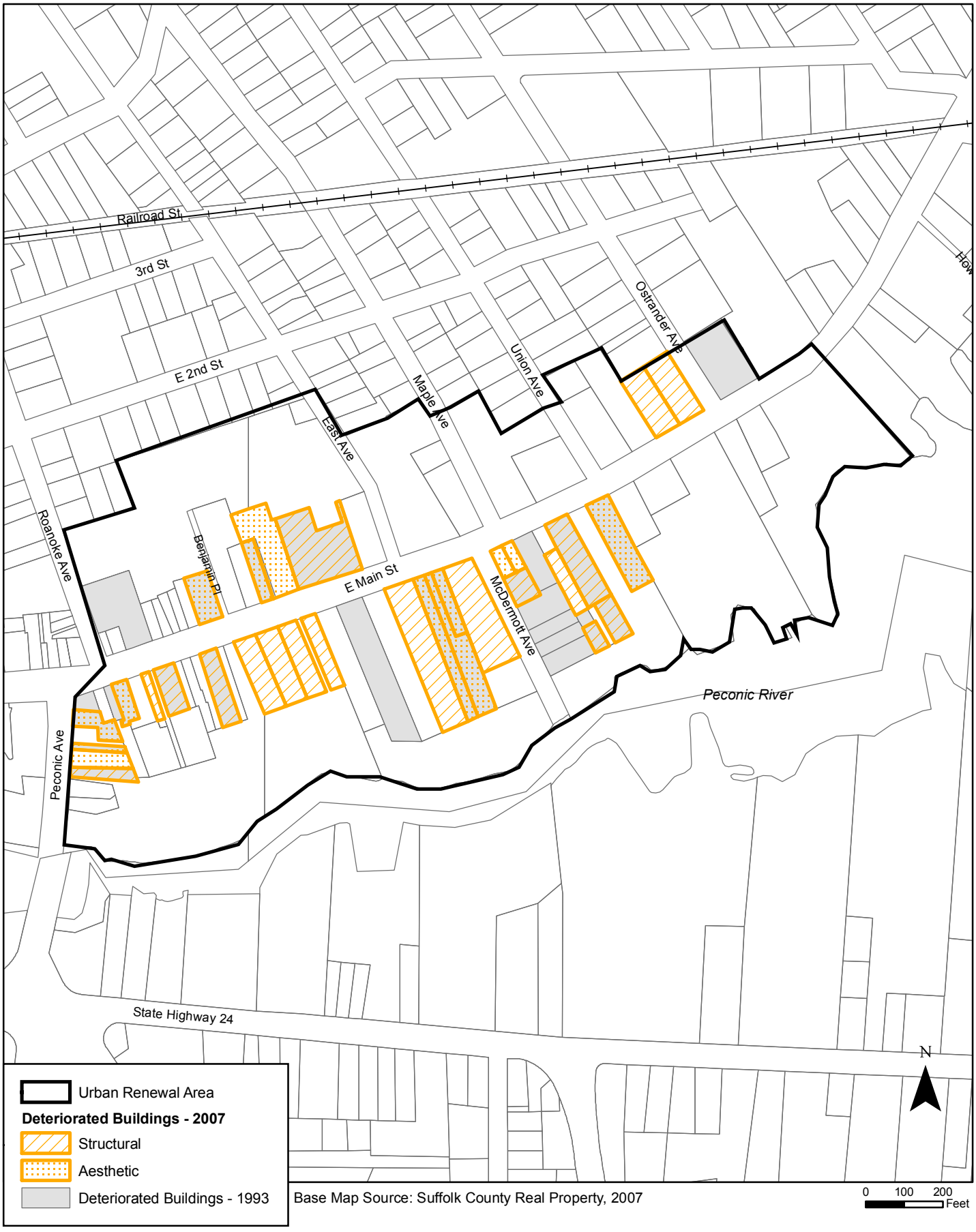


Figure 9
Deteriorated Buildings in 1993 and 2007

Field investigations also found that several alleys/driveways contained garbage and debris. The condition of these "spaces" poses a health and safety concern, especially for pedestrians. Alleys are present on the north and south side of East Main Street as well as behind buildings located on the south side of East Main Street north of the parking area with three alleys closed on one end or gated. Photographs depicting these spaces are included in Appendix D, see Exhibits D-6, D-12, D-14, D-24a and 24b, and D-33.

Nonconforming Uses

As stated in the 1993 Plan, nonconforming uses are a violation of the zoning ordinance, and hinder the success of the urban renewal project. Based on the DC-1 code, the predominant nonconforming uses within the EMSURA are buildings entirely dedicated to office space and single-family residential structures.

Article XXIII, Section 108-51, "Supplementary Use Regulations," of the *Code of the Town of Riverhead* addresses the issue of nonconforming buildings and uses. The code provides regulations for alterations to all nonconforming uses, lots, and buildings in the Town and states that these uses, lots, and buildings may continue to exist, and even expand with various approvals, dependent on the nature of the alteration.

Solid Waste Management

The Town of Riverhead provides solid waste pick-up services to residential uses with the exception of large multi-housing complexes. Currently, all uses with the exception of single-family residential uses in the EMSURA have on their property individual dumpsters for the temporary storage of refuse. Solid waste collection in the EMSURA is currently handled by private carters that are hired or contracted by individual property owners and/or tenants. Nonresidential uses maintain individual dumpsters in the rear or side yard of their property. The presence and frequency of these dumpsters creates a negative aesthetic component in the EMSURA, especially near the Peconic River waterfront. Other issues presented by the current collection method include lack of coordinated collection days and times and lack of tonnage information needed to assess and monitor the quantity and type of solid waste.

ZONING

The 2003 Comprehensive Plan proposed DC zoning "to make downtown the center of Riverhead by providing a vital, high-density, mixed-use environment for shopping, eating out, cultural activity, entertainment, and professional services year-round." There are five categories within the general DC zone: DC-1 (main street), DC-2 (waterfront), DC-3 (office), DC-4 (office and residence), and DC-5 (residential). As stated, the EMSURA is located within the DC-1 and DC-2 districts (see Figure 3). The intent of the DC-1 district is to maintain and foster a traditional downtown character along East Main Street, with a pedestrian-friendly streetscape and retail and office ground-floor uses combined with upper-story residential space of a compact, walkable scale. Table 1 provides the bulk restrictions for the DC-1 zone. The minimum lot area requirement in the DC-1 zone is 5,000 square feet. It should be noted that approximately 32 lots are less than 5,000 square feet in the EMSURA (see Figure 10).

Table 1
DC-1 District Regulations*

Minimum Lot Area (square feet)	Maximum Lot Coverage (percent)	Minimum Lot Width (feet)	Maximum Impervious Surface (percent)	Maximum Height (feet)	Maximum Floor Area Ratio (FAR)
5,000	80	50	100	60	4

Notes: * The minimum front, rear, and side yard setbacks are zero.
Source: Chapter 108, "Zoning," *Code of the Town of Riverhead*.

Permitted uses in the DC-1 district include:

- Retail stores;
- Banks;
- Personal service businesses;
- Indoor public markets;
- Art galleries and studios;
- Museums, libraries, aquariums and other cultural attractions;
- Restaurants, cafes, bakeries with retail sale on premises, banquet facilities, specialty food stores, and ice cream parlors;
- Theaters and cinemas;
- Professional offices (except for veterinary offices) on the ground floor;
- Schools (including business and secretarial);
- Places of worship;
- Residential units on upper floors with a minimum unit size of 650 square feet;
- Bed-and-breakfast establishments; and
- Townhouses on lots with frontage along public highways other than New York State Route 25.

The following uses are prohibited in the DC-1 district:

- All ground-floor offices, with the exception of real estate and professional offices;
- Office-only buildings;
- Ground-floor residential units, with the exception of townhouse uses;
- Flea markets, with the exception of farmers' markets;
- Gas stations, car washes, and other automobile-oriented uses;
- Drive-through windows for restaurants and banks; and
- Antennas for wireless providers.

The DC-2 zone is located along the southern portion of the EMSURA. The intention of the DC-2 zone is to create a downtown waterfront area that provides continuous pathways and public waterfront access, generous open space and landscaping, and watershed protection through limits on impervious surfaces. Permitted uses include marina, resort, and retail stores. Hotels, inns, and indoor recreation facilities are permitted by special exception. The uses prohibited in the DC-1 district are also prohibited in the DC-2 district. The DC-1 and DC-2 regulations were

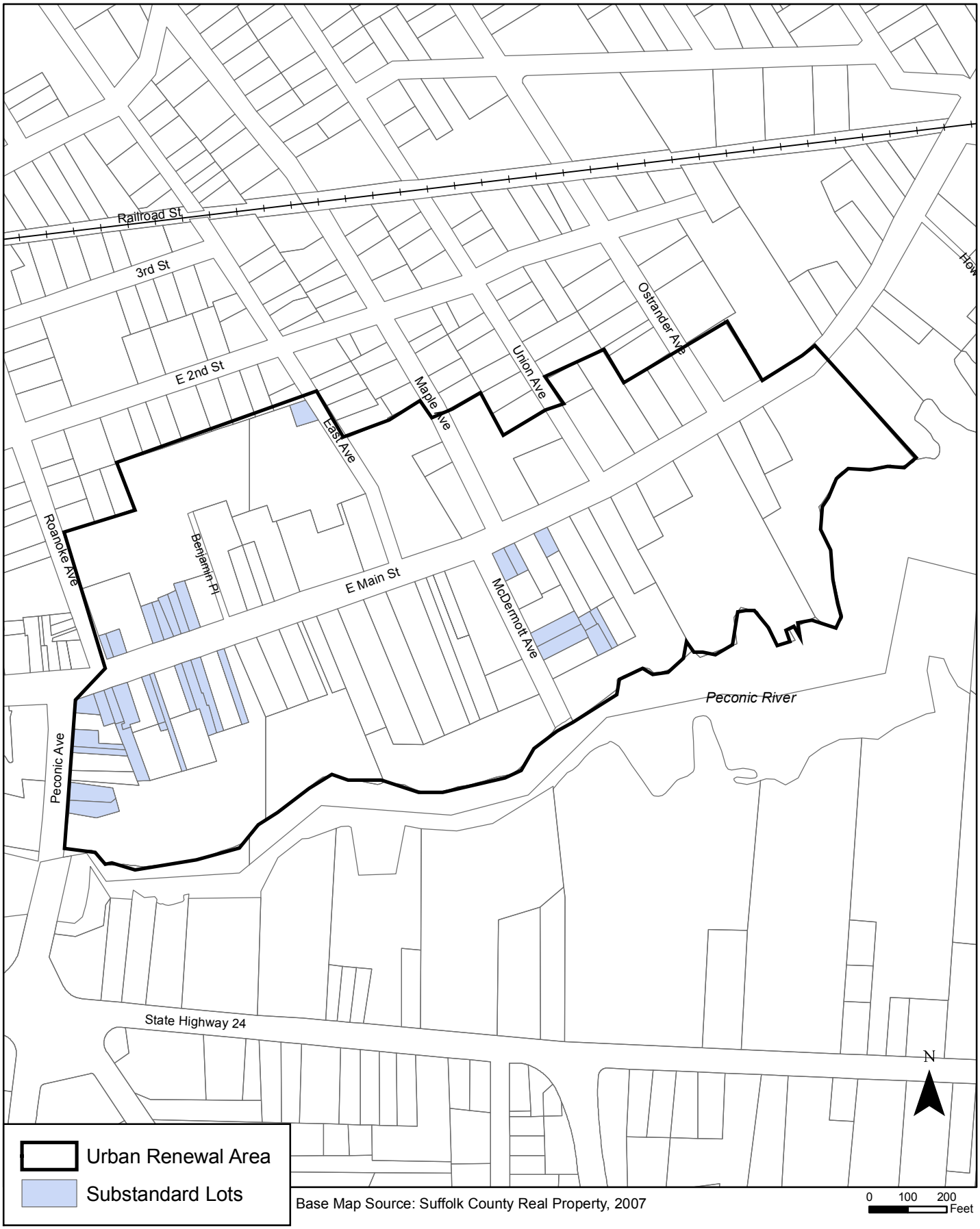


Figure 10
Substandard Lots (less than 5,000 Sq Ft)

created and enacted to provide compatibility between the various permitted uses and the Peconic River waterfront.

E. ACCOMPLISHMENTS SINCE 1993 PLAN

Significant actions taken by the Town relevant to the EMSURA include adopting the 2000 *Revitalization Strategy for Downtown Riverhead* and the 2003 Comprehensive Plan, and amending the Town zoning ordinance and Town zoning map in 2005. In addition to these actions, the Town also recently created a historic district, which includes the entire EMSURA.

Since the 1993 Plan, the CDA has implemented programs and projects intended to improve the EMSURA and fulfill the goals and objectives of the plan. The most notable of the projects and programs that occurred after the adoption of the 1993 Plan are listed below, including park improvements, acquisition and redevelopment, and beautification. These projects helped to initiate the transformation of the EMSURA into an area that is economically viable while fostering the goals and recommendations of the 1993 Plan. An assessment of the recent urban renewal projects discussed below outlines the success of the urban renewal program as a whole and demonstrates the Town's ability to promote an area that is rich in cultural, recreational, and community-based facilities.

PARK IMPROVEMENTS

GRANGEBEL PARK

The Grangebel Park Improvement Project Phases I and II (1990-2000) utilized State and federal funds totaling $800,000. A Phase III project utilizing $1 million in federal funding will complete the replacement of bulkheading, installation of lighting and pedestrian walkways, and landscaping and other amenities to improve safety and utilization of the park. The park occupies 3 acres and is situated on the Peconic River waterfront on the west side of Peconic Avenue. Although the park is located outside the EMSURA, there is a connection to the park facilities on the east side of Peconic Avenue, which is located inside the EMSURA. The Town is renovating the Grangebel Park Comfort Station with funding assistance from a Suffolk County Downtown Revitalization Round VII Grant awarded to the Town of Riverhead Business Improvement District.

WATERFRONT BOARDWALK

Peconic Riverfront Pedestrian Improvement Project, completed in 2005-2006, utilized $2 million in State and federal grant funds to replace deteriorated bulkheading, provide bicycle paths, extend the pedestrian boardwalk, and improve the public park space along the riverfront for enjoyment of residents and tourists alike.

JOHN LOMBARDI PARK

This Town park is currently being restored and includes a gazebo and garden area. The park is situated 100 yards north of East Main Street on the east side of Roanoke Avenue.

AQUISITION AND REDEVELOPMENT

The CDA successfully redeveloped several parcels within the EMSURA, some of which had been identified for redevelopment in the 1993 Plan. Redevelopment projects that the CDA completed pursuant to the 1993 Plan are described below.

SUFFOLK THEATER

The 1937 art deco theater was acquired by the CDA in 1991 as an urban renewal project. The Town renovated the roof, façade, and marquee using State and federal grants. In 2005, the theater was sold to a private sector historic building specialist, Robert Castaldi (Castle Restoration & Construction), who intends to complete the renovations and reopen the theater as a performing arts center.

VAIL LEAVITT MUSIC HALL

The CDA procured several hundred thousand dollars in grants to renovate this 1881 music hall, which is listed as a National Register Landmark site. The theater officially reopened in June 2004 and hosts community events on a regular basis.

ATLANTIS MARINE WORLD AQUARIUM

The Town acquired waterfront property in the early 1990s and prepared a feasibility study, architectural design, and Environmental Impact Statement. The Town then sold the property to a private developer who opened the Atlantis Marine World Aquarium in 2000. The aquarium includes indoor and outdoor exhibits. According to the facility's estimates, the aquarium has attracted more than one million visitors since its opening.

EAST END ARTS COUNCIL

The CDA successfully renovated the historic Benjamin and Corwin Houses that are home to the arts and music programs offered by the East End Arts Council. Site improvements and renovations were also made to the historic Carriage House in order to provide additional year-round space for programming.

RIMLAND (SWEZEY) PROPERTY

The CDA acquisition of the Rimland property located on East Main Street eventually resulted in the purchase and development of the property by the Swezey's Department Store chain. After the recent closing of the regional chain, the property was resold to a private developer for the construction of the Suffolk County Community College Culinary Arts Program facility.

BEAUTIFICATION

The Town of Riverhead has spent several million dollars for improvements to the façades of existing buildings, building renovations, encouragement of residential uses in the downtown area, and other beautification measures. The Town has also been awarded Community Development Block Grants for town-wide improvements every year since the 1993 Plan.

F. PROPOSED LAND USE PLAN

Section 503(h) of Article 15 (Urban Renewal Law) of the New York State General Municipal Law gives the CDA, as the Town's urban renewal agency, the authority to implement the recommendations and implementation strategies put forth in this update. Section 503(h) states the following:

"for the purposes of preserving the integrity of an urban renewal plan, to require, for a maximum period of three years after approval of an urban renewal plan pursuant to section five hundred five of this article, the consent of the agency to the issuance of a building construction or alteration permit or certificate of occupancy for a structure or use within the urban renewal area or within that part or portion of such area for which a plan has been so approved (except for construction, alteration or use which is necessary for the immediate protection of public health or safety). Such consent shall be based upon a determination by the agency that the proposed construction, alteration or us is not inconsistent with the plan."

The CDA, for a period of no more than three years after the adoption of this plan, shall have an advisory role to the Town's building department on all applications for building permits and certificate of occupancies within the EMSURA. The CDA, upon being informed of an application, shall review the application for compliance with the proposed land use, recommendations, and urban renewal efforts put forth in this 2008 Update. The CDA may formally advise the Town's building department of their findings and/or opinions on such applications. As stated earlier, the Town has the authority, by Section 503(h) to require all applicants to the building department receive the consent or approval of the CDA.

RECOMMENDATIONS AND STATEMENT OF PROPOSED LAND USES

Existing conditions offer an opportunity to provide the kind of redevelopment proposed in the 1993 Plan and this 2008 Update. Some of the existing issues and concerns within the EMSURA include vacant and underutilized buildings, the presence of deteriorated structures, an underutilized waterfront, a large parking lot that fronts on the waterfront, the presence of several alleyways and narrow streets, and the overall aesthetic considerations, especially near the waterfront.

It is the intent of this 2008 Update to encourage land uses that are consistent with the policies set forth in the 2003 Comprehensive Plan Update, the Town's zoning ordinance, and the *Revitalization Strategy for Downtown Riverhead*. The recommendations made in this update are intended to promote a mix of uses that foster a balance between residential, commercial, cultural, and tourist accommodations; reduce vacancy and blight; provide connectivity within the EMSURA; and incorporate the natural amenities of the area, including the waterfront. Provided below are the recommendations and proposed land uses that aim to meet the overall objectives of the Town to rehabilitate and revitalize downtown:

1. Fill and redevelop existing vacancies with uses permitted under current zoning regulations. As applications for site plans, building permits, or certificates of occupancy for structure or uses are submitted, the CDA, consistent with Section 503(H) of the General Municipal Law, should ensure that the reuses are appropriate (e.g., uses near the waterfront should incorporate the scenic value and public space of the Peconic River and associated waterfront park as part of their overall design and use). Additionally, interaction between uses should encourage pedestrian walkability and promote shared public spaces. Buildings identified as vacant in this report should be given priority for all redevelopment projects.

2. Deteriorated and vacant structures that pose a risk to public safety and welfare, and impede economic viability should be considered for public and/or private acquisition and redevelopment. Redevelopment of these properties should be in conformance with zoning regulations and be considered for the highest and best use. Buildings identified as deteriorated in this report should be given priority for redevelopment projects.
3. Redevelop and rehabilitate dilapidated buildings using contemporary and environmentally-friendly design in conformance with Chapter 73, "Landmarks Preservation," of the *Code of the Town of Riverhead*, which gives the Town's Landmark Preservation Commission the authority to oversee and provide input on alterations, demolition, construction, repairs, or relocation of structures within the historic district.
4. Preserve and maintain buildings, sites, and structures of historical, cultural, or architectural interest. New development and uses should be cognizant of historic structures and other significant cultural buildings.
5. The CDA and Town should review those structures that currently do not have a landmark designation but possess historic significance for potential inclusion into the Town's list of official designated landmarks.
6. Strengthen the tax base while promoting the integration of commercial and residential uses through development of multi-family residential units with ground floor commercial uses; providing a mix of uses that tie the residential and cultural components of the EMSURA, and encouraging meeting and gathering places to accommodate tourists and residents.
7. Provide multi-family residential developments that accommodate a mix of incomes. This could be accomplished through an incentive zoning program for affordable housing within multi-family developments.
8. Encourage personal service uses related to tourists and residents.
9. Support applications for commercial and recreation uses that are more directly related to the waterfront and incorporate site layout requirements, including minimum setback requirements from the waterfront so that public access is not inhibited.
10. Promote additional open space and community facilities for tourists and local residents. Public spaces should be strategically placed throughout the EMSURA to encourage pedestrian access, tourism, and improved scenic vistas. Additionally, within the western portion of the EMSURA, south of East Main Street across from Benjamin Street, the Town should encourage land or access easements that accommodate open areas allowing pedestrian access to the waterfront ensuring connectivity between East Main Street and the Peconic River.
11. Maintenance and enlargement of public space along the river corridor, south of East Main Street by reducing land dedicated to parking, should be considered a high priority; and the Town should seek public/private partnerships to make improvements and maintain view sheds. Further, development other than public open space should be discouraged within this area to eliminate a conflict of use.
12. Encourage more scenic vistas along the Peconic River corridor within the DC-2 zoning district. Development in this area should be limited to and reserved for public uses, including pedestrian oriented parks, courtyards, and strategic parking areas. All uses in this area should have streetlights, signs, and demonstrate a positive aesthetic quality.
13. Although current zoning permits a building height of no more than 60 feet or five stories, future development should consider the character of existing structures in conformance with existing heights on a block by block basis. Specifically, the buildings located on the east side

of McDermott Avenue do no exceed two stories while buildings west of McDermott Avenue reach three stories in height. Future development should consider these existing building heights. Waterfront vistas or views from buildings on the north side of East Main Street should also be maintained and, where possible, enhanced by ensuring that building heights on the south side are restricted and do not block access or prohibit these views.

14. Provide outside courtyards at the rear entrance of buildings along East Main Street and allow outside merchandise displays within these courtyards. This dual-entrance design would connect commercial and retail uses to the waterfront and parking areas, encouraging better designs.
15. Ensure new development provides connectivity between the eastern and western portions of the EMSURA by way of walkways, building layouts, and greenways.
16. Encourage maritime uses, including retail, restaurants, boat and canoe rentals, and commercial use of the Peconic River, in the portion of the EMSURA that is west of Atlantis Marine World Aquarium. This block could also include workforce housing for employees of maritime trade and a museum dedicated to the history of the waterfront.
17. Minimize the occurrence of alleyways and hidden spaces that pose a risk to public safety (e.g., alleyways could be reused as pedestrian access points to the waterfront). The Town should ensure that design standards address line of sight issues and encourage building clarity that identifies pedestrian access points by incorporating the use of lighting and signage that better identifies these spaces.
18. Improve the overall safety of the area by enhancing the design, layout, and lighting of alleys, streets, and parking areas as well as provide safe road crossings.
19. Implement beautification projects that address façade, landscape, and streetscape improvements as well as encourage an aesthetically pleasing and functional transition between public spaces and parking areas.
20. Establish additional parking areas within the eastern end of the EMSURA where a tourist information center, public amenities, and police substation could be developed.
21. All uses and development in the EMSURA should incorporate designs that consider pedestrian use and safety. Give priority to uses that create minimum conflicts between pedestrians and vehicles by creating a pedestrian-oriented street design, including roadway markings and signage, and provide pedestrian spaces, including benches and safe walkways.
22. Adopt and incorporate building design guidelines that reflect unity and coherence within the EMSURA and maintain the intended integrity of the downtown atmosphere. Standards would include signage, streetscape, and landscape regulations and should provide increased corner lot setbacks to increase vehicular visibility and eliminate and/or reduce gaps in building facades to reduce commercial inactivity.
23. Due to the important nature of encouraging redevelopment activities within the EMSURA, the Town should ensure that applications are responded to in a timely fashion and handled in such a way that avoids unnecessary delays. Specifically, applications that require more than one agency or commission involvement should be coordinated in advance. Advisory commissions and agencies (e.g., the Landmarks Commission) should accommodate and encourage pre-submission meetings prior to, or simultaneously with, building department application submissions.
24. Promote sustainable development in the downtown area to redevelop existing structures while conserving resources. Buildings should be constructed to provide a long life span and a flexible design to accommodate future uses. Multi-family residential developments of four

units or less must be consistent with federal Energy Star standards. Further, green building designs should be promoted in conformance with the Leadership in Energy and Environmental Design (LEED) standards.

Infrastructure

25. Continue test well program and construct production wells to meet additional demand.
26. Increase connection fees to mitigate costs associated with supplying additional capacity.
27. Encourage or mandate water conservation throughout the water district.
28. In the event of development on the East First Street right-of-way, the existing 6-inch water main and existing 8-inch sewer line must be relocated.
29. Investigate existing flows and capacities of the sanitary sewer piping within the EMSURA and of the DeFriest Pump Station to determine whether any upgrades are necessary to handle anticipated additional flows for the interim and long-term development scenarios. This effort should consist of the preparation of a "Map and Plan" similar to that which has been recently developed for the Howell Avenue Pump Station.
30. Encourage Suffolk County to implement measures to reduce sanitary flow from the County Center facilities through the installation of water saving devices, conservation measures, etc.
31. Conduct a thorough inventory to determine where/whether roof drains are connected to the sewer system, and require property owners to provide alternative means for handling flows from roof drains.
32. Explore the possibility of creating a storm drainage district to provide common storm drainage facilities located on public property.
33. Collect impact/mitigation fees to be utilized to handle excess runoff from on-site drainage facilities.
34. Encourage or mandate green stormwater management techniques such as roof gardens and the installation of cisterns.
35. Incorporate drainage improvements into any new parkland/green space provided by elimination of parking along the riverfront, maximizing pervious surfaces that allow percolation.
36. Investigate and inventory those existing facilities that direct stormwater flows to the drainage system, either directly piped or flowing across sidewalks, streets, and parking areas.
37. Initiate a program to encourage retrofitting properties with such conditions to contain some or all of their stormwater on-site.
38. Investigate the opportunity to upgrade or eliminate direct stormwater outfalls to the Peconic River during future development, similar to the ongoing Suffolk County project at Peconic Avenue.

Traffic, Transportation, and Pedestrian Access

39. The Suffolk County Department of Public Works (SCDPW) has indicated its intention to reconstruct the traffic circle and the intersection of CR94 at County Center Drive into modern two-lane roundabouts. The analyses conducted by SCDPW to evaluate the effectiveness of these improvements did not consider impacts due to redevelopment of the EMSURA. It is therefore recommended that the CDA work with the New York State Department of Transportation, the SCDPW, and the Town of Southampton to develop an

improvement plan that will provide a roadway system capable of accommodating the traffic anticipated to be generated by the development envisioned in the EMSURA as well as any plans that the Town of Southampton has for the hamlet of Riverside, as envisioned in the newly released DEIS for the Riverside Planned Development District. To accommodate the traffic anticipated due the short-term Phase 1 development in the EMSURA, the following low-cost, readily implemental measures should be considered for implementation, subject to Suffolk County and/or NYSDOT concurrence:

- Change operation of Roanoke Avenue between Second Street and Main Street to provide one-way southbound operation and restripe to provide two southbound lanes;
- Revise lane use at the intersection of Roanoke Avenue at Main Street to reflect the one-way operation. Two southbound lanes should be carried through the intersection and onto southbound Peconic Avenue. The rightmost lane should transition to a separate right turn lane at the traffic circle;
- Provide one-way northbound operation on East Avenue between Second Street and Main Street. This will provide the northbound compliment to the southbound operation of Roanoke Avenue;
- Prohibit parking on both sides of East Avenue, due to the narrow right-of-way, so that two travel lanes can be provided;
- Revise the operation of the traffic signal at Roanoke Avenue at Main Street;
- Provide a separate eastbound left turn lane on Main Street at East Avenue to accommodate the additional demand due to the one-way operation of Roanoke Avenue. Signalization of the intersection of East Avenue at Main Street should be considered, in consultation with NYSDOT; and
- Install a traffic signal at the intersection of CR 94 at County Center Spur.

40. Revise the C*ode of the Town of Riverhead* and/or to the Parking District guidelines to require that any development with a residential component of more than four units provide parking for those units on-site at a rate of at least one parking space per unit. Commercial components of mixed-use developments could be accommodated in the Town-owned parking provided by the Parking District.
41. Upgrade all mid-block pedestrian crossing locations to provide signing requiring motorists to yield to pedestrians.
42. Upgrade the pedestrian crossing at East Avenue and at Atlantis Marine World Aquarium to provide overhead signing requiring motorists to yield to pedestrians, contrasting pedestrian crosswalk material, and pavement markings, and pedestrian bumpouts to enhance pedestrian safety.
43. Install full pedestrian signals at all existing and proposed signalized intersection locations. Pedestrian signals should be equipped with countdown timers for crossing arterials.
44. Provide a mid-block pedestrian crossing between Grangebel Park on the west side of Peconic Avenue and Riverfront Park on the east side of Peconic Avenue with overhead signing requiring motorists to yield to pedestrians, contrasting pedestrian crosswalk material, and pavement markings.

45. Encourage installation/maintenance of sidewalks with a comfortable, uniform, accessible cross-section with a minimum of street furniture on private development plans, and adopt such a policy when sidewalks are installed by the Town.
46. Investigate funding sources for additional traffic calming measures within the EMSURA. In recent years, New York State Department of Transportation administered the Local Safe Streets and Traffic Calming Program, which provided funding to local governments to investigate and implement pedestrian safety improvements. This program was not funded for the current fiscal year, but is expected to be funded in the future.
47. Monitor parking demand in the EMSURA as development proceeds, and provide additional off-street parking to accommodate demand. In order to make certain that sufficient parking is in place to accommodate demand, applicants should be required to provide parking demand analyses as part of their site plan packages, or the Town should perform parking demand analyses for each approved site plan, so as to anticipate the need for new parking sufficiently in advance.
48. Work with Suffolk Transit to ensure they are kept abreast of increasing demand due to development in the EMSURA to make appropriate adjustments to routes and schedules as needed.
49. Provide bus shelters at all bus stops within the EMSURA. Bus shelters should be provided with copies of schedules, at a minimum. Investigate funding sources and the availability of real time information technology to provide information on route conditions and delays.
50. Encourage private developers to provide incentives for patrons and employees to use public transportation to travel to and from the EMSURA. Movie and hotel discounts, free or discounted merchandise, shuttle service between the EMSURA and the LIRR station should be considered.
51. Engage the LIRR in discussion on the possibility of shuttle service between the LIRR station and the EMSURA, similar to the program on the South Fork. Funding opportunities should be examined also.

Solid Waste Management

52. Develop a comprehensive solid waste collection strategy that uses either the local Business Improvement District (BID), in which the EMSURA is located, or a similar approach for solid waste collection and disposal. To develop the most efficient and effective strategy, the Town or BID should work with landowners and/or tenants to assess the different comprehensive collection strategies and select the best plan or approach considering cost, traffic, visual quality, equity, needs, resources, as well as the potential for future growth.
53. All containers should be kept in good repair (e.g., painted to prevent rust and deterioration), be structurally sound, leak proof, easily accessed, and vermin proof.
54. Garbage and other waste materials should be completely contained within the container. No accumulation of garbage or waste materials should be permitted outside the confines of the container, and garbage should not accumulate so that the container cover cannot be firmly closed as to prevent animals from gaining access to the container.
55. Containers should be strategically located, angled, and screened, yet still allow for removal. Containers should be screened from public view with a solid enclosure or enclosure of dense vegetation on at least three sides to a height of the container. No container should be located in or on a public right-of-way.

56. Efforts should be taken to consolidate all containers within the area, with the assistance of the BID and/or a creation of a garbage district. Such consolidation may include requirements such as the installation one litter receptacle or receptacle area for several uses placed in an inconspicuous and safe location.
57. Garbage should be removed frequently to avoid unpleasant odors.
58. Deliveries, collection of refuse, and other activities should be confined to such hours and such type as will not create any unreasonable disturbance to neighboring residential areas.
59. Heighten code enforcement of mandatory recycling.
60. Require tonnage reports describing the quantity and types of refuse generated.

PROPOSED IMPLEMENTATION

To achieve the objectives of the 2008 Update, the activities described below would be undertaken either by or on behalf of the CDA, in accordance with applicable federal, State, and County laws, policies, and procedures. The CDA, as the Town's designated urban renewal agency, may fund these activities in full or in part, or may seek other sources of funding for implementation. The description of projects herein provides general authority to undertake these activities. These projects may be modified or expanded upon as needed to meet the plan objectives.

LAND ACQUISITION

The CDA plans to acquire a parcel located within the DC-2 zone adjacent to Town-owned property and the Peconic Avenue entrance to the waterfront park. This parcel, identified as Suffolk County Tax Map number District 0600, Section 128, Block 6, Lot 85.3, would provide additional open space in association with Riverfront Park. Public and private acquisition is recognized as an integral measure to revitalize the EMSURA and could be used to redevelop deteriorated and/or other properties for the purposes of improving overall public safety and welfare of the urban renewal area. Currently, there are properties both north and south of East Main Street and West of McDermott that are being considered for public and private acquisition. Public acquisition of additional lands, where warranted, may be necessary to foster the overall goals of this update. Public land within the EMSURA, such as areas utilized for parking, should be reviewed periodically and a determination rendered as to whether parking is the appropriate use. If not, public/private funding for reuse of parking with acceptable development or conversion to parkland should be considered. The CDA and the Town have acquired numerous sites since the 1993 Plan and would continue to do so in the future.

DEMOLITION AND REMOVAL OF STRUCTURES

Deteriorated and blighted properties, whether acquired publicly or privately, deemed not appropriate for rehabilitation and reuse, should be cleared to advance one or more of the goals set forth in this 2008 Update.

AIR RIGHTS AND EASEMENTS

The Town Board and Planning Board should be granted the authority to reduce permitted heights as appropriate to mitigate impacts between proposed new development and historic and other structures of local significance. In accordance with the DC-1 zone, all structures are permitted to be five stories in height, within the allowable density. Since it is the intent of this

2008 Update to preserve historic and significant structures (which are primarily one to two stories), air rights could be purchased, either publicly or privately, to increase density in other areas of the EMSURA that do not conflict with these structures or important views in the area.

The 1993 Plan recommended that preserving visual and physical access to the waterfront should be achieved through securing easements in favor of the Town of Riverhead over private property. Easements should be secured for perpetual pedestrian access in the form of a cross access between uses on East Main Street and the waterfront. Connections should be well lit and maintained as part of the landscape design.

METHODS AND TECHNIQUES OF URBAN RENEWAL

By initiating and sponsoring urban renewal programs and projects, the CDA would foster the goals and objectives of the update as well as the 2003 Comprehensive Plan. Such projects would revitalize the economy; improve the appearance and vitality of the EMSURA; and promote the health, safety, and welfare of the general public. To accomplish these goals, the CDA may participate—through loans, grants, or both—in assisting development of new public and private buildings and facilities in the project area, and in maintaining and improving interior and exterior conditions of existing buildings within the EMSURA.

Urban renewal efforts within the EMSURA would occur through new construction or rehabilitation of existing buildings, creation or improvement of public spaces, reuse of vacant buildings, and beautification projects, all of which further the intended goals of this update. All activities may be achieved by public and/or private property owners, with or without financial assistance by the CDA (Town), County, State or federal government. The CDA is authorized to set financial guidelines, establish loan programs and provide other forms of financial assistance to property owners and those that wish to acquire and redevelop property, as it may deem appropriate to achieve the objectives of this update. The CDA may also acquire property within the EMSURA by any legal means necessary (including condemnation) to achieve the objectives of this update.

Redevelopment activities should be encouraged for the deteriorated and vacant structures identified in Tables C-1 through C-5 in Appendix C. In addition to redevelopment activities, the CDA may create programs, incentives, and other measures pursuant to the Urban Renewal Law of New York State to occupy, either fully or partially, vacant structures within the EMSURA.

Coordinated review of projects, particularly redevelopment projects, should be carried out.

Urban Renewal Actions to Date

On June 15, 2005, the Town issued a Request for Interest and Qualifications (RFIQ) for a developer to plan, finance, construct, operate, and manage a high-quality, mixed-use development encompassing the entire EMSURA.

On October 15, 2005, the Town invited three developers to submit proposals for redevelopment of the EMSURA for review by the Town Board. The Town Board subsequently conducted a review of the responses and held a series of interviews with these developers. By Resolution dated March 7, 2006 and adopted that same date, the CDA authorized the Chairman of the CDA to commence negotiations with Apollo Real Estate Investors, LP on a proposal for a planned development to revitalize downtown Riverhead (CDA Resolution #2).

On August 10, 2006, the Town, CDA, and Riverhead Parking District No. 1 (collectively referred to as the "Municipal Entities") entered into a Master Developer Designation Agreement

(MDDA) with the Company (i.e., Riverhead Renaissance, LLP, the entity created by Apollo for the Riverhead project). Among other things, the MDDA gave the Company the first option to develop publicly owned property within the EMSURA. It identified two proposed areas within the EMSURA which the Company intended to pursue during the initial phase of its redevelopment plans and it outlined, in general terms, a framework by which the Company and the Municipal Entities would proceed on the development, permitting, and construction of projects within the EMSURA. These projects are supported by and consistent with the goals and objectives of the 1993 Plan, this 2008 Update, and are subject to the completion of this update, the subsequent GEIS for the update, and the customary zoning and planning reviews which apply to any development project within the Town.

On October 17, 2006, the Town Board designated the Company as the Qualified and Eligible Sponsor for the two projects identified in the MDDA (CDA Resolution #15). This designation was subject to the execution of the Land Disposition Agreement or other appropriate agreements between the Company and the Municipal Entities, among other conditions.

INFRASTRUCTURE/COMMUNITY FACILITIES/UTILITIES

As stated in the 1993 Plan, future development may necessitate additional public improvements within the EMSURA. Additionally, improvements such as placing utilities underground, façade and building restoration, sidewalk improvements, and the creation of public spaces are to be implemented as funds become available.

The recommendations below call for the improvements of infrastructure, community facilities, and public utilities. These recommendations are in accordance with the proposed goals of this update. It should be noted that improvements of this kind may be sponsored, initiated, or implemented by the CDA, Town of Riverhead, or project applicant, depending on the nature and scope of the project. Further, project-specific infrastructure improvements would be provided by the applicant.

Street Construction and Circulation Improvements

The CDA may construct or require project applicants to improve streets throughout the project area. These projects would include landscaping, construction, reconstruction, repair or replacement of streets, sidewalks, bike and pedestrian amenities, and public transit facilities; and acquisition of land, right-of-ways, easements, and other land rights for street and access improvements.

Infrastructure and Utilities Improvements

The CDA may initiate or sponsor projects that include construction, reconstruction, repair, upgrading, and replacement of electric, water, sanitary sewer and storm drainage facilities; relocation of overhead lines to underground locations; and acquisition of land, right-of-ways, easements, and other land rights as may be necessary to support redevelopment of the EMSURA. As stated, the CDA could require applicants to undertake infrastructure improvements as part of the approval process.

Public Facilities

The CDA may initiate or seek funding opportunities for the purposes of the acquisition, construction or rehabilitation of public facilities within the urban renewal area. Public facilities may include public parking facilities, police facilities, recreation centers, conference facilities, community centers, and performing arts facilities.

Parks, Recreation, Pedestrian, and Bike Paths

The CDA may initiate or sponsor the development of parks and recreation facilities in addition to improvements to pedestrian and bicycle facilities, and other civic-type spaces. In so doing, the CDA may acquire and improve land or buildings for public parks, open space, bicycle and pedestrian uses, as well as construct facilities for public use.

NEW CODES, ORDINANCES, AND AMENDMENTS

The Town may adopt design standards and/or a concept plan as part of the DC-1 zoning district and amend the DC-1 zoning code to emphasize waterfront uses and connectivity as well as provide for transitional development in close proximity to the DC-1 district.

CODE ENFORCEMENT

The use and development of land within the EMSURA shall be in accordance with the regulations set forth in the 2003 Comprehensive Plan, the Town's zoning ordinance, and any other applicable local, federal, State, or County laws regulating the use and development of property in an urban renewal area.

The CDA must be notified of any building or annexation application, building permit, and design review, variance, conditional use or other development permits or applications requested within the EMSURA.

TIME SCHEDULE

Table 2 below is an approximate time schedule for the implementation of this update. Implementation of the 2008 Update would commence upon the completion of the SEQRA process and adoption of this plan by the Town Board. Start and completion dates for all actions, including land acquisition, clearance, disposition of property, redevelopment and rehabilitation, are subject to change as a result of funding, State loans, periodic subsidies, and capital grants.

Table 2
Recommended Time Schedule

Action	Start Date	Date of Completion
Submission of Update to the Town Planning Board	May 2008	July 2008
Planning Board Determination Public Hearing	July 2008	
New York State Environmental Quality Review Process	Late 2006	August 2008
Adoption of the East Main Street Urban Renewal Plan Update 2008	Late 2006	September 2008
CDA's Advisory Role to the Building Department as per Section 503(h) of New York State Article 15 (Urban Renewal Law)	Late 2008	36 months
Reuse of Vacant Structures	September 2008	2012
Rehabilitation of Identified Deteriorated Structures	September 2008	2012
Disposition of Land	September 2008	2017
Acquisition of Land	2008	2017
Infrastructure and Public Space Improvements	September 2008	2022
Approval of Development Applications	Late 2008	2022
Private Development of Underdeveloped or Undeveloped Properties	Late 2008	2022

It is strongly recommended that the implementation of this plan be carried out in three five-year consecutive phases or stages, immediately following the adoption of this report. Those phases would be as follows: short term (2012); interim (2017) and long term (2022). By focusing redevelopment and urban renewal efforts into separate and consecutive phases, the CDA would be able to ensure that the recommendations put forth in this plan are implemented in a manner that is not disruptive to the environment, protects and promotes the safety, health, and welfare of the public, and promotes the sound growth and development of the urban renewal area.

It is intended that the implementation of recommendations put forth in this plan will be carried out in phases or stages extending over a 20-year period from the adoption of this plan and will be subject to modification or amendment thereto by the Riverhead Town Board

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LIST OF APPENDICES

A. CDA Resolution # 9
B. DC-1 Zoning Ordinance
C. Land Use Inventory
D. Photographs
E. Deteriorated Buildings

APPENDIX A

CDA Resolution # 9

09/19/06

Adopted

TOWN OF RIVERHEAD

Community Development Agency

Resolution # 9

AUTHORIZES THE AGENCY TO UNDERTAKE AND UPDATE THE 1993 EAST MAIN STREET URBAN RENEWAL PLAN AND TO PREPARE A GENERIC ENVIRONMENTAL IMPACT STATEMENT IN CONJUNCTION WITH THAT COMPREHENSIVE PLANNING PROCESS

Councilman Bartunek offered the following resolution, which was seconded by Councilwoman Blass.

WHEREAS, in October 1993, pursuant to the General Municipal Law of the State of New York, the Town of Riverhead Community Development Agency adopted an Urban Renewal Plan for East Main Street and through which the Community Development Agency created the Town of Riverhead East Main Street Urban Renewal Area; and

WHEREAS, in November of 2003, the Town Board of the Town of Riverhead adopted a Comprehensive Master Plan pursuant to section 272 of the Town Law of the State of New York; and

WHEREAS, In November 2003, in compliance with rules and regulations promulgated by the Department of Environmental Conservation and set forth in 6 NYCRR Part 617 (State Environmental Quality Act), the Town Board of the Town of Riverhead completed a Generic Environmental Impact Statement in connection with the adoption of the Comprehensive Master Plan and adopted a Findings Statement supporting the conclusions and determinations set forth in the Comprehensive Master Plan; and

WHEREAS, in accordance with the recommendations set forth in the Comprehensive Master Plan, the Town Board adopted new zoning use districts which includes the area encompassed by the East Main Street Urban Renewal Plan; and

WHEREAS, Riverhead Renaissance, LLC, has proposed to redevelop certain property within the East Main Street Urban Renewal Area provided it is determined to be a Qualified and Eligible Sponsor by the Community Development Agency; and

WHEREAS, the adoption of the Comprehensive Master Plan, together with the amendments to the Town's zoning ordinance which includes the East Main Street Urban Renewal Area, warrant a review of the East Main Street Urban

Renewal Plan to ensure its consistency with the Comprehensive Master Plan and the recent amendments to the Town's zoning ordinance; and

WHEREAS, it is anticipated that this review will result in the need for modifications and amendments to the Town of Riverhead's East Main Street Urban Renewal Plan, and

WHEREAS, the potential redevelopment of the East Main Street Urban Renewal Area by Riverhead Renaissance, LLC and others may generate environmental and/or socio-economic impacts which should be the subject of further environmental review; and

WHEREAS, the Community Development Agency believes that the most appropriate means of evaluating these potential impacts is by undertaking a Generic Environmental Impact Statement in conjunction with the update of the Urban Renewal Plan for the East Main Street Urban Renewal Area; and

WHEREAS, in August of 2006, Riverhead Renaissance, LLC was designated to be the Master Developer for the Town's East Main Street Urban Renewal Area; and

WHEREAS, as the Town's designated Master Developer, Riverhead Renaissance, LLC, has agreed to fund the cost of updating the East Main Street Urban Renewal Plan as well as the cost of preparing the aforementioned GEIS, according to terms and conditions of the Master Developer Designation Agreement ("MDDA") between Riverhead Renaissance, the CDA and other Town Agencies dated August 10, 2006,

NOW, THEREFORE, BE IT

RESOLVED, that for all of the foregoing reasons, the Agency hereby agrees to authorize the review and, if appropriate, proposed amendment of the Riverhead East Main Street Urban Renewal Plan by consultants and special counsel selected in accordance with the MDDA; and be it further

RESOLVED, that the amendment of the Town of Riverhead East Main Street Urban Renewal Plan constitutes a Type I action pursuant to 6 NYCRR Part 617.4(b)(1); and be it further

RESOLVED, that since there are a number of redevelopment projects proposed for the East Main Street Urban Renewal Area, a Generic Environmental Impact Statement ("GEIS") should be prepared in connection with the review and amendment of the Riverhead East Main Street Urban Renewal Plan ("URP"); and be it further

RESOLVED, that the following are potentially involved agencies: the Town Board of the Town of Riverhead, and the Town Planning Board; and be it further

RESOLVED, that the Community Development Agency wishes to assume Lead Agency status in connection with the SEQRA review of the project, and be it further

RESOVLED, that the Community Development Agency directs that a Lead Agency coordination letter be circulated among the involved agencies together with a distribution package of a location map, and such other information as has been prepared to date regarding such review and amendment of the URP, and be it further

RESOLVED, that the Town Clerk is hereby directed to forward a copy of this resolution to Philip J. Cardinale, Chairman, Town of Riverhead Community Development Agency; Town of Riverhead Community Development Department, Andrea Lohneiss, Director; Town Attorney; Twomey, Latham, Shea, Kelley, Dubin, Reale and Quartararo, LLP; Riverhead Renaissance, LLC; Richard Hanley, Planning Director; and The Weber Law Group.

THE VOTE
Dunleavy ✓ yes ___ no Bartunek ✓ yes ___ no
Blass ✓ yes ___ no ___ Densieski ✓ yes ___ no
Cardinale ✓ yes ___ no
THE RESOLUTION ✓ WAS ___ WAS NOT
THEREFORE DULY ADOPTED

APPENDIX B

DC-1 Zoning Ordinance

ARTICLE LVI Downtown Center 1: Main Street (DC-1) Zoning Use District [Added 11-3-2004 by L.L. No. 45-2004]

§ 108-297. Purpose and intent.

The intent of the Downtown Center 1: Main Street (DC-1) Zoning Use District is to allow, maintain, and foster a traditional downtown character along Main Street, with a pedestrian-friendly streetscape, active ground-floor uses, a twenty-four-hour presence from upper-story residential, with a compact, walkable scale.

§ 108-298. Uses.

In the DC-1 Zoning Use District, no building, structure, or premises shall be used or arranged or designed to be used, and no building or structure shall be hereafter erected, reconstructed, or altered, unless otherwise provided in this chapter, except for that following permitted uses or specially permitted uses and their customary accessory uses:

A. Permitted uses: **[Amended 2-7-2006 by L.L. No. 8-2006]**

1. Retail stores.
2. Banks.
3. Personal service businesses.
4. Indoor public markets.
5. Art galleries and studios.
6. Museums, libraries, aquariums and other cultural attractions.
7. Restaurants, cafes, bakeries with retail sale on premises, banquet facilities, specialty food stores, ice cream parlors.
8. Theaters and cinemas.
9. Professional offices (except for veterinary offices) on the ground floor.
10. Schools (including business and secretarial).
11. Places of worship.
12. Residential units on upper floors with a minimum unit size of 650 square feet.
13. Bed-and-breakfast establishments.
14. Townhouses upon lots with frontage along public highways other than New York State Route 25.

*Note: Subsequent to the date of enactment of this article, upon the issuance of certificates of occupancy for 500 residential units, such residential units as set forth in § 108-298(A)(13) shall be prohibited within the DC-1 Zoning Use District.

B. Special permit uses:

1. Hotels.
2. Marinas.
3. Taverns.
4. Indoor recreation facilities.
5. Day-care, nursery schools.
6. Dormitories, on upper floors.
7. Retail stores with greater than 10,000 square feet of gross leasable floor area.

C. Accessory uses. Accessory uses shall include those uses customarily incidental to any of the above permitted uses or specially permitted uses when located on the same lot. Specifically permitted are the following:

(1) Artists' studios, provided that they occupy 40% or less of a principal residence or are located in a detached accessory building on a residential pare, and do not exceed 1,000 square feet of floor area.

D. Prohibited uses:

1. All ground-floor offices, with the exception of real estate and professional offices.
2. Office-only buildings.
3. Ground-floor residential units, with the exception of townhouse uses.
4. Flea markets, with the exception of farmers markets.
5. Gas stations, car washes, and other automobile-oriented uses.
6. Drive-through windows for restaurants and banks.
7. Antennas for wireless providers.

§ 108-299. Lot, yard, bulk, and height requirements.

No buildings shall be erected nor any lot or land area utilized unless in conformity with the Zoning Schedule Editor's Note: The Zoning Schedule is included at the end of this chapter. incorporated into this chapter by reference and made a part hereof with the same force and effect as if such requirements were herein set forth in full as specified in said schedule, except as may be hereafter specifically modified.

§ 108-300. Supplementary requirements.

The following design and parking standards shall apply:

A. Design standards.

1. The principal building entrance and front shall face the primary street frontage and sidewalk. Secondary building entrances on the south side of Main Street shall face the Peconic Riverfront.
2. At least 75% of linear width of the front facade shall be comprised of transparent windows. Where shade is desired, awnings are encouraged. Windows may not be obscured more than 10% by opaque banners, or either permanent or temporary advertisements or signs.
3. Building shape, massing, and siting should reflect the prevalent character of surrounding buildings on the block.
4. Facades of commercial buildings that face sidewalks or pedestrian walkways shall be required to have variations in facade plane, piers, or other architectural features.
5. Signage in the DC-1 Zoning Use District shall be provided in accordance with § 108-56, Signs.
6. Buffering and transitions:
    a. Trash and/or dumpster areas shall be screened by wood fences or landscaping, or a combination thereof pursuant to § 98-8.
    b. Buffer plantings or landscaping or opaque fences, preferably wood fences, shall be provided between commercial businesses and adjoining residential uses.
    c. Deliveries and loading activities shall, to the extent possible, be restricted to the hours between 8:00 a.m. and 5:00 p.m. on weekdays.

B. Parking standards.

1. The number of off-street parking spaces in the DC-1 Zoning Use District shall be provided in accordance with § 108-80, Off-street parking.
2. Where credible evidence is provided by traffic counts or data by a licensed traffic engineer, up to a twenty-percent reduction in off-street parking may be permitted for shared parking, where the peak parking of two or more uses occurs at different times.
3. The parking requirement may be reduced with payment of a fee in lieu of providing off-street parking as provided for in § 108-60.
4. Off-street parking shall not be permitted in the front yard. Parking shall be sited to the rear of buildings, away from street frontage(s) when possible, or to the side of buildings. In all cases, garages and parking areas shall be recessed at least five feet from the primary front facade plane of the main building, and at least 15 feet back from the front property line.

5. Parking may also be located fully below buildings, partially below grade in a building, or at-grade within a building, provided it is fully enclosed and no entry is provided facing a public street or front yard. Structured parking that is partially below grade shall be screened from the street by steps, trellises, or screens.
6. Curb cuts to parking lots and garages shall be minimized by sharing driveways for access to adjacent parking lots. However, curb cuts and driveways are prohibited along the front property line for properties less than 30 feet in width; in these situations, parking must be accessed from a rear alley, side street, or shared rear lot.
7. Curb cuts, driveways, and garages shall meet the following dimensional regulations:
    a. Curb cuts and driveways at the front property line leading to parking areas of 10 or fewer spaces shall not exceed 10 feet in width along any point.
    b. Curb cuts and driveways at the front property line leading to parking areas of 11 or more spaces shall not exceed 14 feet in width at any point.
    c. The maximum width of garage entryways facing a front street shall not exceed 18 feet.

APPENDIX C

Land Use Inventory

Appendix C: Land Use Inventory Tables

Table C-1
Land Use By Parcel: Section 128, Block 6

Lot	Land Use-Description	1993		2007		
					Deteriorated	
		Vacant	Deteriorated	Vacant*	Structural Damage	Aesthetic Concern
49.2	Commercial building, multi-story, restaurant on the ground floor	✓				
66.6	Cultural and institutional use, multi-story (Suffolk County Community College Culinary and Hospitality Center)					
52.1	Commercial building, multi-story, restaurant on the ground floor					
52.2	Commercial building, multi-story, office on the ground floor					
57.3	Commercial building, retail use					
58.1	Vacant lot					
61.2	Vacant lot	✓				
63.2	Commercial building, retail use					
64	Commercial building	✓	✓	✓		✓
65	Place of worship					
66.4	Parking lot					
67	Commercial building, multi-story, office on the ground floor					
68	Commercial building, multi-story		✓	✓		
69	Commercial building, multi-story, restaurant on the ground floor					
70	Commercial building, multi-story, retail on the ground floor		✓			
71	Commercial building, restaurant use		✓			✓
72.1	Commercial building, retail					
72.2	Parking lot					
72.3	Parking lot					
72.4	Parking lot					
73.1	Commercial building, multi-story, retail on the ground floor			✓	✓	
73.2	Parking lot					
74	Commercial building, multi-story		✓		✓	
75	Commercial building					

Table C-1 Continued
Land Use By Parcel: Section 128, Block 6

Lot	Land Use-Description	1993		2007		
					Deteriorated	
		Vacant	Deteriorated	Vacant*	Structural Damage	Aesthetic Concern
76.1	Commercial building					
76.2	Commercial building					
77	Commercial building, multi-story	✓	✓		✓	
78	Commercial building, restaurant use					
79	Commercial building, multi-story, church on the ground floor		✓			✓
80	Recreational use, music hall					
81	Commercial building, multi-story			✓		✓
82	Commercial building, multi-story, restaurant on the ground floor			✓		✓
85.1	Public park					
85.3	Parking lot					
86.1	Parking lot					
86.3	Commercial building, multi-story		✓	✓	✓	
88	Parking lot					

Note: * Includes partially vacant structures.

Sources: Field Surveys, November/December 2006; *1993 East Main Street Urban Renewal Plan;* Town of Riverhead Tax Assessors Office, December 2006.

Table C-2
Land Use By Parcel: Section 129, Block 1

Lot	Land Use-Description	1993		2007		
					Deteriorated	
		Vacant	Deteriorated	Vacant*	Structural Damage	Aesthetic Concern
4	Commercial building	✓		✓		
6	Commercial building		✓	✓		✓
8.2	Commercial building	✓	✓	✓	✓	
8.4	Recreational use, multi-story theater			✓		✓
9	Commercial building, multi-story, office on the ground floor					
10	Commercial building			✓	✓	
11	Commercial building			✓	✓	
12	Commercial building			✓	✓	
13	Commercial building, retail use				✓	
14	Commercial building			✓		
15	Cultural and institutional use (East End Arts Council)		✓			
16	Cultural and institutional use (East End Arts Council)					
17	Commercial building			✓	✓	
18	Commercial building		✓	✓		✓
19	Commercial building		✓	✓		✓
20	Commercial building		✓	✓		✓
21	Recreational use, museum				✓	
22	Commercial building, retail use					
23	Parking lot					

Note: * Includes partially vacant structures.

Sources: Field Surveys, November/December 2006; *1993 East Main Street Urban Renewal Plan;* Town of Riverhead Tax Assessors Office, December 2006.

Table C-3
Land Use By Parcel: Section 129, Block 2

Lot	Land Use-Description	1993		2007		
					Deteriorated	
		Vacant	Deteriorated	Vacant*	Structural Damage	Aesthetic Concern
11	Community use, multi-story, place of worship					
12	Single-family residence					
13	Commercial building, multi-story, office on the ground floor					
32	Commercial use, bank					
34.1	Commercial building					

Note: * Includes partially vacant structures.
Sources: Field Surveys, November/December 2006; *1993 East Main Street Urban Renewal Plan;* Town of Riverhead Tax Assessors Office, December 2006.

Table C-4
Land Use By Parcel: Section 129, Block 3

Lot	Land Use-Description	1993		2007		
					Deteriorated	
		Vacant	Deteriorated	Vacant*	Structural Damage	Aesthetic Concern
9	Parking lot					
10	Commercial building, multi-story, funeral home					
11	Vacant lot					
12	Commercial building, multi-story, office use				✓	
13	Commercial building, multi-story			✓	✓	
31	Parking lot		✓			

Note: * Includes partially vacant structures.
Sources: Field Surveys, November/December 2006; *1993 East Main Street Urban Renewal Plan;* Town of Riverhead Tax Assessors Office, December 2006.

Table C-5
Land Use By Parcel: Section 129, Block 4

Lot	Land Use-Description	1993		2007		
					Deteriorated	
		Vacant	Deteriorated	Vacant*	Structural Damage	Aesthetic Concern
1	Commercial building, multi-story, office on the ground floor					✓
2	Commercial building, multi-story, office on the ground floor					✓
3	Commercial building, retail use		✓			
5.2	Single-family residence		✓		✓	
6.1	Single-family residence		✓			
7	Single-family residence		✓			
8	Single-family residence		✓			
9	Single-family residence		✓			
10.1	Commercial building, multi-story		✓	✓	✓	
10.6	Commercial building, multi-story		✓	✓	✓	
10.7	Vacant lot					
11	Sewage treatment and water pollution control		✓			
12	Commercial building, restaurant use					
13.1	Commercial building, warehouse				✓	
13.2	Commercial building, restaurant use		✓		✓	
14	Parking lot					
15	Commercial building, restaurant use		✓			
17	Commercial building, gas station with minimart					
18.3	Commercial building					✓
19.1	Recreation use, aquarium					
20	Parking lot					
21.1	Marina					
21.2	Parking lot					

Note: * Includes partially vacant structures.

Sources: Field Surveys, November/December 2006; *1993 East Main Street Urban Renewal Plan;* Town of Riverhead Tax Assessors Office, December 2006.

APPENDIX D

Photographs



Exhibit D-1: Looking southeast from the east side of Peconic Avenue toward the waterfront park access road.



Exhibit D-2: Looking northeast toward the east side of Peconic Avenue at several commercial and vacant uses.



Exhibit D-3: Looking east toward the northeast corner of Peconic Avenue near East Main Street at vacant and cultural uses.



Exhibit D-4: Looking southwest toward the corner of East Main Street and Peconic Avenue at commercial uses.



Exhibit D-5: Looking southwest toward the south side of East Main Street at the streetscape, east of Peconic Avenue.



Exhibit D-6: Looking south from a gated alley on the south side of East Main Street toward the waterfront, east of Peconic Avenue.



Exhibit D-7: Looking southeast toward the south side of East Main Street at commercial uses and streetscape.



Exhibit D-8: Looking south toward the south side of East Main Street at commercial uses.



Exhibit D-9: Looking south from the entrance to the parking lot located on the south side of East Main Street toward the waterfront within the southwest portion of the EMSURA.



Exhibit D-10: Looking southwest toward the south side of East Main Street at vacant structures and streetscape.



Exhibit D-11: Looking south toward the south side of East Main Street at vacant structures and commercial uses, west of McDermott Avenue.



Exhibit D-12: Looking south toward the waterfront, from an alley located on the south side of East Main Street.

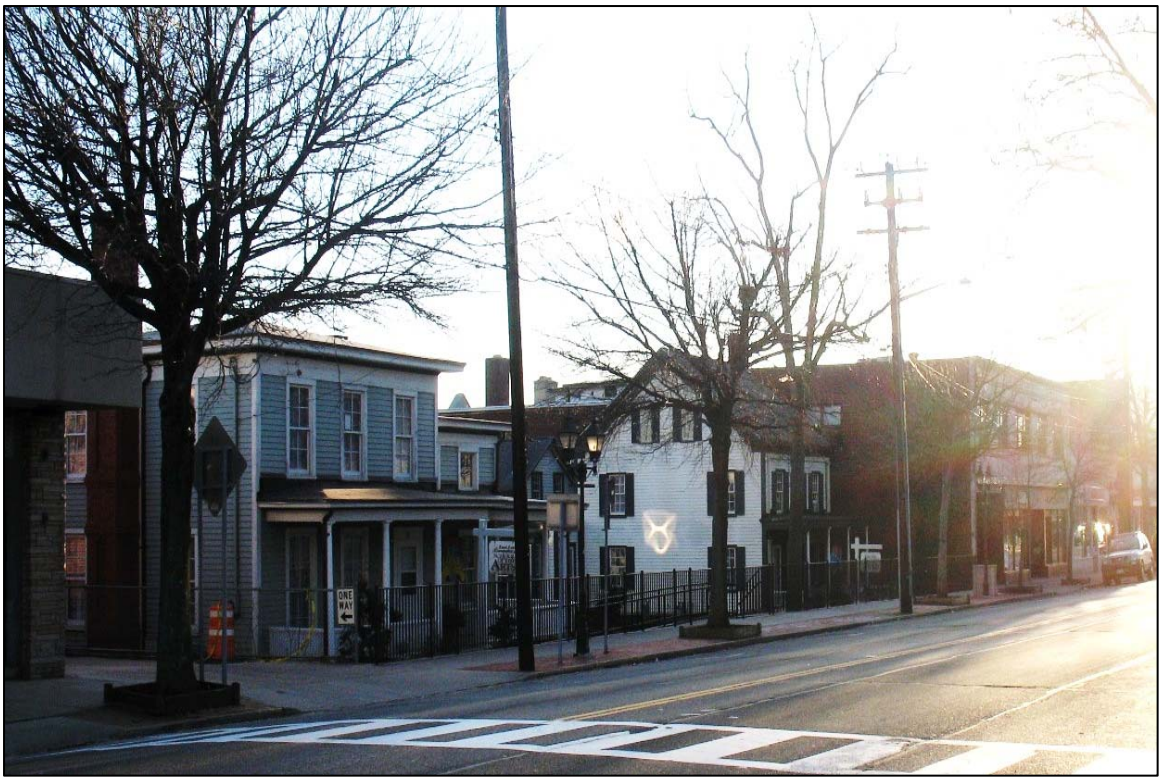


Exhibit D-13: Looking southwest from East Avenue toward the south side of East Main Street at the East End Arts Council and streetscape.



Exhibit D-14: Looking south from an alley located within a vacant structure on the south side of East Main Street, just west of the East End Arts Council.



Exhibit D-15: Looking south from a pedestrian path located on the East End Arts Council property on the south side of East Main Street toward the waterfront.



Exhibit D-16: Looking south from an access road on the south side of East Main Street, between the East End Arts Council and the old Sears building, toward the waterfront.



Exhibit D-17: Looking southwest toward the south side of East Main Street at the East End Arts Council and a vacant structure, west of McDermott Avenue.



Exhibit D-18: Looking southwest toward the south side of East Main Street at a recreational use and vacant structures, immediately west of McDermott Avenue.



Exhibit D-19: Looking southeast toward the east side of McDermott Avenue at single-family residences.



Exhibit D-20: Looking east toward the east side of McDermott Avenue at a single-family residence. Proposed for demolition and new construction for a commercial building.



Exhibit D-21: Looking east from the corner of McDermott Avenue and East Main Street, toward the streetscape east of McDermott Avenue.



Exhibit D-22: Looking south toward East Main Street at commercial use, immediately east of McDermott Avenue.



Exhibit D-23: Looking south at an alley on the south side of East Main Street, east of McDermott Avenue.



Exhibit D-24a: Looking south at an alley on the south side of East Main Street, just east of McDermott Avenue.

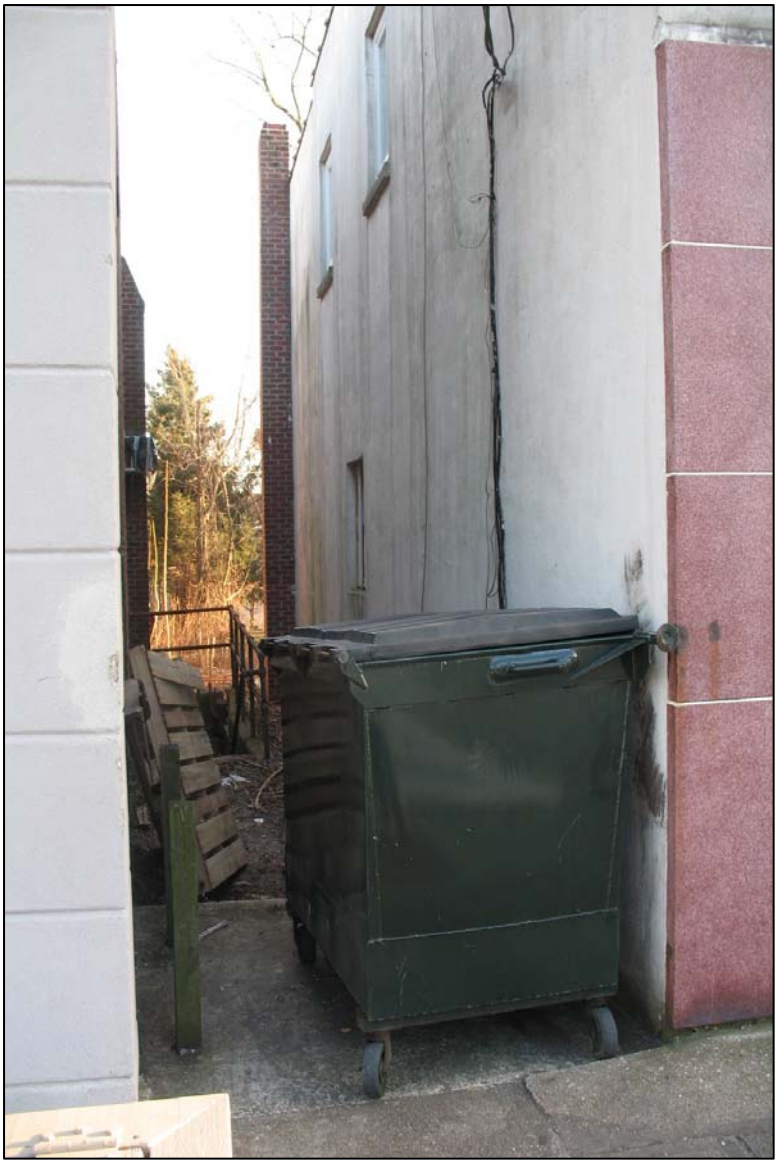


Exhibit D-24b: Looking south at an alley on south side of East Main Street, just east of McDermott Avenue (close-up).



Exhibit D-25: Looking southwest from Maple Avenue toward the south side of East Main Street at commercial uses east of McDermott Avenue.



Exhibit D-26: Looking southwest from Union Avenue toward the south side of East Main Street at commercial uses and streetscape.



Exhibit D-27: Looking south from an alley located on the south side of East Main Street toward the waterfront, east of McDermott Avenue.



Exhibit D-28: Looking west toward the side of a vacant building located north of the waterfront parking lot, east of McDermott Avenue.



Exhibit D-29: Looking south toward East Main Street at a commercial structure, west of an access road/parking lot to the waterfront and east of McDermott Avenue.



Exhibit D-30: Looking south from the south side of East Main Street at an access road/parking lot to the waterfront, east of the Thrift Store.



Exhibit D-31: Looking southeast from the south side of East Main Street toward a commercial structure located across from Union Avenue.



Exhibit D-32: Looking southeast from an access road between two commercial structures toward the waterfront across from Union Avenue.



Exhibit D-33: Looking south toward the western end of a building on the south side of East Main Street across from Union Avenue.



Exhibit D-34: Looking south toward the Atlantis Marine World Aquarium entrance on the south side of East Main Street, just west of the eastern boundary of the EMSURA.



Exhibit D-35: Looking south toward the south side of East Main Street at the easternmost boundary of the EMSURA.



Exhibit D-36: Looking south toward Treasure Cove Resort and Marina entrance at the easternmost boundary of the EMSURA.



Exhibit D-37: Looking east from the north side of East Main Street near the easternmost EMSURA boundary at a parking lot located just east of Ostrander Avenue.



Exhibit D-38: Looking north from the north side of East Main Street at a vacant structure, just west of Ostrander Avenue.



Exhibit D-39: Looking north at a commercial use on the north side of East Main Street, west of Ostrander Avenue.



Exhibit D-40: Looking north from the south side of East Main Street at a funeral home located on the corner of East Main Street and Union Avenue.



Exhibit D-41: Looking northeast from the south side of East Main Street toward the intersection of Union Avenue and East Main Street.



Exhibit D-42: Looking north from the south side of East Main Street at commercial uses east of Maple Avenue.



Exhibit D-43: Looking north from the south side of East Main Street at a strip mall between Union and Maple Avenues.



Exhibit D-44: Looking northwest from the south side of East Main Street at various uses and streetscape, west of Union Avenue.



Exhibit D-45: Looking north from the eastern corner of East Main Street and Maple Avenue at Maple Avenue.



Exhibit D-46: Looking northwest from the eastern corner of East Main Street and Maple Avenue at single-family residences.



Exhibit D-47: Looking northeast from the south side of East Main Street toward the corner of Maple Avenue and East Main Street at a single-family residence.



Exhibit D-48: Looking northwest toward the corner of Maple Avenue and East Main Street at a single-family residence.



Exhibit D-49: Looking north from the south side of East Main Street at Methodist Episcopal Church and a single-family residence located between Maple Avenue and East Avenue.



Exhibit D-50: Looking east from the south side of East Main Street at the Methodist Episcopal Church.



Exhibit D-51: Looking north toward the north side of East Main Street at the Methodist Episcopal Church and parish house, just east of East Avenue



Exhibit D-52: Looking north from the intersection of East Main Street and East Avenue at East Avenue.



Exhibit D-53: Looking north toward the northwest corner of East Avenue and East Main Street at a commercial bank.



Exhibit D-54: Looking north from the south side of East Main Street toward the north side of East Main Street at a commercial use, just west of North Fork Bank.



Exhibit D-55: Looking north from the north side of East Main Street at an alley adjacent to and west of North Fork Bank.



Exhibit D-56: Looking northwest toward the north side of East Main Street at a largely vacant retail strip mall west of East Avenue.



Exhibit D-57: Looking northeast at the western portion of a largely vacant retail strip mall located on north side of East Main Street, west of East Avenue.



Exhibit D-58: Looking north from the north side of East Main Street at an alley adjacent to and east of the Suffolk Theater.



Exhibit D-59: Looking north from the south side of East Main Street at vacant structures and commercial uses, east of the First Congregational Church.



Exhibit D-60: Looking north at an alley between a vacant structure and commercial use on north side of East Main Street, just east of the First Congregational Church.



Exhibit D-61: Looking north from the south side of East Main Street at a commercial use and a portion of the First Congregational Church, just east of Benjamin Place.



Exhibit D-62: Looking north from the corner of East Main Street and Benjamin Place at Benjamin Place.



Exhibit D-63: Looking north from the south side of East Main Street at a vacant structure, just west of Benjamin Place.



Exhibit D-64: Looking northwest toward the north side of East Main Street at the western portion of EMSURA, west of Benjamin Place.



Exhibit D-65: Looking north from the north side of East Main Street at an alley between Eastenders Coffee House and Green Earth retail store on East Main Street.



Exhibit D-66: Looking northeast toward a commercial use on the north side of East Main Street ,west of Benjamin Place.



Exhibit D-67: Looking north from the south side of East Main Street toward a commercial structure and construction site, east of Roanoke Avenue.



Exhibit D-68: Looking north from the south side of East Main Street at commercial uses located on the northwest corner of the EMSURA, just east of Roanoke Avenue.



Exhibit D-69: Looking east from the east side of Roanoke Avenue at the Town of Riverhead's John Lombardi Park.



Exhibit D-70: Looking south toward the south easternmost boundary of the EMSURA.



Exhibit D-71: Looking southeast from the parking lot on the south side of East Main Street toward the waterfront, west of the parking lot access road.



Exhibit D-72: Looking north from the parking lot on the south side of East Main Street and west of the parking lot access road toward the rear entrances of commercial buildings located within the western portion of the EMSURA.



Exhibit D-73: Looking west from the parking lot access road on Peconic Avenue at Peconic Avenue.



Exhibit D-74: Looking southeast from the waterfront park toward the boardwalk along the waterfront, west of McDermott Avenue.



Exhibit D-75: Looking southwest from the major access road into the parking on the south side of East Main Street toward the parking lot and waterfront.



Exhibit D-76: Looking south from the east side of Peconic Avenue toward a pedestrian bridge located on southeastern portion of Peconic Avenue.



Exhibit D-77: Looking northeast from the waterfront toward the rear entrance of buildings that front the south side of East Main Street, west of McDermott Avenue.



Exhibit D-78: Looking north from the south side of the Peconic River toward the waterfront, west of McDermott Avenue.



Exhibit D-80: Looking east from the road/bike path along the waterfront toward the waterfront park within the southeastern portion of the EMSURA.

APPENDIX E

Deteriorated Buildings



Exhibit E-1: A deteriorated building (Tax map number 0600-128-6-86.3) located on the east side of Peconic Avenue, north of the parking lot access road.

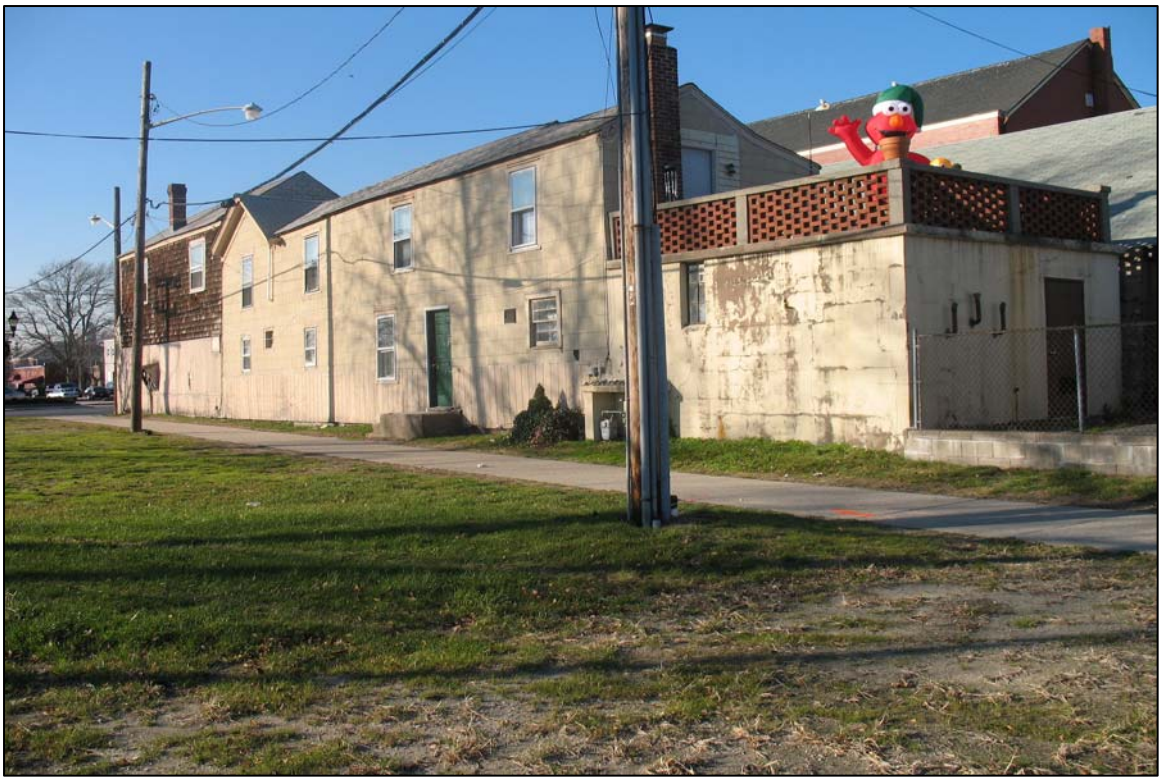


Exhibit E-2: Side view of Exhibit E-1 (Tax map number 0600-128-6-86.3) located on the east side of Peconic Avenue, north of the parking lot access road.



Exhibit E-3: Side view of a deteriorated building (Tax map number 0600-128-6-73.1) located on the south side of East Main Street, east of the major access road into the parking lot.



Exhibit E-4: Rear view of a deteriorated building (Tax map number 0600-128-6-75) located on the south side of East Main Street, north of the parking lot within the southwest portion of the EMSURA.



Exhibit E-5: Rear view of a deteriorated building (Tax map number 0600-128-6-77) located on the south side of East Main Street, north of the parking lot within the southwest portion of the EMSURA.



Exhibit E-6: Side view of a deteriorated building (Tax map number 0600-129-1-10) located east of the parking lot access road within the southeast portion of the EMSURA.



Exhibit E-7: Side and rear view of Exhibit E-6 (Tax map number 0600-129-1-10) located east of the parking lot access road within the southeast portion of the EMSURA.



Exhibit E-8: Rear view of deteriorated buildings (Tax map number 0600-129-1-12 and part of 129-1-11) located on the south side of East Main Street, west of McDermott Avenue and north of the parking lot within the southeast portion of the EMSURA.



Exhibit E-9: Side view of a deteriorated building (Tax map number 0600-129-1-17) on the south side of East Main Street, just east of the East End Arts Council.



Exhibit E-10: Side view of a deteriorated building (Tax map number 0600-129-1-21) located on the south side of East Main Street, just west of McDermott Avenue.



Exhibit E-11: Side view of a deteriorated building (Tax map number 0600-129-4-13.1) located west of McDermott Avenue behind structures fronting on East Main Street.



Exhibit E-12: Side view of a deteriorated building (Tax map number 0600-129-4-13.2) located west of the access road/parking lot on the south side of East Main Street, west of McDermott Avenue.



Exhibit E-13: Side view of a deteriorated building (Tax map number 0600-129-4-10.6) located behind the Thrift Store on the south side of East Main Street within the southeast portion of the EMSURA.



Exhibit E-14: A deteriorated building (Tax map number 0600-129-3-13) located on the north side of East Main Street, just west of Ostrander Avenue.



Exhibit E-15: A deteriorated building (Tax map number 0600-129-3-12) located on the north side of East Main Street, just west of Exhibit E-14.



Exhibit E-16: A deteriorated building (Tax map number 0600-129-1-8.2) located on the north side of East Main Street, west of East Avenue.



Exhibit E-17: A view of the eastern portion of Exhibit E-17(Tax map number 0600-129-1-8.2) located on the north side of East Main Street, west of East Avenue.

Appendix B-6
Geotechnical Evaluation, 221 E. Main Street and 31 McDermott Avenue

J.R. Holzmacher P.E., LLC

May 12, 2016

J.R. Holzmacher P.E., LLC

3555 Veterans Memorial Highway, Suite A, Ronkonkoma, New York 11779-7636
Tel: (631) 234-2220 Fax: (631) 234-2221 e-mail: info@holzmacher.com

May 12, 2016

Erich Seber
White Birch Enterprise LLC
850 Still Creek Lane
Gaithersburg, MD 20878

RE: Geotechnical Evaluation
221 E. Main Street and
31 McDermott Avenue
Riverhead, NY 11901

Dear Mr. Seber:

J.R. Holzmacher P.E., LLC (JRH) Consulting Engineers has prepared this Geotechnical Evaluation Report (GER) for the above referenced site. The soil borings described in this report were completed by Land, Air, Water Environmental Services, Inc. (LAWES). Field data was used in rendering geotechnical evaluation and judgment regarding subsoil suitability in connection with residential construction. No materials testing laboratory analysis was requested or completed on any of the soil samples.

EXPLORATION PROGRAM

Soil borings were completed on April 26, 2016 and April 27, 2016 to determine the nature and condition of the soils below the existing ground surface at the site. The boring program consisted of drilling four (4) soil borings. Boring locations B-1 and B-4 were completed to a depth of 57-feet below grade and boring locations B-2 and B-3 were completed to a depth of 37-feet below grade. Boring locations B-1 through B-3 were completed at 221 E. Main Street and boring location B-4 was completed at 31 McDermott Avenue as indicated on the attached figures.

The soil borings were completed by LAWES, a NYSDEC licensed driller, with oversight by JRH personnel. Soil samples were collected continuously from grade to 10-feet below grade and at five (5) foot intervals below that to the full depth of each boring location. Samples were collected by a Geoprobe 7822DT using a split-spoon core barrel sampler. The sampler was driven in six-inch increments by using the equivalent force of a 140-pound hammer from a height of thirty inches. Samples were collected using a standard 2" by 24" long split spoon sampler driven into the soil. The driller who recorded the Standard Penetration Test (SPT) values characterized the samples recovered during the performance of the test. The general subsurface conditions encountered during the field exploration program are shown on the soil boring logs (Appendix A). Soil stratification is based on the examination of recovered soil samples and interpretation of the field boring logs. The stratification lines, dimensions, as well

as reported values of this report represent the approximate boundaries between the soil types, while the actual transitions and dimensions may be more gradual. While the borings are representative of the subsurface conditions at their respective location and within their respective vertical reach, variations over the site may be encountered.

METHODOLGY

The scope of the work was to drill through unconsolidated soils via Geoprobe™ direct drive at four boring locations to obtain geotechnical information. Samples were logged and collected at various depths for all four boring locations. The borings were logged with respect to blow counts and classified according to the USCS unified soils classification system. The borings and all sampling were completed according to ASTM D1586-84. Restoration consisted of backfilling the borings with sand.

Representative samples were routinely obtained during the drilling process at selected intervals by applying a two-inch diameter split spoon-sampling tube. The sampler was driven by the 30-inch fall of a 140-pound hammer. The number of blows required to drive the sample spoon from 6 inches to 18 inches represents the standard penetration resistance (N), and is an indicator of the safe bearing capacity of the soil.

The drilling and testing procedures were performed applying the guidelines and procedures of ASTM designations:

ASTM D1586 Penetration Test and Split Barrel Sampling of Soils.
ASTM D2488 Recommended Practice for Description of Soils.

Sectional linear samples were also secured in conjunction with the performance of the standard penetration and density test. The soil profiles reported by the boring logs should be reviewed for specific information at the individual boring location and test depths.

SUMMARY

This report was developed from conventional and standard soil testing procedures and engineering analysis. Asphalt, brown sand/loam, medium to fine sand and gravel (fill) was recovered from grade to 4-feet below grade at boring location B-1 and from grade to 2-feet below grade at boring location B-2. Asphalt, brown sand, fine to medium sand, red brick and gravel (fill) was recovered from grade to 4-feet below grade at boring location B-3. Asphalt, brown sand, medium to fine sand, coarse to medium sand and trace gravel (fill) was recovered from grade to 2-feet below grade at boring location B-4. Dark brown peat, light brown sand, coarse to fine sand and gravel was recovered from 4-feet to 8-feet below grade at boring location; from 4-feet to 6-feet below grade at boring locations B-2 and B-3; and from 6-feet to 10-feet below grade at boring location B-4. Gray clay, sandy clay, silty clay and silty sand were recovered from 35-feet to 57-feet below grade at boring location B-1; from 25-feet to 37-feet below grade at boring location B-2; and from 35-feet to 47-feet below grade at boring location B-4. Trace silt was recovered from 30-feet to 37-feet below grade at boring location B-3. Fine to medium sand, coarse to medium sand and gravel was recovered at the remaining depths of all boring locations. Lower blow counts (N<15) were encountered throughout all four boring

locations. NYS Building Code further requires foundations to extend below the frost line, which is approximately three (3) feet to top of footing for this area.

SUBSURFACE WATER CONDITIONS

Groundwater was encountered from 3'-6" to 4'-0" below grade at all four boring locations during the field exploration.

FLOOD ZONE

The 221 E. Main Street site is located in both Zone "X" and Zone "AE". Zone "X" is an area outside the statistical 500-year flood plain and Zone AE is an area inundated by 100 year flooding where base flood elevations is 7 feet as per the attached Flood Insurance Rate Map (FIRM map). The 31 McDermott Avenue site is located in Zone "AE" only. A surveyor will determine the line demarcating the zones on the property, which will govern the elevation that the structure is to be designed to.

OBSERVATIONS AND ANALYSIS

Soil bearing capacity is estimated from results of in-situ tests using empirical correlation factors. Soil bearing values (SBVs) in tons per square foot (TSF) to undisturbed, structurally rated soils are inferred from blow counts as tabulated in Appendix B.

Boring No.	TSF @ 3.5-ft	TSF @ 5.5-ft	TSF @ 7.5-ft	TSF @ 9.5-ft
B-1	0.70	0.20	0.50	1.04
B-2	0.80	0.25	0.45	0.45
B-3	0.60	0.05	0.45	0.70
B-4	0.35	0.25	0.10	0.45

The SBVs are predicted based on saturated sands. An additional contingency to address the variation in soil strength can be realized by increasing the reinforcing steel within footings or the pile cap to accommodate "soft spots" without cracking. The lower settlement of the granular materials encountered is expected to be small in magnitude and to occur rapidly as the load is applied. Longer-term settlement of silt and organic layers, if any exist, may be significant.

SEISMIC COMPONENT

The 2010 New York State Building Code (NYSBC) (BC) contains a requirement that every structure be designed to resist the effect of earthquake motion and be assigned a seismic Design Category. The BC, Seismic Study Section 1613.5.2, Site Class Definition further dictates, at a minimum, that Site Class E be imposed. The USGS seismic summary report is included in attachment C.

Subject Site

Site Designation	Class 'E'
Site Coefficient	$F_a = 2.5$
One Second Site Coefficient	$F_v = 3.5$
5% Peak Dampened Acceleration Stress Design	$S_{DS} = 0.259g$
One Second Peak 5% Dampened Acceleration Stress Design	$S_{D1} = 0.130g$

Moreover, the project location would result in a wind design component that would exceed the anticipated effect of seismic action and would therefore govern the structural integrity of the design.

The analysis and recommendations are based on the data obtained from the test boring performed for this report. The nature and extent of variations may not become evident until open excavation is initiated. Variations should be noted and their impact evaluated with respect to the necessity to modify the recommendations of this report.

LATERAL EARTH PRESSURES COEFFICIENTS

Lateral Earth Pressures as described by theories presented by both Coulomb and Rankine, requires that the foundation size be determined prior determining the true failure planes and the resultant forces. Since the soils noted in the boring are granular, we recommend that the Active and Passive Lateral Earth Pressure coefficient be based upon cohesionless soils. The angle of internal friction is estimated at 34°, accounting for the variations within the soil column, and can be used in the computation of the loads on the foundation. An internal angle of friction for the soil yields an active earth pressure of Ka = 0.2827 and a passive earth pressure of Kp = 3.5371.

Furthermore, NYSBC Table 1804.2 permits an allowable lateral bearing of 150 psf for soil types SW, SP, SM, SC, GM, and GC. This would therefore be applicable to the soils found onsite.

INFILTRATION TEST

LAWES installed a 4-inch Schedule 40 PVC casing to approximately 3-feet below grade to complete an infiltration test. The location of the infiltration test hole (TH-1) is located in Appendix D. The soils recovered in the test hole consisted of medium to fine brown sand, loam, and trace gravel (fill material). The casing was installed into a natural soil interface to allow for the water to percolate. Any loose material was removed from the casing prior to any testing.

LAWES filled the casing with clean water to a depth of 24-inches and allowed for pre-soaking of the soil. LAWES refilled the casing within a 24 hour period with 24-inches of clean water and JRH monitored the water level. JRH allowed for the 1 hour monitoring prior to refilling the casing three additional times for a total of four observations. The results of the percolation test are included in Appendix D. Upon completion of the testing, the casing was immediately pulled, and the boring shall be back-filled with drill cuttings.

RECOMMENDATIONS

The boring exploration was completed to determine the structural design requirements for a five story mixed use structure. The field exploration revealed subsurface conditions having weaker bearing capacities throughout all boring locations and high groundwater conditions. Furthermore, it appears that the proposed structure will need to be constructed several feet higher in accordance with the FEMA flood zone for this area. Due to the weak unconsolidated soils encountered and the proposed higher first floor elevation, we recommend the use of round hollow shaft helical piles. We recommend a maximum vertical design capacity of 35 ton allowable for helical piles. The bearing capacity values for all sampled depths are available in Appendix B.

The analysis and recommendations are based on the data obtained from the borings completed for this report. The nature and extent of variations may not become evident until open excavation is initiated. Variations should be noted and their impact evaluated with respect to the necessity to modify the recommendations of this report.

Backfill of excavations, following foundation construction, should be performed using clean, excavated soils or compatible imported select common fill where additional material is required. Any and all excavations should follow OSHA guidelines for excavation protection.

LIMITATIONS

The recommendations in this report are based on our experience and training, in conjunction with the limited soils exposed at the site. We believe that this information gives an acceptable degree of reliability for anticipating behavior of the proposed improvement to be constructed; however, our recommendations are professional opinions and cannot assure accuracy beyond the limits of the soil profiles from which data was obtained. This report is based on the evaluation at the described site and on the specific anticipated construction.

MISCELLANEOUS

The attached boring logs and calculations are components of this report. If you have any questions regarding this report, or if we can be of further service, please do not hesitate to contact our office. We trust this report provides you with the necessary information to continue with development of the project.

Very truly yours,
J.R. Holzmacher P.E., LLC



Michael C. Simon, P.E.
Principal

MCS:hvs
Encl.
P:\2016\SebeE\Task I – Geotechnical Drilling, Field Oversight & Geotechnical Engineering Report (GER)\Report\Riverhead Report.doc

FIGURES



LEGEND

B-1 BORING LOCATION

TH-1 INFILTRATION TEST

P:\2016\SebeE\Task 1 ? Geotechnical Drilling, Field Oversight & Geotechnical Engineering Report (GER)\CAD\boring location map.dwg

PREPARED BY:

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The Third Generation of Excellence
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PHONE # (631) 234-2220 FAX # (631) 234-2221
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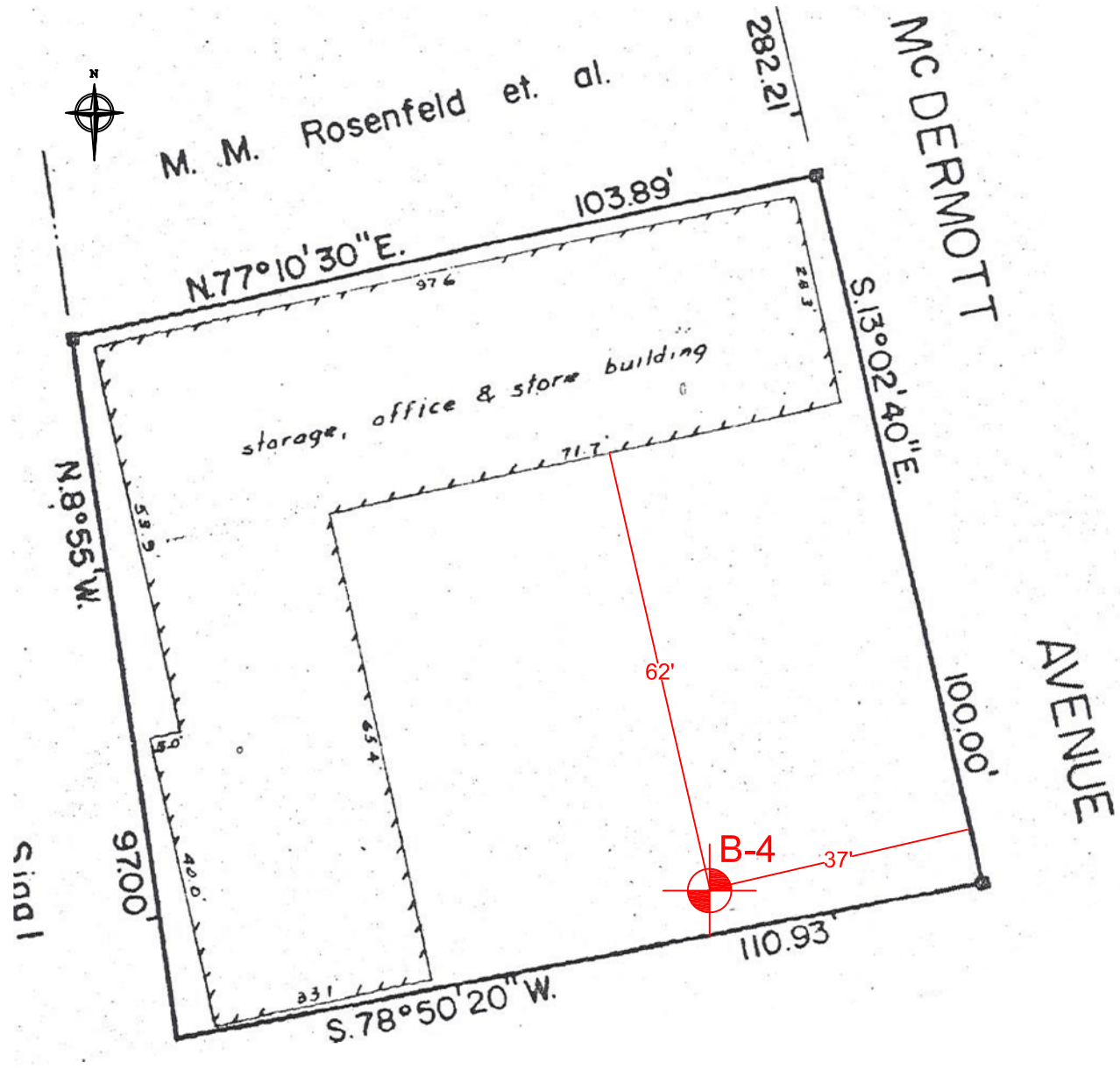
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BORING LOCATING MAP

221 E. Main Street
Riverhead, New York

DWN:	SCALE:	DATE:	PROJECT NO.:
HVS	NTS	5/12/2016	SebeE 16-01
CHKD:	APPD:	REV.:	NOTES:
HVS	MCS	-	-

FIGURE NO.: 1



LEGEND

B-1 BORING LOCATION

PREPARED BY:

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In Water Supply, Water Resources,
Civil and Environmental Engineering

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E-MAIL: info@holzmacher.com

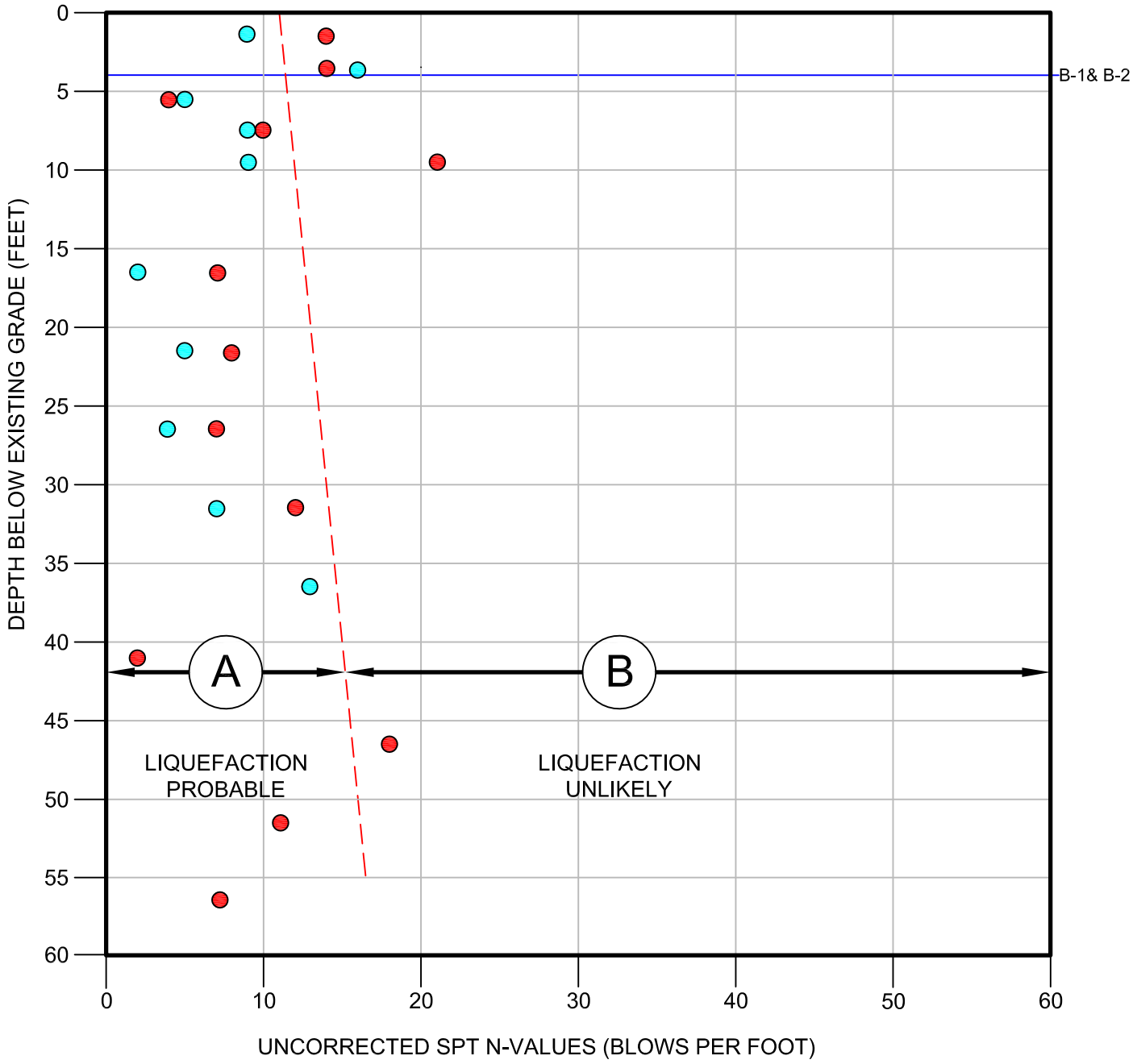
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BORING LOCATING MAP

31 McDermott Avenue
Riverhead, New York

DWN:	SCALE:	DATE:	PROJECT NO.:
HVS	NTS	5/12/2016	SebeE 16-01
CHKD:	APPD:	REV.:	NOTES:
HVS	MCS	-	-
FIGURE NO.:			
2			

P:\2016\SebeE\Task 1 ? Geotechnical Drilling, Field Oversight & Geotechnical Engineering Report (GER)\CAD\boring location map.dwg



NOTE:

THIS FIGURE IS BASED ON THE LIQUEFACTION CRITERIA FROM THE SEISMIC PROVISIONS OF THE 2014 NYC BUILDING CODE

LEGEND:

- BORING B-1
- BORING B-2
- APPROXIMATE WATER LINE
- LIQUEFACTION LINE

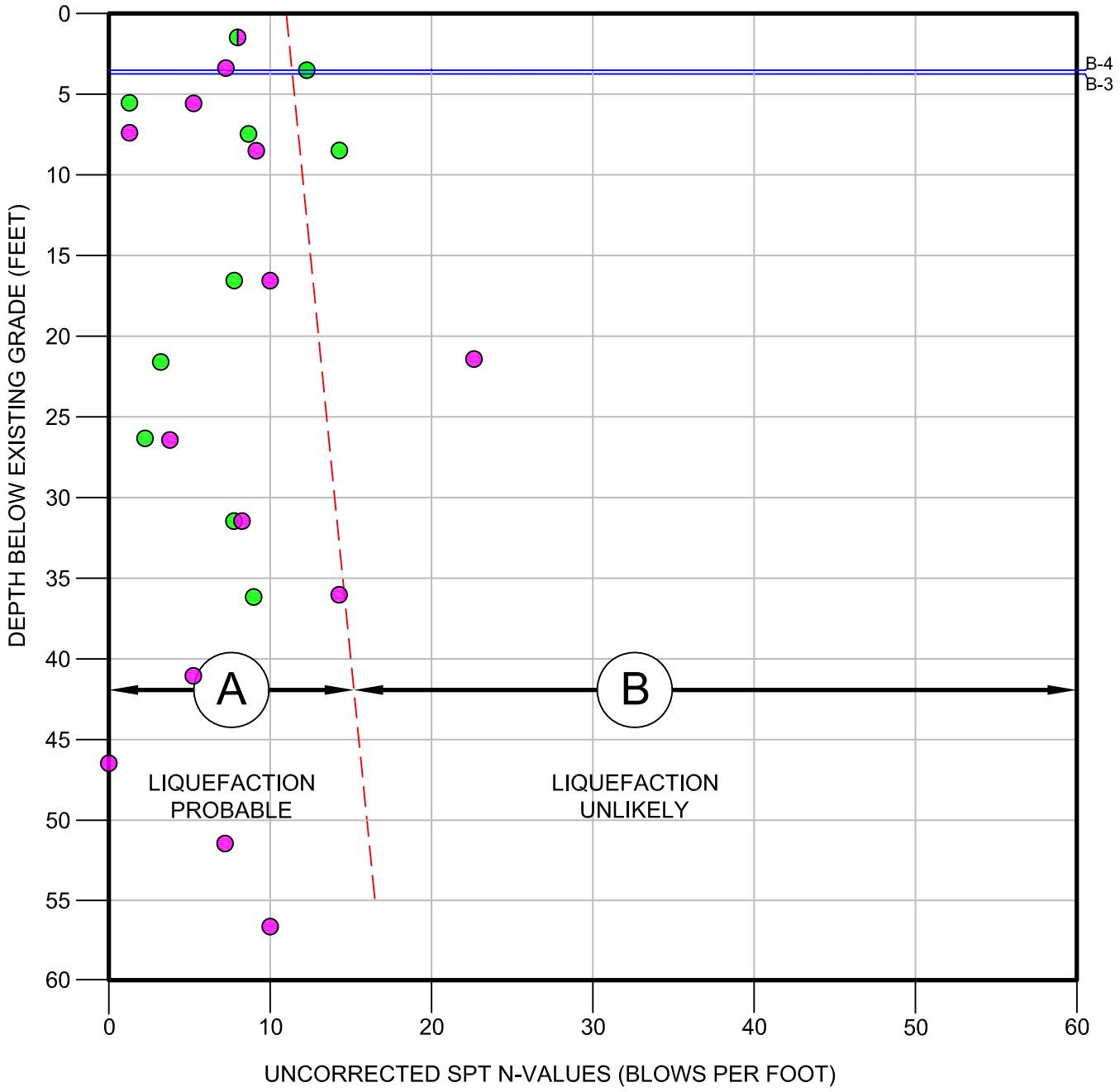
PREPARED BY:
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The Third Generation of Excellence In Water Supply, Water Resources, Civil and Environmental Engineering
3555 VETERANS MEMORIAL HWY SUITE A RONKONKOMA, NEW YORK 11779
PHONE # (631) 234-2220 FAX # (631) 234-2221 E-MAIL: info@holzmacher.com

TITLE:
N-VALUES VS. DEPTH
221 E. Main Street
Riverhead, New York

DWN:	SCALE:	DATE:	PROJECT NO.:
HVS	N/A	04/04/16	BersJ 16-01
CHKD:	APPD:	REV.:	NOTES:
HVS	MCS	-	-

FIGURE NO.: 3

P:\2016\SebeE\Task I – Geotechnical Drilling, Field Oversight & Geotechnical Engineering Report (GER)\CAD\N VALUES VS DEPTH GRAPH.dwg



NOTE:

THIS FIGURE IS BASED ON THE LIQUEFACTION CRITERIA FROM THE SEISMIC PROVISIONS OF THE 2014 NYC BUILDING CODE

LEGEND:

- BORING B-3
- BORING B-4
- APPROXIMATE WATER LINE
- LIQUEFACTION LINE

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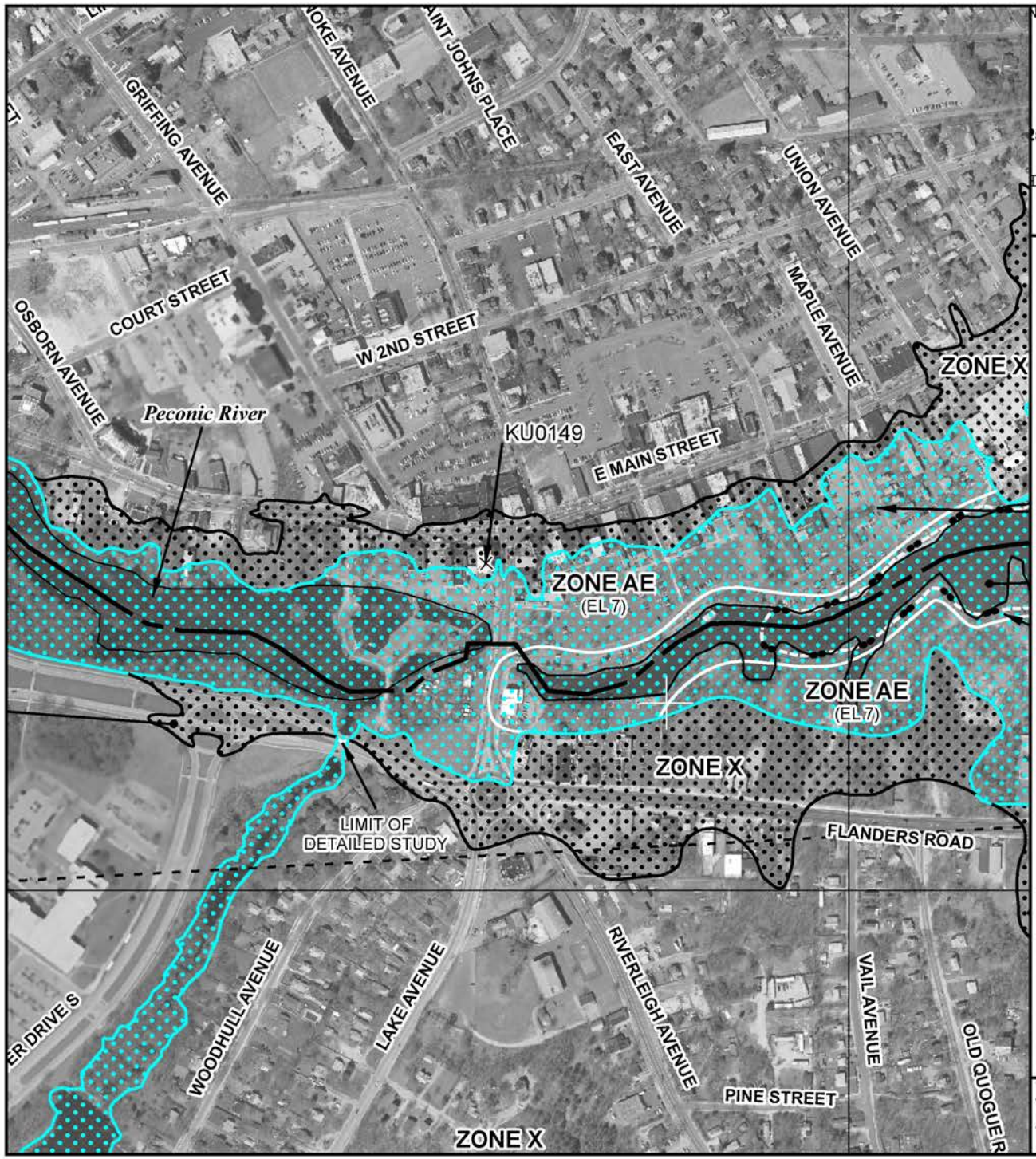
TITLE:
N-VALUES VS. DEPTH
221 E. Main Street
Riverhead, New York

DWN:	SCALE:	DATE:	PROJECT NO.:
HVS	N/A	04/04/16	BersJ 16-01
CHKD:	APPD:	REV.:	NOTES:
HVS	MCS	-	-

FIGURE NO.: 4

P:\2016\SebeE\Task I – Geotechnical Drilling, Field Oversight & Geotechnical Engineering Report (GER)\CAD\N VALUES VS DEPTH GRAPH.dwg

FIRM MAP



National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0466H

FIRM

FLOOD INSURANCE RATE MAP

for SUFFOLK COUNTY, NEW YORK
(ALL JURISDICTIONS)

CONTAINS:

COMMUNITY	NUMBER
RIVERHEAD, TOWN OF	360805
SOUTHAMPTON, TOWN OF	365342

PANEL 466 OF 1026
MAP SUFFIX: H
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36103C0466H

MAP REVISED
SEPTEMBER 25, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

APPENDIX A

SOIL BORING LOGS

Land, Air, Water Environmental Services, Inc.

DRILLER'S LOGS

BORING#: B-1

DATE: April 26, 2016
SITE: 221 E. Main St.
Riverhead, NY

CONSULTANT: J. R. Holzmacher, P.E. LLC.
Ronkonkoma, NY

DEPTH DRILLED: 57 feet
CORING DEVICE: 2" x 24"
AUTOMATIC SPT DROP HAMMER
DRILL RIG / GEOPROBE TYPE: Geoprobe 78DT

DEPTH TO WATER: 4 feet
TIME WATER WAS TAKEN: 9:15 AM
WELL/BORING GROUTED : NO
DRILLING METHOD: 3.5" Geoprobe rods

DRILLER: S. Pedersen

HELPER: C. Pedersen

DEPTH FROM	DEPTH TO	RECOVERY	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	2 ft	18 inches	0-7-7-10	4" Asphalt, brown sand/loam, medium to finem, 5% gravel, (loam)
2 ft	4 ft	18 inches	10-8-6-5	Brown sand/loam, medium to fine, 5% gravel, (loam)
4 ft	6 ft	22 inches	4-3-1-PUSH	Dark brown peat (dry), fine, (PT), top 14" light brown sand, coarse to fine, 10% gravel, (SW), wet
6 ft	8 ft	15 inches	2-4-6-4	Light brown sand, medium to fine, trace of gravel, (SW), wet, top 7" dark brown peat, fine, (PT), moist
8 ft	10 ft	16 inches	6-10-11-15	Dark brown sand, coarse to fine, 5% gravel, (SW), wet
10 ft	15 ft	Direct Push		Rod Advancement
15 ft	17 ft	14 inches	2-3-4-5	Light brown sand, coarse to medium to fine, 10% gravel, (SW), wet
17 ft	20 ft	Direct Push		Rod Advancement
20 ft	22 ft	10 inches	2-3-3-4	Light brown/tan sand, coarse to fine, 20% gravel, (SW), wet
22 ft	25 ft	Direct Push		Rod Advancement
25 ft	27 ft	9 inches	3-3-4-5	Light brown/tan/orange sand, coarse to medium, 5% gravel, (SW), wet
27 ft	30 ft	Direct Push		Rod Advancement
30 ft	32 ft	6 inches	5-6-6-7	Light tan sand, coarse to medium to fine, trace of gravel, (SW), wet
32 ft	35 ft	Direct Push		Rod Advancement
35 ft	37 ft	17 inches	2-4-5-4	Light tan/grey (2) 4" layer grey clay & silts, middle & bottom of spoon, fine, trace of gravel, (SW)/(SC)/(SM), wet
37 ft	40 ft	Direct Push		Rod Advancement

The boring / well has been finished at grade as contracted. It is the responsibility of the client and / or property owner to maintain the boring / well and have it legally abandoned when decommissioning is required.

Land, Air, Water Environmental Services, Inc.

DRILLER'S LOGS

BORING#: B-1 (con't)

DATE: April 26, 2016
SITE: 221 E. Main St.
Riverhead, NY

CONSULTANT: J. R. Holzmacher, P.E. LLC.
Ronkonkoma, NY

DRILLER: S. Pedersen HELPER: C. Pedersen

DEPTH FROM	DEPTH TO	RECOVERY	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
40 ft	42 ft	16 inches	1-1-1-4	Grey silty sand/clay (mica), fine, (SC)/(SM), wet
42 ft	45 ft	Direct Push		Rod Advancement
45 ft	47 ft	16 inches	5-8-10-13	Light grey sand/trace of silt/some mica flakes, fine, (SP), wet
47 ft	50 ft	Direct Push		Rod Advancement
50 ft	52 ft	16 inches	3-5-6-7	Light grey sand/trace of silts/clay mica, fine, (SC)/(SM), wet
52 ft	55 ft	Direct Push		Rod Advancement
55 ft	57 ft	17 inches	1-3-4-4	Light grey silty sand/trace of clay, (SM)/(SC), wet

The boring / well has been finished at grade as contracted. It is the responsibility of the client and / or property owner to maintain the boring / well and have it legally abandoned when decommissioning is required.

Land, Air, Water Environmental Services, Inc.

DRILLER'S LOGS

BORING#: B-2

DATE: April 26, 2016
SITE: 221 E. Main St.
Riverhead, NY

CONSULTANT: J. R. Holzmacher, P.E. LLC.
Ronkonkoma, NY

DEPTH DRILLED: 37 feet
CORING DEVICE: 2" x 24"
AUTOMATIC SPT DROP HAMMER
DRILL RIG / GEOPROBE TYPE: Geoprobe 78DT

DEPTH TO WATER: 4 feet
TIME WATER WAS TAKEN: 1:30 PM
WELL/BORING GROUTED : NO
DRILLING METHOD: 3.5" Geoprobe rods

DRILLER: S. Pedersen

HELPER: C. Pedersen

DEPTH FROM	DEPTH TO	RECOVERY	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	2 ft	18 inches	9-5-4-7	4" asphalt, brown loamy sand, medium to fine, 10% gravel, (loam)
2 ft	4 ft	16 inches	11-9-7-7	Brown sand, medium to fine, 5% gravel, (SW)
4 ft	6 ft	17 inches	1-2-3-1	Brown sand, coarse to medium to fine, 5% gravel, (SW), wet, top 3" dark brown peat, fine, (PT)
6 ft	8 ft	12 inches	3-4-5-7	Dark brown sand, coarse to medium, 20% gravel, (SW), wet
8 ft	10 ft	10 inches	5-5-4-4	Dark brown sand, coarse to medium, 25% gravel, (SW), wet
10 ft	15 ft	Direct Push		Rod Advancement
15 ft	17 ft	12 inches	1-1-1-1	Light brown/tan sand, coarse to medium, 5% gravel, (SW), wet
17 ft	20 ft	Direct Push		Rod Advancement
20 ft	22 ft	9 inches	1-2-3-3	Light brown/tan/orange sand, coarse to medium, 5% gravel, (SW), wet
22 ft	25 ft	Direct Push		Rod Advancement
25 ft	27 ft	12 inches	3-2-2-4	Top 6" light tan sand, fine, trace of gravel, (SW), bottom 6" grey silty sand/clay, (SM)/(SC)m, wet
27 ft	30 ft	Direct Push		Rod Advancement
30 ft	32 ft	16 inches	4-3-4-6	Light grey silty sand/trace of clay, finem, (SM)/(SC), wet
32 ft	35 ft	Direct Push		Rod Advancement
35 ft	37 ft	17 inches	5-6-7-10	Light grey sand, coarse to fine, 5% gravel, (SW), wet, top 5" grey silty sand clay, fine, (SM)/(SC), wet

The boring / well has been finished at grade as contracted. It is the responsibility of the client and / or property owner to maintain the boring / well and have it legally abandoned when decommissioning is required.

Land, Air, Water Environmental Services, Inc.

DRILLER'S LOGS

BORING#: B-3

DATE: April 27, 2016
SITE: 221 E. Main St.
Riverhead, NY

CONSULTANT: J. R. Holzmacher, P.E. LLC.
Ronkonkoma, NY

DEPTH DRILLED: 37 feet
CORING DEVICE: 2" x 24"
AUTOMATIC SPT DROP HAMMER
DRILL RIG / GEOPROBE TYPE: Geoprobe 78DT

DEPTH TO WATER: 3' 8"
TIME WATER WAS TAKEN: 9:20 AM
WELL/BORING GROUTED : NO
DRILLING METHOD: 3.5" Geoprobe rods

DRILLER: S. Pedersen
HELPER: C. Pedersen

DEPTH FROM	DEPTH TO	RECOVERY	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	2 ft	19 inches	7-4-4-8	4" asphalt, brown sand/fill/red brick, fine to medium, 5% gravel, (fill)
2 ft	4 ft	22 inches	9-7-5-4	Brown sand/fill, medium to fine, 5% gravel, (fill)
4 ft	6 ft	19 inches	3-1-PUSH-1	Dark brown sand, coarse to medium, 10% gravel, (SW), wet, top 4" dark brown peat, fine, (PT)
6 ft	8 ft	20 inches	2-3-6-5	Dark brown/brown sand, coarse to medium, 5% gravel, (SW), wet
8 ft	10 ft	12 inches	5-7-7-8	Light brown sand, coarse to medium, 10% gravel, (SW), wet
10 ft	15 ft	Direct Push		Rod Advancement
15 ft	17 ft	14 inches	4-4-5-8	Orangey tan sand, coarse to medium, 20% gravel, (SW), wet
17 ft	20 ft	Direct Push		Rod Advancement
20 ft	22 ft	15 inches	1-2-1-1	Light tan sand, coarse to fine, 10% gravel, (SW), wet
22 ft	25 ft	Direct Push		Rod Advancement
25 ft	27 ft	13 inches	1-1-1-2	Light brown sand, medium to fine, trace of gravel, (SW), wet
27 ft	30 ft	Direct Push		Rod Advancement
30 ft	32 ft	13 inches	3-3-5-6	Brown sand/trace of silts, medium to fine, trace of gravel, (SW)/(SM), wet
32 ft	35 ft	Direct Push		Rod Advancement
35 ft	37 ft	14 inches	3-4-5-6	Brown sand/trace of silts, fine, (SP)/(SM), wet

The boring / well has been finished at grade as contracted. It is the responsibility of the client and / or property owner to maintain the boring / well and have it legally abandoned when decommissioning is required.

Land, Air, Water Environmental Services, Inc.

DRILLER'S LOGS

BORING#: B-4

DATE: April 27, 2016
SITE: 31 McDermott Ave
Riverhead, NY

CONSULTANT: J. R. Holzmacher, P.E. LLC.
Ronkonkoma, NY

DEPTH DRILLED: 57 feet
CORING DEVICE: 2" x 24"
AUTOMATIC SPT DROP HAMMER
DRILL RIG / GEOPROBE TYPE: Geoprobe 78DT

DEPTH TO WATER: 3.5 feet
TIME WATER WAS TAKEN: 12:00 PM
WELL/BORING GROUTED : NO
DRILLING METHOD: 3.5" Geoprobe rods

DRILLER: S. Pedersen
HELPER: C. Pedersen

DEPTH FROM		TO		RECOVERY	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0	ft	2	ft	20 inches	7-4-4-5	3" asphalt, top 14" brown sand/fill/asphalt, medium o fine, (fill), bottom 6" orange tan and, coarse to medium, trace of gravel, (SW)
2	ft	4	ft	16 inches	4-4-3-2	Light tan sand, coarse to medium to fine, 5% gravel, (SW), wet bottom 5"
4	ft	6	ft	16 inches	2-2-3-2	Brown sand, medium to fine, trace of gravel, (SW), wet
6	ft	8	ft	21 inches	2-1-1-1	Light brown sand, coarse to fine, 5% gravel, (SW), wet, bottom 8" dark brown peat, fine, (PT)
8	ft	10	ft	9 inches	2-4-5-7	Top 2" dark brown peat, (PT), light brown sand, coarse to medium, 20% gravel, (SW), wet
10	ft	15	ft	Direct Push		Rod Advancement
15	ft	17	ft	14 inches	3-4-6-6	Orange brown sand, coarse to medium to fine, 10% gravel, (SW), wet
17	ft	20	ft	Direct Push		Rod Advancement
20	ft	22	ft	13 inches	10-11-11-12	Orangey tan sand, fine to medium, trace of gravel, (SW), wet
22	ft	25	ft	Direct Push		Rod Advancement
25	ft	27	ft	15 inches	1-1-3-7	Brown/grey sand, coarse to medium to fine, 5% gravel, (SW), wet
27	ft	30	ft	Direct Push		Rod Advancement
30	ft	32	ft	9 inches	3-4-4-5	Light brown/tan sand, coarse to fine, 5% gravel, (SW), wet
32	ft	35	ft	Direct Push		Rod Advancement
35	ft	37	ft	17 inches	4-5-9-10	Light grey/tan sand/silty sandy clay, medium to fine/fine, trace of gravel, (SW)/(SC), wet
37	ft	40	ft	Direct Push		Rod Advancement

The boring / well has been finished at grade as contracted. It is the responsibility of the client and / or property owner to maintain the boring / well and have it legally abandoned when decommissioning is required.

Land, Air, Water Environmental Services, Inc.

DRILLER'S LOGS

BORING#: B-4 (con't)

DATE: April 27, 2016
SITE: 31 McDermott Ave
Riverhead, NY

CONSULTANT: J. R. Holzmacher, P.E. LLC.
Ronkonkoma, NY

DRILLER: S. Pedersen HELPER: C. Pedersen

DEPTH FROM		TO		RECOVERY	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
40	ft	42	ft	17 inches	4-3-2-2	Light grey sand/silty sand clay, fine, trace of gravel, (SW)/(SC), wet
42	ft	45	ft	Direct Push		Rod Advancement
45	ft	47	ft	21 inches	2-PUSH	Grey sand/silty sand, medium to fine, trace of gravel, (SW)/(SM), wet
47	ft	50	ft	Direct Push		Rod Advancement
50	ft	52	ft	14 inches	3-3-4-7	Light grey sand, coarse to medium, 10% gravel, (SW), wet
52	ft	55	ft	Direct Push		Rod Advancement
55	ft	57	ft	12 inches	4-4-6-7	Grey sand, medium to fine, trace of gravel, (SW), wet

The boring / well has been finished at grade as contracted. It is the responsibility of the client and / or property owner to maintain the boring / well and have it legally abandoned when decommissioning is required.

APPENDIX B

SOIL BEARING STRENGTH

APPENDIX B

Land, Air, Water Environmental Services, Inc.

221 E. Main Street

Riverhead, New York

Boring Performed April 26, 2016

B-1

Sample Depth (ft bg)		Blows	N	Bearing	
From	To	(per 6")		Strength (TSF)	
0	2	0			
		7			
		7	14	0.70	
		10			
2	4	10			
		8			
		6	14	0.70	
		5			DTW
4	6	4			4'-0"
		3			
		1	4	0.20	
		PUSH			
6	8	2			
		4			
		6	10	0.50	
		4			
8	10	6			
		10			
		11	21	1.04	
		15			
15	17	2			
		3			
		4	7	0.35	
		5			
20	22	2			
		3			
		3	6	0.30	
		4			
25	27	3			
		3	7	0.35	
		4			
		5			

APPENDIX B
Land, Air, Water Environmental Services, Inc.
221 E. Main Street
Riverhead, New York

Boring Performed April 26, 2016

B-1 Continued

Sample Depth (ft bg)		Blows	N	Bearing
From	To	(per 6")		Strength (TSF)
30	32	5		
		6		
		6	12	0.60
		7		
35	37	2		
		4		
		5	9	0.45
		4		
40	42	1		
		1		
		1	2	0.10
		4		
45	47	5		
		8		
		10	18	0.90
		13		
50	52	3		
		5		
		6	11	0.55
		7		
55	57	1		
		3		
		4	7	0.35
		4		

APPENDIX B

Land, Air, Water Environmental Services, Inc.

221 E. Main Street

Riverhead, New York

Boring Performed April 26, 2016

B-2

Sample Depth (ft bg)		Blows	N	Bearing	
From	To	(per 6")		Strength (TSF)	
0	2	9			
		5			
		4	9	0.45	
		7			
2	4	11			
		9			
		7	16	0.80	
		7			DTW
4	6	1			4'-0"
		2			
		3	5	0.25	
		1			
6	8	3			
		4			
		5	9	0.45	
		7			
8	10	5			
		5			
		4	9	0.45	
		4			
15	17	1			
		1			
		1	2	0.10	
		1			
20	22	1			
		2			
		3	5	0.25	
		3			
25	27	3			
		2	4	0.20	
		2			
		4			
30	32	4			
		3	7	0.35	
		4			
		6			
35	37	5			
		6	13	0.65	
		7			
		10			

APPENDIX B

Land, Air, Water Environmental Services, Inc.

221 E. Main Street

Riverhead, New York

Boring Performed April 27, 2016

B-3

Sample Depth (ft bg)		Blows	N	Bearing	
From	To	(per 6")		Strength (TSF)	
0	2	7			
		4			
		4	8	0.40	
		8			
2	4	9			
		7			
		5	12	0.60	DTW
		4			3'-8"
4	6	3			
		1			
		PUSH	1	0.05	
		1			
6	8	2			
		3			
		6	9	0.45	
		5			
8	10	5			
		7			
		7	14	0.70	
		8			
15	17	4			
		4			
		5	9	0.45	
		8			
20	22	1			
		2			
		1	3	0.15	
		1			
25	27	1			
		1	2	0.10	
		1			
		2			
30	32	3			
		3	8	0.40	
		5			
		6			
35	37	3			
		4	9	0.45	
		5			
		6			

APPENDIX B

Land, Air, Water Environmental Services, Inc.

31 McDermott Avenue

Riverhead, New York

Boring Performed April 27, 2016

B-4

Sample Depth (ft bg)		Blows	N	Bearing	
From	To	(per 6")		Strength (TSF)	
0	2	7			
		4			
		4	8	0.40	
		5			
2	4	4			
		4			DTW
		3	7	0.35	3'-6"
		2			
4	6	2			
		2			
		3	5	0.25	
		2			
6	8	2			
		1			
		1	2	0.10	
		1			
8	10	2			
		4			
		5	9	0.45	
		7			
15	17	3			
		4			
		6	10	0.50	
		6			
20	22	10			
		11			
		11	22	1.09	
		12			
25	27	1			
		1	4	0.20	
		3			
		7			

APPENDIX B
Land, Air, Water Environmental Services, Inc.
221 E. Main Street
Riverhead, New York

Boring Performed April 27, 2016

B-4 Continued

Sample Depth (ft bg)		Blows	N	Bearing
From	To	(per 6")		Strength (TSF)
30	32	3		
		4		
		4	8	0.40
		5		
35	37	4		
		5		
		9	14	0.70
		10		
40	42	4		
		3		
		2	5	0.25
		2		
45	47	2		
		PUSH		
		PUSH	0	0.00
		PUSH		
50	52	3		
		3		
		4	7	0.35
		7		
55	57	4		
		4		
		6	10	0.50
		7		

APPENDIX C

USGS SEISMIC SUMMARY REPORT

USGS Design Maps Summary Report

User–Specified Input

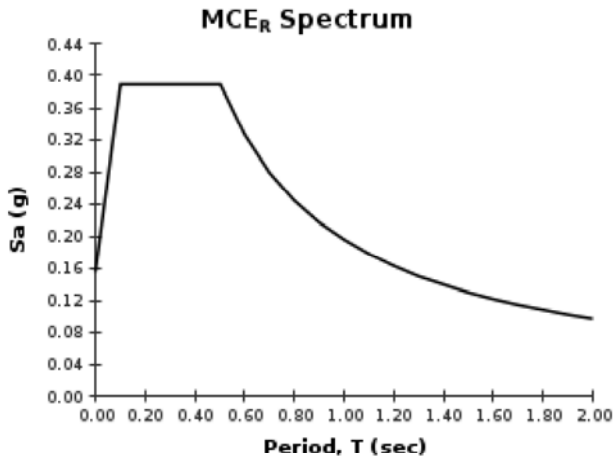
Building Code Reference Document	2009 NEHRP Recommended Seismic Provisions (which utilizes USGS hazard data available in 2008)
Site Coordinates	40.91783°N, 72.65883°W
Site Soil Classification	Site Class E – "Soft Clay Soil"
Risk Category	I/II/III

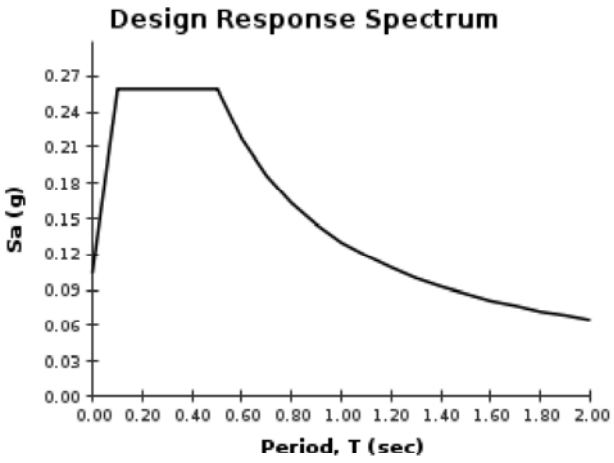


USGS–Provided Output

S_S =	0.155 g	S_{MS} =	0.389 g	S_{DS} =	0.259 g
S_1 =	0.056 g	S_{M1} =	0.196 g	S_{D1} =	0.130 g

For information on how the S_S and S_1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please view the detailed report.





For PGA_M, T_L, C_{RS}, and C_{R1} values, please view the detailed report.

Although this information is a product of the U.S. Geological Survey, we provide no warranty, expressed or implied, as to the accuracy of the data contained therein. This tool is not a substitute for technical subject-matter knowledge.

APPENDIX D

PERCOLATION TEST DATA

Percolation Test Data

Site: 221 East Main Street, Riverhead
Job ID: SebeE 16-01
Location: 6 feet south of B-2

Depth to Groundwater: 4 feet
Depth of Hole: 3 feet
Depth to bottom of casing: 3 feet
Depth to added gravel: 2.5 feet
Presoaking time: overnight (17 hours)

Test Conducted By: Ron Huttie
Date: April 27, 2016
Weather Conditions: Partly cloudy to sunny
40°F to 48°F

	Time	Depth (in)	Time	Depth (in)	Time	Depth (in)	Time	Depth (in)
Start time	8:30am	0	9:35am	0	10:40am	0	11:45am	0
5 min	8:35am	0.75 in	9:40am	0.5 in	10:45am	0.5 in	11:50am	0.5 in
10 min	8:40am	1.50 in	9:45am	1.0 in	10:50am	1.0 in	11:55am	1.0 in
15 min	8:45am	2.375 in	9:50am	1.625 in	10:55am	1.625 in	12:00pm	1.5625 in
20 min	8:50am	3.00 in	9:55am	2.125 in	11:00am	2.1875 in	12:05pm	2.125 in
25 min	8:55am	3.75 in	10:00am	2.750 in	11:05am	2.9375 in	12:10pm	2.875 in
30 min	9:00am	4.125 in	10:05am	3.4375 in	11:10am	3.5625 in	12:15pm	3.375 in
45 min	9:15am	6.125 in	10:20am	5.0 in	11:25am	5.375 in	12:30pm	5.0625 in
1 hour	9:30am	7.125 in	10:35am	6.625 in	11:40am	6.875 in	12:45pm	6.5625 in

Appendix B-7
No Adverse Impact Letter

NYS OPRHP

November 1, 2016

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

November 01, 2016

Mr. Matthew Ardito, Project Manager
Georgica Green Ventures, LLC
50 Jericho Quadrangle, Suite 200
Jericho, NY 11753

Re: HFA
Riverhead Apartments
221 East Main Street and 31 McDermott Avenue, Riverhead, NY.
16PR06896

Dear Mr. Ardito:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials for the above referenced project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6NYCRR Part 617).

We note the site for this proposed project is directly across the street from the Riverhead Main Street Historic District, listed in the State and National Registers of Historic Places. More specifically, the buildings at 221 East Main Street and 31 McDermott Avenue have been determined “not eligible” for inclusion in the historic registers; we therefore have no concerns with their removal.

Based upon our review of the materials submitted and conversations with your office, it is the OPRHP’s opinion that the proposed project, as designed and presented, will have No Adverse Impact upon historic resources.

If there are substantive changes or unexpected discoveries, consultation with our office should resume. Please let me know if you have any questions, I can be reached at (518) 268-2170.

Sincerely,



Laurie E. Klenkel
Historic Site Restoration Coordinator
e-mail: Laurie.Klenkel@parks.ny.gov

via e-mail only

Appendix B-8
Simulated Views of Proposed Project


restaurant








restaurant
bar

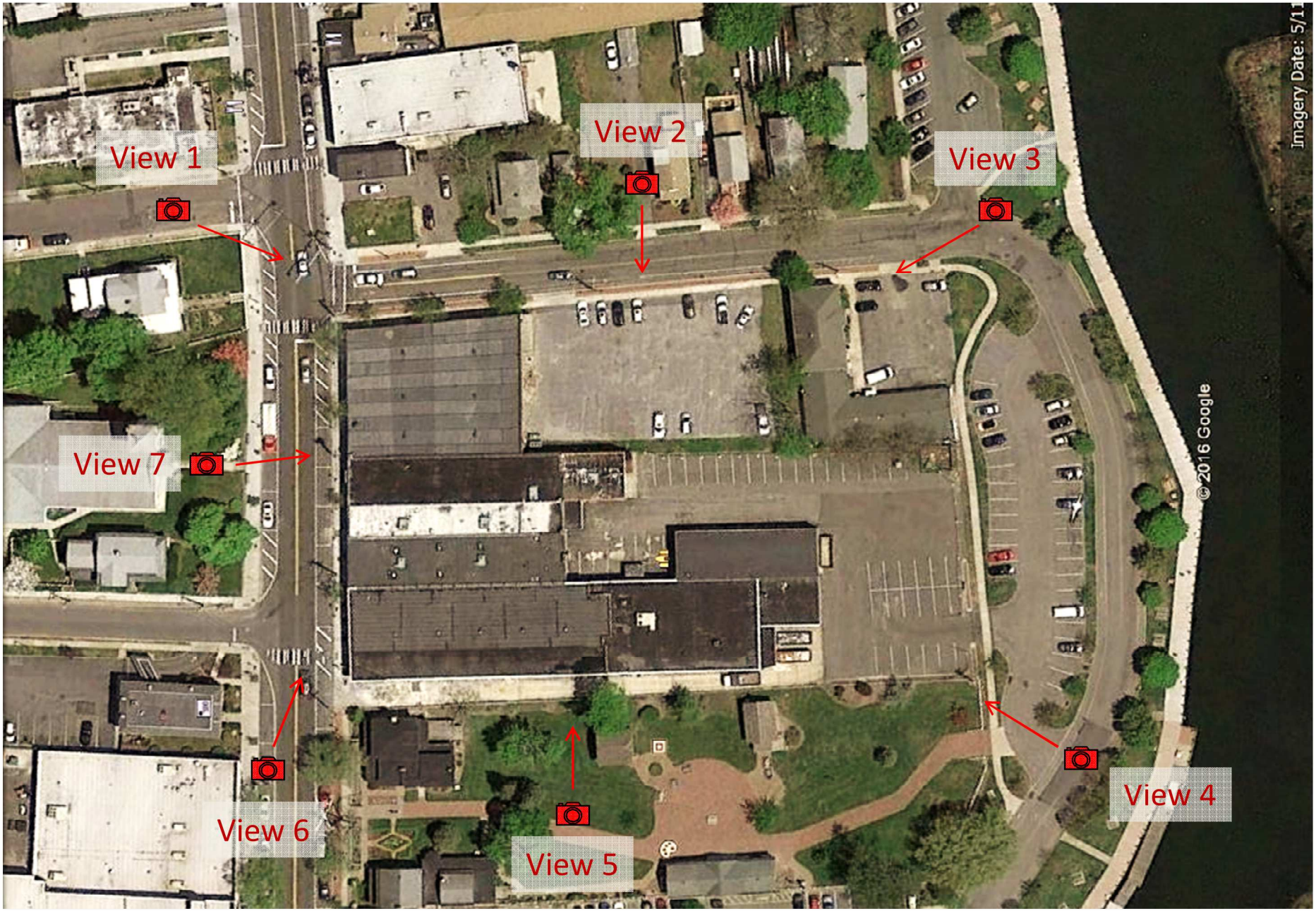


Appendix B-9
Photo-Simulation Analysis: Comparison of Views of Project Site, Existing Conditions vs. Proposed Project


109 109 Maple Ave
Exit Street
Google Ear


Maple Ave
Exit Street View
N
restaurant
© 2016 Google
Google earth

Appendix B-10
Cumulative Photo-Simulation Analysis; Comparison of Views of Project Site and Adjacent Site, Existing Conditions vs. Proposed Projects


View 1
View 2
View 3
View 4
View 5
View 6
View 7
Imagery Date: 5/11
© 2016 Google



View 1 - Existing


View 1 - Proposed


View 2 - Existing


View 2 - Proposed



View 3 - Existing


View 3 - Proposed


View 4 - Existing


View 4 - Proposed


View 5 - Existing


View 5 - Proposed


View 6 - Existing



View 6 - Proposed


View 7 - Existing



View 7 - Proposed

Appendix B-11
Architectural Review Board Approval Recommendation

May 17, 2017

MEMORANDUM

TO: TOWN BOARD
FROM: ARCHITECTURAL REVIEW BOARD
SUBJECT: GEORGICA GREEN VENTURES SCTM NO. 600-129-1-21 & 22
DATE: MAY 17, 2017
CC: KARIN GLUTH, JILL LEWIS

The Architectural Review Board and the Landmarks Preservation Committee reviewed the aforementioned project at various meetings, the latest meeting being held on April 19, 2017.

The applicant, as agreed, has since submitted final renderings dated April 25, 2017.

The ARB recommends approval with the following comments:

- More development should be made of the cornice
- Please submit final working drawings with all necessary details when available

APPENDIX C

TRAFFIC IMPACT STUDY

N&P, LLP

June 2017

TRAFFIC STUDY

221 East Main Street

Town of Riverhead
New York

December 2016
Revised June 2017

N & P JOB NO. 16068

NELSON & POPE
ENGINEERS & SURVEYORS

572 WALT WHITMAN ROAD, MELVILLE, NY 11747-2188 . (631)427-5665 . FAX(631)427-5620 . www.nelsonpope.com

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APPENDIX

Appendix A: Existing Traffic Volume
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Appendix C: Trip generation
Appendix D: Level of Service Definitions
Appendix E: Capacity Analysis/Level of Service Worksheets & Summary Table
Appendix F: Parking Data

PURPOSE OF REPORT

Nelson & Pope conducted a Traffic Impact Study in 2016 to investigate the potential traffic impacts associated with the proposed construction of 116 apartment units, 1,508 SF of retail space and two restaurants containing a total of 535 seats on the southwest corner of East Main Street and McDermott Avenue in the Town of Riverhead, New York. This study is a revision to the 2016 Traffic Study to incorporate comments from the Town of Riverhead Planning department SEQRA Staff Report dated April 17, 2017. The site is located in the DC-1 district associated with downtown Main Street, Riverhead. Access to the site will be provided via McDermott Avenue.

The revised report summarizes the results of a detailed investigation of the traffic impacts of the proposed project by reviewing the area's existing roadway characteristics and traffic conditions, estimating the vehicular volume and pattern that the development will generate during peak hours, and analyzing the effect of the additional volume on the surrounding roadway network. Figures 1 and 2 show the study area map and site location map respectively.

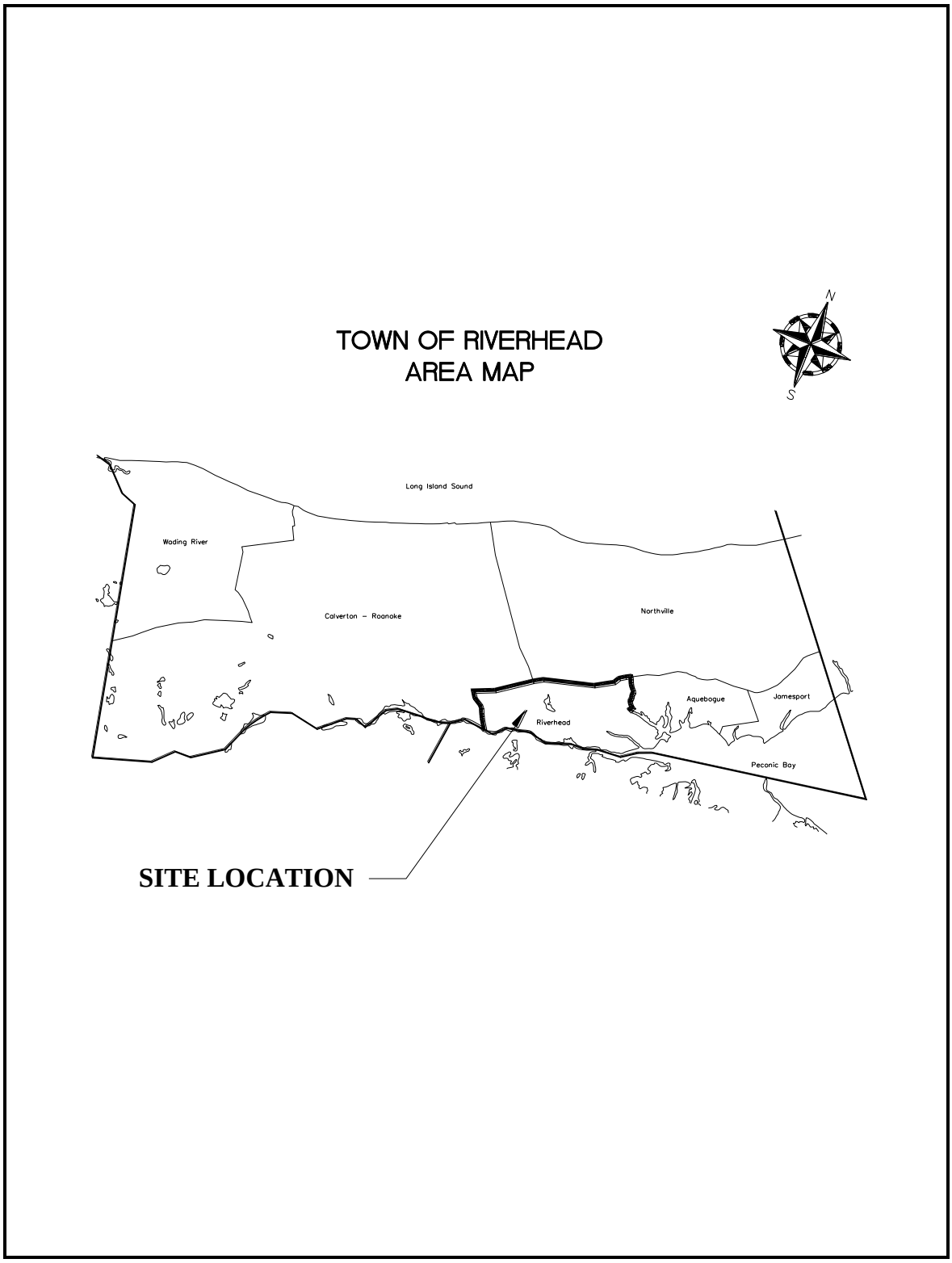
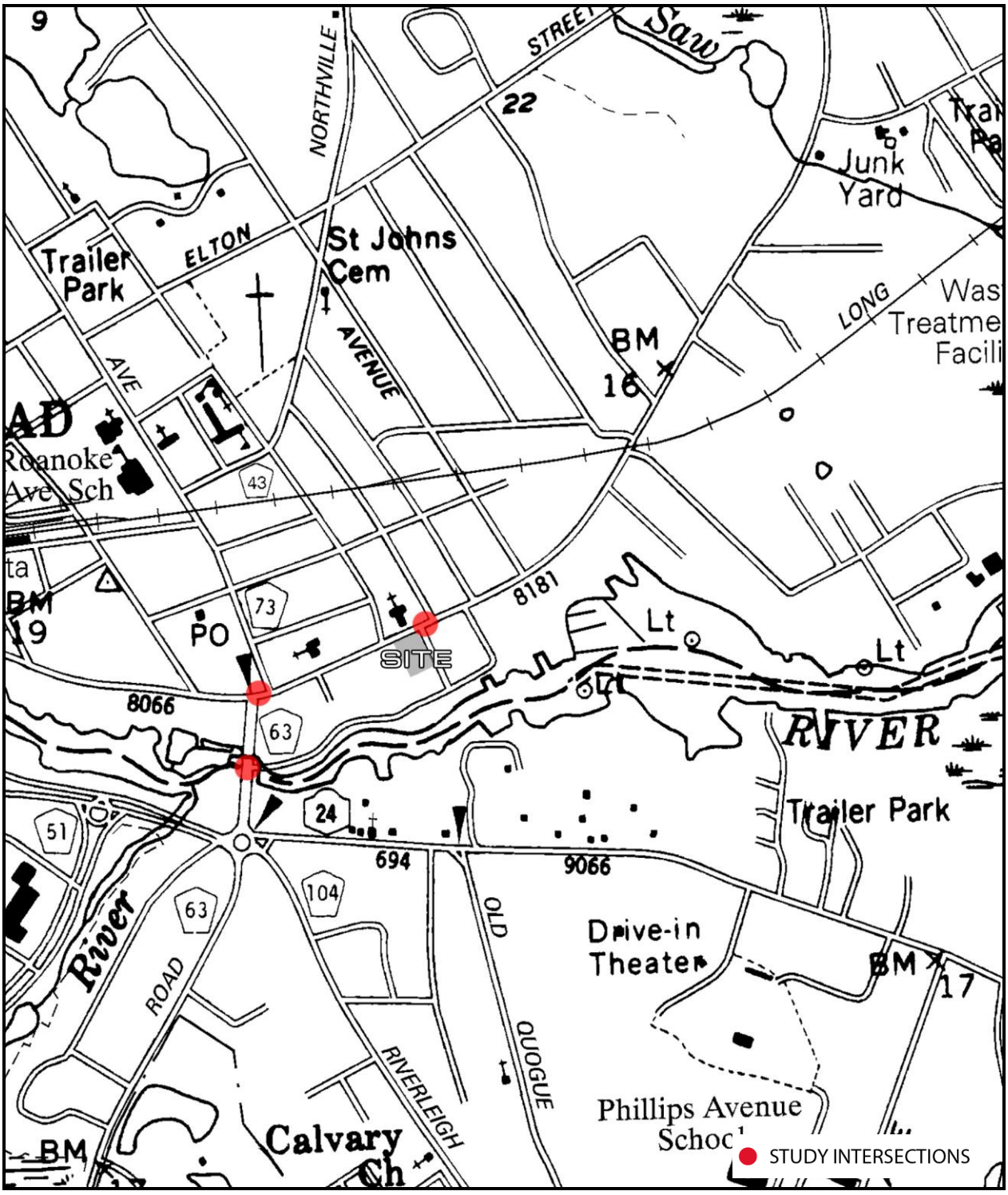


Figure 1: Area Map



SOURCE: USGS RIVERHEAD 1991

Figure 2: Location Map

STUDY METHODOLOGY

The study assesses the traffic and parking impacts associated with the proposed project and identifies mitigation measures if necessary. In executing the scope of work, the following steps were undertaken:

1. A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, location/geometry of existing driveways and intersections along with signing and pavement markings.

2. In 2016 the Town of Riverhead Planning Department requested that any traffic data collection for the project should take into account events in the Town. In consultation with the Town, turning movement counts were conducted at the intersections of East Main Street at Peconic Avenue, East Main Street and Roanoke Avenue and East Main Street at McDermott Avenue/Maple Avenue during the weekday AM (7-9AM), PM (4-6PM) and Saturday midday (10AM-2PM) peak periods on the following days:

    - Wednesday May 31th, 2016 from 7-9AM and 4-6PM to cover a typical weekday
    - Saturday August 20th, 2016 from 10 AM -2PM to cover the Polish Town Fair event (Special events in Riverhead).
    - Saturday August 27th, 2016 from 10AM -2PM to cover a typical Summer Saturday.

- In order to respond to the Town of Riverhead Planning Department's comment on the 2016 Traffic Study regarding weekday turning movement counts collected when schools were not in session, additional turning movement counts have been collected at the intersections listed above on Wednesday May 31, 2017 during the weekday AM (7-9AM) and PM (4-6PM) peak hours.
- The turning movement counts collected in 2017 during the weekday and the 2016 Saturday data were tabulated and utilized to revise the 2016 Traffic Study to account for weekday traffic impacts when schools are in session.
- An annual growth factor, obtained from the LITP 2000 study, was applied to the existing volumes to estimate the increase in background traffic that would occur in 2019 Build Year (Ambient Traffic Volumes).

- The Town of Riverhead Planning Department was contacted to obtain information on other planned developments that may impact traffic flow in the study area.
- Traffic volumes from the other planned projects in the study area were added to the Ambient Traffic Volumes to generate the 2019 No Build Volumes.
- Estimates of traffic that would be generated by the proposed project were prepared utilizing trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Ninth Edition*. The site-generated traffic volumes were assigned to the adjacent street system based upon the anticipated directional trip distribution forecasted by Nelson & Pope.
- The 2019 Build Condition volumes for the proposed development were developed by adding the site generated traffic volumes to the 2019 No Build Condition volumes.
- Capacity analyses were performed at the study intersections identified above for the Existing Condition, No Build Condition and Build Condition for weekday AM, PM and Saturday midday peak hours.
- The results of the analyses for the 2019 No Build Condition and 2019 Build Condition were compared to identify any significant traffic impact associated with the proposed project.

EXISTING CONDITION

Land Use

The site is located on the southwest corner of East Main Street and McDermott Avenue, Town of Riverhead, Suffolk County, New York. The site is located in the DC-1 district associated with downtown Main Street.

Roadway Conditions

Main Street **(NYS 25)** is an east/west NYSDOT roadway within the study area and runs through the downtown area of the Town of Riverhead. Within the Study area, Main Street provides one lane per travel direction. The posted speed limit on Main Street is 30 MPH within the Riverhead downtown area. Sidewalks equipped with planters and decorative street lighting are provided on both sides of Main Street in the Downtown area. Pedestrian crossings are painted across Main Street and supplemented with pedestrian crossing signs. Midblock crossings are located in front of the Suffolk Theater south of East Avenue and in front of Town Hall north of Howell Avenue.

Table 1 summarizes the lane configurations and traffic controls at the study intersections.

Table 1: Intersection Geometry

Intersection	Approach	Lane Designation*	Traffic Control
West Main Street at Peconic Avenue	EB	T-R	Traffic Signal
	WB	L-T	
	NB	L-R	
West Main Street at Roanoke Avenue	EB	L-T	Traffic Signal
	WB	L-TR	
	SB	R	
East Main Street at McDermott Avenue/Maple Avenue	EB	LTR	Traffic Signal
	WB	LTR	
	NB	LTR	
	SB	LTR	
Peconic Avenue at Parking Lot Access	WB	LR	Stop Control WB
	NB	TR	
	SB	L-T	

** L = Left turn lane; T = through lane; R = Right turn lane*

Traffic Volume Data

Turning movement counts were collected at the study intersections on Friday, August 19, 2016 during the weekday AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak period and on Saturday, August 20st and 27th, 2016 during the Saturday midday peak period (10:00 AM – 2:00 PM). Additional weekday counts were conducted on Wednesday May 31th 2017 during the weekday AM (7-9AM) and PM(4-6PM) peak hours. The Saturday data collected on August 20th, during the Polish Town Fair was slightly higher than the data collect on Saturday August 27th. The weekday counts collected on Wednesday May 31st 2017 is higher than the counts conducted on Friday, August 19, 2016. To perform a conservative analysis, the data collected on May 31st and August 20th was utilized for the weekday and weekend traffic analyses respectively.

Seasonal adjustment factors of 1.072 and 1.210 were obtained from the 2016 NYSDOT Traffic Data Report for the weekday and weekend counts respectively during the months of May and August. These seasonal adjustment factors were developed from NYSDOT continuous data collected for a three-year period. Applying the weekday and weekend normalization factors will decrease the existing traffic volumes; therefore, the weekday and weekend counts were not normalized in order to perform a more conservative analysis. The existing peak hour volumes are shown on Figures 3, 4 and 5 and detailed data are contained in Appendix A.

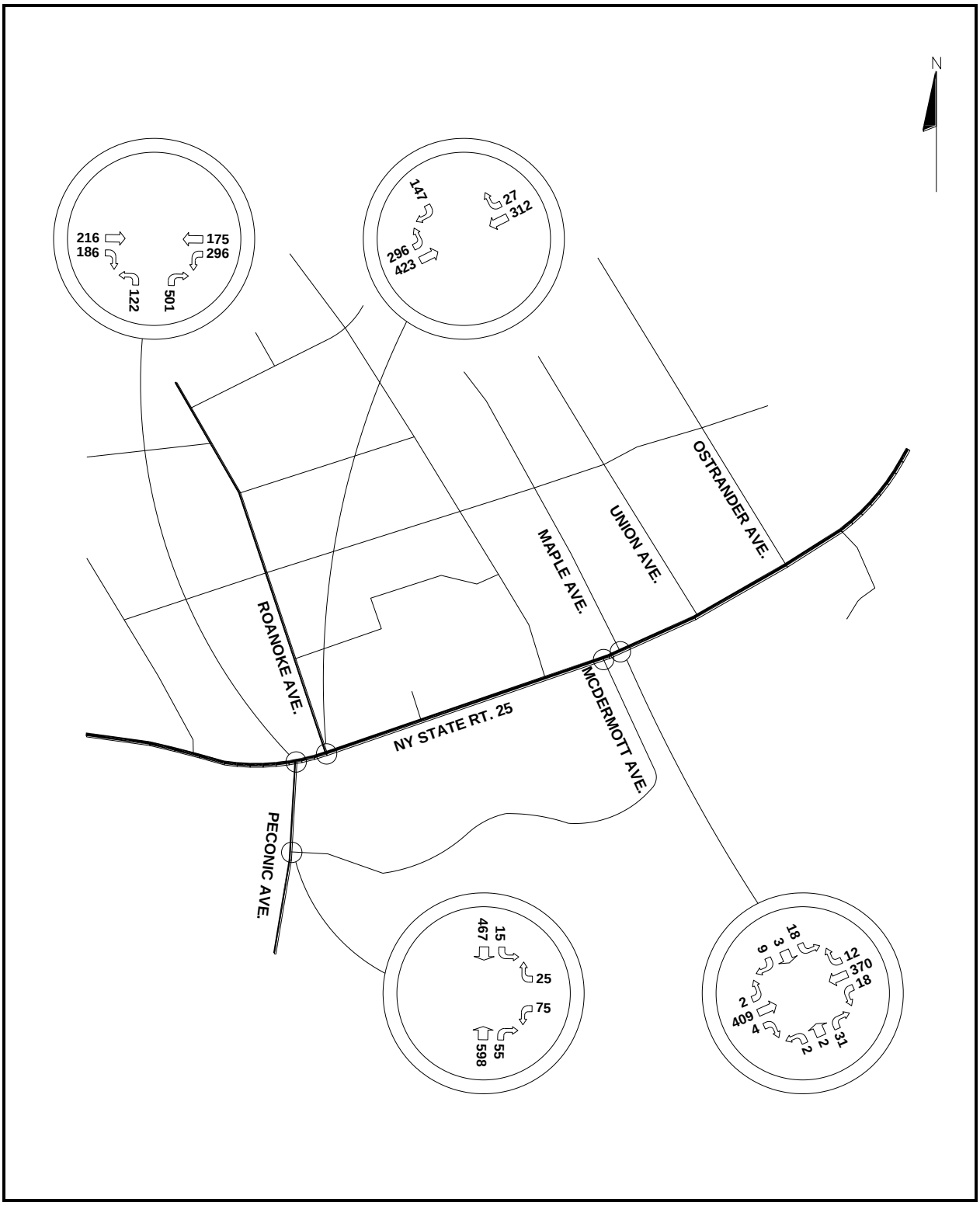


Figure 3: 2016 Existing AM Traffic Volumes

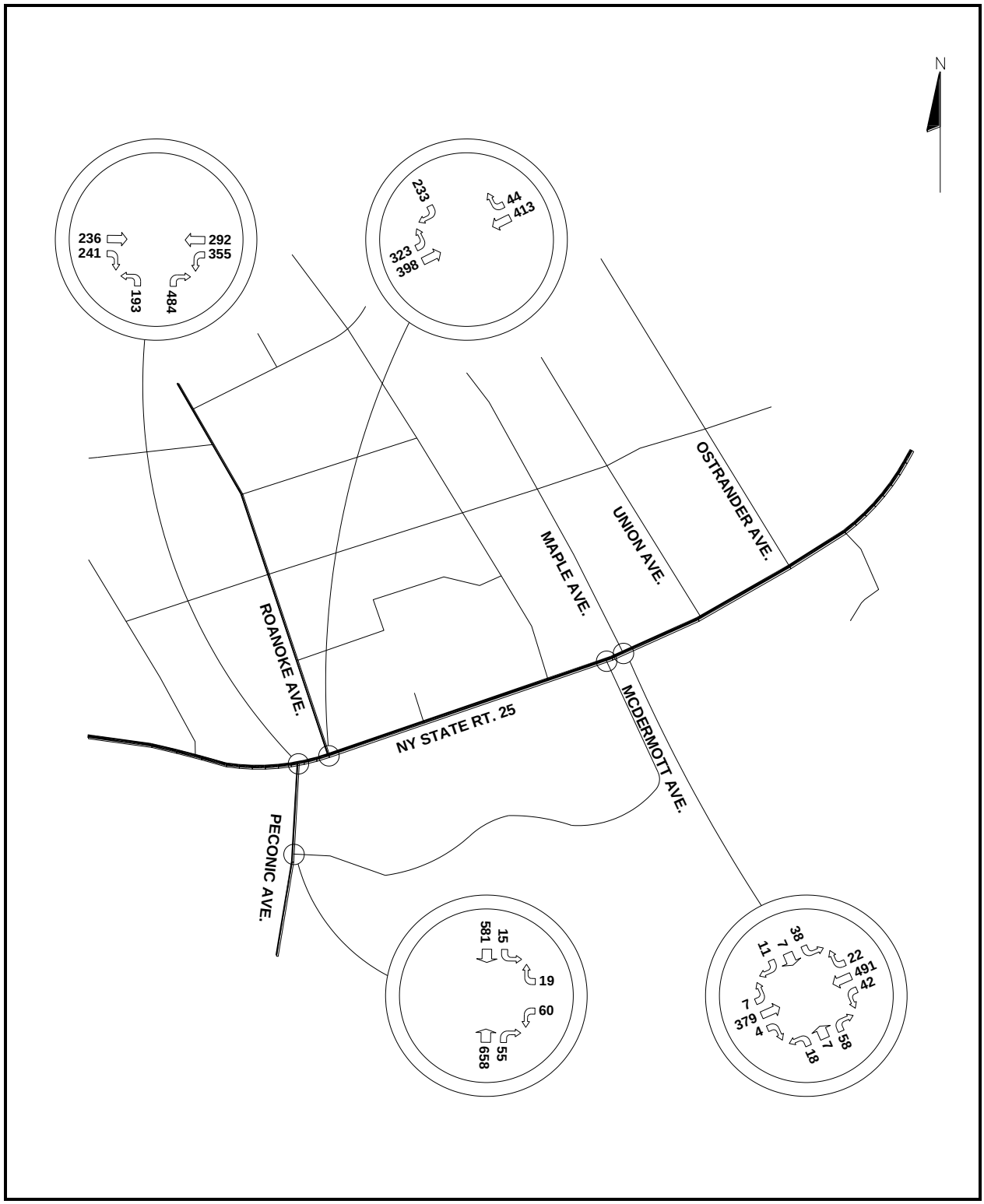


Figure 4: 2016 Existing PM Traffic Volumes

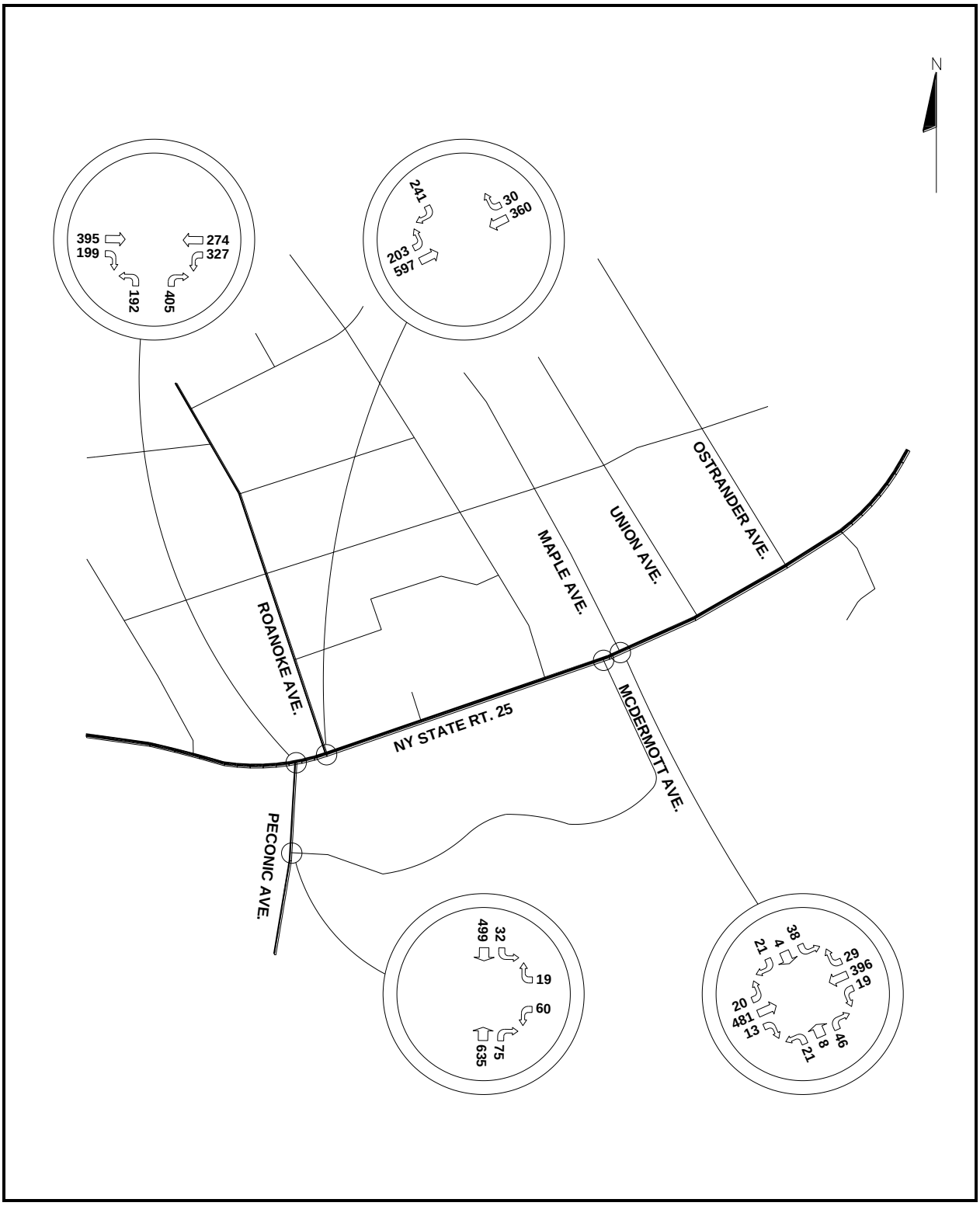


Figure 5: 2016 Existing SAT Traffic Volumes

LEVEL OF SERVICE DESCRIPTION

While traffic volumes provide an important measure of activity on the adjacent roadway network, evaluating how well that network accommodates those volumes is also important. Therefore, a comparison of peak hour traffic volumes with available roadway capacity is prepared. Capacity, by definition, represents the maximum number of vehicles that can be accommodated given the constraints of roadway geometry, traffic characteristics and controls. Intersections primarily control capacity in roadway networks, since conflicts exist at these points between through, crossing and turning traffic. Because of these conflicts, congestion is most likely to occur at intersections. Therefore, intersections are studied most often when determining the quality of traffic flow.

In order to identify the operational characteristics of the study intersections, LOS and capacity analyses and arterial network analyses for the study intersections were performed using *SYNCHRO Version 9* Software. *SYNCHRO*, in conjunction with *SimTraffic*, is a software package that allows for an interactive analysis of a single intersection or a network of intersections and can also be used for modeling and optimizing traffic signal timings. The *SimTraffic* component provides simulations of operations with animation features. *SYNCHRO* implements the Intersection Capacity Utilization (ICU) 2003 method for determining intersection capacity. This method compares the current volume to the intersections ultimate capacity. *SYNCHRO* also implements the methods of the 2010 Highway Capacity Manual (HCM) for urban streets, signalized intersections, and unsignalized intersections for determining intersection capacity analyses. The *HCM* contains procedures and methodologies for estimating capacity and determining LOS for many transportation facilities and modes including signalized and unsignalized intersections.

An intersection's LOS (LOS) describes its quality of traffic flow. It ranges in grade from LOS "A" (relatively congestion-free) to LOS "F" (very congested). The LOS definition, as well as the threshold values for each level, varies according to whether the intersection is controlled by a signal or a stop sign. A brief description is given here and a more detailed definition is found in Appendix D.

The capacity of a signalized intersection is evaluated in terms of the ratio of demand flow rate to capacity (V/C ratio). The capacity for each approach represents the maximum rate of flow (for the subject approach) which may pass through the intersection under prevailing traffic, roadway and signal conditions. The LOS of a signalized intersection is evaluated on the basis of average control-delay measured in seconds per vehicle (sec/veh). The control-delay is calculated using an equation that combines the stopped-delay with the vehicle acceleration/deceleration delay that is caused by the signalized intersection. At the signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal "green time", turning percentages, truck volumes, etc. However, delay cannot be related to capacity in a simple one-to-one fashion. For example, it is possible to have delays in the LOS "F" range without exceeding roadway capacity. Substantial delays can exist without exceeding capacity if one or more of the following conditions exist: long signal cycle length; a particular traffic movement experience a long red time; or progressive movements for a particular lane is poor.

The flow at a two-way stop-controlled (TWSC) intersection is gauged in terms of LOS and capacity. The capacity of a stop-controlled leg is based on the distribution of gaps in the major street traffic, driver judgment in selecting a gap, and the follow-up time required by each driver in a queue. The LOS for a TWSC intersection is determined by the control-delay, and is defined for each movement rather than for the overall intersection. As with signalized intersections, HCS quantifies only the average control-delay, which is a function of the approach and the degree of saturation for any particular minor movement.

EXISTING CONDITION

The peak hour traffic volumes depicted in Figures 3 were used to determine the existing capacity and LOS of the study intersections. Table 2 contains the LOS summary for the Existing Condition calculated through the Synchro software described previously. The detailed analysis worksheets are in Appendix E.

Table 2: Existing Condition LOS Summary – Signalized

			AM Peak		PM Peak		Saturday Peak	
Signalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
East/West Main Street at	EB	T	44.7	D	46.1	D	70.1	E
Peconic Avenue		R	24.0	C	22.4	C	21.2	C
	WB	L	7.8	A	11.2	B	19.1	B
		T	2.6	A	3.0	A	2.7	A
	NB	L	95.2	F	87.7	F	94.9	F
		R	34.6	C	29.3	C	27.7	C
Intersection			31.2	C	28.2	C	37.7	D
East/West Main Street at	EB	L	22.3	C	27.7	C	37.5	D
Roanoke Avenue		T	3.5	A	2.8	A	2.7	A
	WB	TR	41.2	D	44.0	D	40.4	D
	SB	R	37.7	D	44.6	D	46.5	D
Intersection			22.8	C	29.0	C	25.4	C
East/West Main Street at	EB	LTR	2.8	A	3.4	A	3.9	A
Maple/McDermott Avenue	WB	LTR	2.8	A	4.6	A	3.8	A
	NB	LTR	17.1	B	19.7	B	22.0	C
	SB	LTR	31.5	C	38.9	D	33.8	C
Intersection			4.6	A	7.5	A	7.2	A

Table 3: Existing Condition LOS Summary – Unsignalized

			AM Peak		PM Peak		Saturday Peak	
Unsignalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
Peconic Avenue at	WB	L	15.8	C	17.0	C	16.6	C
Parking Lot Access		R	13.5	B	14.2	B	14.0	B
	SB	LT	9.1	A	9.4	A	9.5	A

Main Street at Peconic Avenue/Roanoke Avenue

The intersections of West Main Street at Peconic Avenue and East Main Street at Roanoke Avenue are approximately 55 feet apart as measured between stop lines. The distance between the two intersections provides one westbound through lane, one westbound left turn lane and a 22-foot wide eastbound lane that currently operates as a separate eastbound left turn lane and an eastbound through lane. These two left turn lanes provide storage for two cars each. These two intersections are controlled by two traffic signals operating under the same controller.

Under the Existing Condition, the eastbound West Main Street through movement at Peconic Avenue operate at LOS D, D and E during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operate at LOS F during the weekday AM, PM and Saturday midday peak hours. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and D during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours.

East Main Street at McDermott Avenue/Maple Avenue

The northbound McDermott Avenue leg and southbound Maple Avenue leg at this intersection are slightly offset from each other (approximately 20 feet) with each approach providing one lane for all traffic movements. The intersection is controlled by a two-phase traffic signal.

Under the Existing Condition, all the approach movements to this intersection operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM, PM and Saturday midday peak hours.

Peconic Avenue at Parking Lot Access

The parking lot access intersects Peconic Avenue to form the Stop Controlled leg of a T-intersection. Peconic Avenue provides one lane per travel direction with a two-way left turn lane. The westbound parking lot access provides one left turn lane and one right turn lane.

Under the Existing Condition, the southbound Peconic Avenue approach operates at LOS A. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM, PM and Saturday midday peak hours.

NO BUILD CONDITION

The No Build Condition represents traffic conditions expected at the study intersections in the future year 2019 without the construction of the proposed project. The No Build Condition traffic volumes are estimated based on two factors as follows:

- Increases in traffic due to general population growth and developments outside of the immediate project area. This traffic increase is referred to as ambient growth.
- Other planned projects located near the project site that may affect traffic levels and patterns at the study intersections in this report.

Traffic Growth

A 1.9% annual growth factor was obtained from the New York State Department of Transportation (NYSDOT) Long Island Transportation Plan 2000 Study (LITP2000) for the Town of Riverhead. The existing traffic volumes were increased by 1.9% growth per year to project volumes to the year 2019 (2019 Base Volumes).

Other Planned Projects

"Other Planned Projects" is a term that refers to developments located near the project site that are currently under construction or in the planning stages. Traffic generated by these projects may significantly influence the operations of the study intersections and would not be represented in the field data collected. The Town of Riverhead was contacted to obtain information on any planned projects in the area. The following projects were provided to us by the Town of Riverhead for consideration:

Pending Approval:

- **Riverhead Plaza**- SCTM No. 0600-104-2-19, the removal of approximately 71,343 sq. ft. of existing building and the construction of two pad site restaurants and a movie theater at an existing shopping center on Old Country Rd. between Ostrander Ave. and Oliver St. Approximately 59,240 sq. ft. of building area will be added, including a 50,340 sq. ft., 1,246 seat movie theater with 10 auditoriums and a snack bar, a 6,300 sq. ft., 250 seat restaurant, and a 2,600 sq. ft., 125 seat restaurant with drive-through. A portion of the existing building with part of the former Wal-Mart store and two other businesses will be demolished to make way for the movie theater. The two proposed restaurants will be

located in the parking area at the front of the site to the west of the main entrance from Old Country Rd.

- **428 East Main Street,** 20-unit hotel and a 201-seat restaurant to be located on the northwest corner of East Main Street and Ostrander Avenue.
- **203-2013 East Main Street,** 170 apartment units and 3800 SF commercial space.
- **Suffolk County Historical Society**, SCTM No. 0600-128-3-46, construction of an approximately 725 sq. ft. addition for handicapped accessibility.
- **J. Petrocelli Development Associates**, SCTM No. 0600-129-5-3.3, construction of a 30-stall parking lot.
- **Viva L' Arte,** SCTM No. 0600-128-6-58.1, construction of a two-story art gallery building on East Main St. with office mezzanine and apartment mezzanine (1,779 sq. ft. first floor and 1,805 sq. ft. second floor and 428 sq. ft. for each mezzanine for a total of 4,440 sq. ft.).
- **Farm Country Kitchen**, SCTM Nos. 0600-124-04-32 & 33 and 0600-124-03-26, for conversion of an existing take-out food service on West Main St. to a 69-seat restaurant and the construction of an off-site parking lot on Raynor Ave. with 27 stalls.
- **Thea Cohen Residences**, SCTM No. 0600-127-7-24.1, the conversion of a storage building into a single-family residence on a property with two existing residences.
- **Emanon Center,** SCTM No. 0600-124-04-9 & 10, demolition of existing structures and construction of one building 3,240 sq. ft. for a convenience store and a two-story building with 1,950 sq. ft. of office and 2,497.5 sq. ft. of retail.
- **Development in Southampton**: Development in Southampton in the Riverside Area (please contact the Town of Southampton)-Large scale redevelopment is planned.

Recently approved:

- **715-725 Roanoke Ave**., SCTM No. 0600-126-02-8, an additional medical office building in addition to two existing medical buildings. The building will be two-stories of 2,475 sq. ft. each with an unfinished basement.
- **Peconic Crossing-** SCTM No. 600-128-3-68.2, to demolish an existing building (Long Island Science Center) and construct a new five-story residential building with 45 residential apartment units, 34-parking stalls, and an art gallery/studio.

- **206 Raynor Ave**., SCTM#0600-124-02-9, preliminary approval to construct a commercial building with a footprint of 1,056 sq. ft. and a lower level of 629 sq. ft. (Three use scenarios approved-either all industrial/manufacturing, first floor office and lower level storage, or all warehouse/storage use.)
- **Fedun Warehouse,** SCTM#0600-128-1-13.1, a 5000 SF warehouse at 427 Lincoln St., Riverhead.

It has been our experience that the annual growth factors typically exceed the actual increase in the ambient growth volumes. Therefore, from the review of the planned projects, it is our professional opinion that traffic from these other planned projects should already be accounted for in the 1.9% annual growth factor (5.7% over a 3-year period) applied to the existing traffic volumes. The Riverhead Plaza project is far from the proposed project and due to its size, it could be completed way after the construction of the proposed project and hence should not be included as a planned project. The same applies to the Southampton Riverside project, which has a build year of 2025. However, to perform a more conservative analysis, traffic from the other planned projects except for the Riverhead Plaza and the Southampton Riverside projects was estimated from the Institute of Transportation Engineers Trip Generation Manual and added to the 2019 Base Volumes to develop the 2019 No Build Volumes. The trip generation for the other planned developments is contained in Appendix B of the report. The No Build condition volumes for the weekday AM, weekday PM and Saturday midday peak hours are illustrated in Figures 6, 7 and 8.

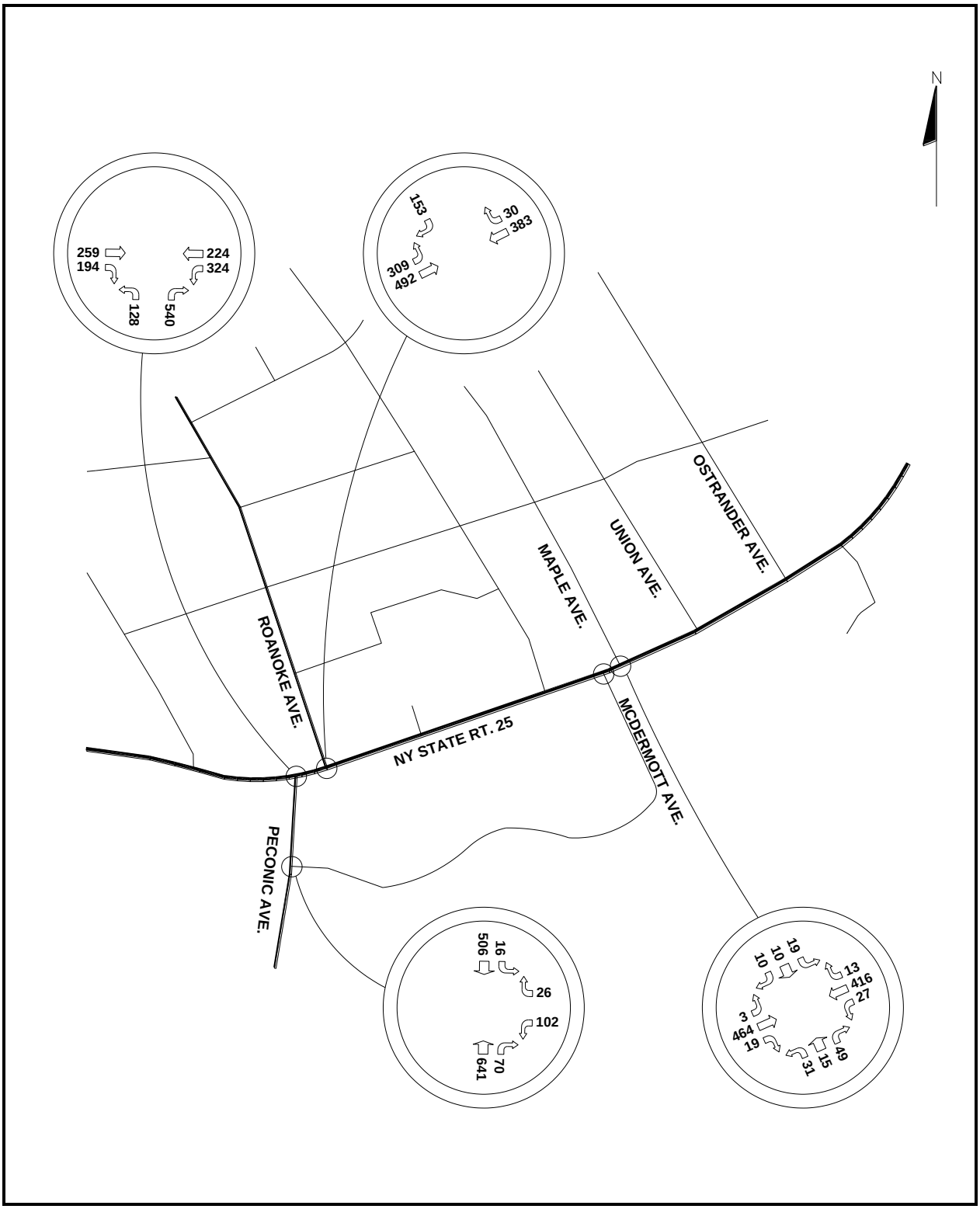


Figure 6: 2019 No Build AM Traffic Volumes

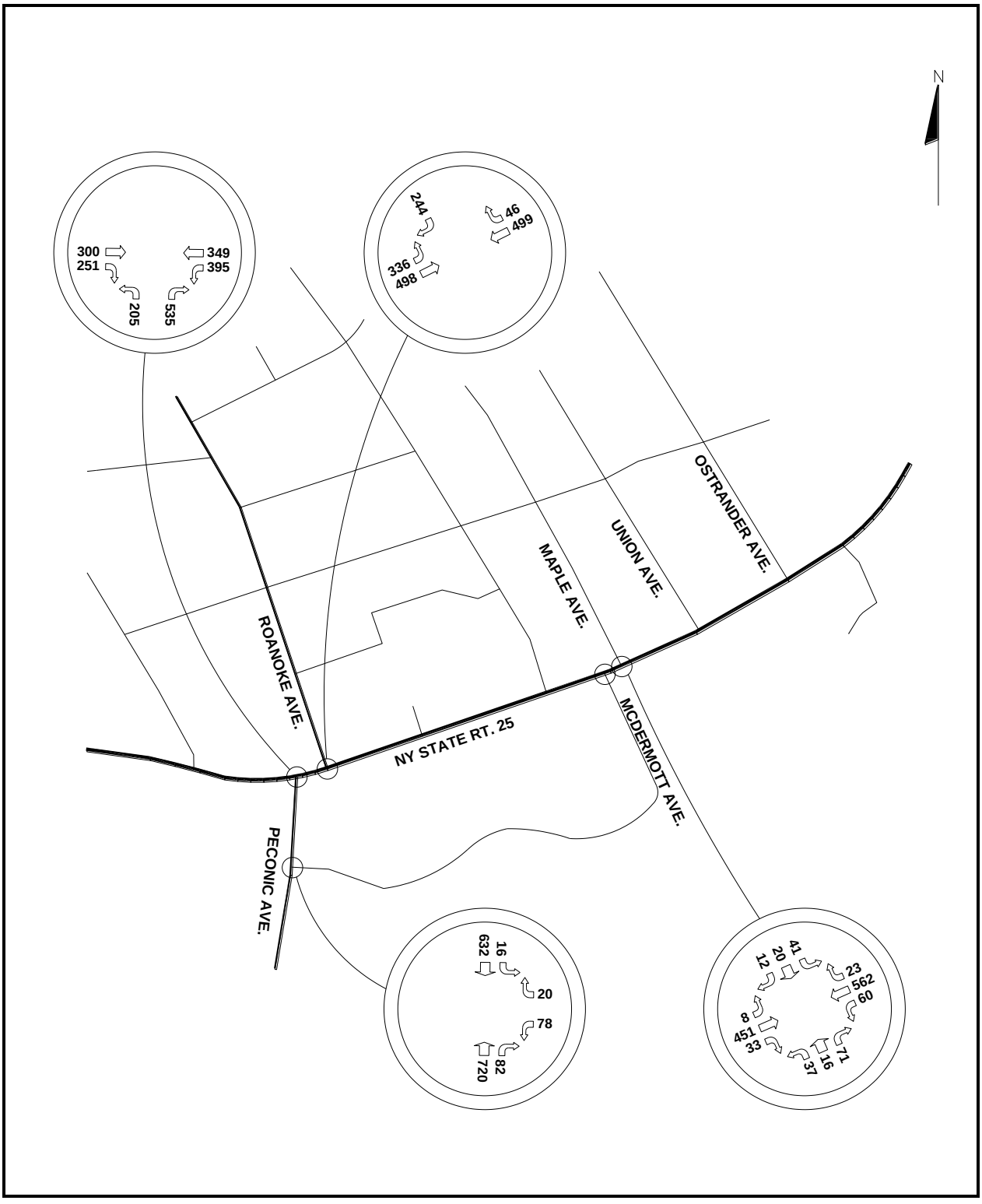


Figure 7: 2019 No Build PM Traffic Volumes

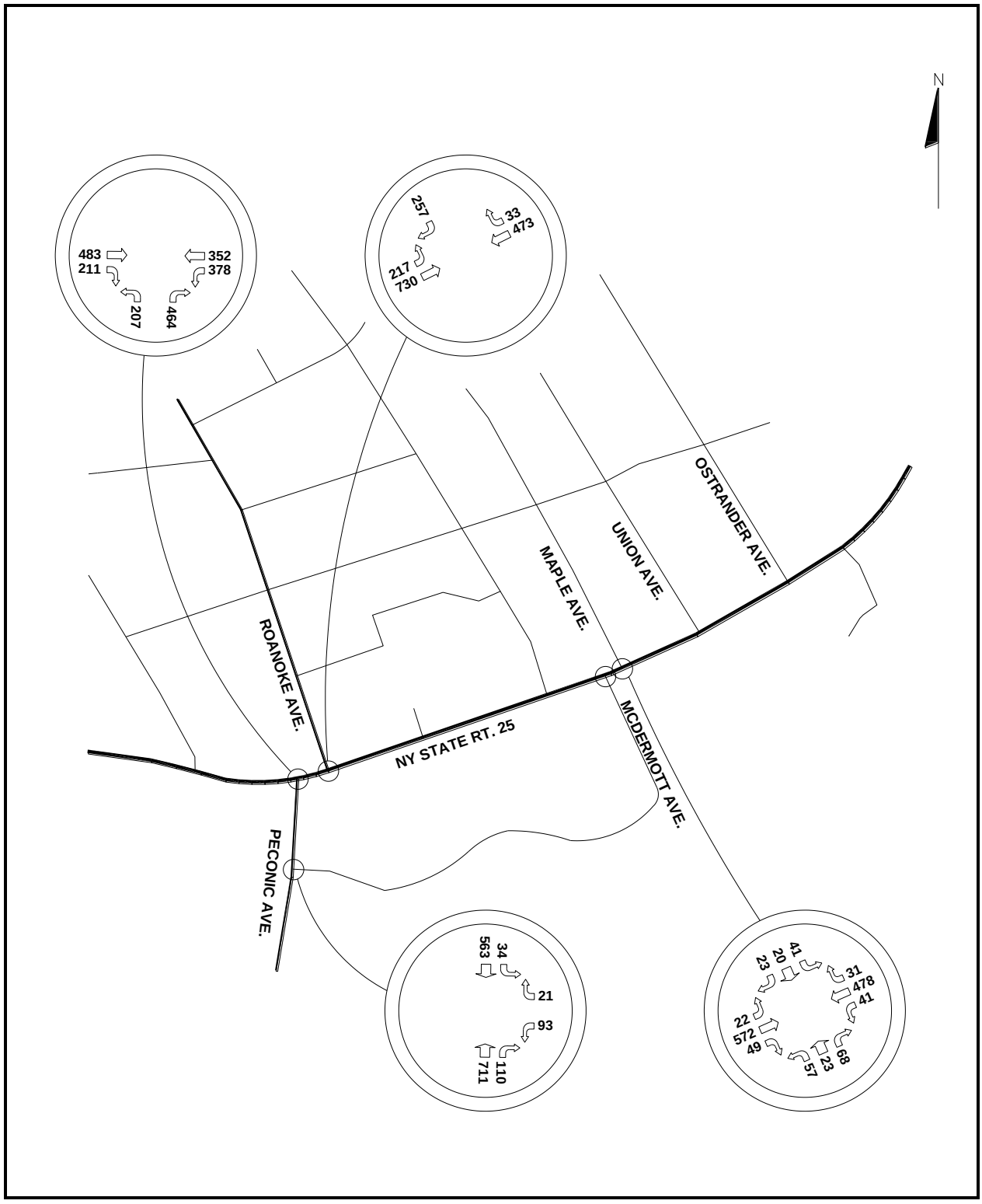


Figure 8: 2019 No Build SAT Traffic Volumes

PROPOSED DEVELOPMENT

Site Access

As depicted on the site plan, access to the site will be provided via McDemott Avenue.

Trip Generation

In order to identify the impacts, the proposed project will have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume generated during the peak hours and to estimate the directional distribution of the site traffic when entering and exiting the subject property. The trip generation estimates for the proposed project were prepared utilizing data found under Land Use Code 220 – Apartments, Land Use Code 820-Shopping Center and Land Use Code 931 –Quality Restaurant within the Institute of Transportation Engineers' publication, *Trip Generation, Ninth Edition*. This publication sets forth trip generation data obtained by traffic counts conducted at sites throughout the country.

We also prepared a trip generation comparison for the project which consisted of performing estimates for 2 scenarios. Scenario 1: 116 apartment units, 1,508 SF of retail and 535 seats of quality restaurant. Scenario 2: 116 apartment units and 12,623 SF of retail. The comparison revealed that Scenario 1 is anticipated to have higher trip generation and therefore is the scenario for which the analysis was prepared, a worst-case scenario. The trip generation sheets are located in the Appendix.

It should also be noted that, according to studies conducted by the Institute of Transportation Engineers (ITE), traffic associated with a retail and restaurant developments is not 100% newly generated, a significant portion of these trips will be "pass-by" traffic. It is expected that at least 40% of the peak hour trips generated by the retail and restaurant development on the site would originate from traffic already using the roadway traveling to or from another destination. No pass-by credit was applied to the retail portion of the project since it is only a small portion of the project. Pass-by credits were applied for the restaurant component of the proposed project in accordance with ITE guidelines.

The following table summarizes the trip generation estimates for the proposed project. Appendix C contains the trip generation worksheets.

Table 4: Trip Generation (Proposed Project)

Time Period	Distribution	Apartment 116 Units ITE LUC 220	Retail 1,508 SF ITE LUC 820	Restaurant 535 Seats ITE LUC 931	Total
Weekday AM Peak Hour	Enter	12	1	8	21
	Exit	50	0	8	58
	Total	**62**	**1**	**16**	**79**
Weekday PM Peak Hour	Enter	54	3	52	109
	Exit	29	3	26	58
	Total	**83**	**6**	**78**	**167**
Saturday Midday Peak Hour	Enter	34	4	104	142
	Exit	34	3	73	110
	Total	**68**	**7**	**177**	**252**

Source: Trip Generation,9th Edition, published by ITE

As can be seen from Table 4 above, the proposed project is projected to generate 79 trips (21 entering and 58 exiting) during the weekday AM peak hour, 167 trips (109 entering and 58 exiting) during the weekday PM peak hour and 252 trips (142 entering and 110 exiting) during the Saturday midday peak hour.

Trip Distribution and Assignment

The volume of site traffic that would travel through the study intersection during peak hours was distributed and assigned to each movement based on the existing roadway and travel patterns. The nature of the proposed land use and its associated travel patterns were considered as well. Figure 9 presents the trip distribution for site-generated traffic and Figures 10, 11 and 12 depict the site generated volumes for the weekday AM, weekday PM and Saturday midday peak hours. The site generated volumes were then added to the corresponding No Build Condition volumes resulting in the Build Condition volumes shown in Figure 13, 14 and 15.

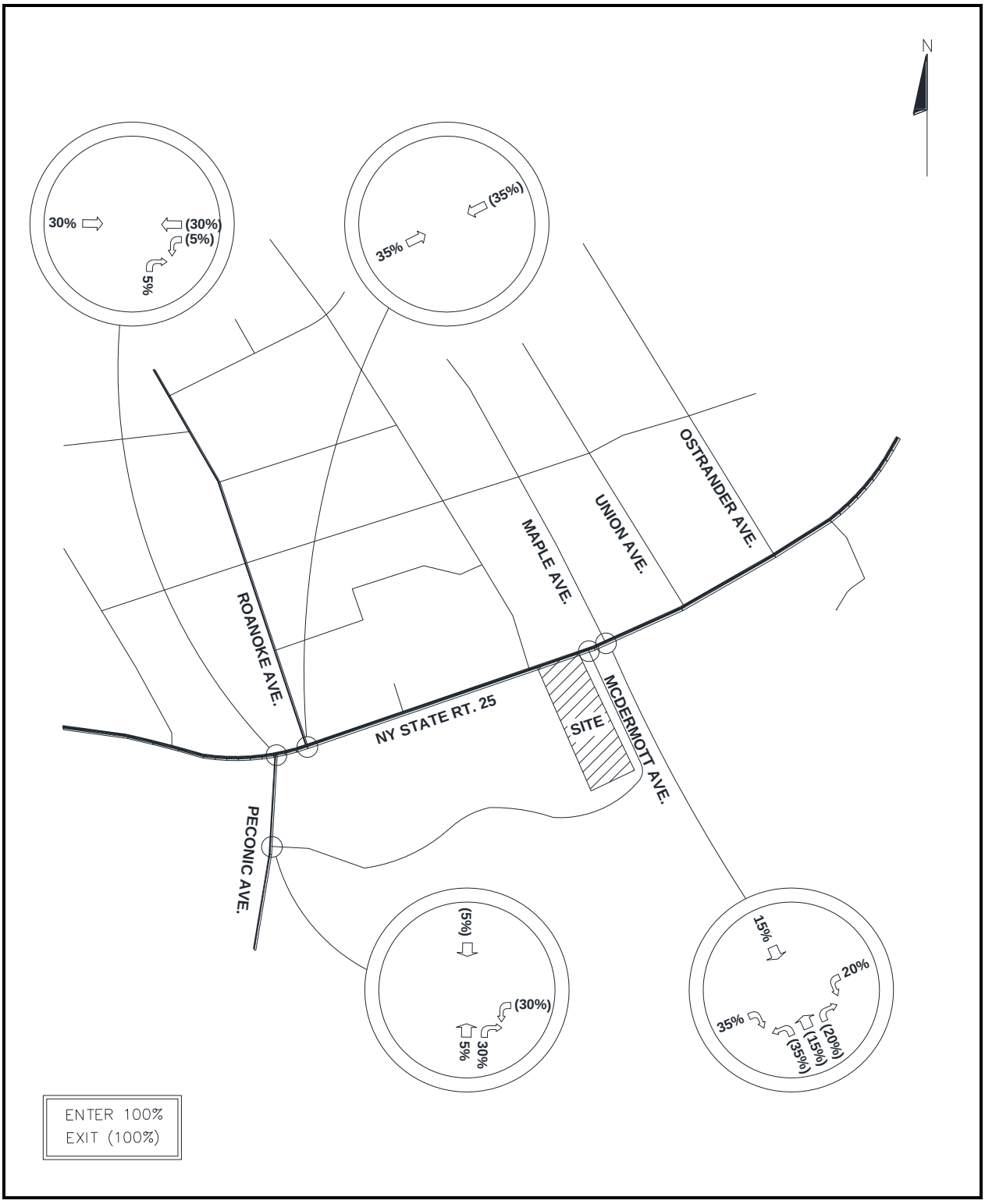


Figure 9: Site Generated Trip Distribution

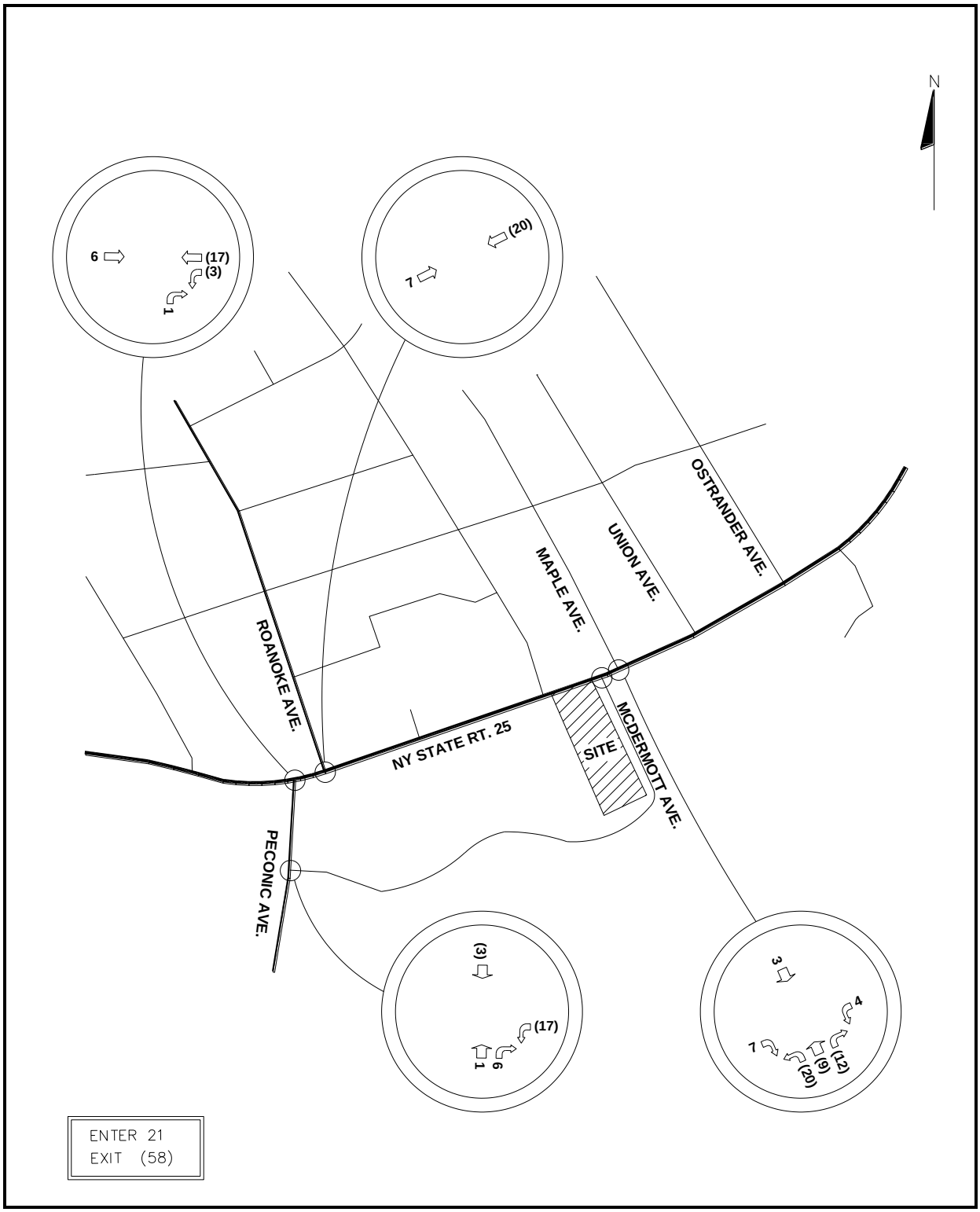


Figure 10: Site Generated AM Traffic Volumes

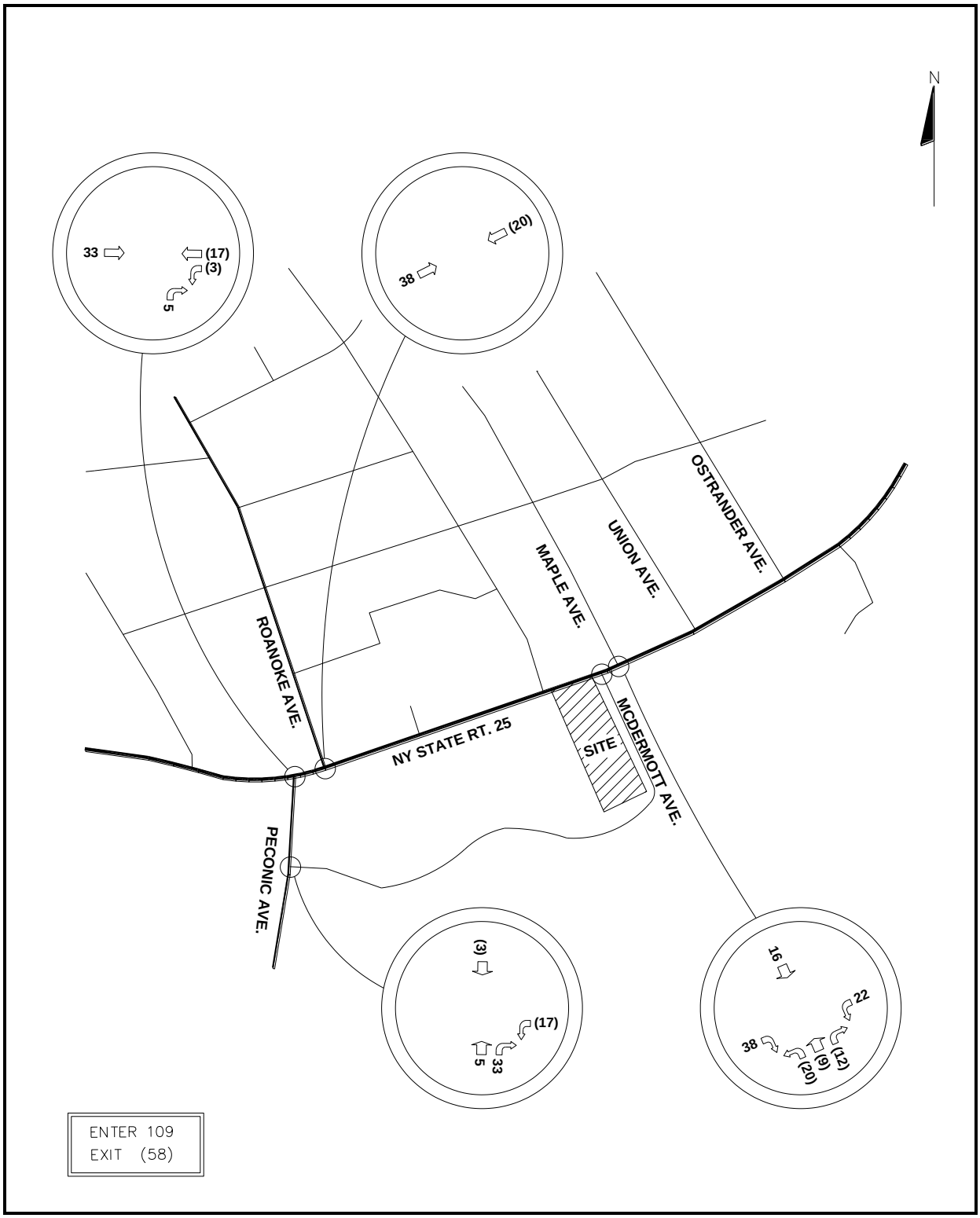


Figure 11: Site Generated PM Traffic Volumes

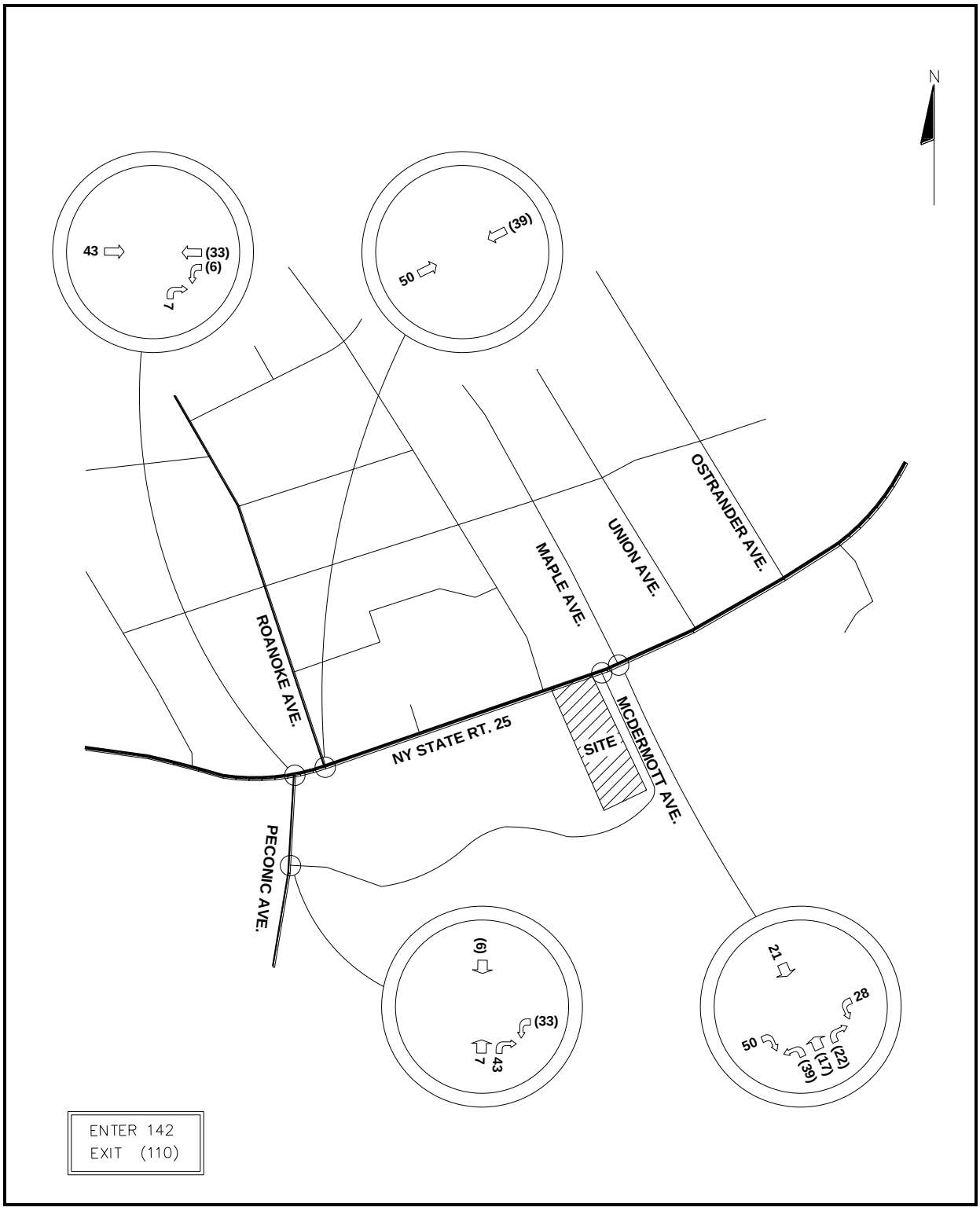


Figure 12: Site Generated SAT Traffic Volumes

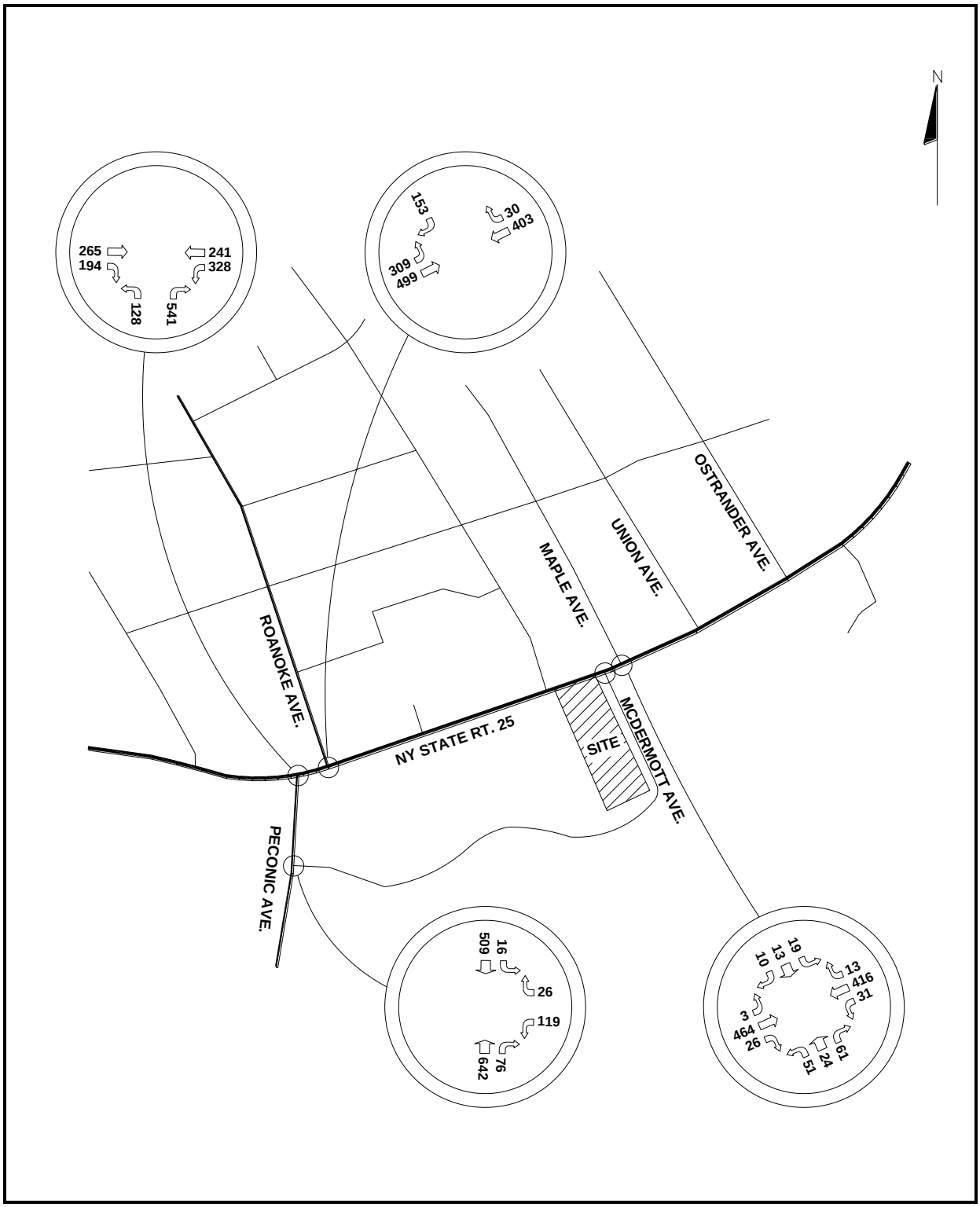


Figure 13: 2019 Build AM Traffic Volumes

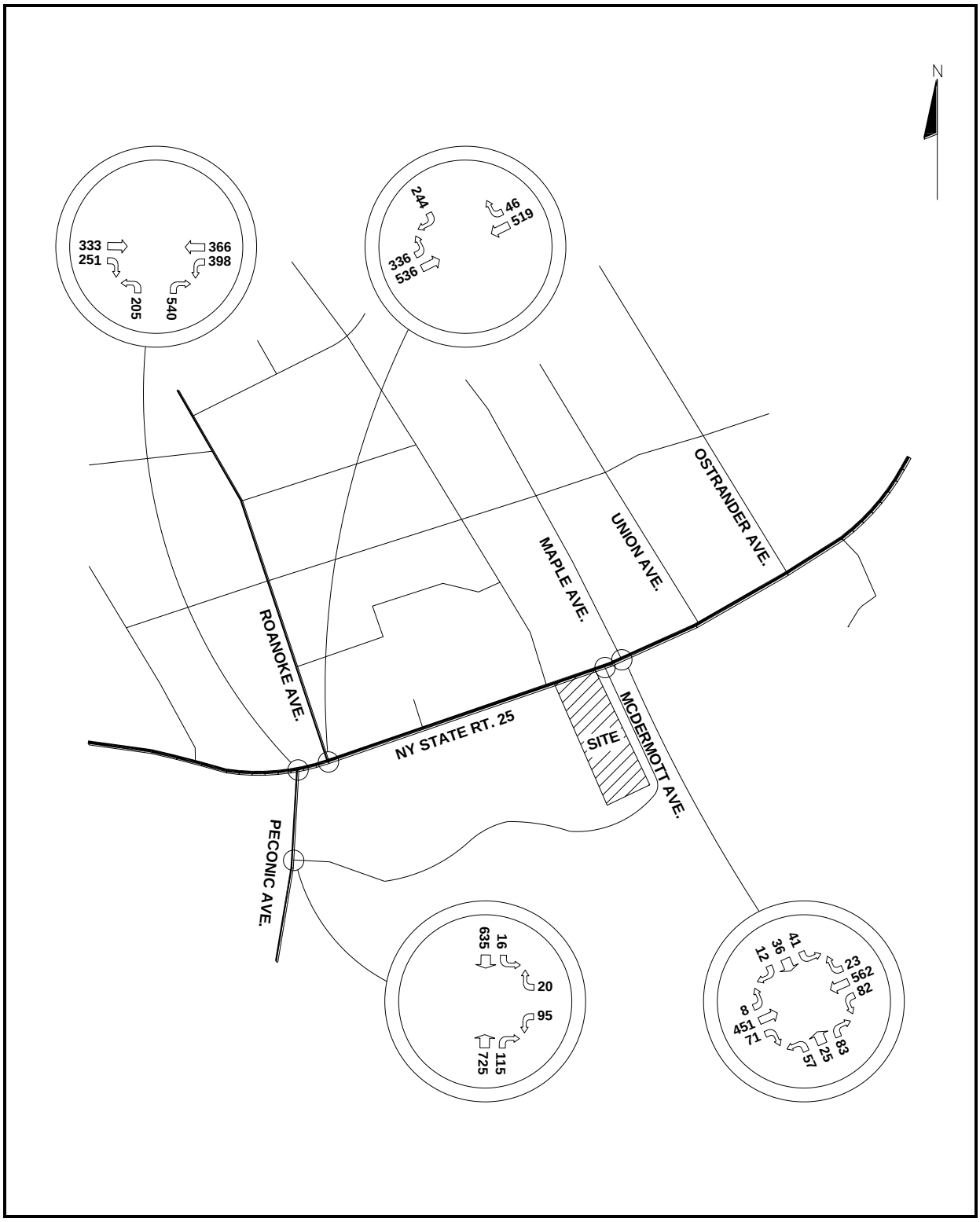


Figure 14: 2019 Build PM Traffic Volumes

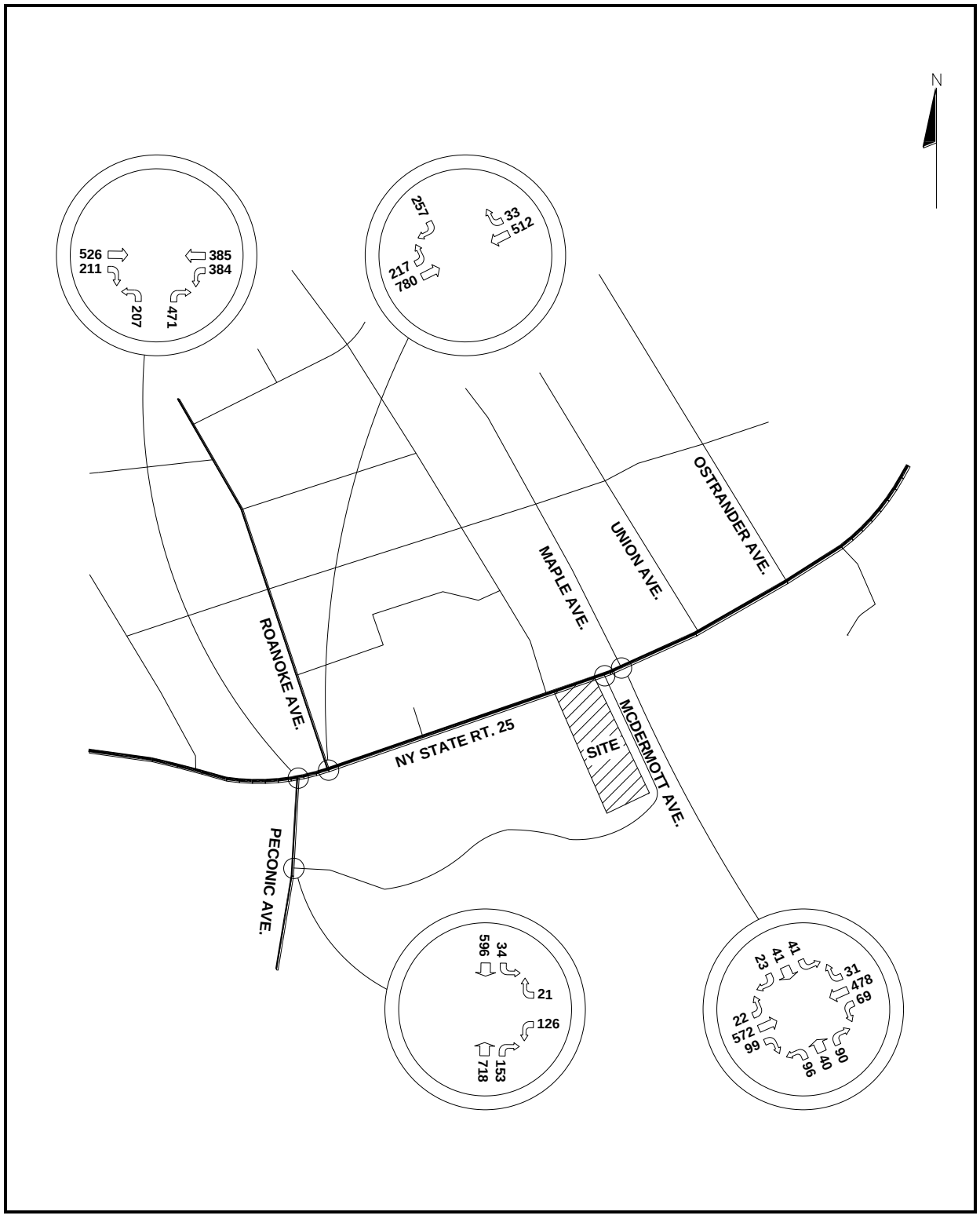


Figure 15: 2019 Build SAT Traffic Volumes

TRAFFIC IMPACT ANALYSIS

As stated previously, the intersection capacity and level-of-service (LOS) analyses were based on the procedures and guidelines presented in the *Highway Capacity Manual (2010)*, published by the *Transportation Research Board*. The Synchro Version 9 software was used to analyze the study intersections and provide a LOS measurement of the intersection operations. The six classes of LOS, ranging from LOS A (excellent) to F (worst), are defined in Appendix D.

The following tables illustrate the LOS summaries for the study intersections.

Table 5: Level of Summary – AM Signalized

			No Build		Build	
Signalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**
East/West Main Street at	EB	T	49.3	D	54.6	D
Peconic Avenue		R	27.3	C	27.3	C
	WB	L	16.7	B	18.7	B
		T	2.7	A	2.7	A
	NB	L	96.8	F	94.5	F
		R	32.2	C	31.9	C
Intersection			32.6	C	33.2	C
East/West Main Street at	EB	L	22.9	C	23.0	C
Roanoke Avenue		T	3.7	A	3.8	A
	WB	TR	47.5	D	48.4	D
	SB	R	34.5	C	34.3	C
Intersection			24.7	C	25.2	C
East/West Main Street at	EB	LTR	5.1	A	6.6	A
Maple/McDermott Avenue	WB	LTR	5.1	A	6.6	A
	NB	LTR	31.2	C	40.4	D
	SB	LTR	30.6	C	28.0	C
Intersection			8.7	A	12.0	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 6: Level of Summary – AM Unsignalized

			No Build		Build	
Unsignalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**
Peconic Avenue at	WB	L	18.2	C	19.1	C
Parking Lot Access		R	14.2	B	14.3	B
	SB	LT	9.4	A	9.4	A

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 7: Level of Summary – PM Signalized

			No Build		Build		Build Mod.	
Signalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
East/West Main Street @	EB	T	55.9	E	66.7	E		
Peconic Avenue		R	24.3	C	24.9	C		
	WB	L	25.6	C	34.6	C		
		T	3.3	A	3.2	A		
	NB	L	89.8	F	89.5	F		
		R	28.1	C	27.5	C		
		Intersection	32.6	C	36.1	C		
East/West Main Street @	EB	L	29.1	C	30.2	C		
Roanoke Avenue		T	3.0	A	3.2	A		
	WB	TR	50.6	D	51.3	D		
	SB	R	41.4	D	41.4	D		
		Intersection	30.6	C	30.7	C		
East/West Main Street @	EB	LTR	4.8	A	6.1	A	6.6	A
Maple/McDermott Avenue	WB	LTR	7.2	A	9.9	A	10.7	B
	NB	LTR	29.5	C	41.0	D	34.6	C
	SB	LTR	44.9	D	42.6	D	37.1	D
		Intersection	11.0	B	14.7	B	14.1	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 8: Level of Summary – PM Unsignalized

			No Build		Build	
Unsignalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**
Peconic Avenue at	WB	L	19.6	C	21.1	C
Parking Lot Access		R	15.3	C	15.6	C
	SB	LT	9.8	A	9.9	A

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 9: Level of Summary – Saturday Signalized

			No Build		Build		Build Mod.	
Signalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
East/West Main Street at	EB	T	117.4	F	122.4	F		
Peconic Avenue		R	24.8	C	25.2	C		
	WB	L	101.9	F	114.7	F		
		T	2.9	A	3.1	A		
	NB	L	94.9	F	94.9	F		
		R	24.2	C	24.0	C		
Intersection			63.5	E	67.2	E		
East/West Main Street at	EB	L	35.8	D	37.3	D		
Roanoke Avenue		T	3.6	A	4.3	A		
	WB	TR	49.3	D	52.1	D		
	SB	R	42.0	D	41.4	D		
Intersection			27.2	C	28.2	C		
East/West Main Street at	EB	LTR	7.0	A	10.8	B	12.4	B
Maple/McDermott Avenue	WB	LTR	7.2	A	10.2	B	11.6	B
	NB	LTR	40.2	D	67.9	E	52.8	D
	SB	LTR	36.8	D	37.3	D	33.0	C
Intersection			12.9	B	21.2	C	19.8	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 10: Level of Summary – Saturday Unsignalized

			No Build		Build	
Unsignalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**
Peconic Avenue at	WB	L	20.5	C	25.0	C
Parking Lot Access		R	15.4	B	15.9	B
	SB	LT	10.0	B	10.3	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Main Street at Peconic Avenue/Roanoke Avenue

In the No Build Condition, the eastbound West Main Street through movement at Peconic Avenue operates at LOS D, E and F during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operates at LOS F during the weekday AM, PM and Saturday midday peak hours. The westbound left turn movement operates at LOS F during the Saturday midday peak hour. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and E during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at No Build LOS.

East Main Street at McDermott Avenue/Maple Avenue

Under the No Build Condition, all the approach movements to this intersection operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM peak hour and at LOS B during the PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at LOS D or better except for the McDermott Avenue northbound approach which is anticipated to operate at LOS D and E during the weekday PM and Saturday midday peak hours, respectively. Minor signal timing adjustments will improve the northbound LOS D to LOS C during the PM peak hour and from LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.

Peconic Avenue at Parking Lot Access

Under the No Build Condition, the southbound Peconic Avenue left turn movement operates at LOS A during the AM and PM peak hours and at LOS B during the Saturday peak hour. The

westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM and Saturday midday peak hours and at LOS C during the PM peak hour. After the completion of the project, the approach movements to the intersection will continue to operate at No Build LOS during all peak hours.

PARKING ANALYSES

A parking assessment was conducted for the proposed project to determine if there is adequate parking near the study area to support the proposed project. As part of the Transit Oriented Development (TOD) Growth Plan in the Riverhead BOA project, Nelson & Pope conducted a detailed Parking and Public Transportation Study of Downtown Riverhead. The Downtown Riverhead parking study inventoried the parking supply and parking restrictions in the study area. It also identified the peak parking periods and associated peak occupancy by location, calculated the average parking duration and turnover by location.

The Parking Study conducted for the BOA project determined that under current conditions, only a few parking areas are highly utilized during weekdays, mostly lots used by the Suffolk County Courts, Riverhead Town Hall and the Police Department. The majority of parking areas are highly underutilized on Saturdays. From the review of the parking data, it appears that Downtown Riverhead has adequate parking to support existing conditions. The following table summarizes the overall peak utilization in Downtown Riverhead.

Table 11: Overall Parking Utilization

Lots	Available Spaces	Weekday Peak Occupancy	Weekend Peak Occupancy
Public/ Institutional	2121 Spaces	1059 Spaces (50%)	398 Spaces (22%)
Private	353 Spaces	109 Spaces (50%)	74 Spaces (24%)
On-Street	236 Spaces	122 Spaces (52%)	44 Spaces (29%)
Total	**2710 Spaces**	**1290 Spaces (48%)**	**516 Spaces (19%)**

For the purpose of the proposed project, additional parking counts were conducted in the parking areas closer the proposed project to identify current parking utilization.

The following table summarizes the existing parking capacities of the parking areas where the parking counts were conducted. Figure 16 shows the parking areas studied.

Table 12: Existing Parking Supply

Parking Area	Total Number of Spaces
Lot L	287
Lot M	59
Lot N	57
Lot Q	52
Lot R	27
Lot T	33
Lot U	84
Lot V	167
West/East Main St between Griffing Ave and Union Ave	68
Maple Ave between E 2nd Street and East Main St	19
Total spaces	853



PUBLIC/INSTITUTIONAL PARKING LOTS	
PARKING AREA	TOTAL NUMBER OF SPACES
LOT L	287
LOT M	59
LOT N	57
LOT Q	52
LOT R	27
LOT T	33
LOT U	84
LOT V	167
	150
	130
TOTAL PUBLIC/INSTITUTIONAL LOT SPACES	766
ON-STREET PARKING	
MAPLE AVENUE	19
EAST MAIN STREET	68
TOTAL ON-STREET PARKING	87
TOTAL AVAILABLE PARKING	853

LEGEND:

NO PARKING ON STREET

PARKING PERMITTED ON STREET

PARKING LOT

N&P
NELSON & POPE
ENGINEERS · SURVEYORS
572 WALT WHITMAN ROAD, MELVILLE, N.Y. 11747-2188
(631) 427-5665 FAX (631) 427-5620
WWW.NELSONPOPE.COM

FIGURE 16: PARKING STUDY AREA MAP

Parking Accumulation Data

Parking accumulation survey was conducted at the parking areas between the hours of 10:00 AM and 8:00 PM on a half-hourly basis on the following dates:

- Friday August 19th, 2016 to cover a typical summer weekday
- Saturday August 27th, 2016 to cover a typical Summer Saturday.

The parking counts were tabulated to identify the parking utilization by time-of-day and by location. The peak parking occupancy was identified for each parking facility and analyzed. The following table summarizes the peak parking demand in the study area. The detailed parking data is contained in Appendix F of the report.

Table 13: Peak Parking Demand

Parking Area	Total Number of Spaces	Weekday Peak Parking Demand	Saturday Peak Parking Demand
Lot L	287	121	111
Lot M	59	26	46
Lot N	57	10	40
Lot Q	52	50	51
Lot R	27	12	13
Lot T	33	14	30
Lot U	84	25	31
Lot V	167	88	146
West/East Main St between Griffing Ave and Union Ave	68	50	49
Ostrander Ave between E 2nd Street and East Main St	19	6	3
Total spaces	853	402	520
Parking Utilization		47.1%	61%

From the review of Table 9 above, it can be seen that the peak parking utilization in the study area is 47.1% (451 parking spaces available) during a typical weekday and 61% (333 parking spaces available) during a typical Saturday.

Peak parking demand of proposed uses

The peak parking demand of the proposed uses was estimated using parking data contained with the Institute of Transportation Engineers Parking Generation Manual 4th Edition, data within the files of Nelson & Pope and Town parking requirements for developments outside the Downtown Parking District. The following is a summary of the peak park parking demand.

Apartments: The Town Code requires 1.5 parking spaces per dwelling unit for developments outside the parking district. Given that the proposed residential units associated with the project are within the Downtown Parking District and located in close proximity to public transportation and have shared parking opportunity due to mix use or commuter parking nearby, parking demand was evaluated based on existing field surveys of parking utilization at similar apartment complexes located in Farmingdale, Babylon and Patchogue within the files of Nelson & Pope. Additionally, rates contained in other industry standard resources like The Institute of Transportation Engineers' (ITE) Parking Generation 4th Editions, and Urban Land Institute's Shared Parking Manual, 2nd Edition were utilized. The average peak parking demand obtained was 1 space per dwelling unit. Therefore, 1 space per residential dwelling unit was utilized for the parking demand calculations.

Restaurant: The Town Code requires one space per 3 seats. Downtown Riverhead is a mixed-use downtown environment providing a range of commercial establishments. Given the mixed-use nature of the restaurant locations, and proximity to the LIRR, there are opportunities for shared customer parking and hence a reduced parking rate. However, to perform a conservative parking analysis, a rate of 1 space per 3 seats was utilized for the restaurant parking calculations.

Retail: The Town Code requires one space per 250 SF of GFA for retail uses outside the Downtown Parking District. The proposed retail uses are within the Downtown Parking District and are expected to mainly be supported by the commercial and residential uses proposed as part of the project and existing in the immediate area. Therefore, a reduction in the parking requirement is warranted. According to the ITE Parking Generation, 4th Edition, an average of 2.87 spaces per 1,000 square feet for "Shopping Center" is recommended. To be conservative, a ratio of 3.0 spaces per 1,000 square feet is recommended and utilized in the parking calculations.

The following table is a summary of the peak parking demand of the proposed project (221 East Main Street – Riverview Loft) and the adjacent project at 203-213 East Main Street.

Table 14: Peak Parking Demand Estimates

Project	Use	Parking Ratio	Parking demand
221 East Main Street	116 apartments units	1 parking space per unit	116 spaces
	Restaurant (535 seats)	1 parking space per 3 seats	179 spaces
	Retail (1,508 SF)	3 parking spaces per 1000 SF	5 spaces
203-213 East Main Street	170 apartments units	1 parking space per unit	170 spaces
	Retail (3,750 SF)	3 parking spaces per 1000 SF	11 spaces
	Total parking required	**481**	
	Total parking available	**504***	

*- Total parking available is equal to available parking within the Downtown Parking District plus parking provided within the project site.

From the review of the table above, it can be seen that the peak parking demand for the proposed project (221 East Main Street) will be 300 parking spaces and the parking demand for the project adjacent to 221 East main Street (203-213 East Main Street) will be 181 parking space. The overall parking demand for the two projects will be 481 parking spaces. From the review of the parking data, a minimum of 331 parking spaces could be available in the study area during a typical weekday or weekend. A total of 171 parking spaces will be provided on site to support the two projects resulting in a total of 504 available parking spaces to support the two projects. The 505 parking spaces exceeds the peak parking demand of 481 parking spaces. It is therefore the professional opinion of Nelson & Pope that there will be more than adequate parking in the study area to meet the peak parking demand for the proposed project.

CONCLUSION

Nelson & Pope has investigated the potential traffic and parking impacts associated with the proposed development to be located at the southwest corner of East Main Street and McDermott Avenue in Riverhead, New York. The following is a summary of this investigation and the findings thereof:

1. At the request of the Town of Riverhead Planning Department, turning movement counts were conducted at the intersections of East Main Street at Peconic Avenue, East Main Street and Roanoke Avenue and East Main Street at McDermott Avenue/Maple Avenue during the weekday AM (7-9AM), PM (4-6PM) and Saturday midday (10AM-2PM) peak periods on the following days:

    - Friday August 19th from 7-9AM and 4-6PM to cover a typical summer weekday
    - Saturday August 20th from 10 AM -2PM to cover the Polish Town Fair event (Special events in Riverhead).
    - Saturday August 27th from 10AM -2PM to cover a typical Summer Saturday.

2. In order to respond to the Town of Riverhead Planning Department's comment on the 2016 Traffic Study regarding weekday turning movement counts collected when schools were not in session, additional turning movement counts have been collected at the intersections listed above on Wednesday May 31, 2017 during the weekday AM (7-9AM) and PM (4-6PM) peak hours.

3. Future 2019 No Build traffic volumes were determined by applying a 1.9% annual growth factor to the existing traffic volumes and then adding the traffic generated by the other planned developments in the vicinity of the site.

4. The trip generation for the proposed project was prepared utilizing trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Ninth Edition*.

5. The proposed project is projected to generate 79 trips (21 entering and 58 exiting) during the weekday AM peak hour, 167 trips (109 entering and 58 exiting) during the weekday PM peak hour and 252 trips (142 entering and 110 exiting) during the Saturday midday peak hour.

6. The site-generated traffic was distributed to the study intersections and incorporated into the Future Build Condition.

7. In the No Build Condition, at the intersections Main Street and Peconic Avenue/Roanoke Avenue, eastbound West Main Street through movement at Peconic Avenue operates at LOS D, E and F during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operates at LOS F during the weekday AM, PM and Saturday midday peak hours. The westbound left turn movement operates at LOS F during the Saturday midday peak hour. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and E during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at No Build LOS.

8. Under the No Build Condition, all the approach movements at the intersection of East Main Street and McDermott Avenue/Maple Avenue operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM peak hour and at LOS B during the PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at LOS D or better except for the McDermott Avenue northbound approach which is anticipated to operate at LOS D and E during the weekday PM and Saturday midday peak hours, respectively. Minor signal timing adjustments will improve the northbound LOS D to LOS C during the PM peak

hour and from LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.

9. Under the No Build Condition, the southbound Peconic Avenue left turn movement operates at LOS A during the AM and PM peak hours and at LOS B during the Saturday peak hour. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM and Saturday midday peak hours and at LOS C during the PM peak hour. After the completion of the project, the approach movements to the intersection will continue to operate at No Build LOS during all peak hours.
10. A parking assessment was conducted for the proposed project and an adjacent planned project (203-213 East Main Street) to determine if there is adequate parking near the study area to support the proposed project. As part of the Transit Oriented Development (TOD) Growth Plan in the Riverhead BOA project, Nelson & Pope conducted a detailed Parking and Public Transportation Study of Downtown Riverhead. The Downtown Riverhead parking study inventoried the parking supply and parking restrictions in the study area. It also identified the peak parking periods and associated peak occupancy by location, calculated the average parking duration and turnover by location. For the purpose of the proposed project, additional parking counts were conducted in the parking areas closer the proposed project to identify current parking utilization.
11. Parking accumulation survey was conducted at the parking areas between the hours of 10:00 AM and 8:00 PM on a half-hourly basis on the following dates:
    - Friday August 19th, 2016 to cover a typical summer weekday
    - Saturday August 27th, 2016 to cover a typical Summer Saturday.
12. The parking data was summarized to identify the peak parking demand in the vicinity of the proposed project.
13. Peak parking demand of the proposed uses was estimated using parking data contained with the Institute of Transportation Engineers Parking Generation Manual 4th Edition, data

within the files of Nelson & Pope and Town parking requirements for developments outside the Downtown Parking District.

14. Based on the peak parking demand, the proposed project and adjacent planned project will require a total of 481 parking spaces. With the peak parking utilization within the study area, there will be at least 504 parking spaces available during the weekday and weekend peak periods. The available parking exceeds the peak parking demand.

Based on the results of the traffic study and parking analysis as detailed in the body of this report, it is the professional opinion of Nelson & Pope that, the proposed project will not result in significant traffic impacts in the study area.

TRAFFIC STUDY

221 East Main Street

TOWN OF RIVERHEAD

APPENDIX

December 2016
Revised June 2017

N & P JOB NO. 16068

Appendix A: Existing Traffic Volume

NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 3-MAIN_ST_AT_ROANOKE_AV_417697_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

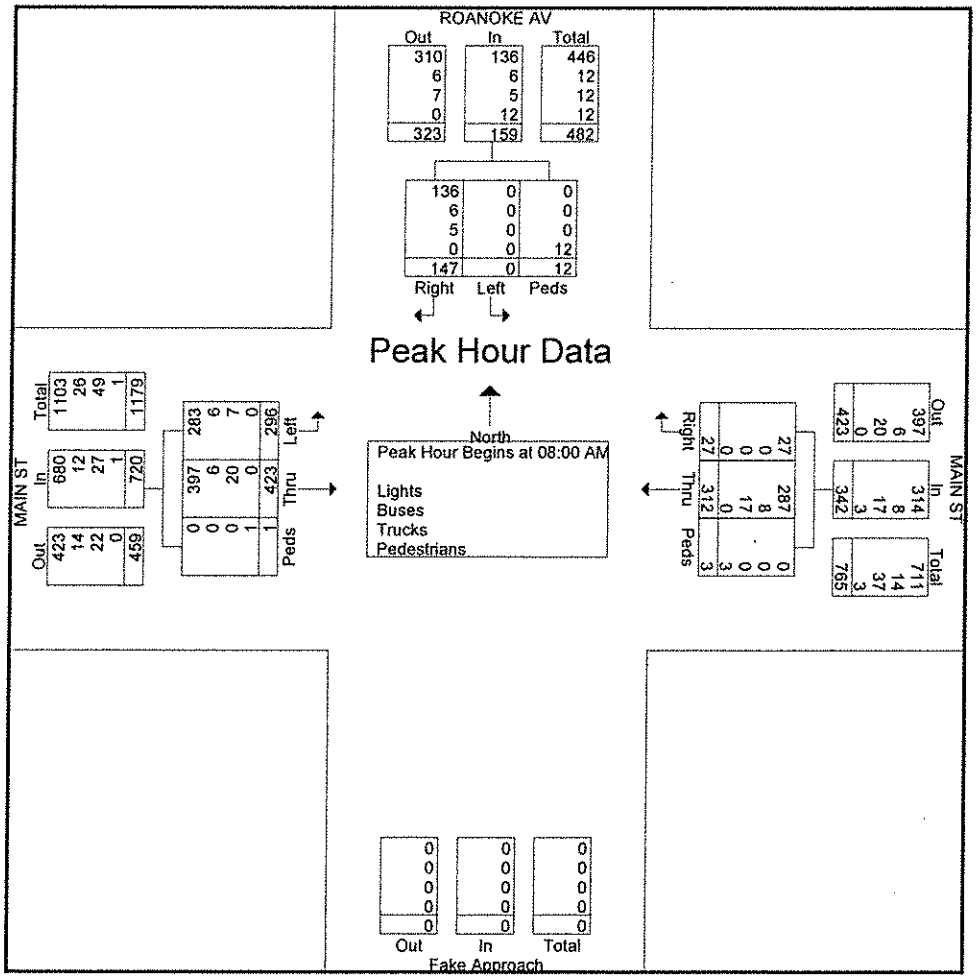
	ROANOKE AV Southbound				MAIN ST Westbound				MAIN ST Eastbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
07:00 AM	0	32	2	34	77	7	0	84	35	67	0	102	220
07:15 AM	0	29	0	29	61	3	1	65	48	75	0	123	217
07:30 AM	0	36	0	36	86	3	0	89	71	78	0	149	274
07:45 AM	0	32	1	33	97	5	0	102	68	116	0	184	319
Total	0	129	3	132	321	18	1	340	222	336	0	558	1030
08:00 AM	0	39	3	42	72	7	1	80	70	95	0	165	287
08:15 AM	0	35	4	39	70	6	1	77	68	104	0	172	288
08:30 AM	0	41	3	44	81	7	0	88	70	109	0	179	311
08:45 AM	0	32	2	34	89	7	1	97	88	115	1	204	335
Total	0	147	12	159	312	27	3	342	296	423	1	720	1221
04:00 PM	0	61	6	67	119	8	4	131	61	106	0	167	365
04:15 PM	0	59	14	73	101	6	1	108	50	103	1	154	335
04:30 PM	0	64	7	71	123	10	3	136	85	109	0	194	401
04:45 PM	0	62	7	69	99	7	11	117	75	99	0	174	360
Total	0	246	34	280	442	31	19	492	271	417	1	689	1461
05:00 PM	0	53	4	57	102	14	1	117	84	101	0	185	359
05:15 PM	0	54	12	66	89	13	6	108	79	89	0	168	342
05:30 PM	0	66	6	72	97	5	4	106	51	116	0	167	345
05:45 PM	0	61	12	73	87	6	3	96	59	83	1	143	312
Total	0	234	34	268	375	38	14	427	273	389	1	663	1358
Grand Total	0	756	83	839	1450	114	37	1601	1062	1565	3	2630	5070
Apprch %	0	90.1	9.9		90.6	7.1	2.3		40.4	59.5	0.1		
Total %	0	14.9	1.6	16.5	28.6	2.2	0.7	31.6	20.9	30.9	0.1	51.9	
Lights	0	722	0	722	1387	111	0	1498	1019	1488	0	2507	4727
% Lights	0	95.5	0	86.1	95.7	97.4	0	93.6	96	95.1	0	95.3	93.2
Buses	0	15	0	15	15	0	0	15	20	17	0	37	67
% Buses	0	2	0	1.8	1	0	0	0.9	1.9	1.1	0	1.4	1.3
Trucks	0	19	0	19	48	3	0	51	23	60	0	83	153
% Trucks	0	2.5	0	2.3	3.3	2.6	0	3.2	2.2	3.8	0	3.2	3
Pedestrians	0	0	83	83	0	0	37	37	0	0	3	3	123
% Pedestrians	0	0	100	9.9	0	0	100	2.3	0	0	100	0.1	2.4

NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 3-MAIN_ST_AT_ROANOKE_AV_417697_05-31-2017
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	ROANOKE AV Southbound				MAIN ST Westbound				MAIN ST Eastbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	39	3	42	72	7	1	80	70	95	0	165	287
08:15 AM	0	35	4	39	70	6	1	77	68	104	0	172	288
08:30 AM	0	41	3	44	81	7	0	88	70	109	0	179	311
08:45 AM	0	32	2	34	89	7	1	97	88	115	1	204	335
Total Volume	0	147	12	159	312	27	3	342	296	423	1	720	1221
% App. Total	0	92.5	7.5		91.2	7.9	0.9		41.1	58.8	0.1		
PHF	.000	.896	.750	.903	.876	.964	.750	.881	.841	.920	.250	.882	.911
Lights	0	136	0	136	287	27	0	314	283	397	0	680	1130
% Lights	0	92.5	0	85.5	92.0	100	0	91.8	95.6	93.9	0	94.4	92.5
Buses	0	6	0	6	8	0	0	8	6	6	0	12	26
% Buses	0	4.1	0	3.8	2.6	0	0	2.3	2.0	1.4	0	1.7	2.1
Trucks	0	5	0	5	17	0	0	17	7	20	0	27	49
% Trucks	0	3.4	0	3.1	5.4	0	0	5.0	2.4	4.7	0	3.8	4.0
Pedestrians	0	0	12	12	0	0	3	3	0	0	1	1	16
% Pedestrians	0	0	100	7.5	0	0	100	0.9	0	0	100	0.1	1.3

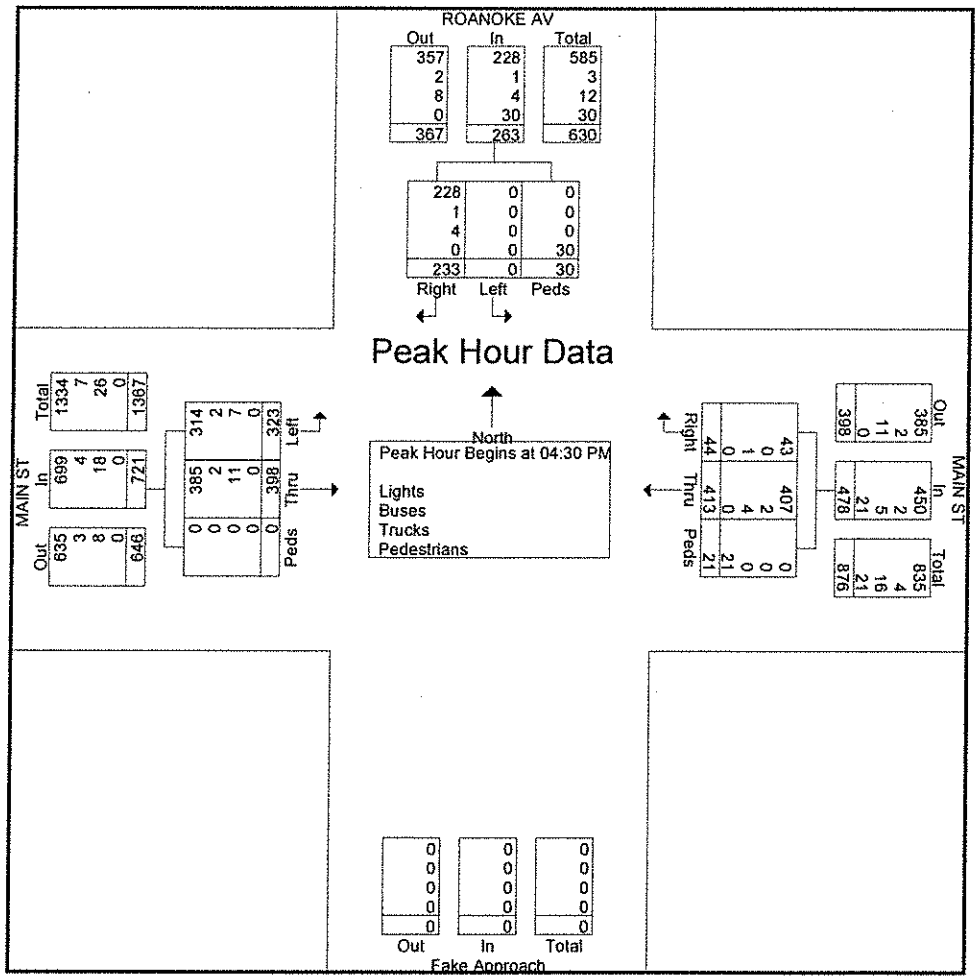


NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 3-MAIN_ST_AT_ROANOKE_AV_417697_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 3

	ROANOKE AV Southbound				MAIN ST Westbound				MAIN ST Eastbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	**64**	7	**71**	**123**	10	3	**136**	**85**	**109**	0	**194**	**401**
04:45 PM	0	62	7	69	99	7	**11**	117	75	99	0	174	360
05:00 PM	0	53	4	57	102	**14**	1	117	84	101	0	185	359
05:15 PM	0	54	**12**	66	89	13	6	108	79	89	0	168	342
Total Volume	0	233	30	263	413	44	21	478	323	398	0	721	1462
% App. Total	0	88.6	11.4		86.4	9.2	4.4		44.8	55.2	0		
PHF	.000	.910	.625	.926	.839	.786	.477	.879	.950	.913	.000	.929	.911
Lights	0	228	0	228	407	43	0	450	314	385	0	699	1377
% Lights	0	97.9	0	86.7	98.5	97.7	0	94.1	97.2	96.7	0	96.9	94.2
Buses	0	1	0	1	2	0	0	2	2	2	0	4	7
% Buses	0	0.4	0	0.4	0.5	0	0	0.4	0.6	0.5	0	0.6	0.5
Trucks	0	4	0	4	4	1	0	5	7	11	0	18	27
% Trucks	0	1.7	0	1.5	1.0	2.3	0	1.0	2.2	2.8	0	2.5	1.8
Pedestrians	0	0	30	30	0	0	21	21	0	0	0	0	51
% Pedestrians	0	0	100	11.4	0	0	100	4.4	0	0	0	0	3.5



NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 2-MAIN_ST_AT_MAPLE_AV-MCDERMOTT_AV_417699_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 1

Groups Printed- Lights - Buses - Trucks

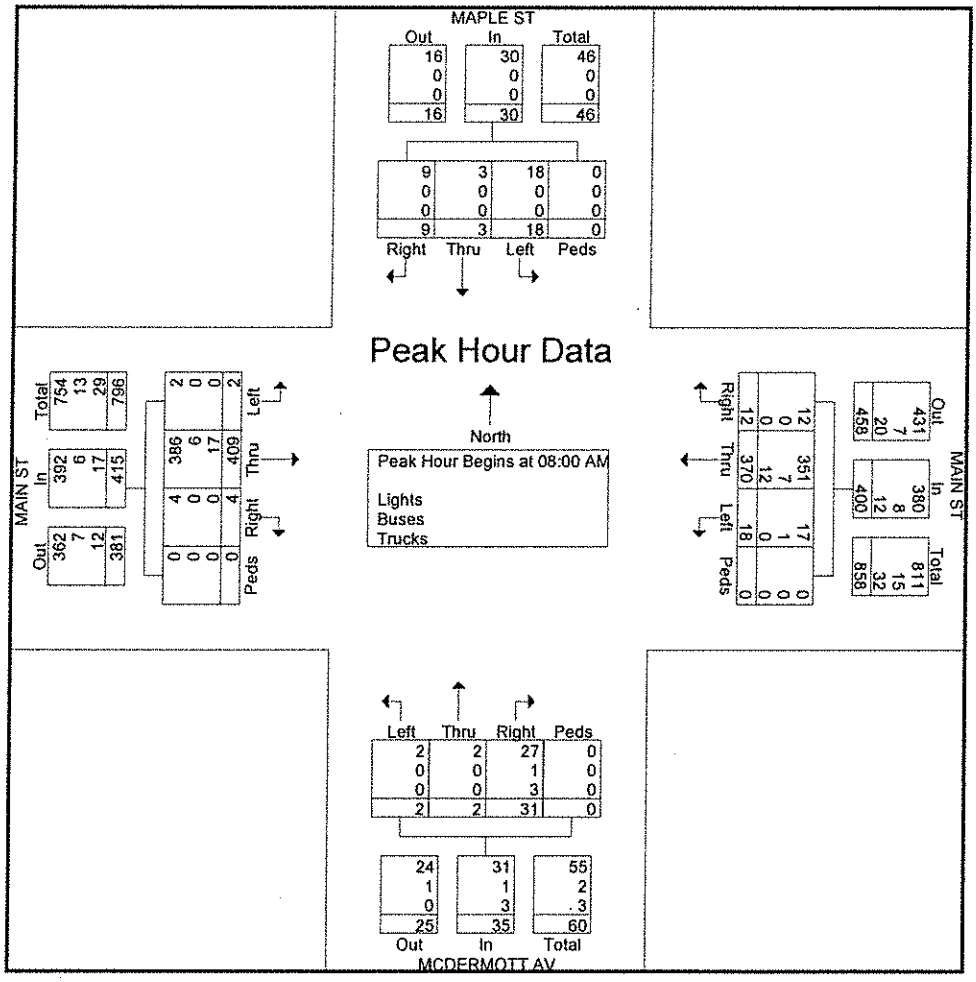
	MAPLE ST Southbound					MAIN ST Westbound					MCDERMOTT AV Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	3	0	8	0	11	3	76	0	0	79	1	0	4	0	5	2	66	4	0	72	167
07:15 AM	2	0	2	0	4	1	71	0	0	72	0	0	1	0	1	1	67	1	0	69	146
07:30 AM	3	0	5	0	8	1	88	2	0	91	1	0	2	0	3	4	87	1	0	92	194
07:45 AM	4	0	2	0	6	3	100	3	0	106	1	1	7	0	9	0	114	2	0	116	237
Total	12	0	17	0	29	8	335	5	0	348	3	1	14	0	18	7	334	8	0	349	744
08:00 AM	4	1	0	0	5	6	93	2	0	101	0	0	7	0	7	0	99	0	0	99	212
08:15 AM	4	0	2	0	6	4	81	2	0	87	1	0	5	0	6	1	98	3	0	102	201
08:30 AM	5	2	6	0	13	2	91	5	0	98	1	2	9	0	12	0	99	0	0	99	222
08:45 AM	5	0	1	0	6	6	105	3	0	114	0	0	10	0	10	1	113	1	0	115	245
Total	18	3	9	0	30	18	370	12	0	400	2	2	31	0	35	2	409	4	0	415	880
04:00 PM	11	0	4	0	15	12	138	7	0	157	6	3	16	0	25	4	86	2	0	92	289
04:15 PM	11	3	4	0	18	6	112	6	0	124	4	0	14	0	18	1	100	2	0	103	263
04:30 PM	7	1	0	0	8	10	123	4	0	137	8	0	15	0	23	1	95	0	0	96	264
04:45 PM	9	3	3	0	15	14	118	5	0	137	0	4	13	0	17	1	98	0	0	99	268
Total	38	7	11	0	56	42	491	22	0	555	18	7	58	0	83	7	379	4	0	390	1084
05:00 PM	12	1	3	0	16	13	128	4	0	145	9	1	20	0	30	1	91	3	0	95	286
05:15 PM	15	0	2	0	17	9	91	4	0	104	7	2	14	0	23	1	86	0	0	87	231
05:30 PM	12	5	4	0	21	2	95	0	0	97	5	3	16	0	24	3	94	3	0	100	242
05:45 PM	12	1	1	0	14	5	86	2	0	93	3	2	17	0	22	2	86	3	0	91	220
Total	51	7	10	0	68	29	400	10	0	439	24	8	67	0	99	7	357	9	0	373	979
Grand Total	119	17	47	0	183	97	1596	49	0	1742	47	18	170	0	235	23	1479	25	0	1527	3687
Apprch %	65	9.3	25.7	0		5.6	91.6	2.8	0		20	7.7	72.3	0		1.5	96.9	1.6	0		
Total %	3.2	0.5	1.3	0	5	2.6	43.3	1.3	0	47.2	1.3	0.5	4.6	0	6.4	0.6	40.1	0.7	0	41.4	
Lights	116	16	45	0	177	93	1541	49	0	1683	45	18	162	0	225	22	1415	25	0	1462	3547
% Lights	97.5	94.1	95.7	0	96.7	95.9	96.6	100	0	96.6	95.7	100	95.3	0	95.7	95.7	95.7	100	0	95.7	96.2
Buses	3	0	2	0	5	1	16	0	0	17	1	0	1	0	2	1	17	0	0	18	42
% Buses	2.5	0	4.3	0	2.7	1	1	0	0	1	2.1	0	0.6	0	0.9	4.3	1.1	0	0	1.2	1.1
Trucks	0	1	0	0	1	3	39	0	0	42	1	0	7	0	8	0	47	0	0	47	98
% Trucks	0	5.9	0	0	0.5	3.1	2.4	0	0	2.4	2.1	0	4.1	0	3.4	0	3.2	0	0	3.1	2.7

NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 2-MAIN_ST_AT_MAPLE_AV-MCDERMOTT_AV_417699_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 2

	MAPLE ST Southbound					MAIN ST Westbound					MCDERMOTT AV Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	4	1	0	0	5	6	93	2	0	101	0	0	7	0	7	0	99	0	0	99	212
08:15 AM	4	0	2	0	6	4	81	2	0	87	1	0	5	0	6	1	98	3	0	102	201
08:30 AM	5	2	6	0	13	2	91	5	0	98	1	2	9	0	12	0	99	0	0	99	222
08:45 AM	5	0	1	0	6	6	105	3	0	114	0	0	10	0	10	1	113	1	0	115	245
Total Volume	18	3	9	0	30	18	370	12	0	400	2	2	31	0	35	2	409	4	0	415	880
% App. Total	60	10	30	0		4.5	92.5	3	0		5.7	5.7	88.6	0		0.5	98.6	1	0		
PHF	.900	.375	.375	.000	.577	.750	.881	.600	.000	.877	.500	.250	.775	.000	.729	.500	.905	.333	.000	.902	.898
Lights	18	3	9	0	30	17	351	12	0	380	2	2	27	0	31	2	386	4	0	392	833
% Lights	100	100	100	0	100	94.4	94.9	100	0	95.0	100	100	87.1	0	88.6	100	94.4	100	0	94.5	94.7
Buses	0	0	0	0	0	1	7	0	0	8	0	0	1	0	1	0	6	0	0	6	15
% Buses	0	0	0	0	0	5.6	1.9	0	0	2.0	0	0	3.2	0	2.9	0	1.5	0	0	1.4	1.7
Trucks	0	0	0	0	0	0	12	0	0	12	0	0	3	0	3	0	17	0	0	17	32
% Trucks	0	0	0	0	0	0	3.2	0	0	3.0	0	0	9.7	0	8.6	0	4.2	0	0	4.1	3.6

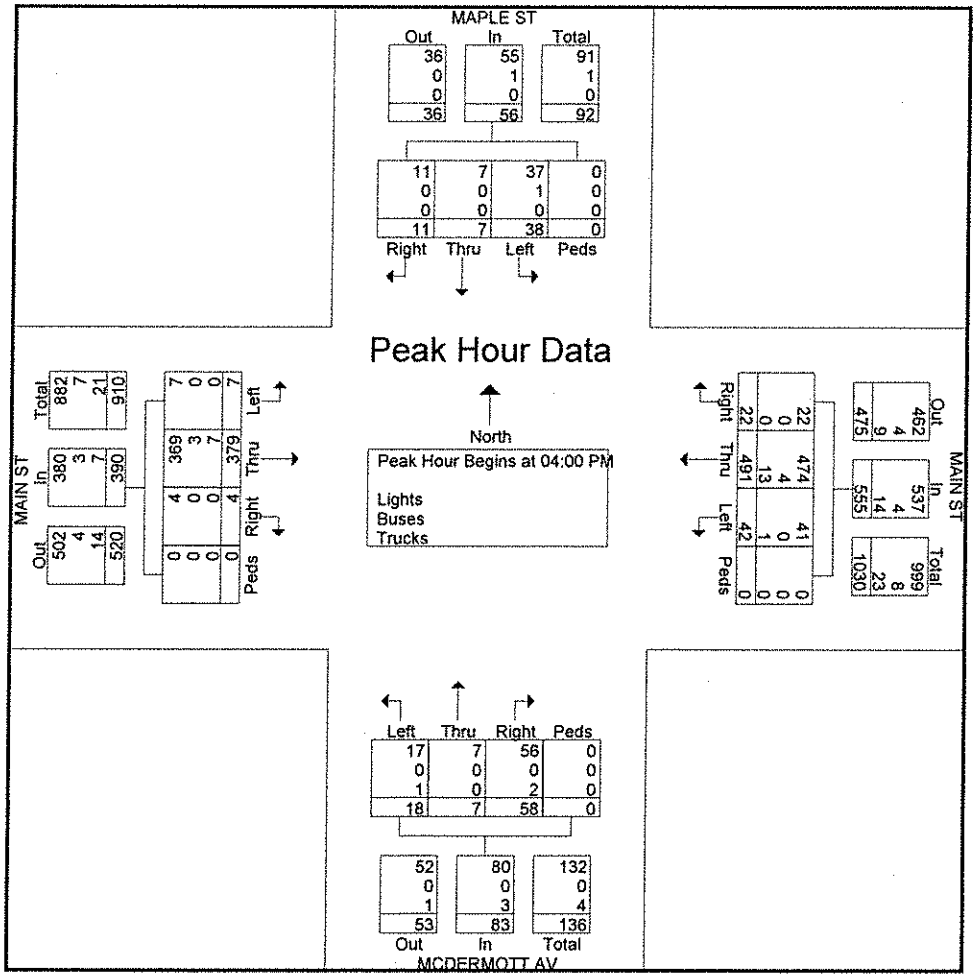


NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 2-MAIN_ST_AT_MAPLE_AV-MCDERMOTT_AV_417699_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 3

	MAPLE ST Southbound					MAIN ST Westbound					MCDERMOTT AV Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	11	0	4	0	15	12	138	7	0	157	6	3	16	0	25	4	86	2	0	92	289
04:15 PM	11	3	4	0	18	6	112	6	0	124	4	0	14	0	18	1	100	2	0	103	263
04:30 PM	7	1	0	0	8	10	123	4	0	137	8	0	15	0	23	1	95	0	0	96	264
04:45 PM	9	3	3	0	15	14	118	5	0	137	0	4	13	0	17	1	98	0	0	99	268
Total Volume	38	7	11	0	56	42	491	22	0	555	18	7	58	0	83	7	379	4	0	390	1084
% App. Total	67.9	12.5	19.6	0		7.6	88.5	4	0		21.7	8.4	69.9	0		1.8	97.2	1	0		
PHF	.864	.583	.688	.000	.778	.750	.889	.786	.000	.884	.563	.438	.906	.000	.830	.438	.948	.500	.000	.947	.938
Lights	37	7	11	0	55	41	474	22	0	537	17	7	56	0	80	7	369	4	0	380	1052
% Lights	97.4	100	100	0	98.2	97.6	96.5	100	0	96.8	94.4	100	96.6	0	96.4	100	97.4	100	0	97.4	97.0
Buses	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	8
% Buses	2.6	0	0	0	1.8	0	0.8	0	0	0.7	0	0	0	0	0	0	0.8	0	0	0.8	0.7
Trucks	0	0	0	0	0	1	13	0	0	14	1	0	2	0	3	0	7	0	0	7	24
% Trucks	0	0	0	0	0	2.4	2.6	0	0	2.5	5.6	0	3.4	0	3.6	0	1.8	0	0	1.8	2.2



NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 4-MAIN_ST_AT_PECONIC_AV_417700_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

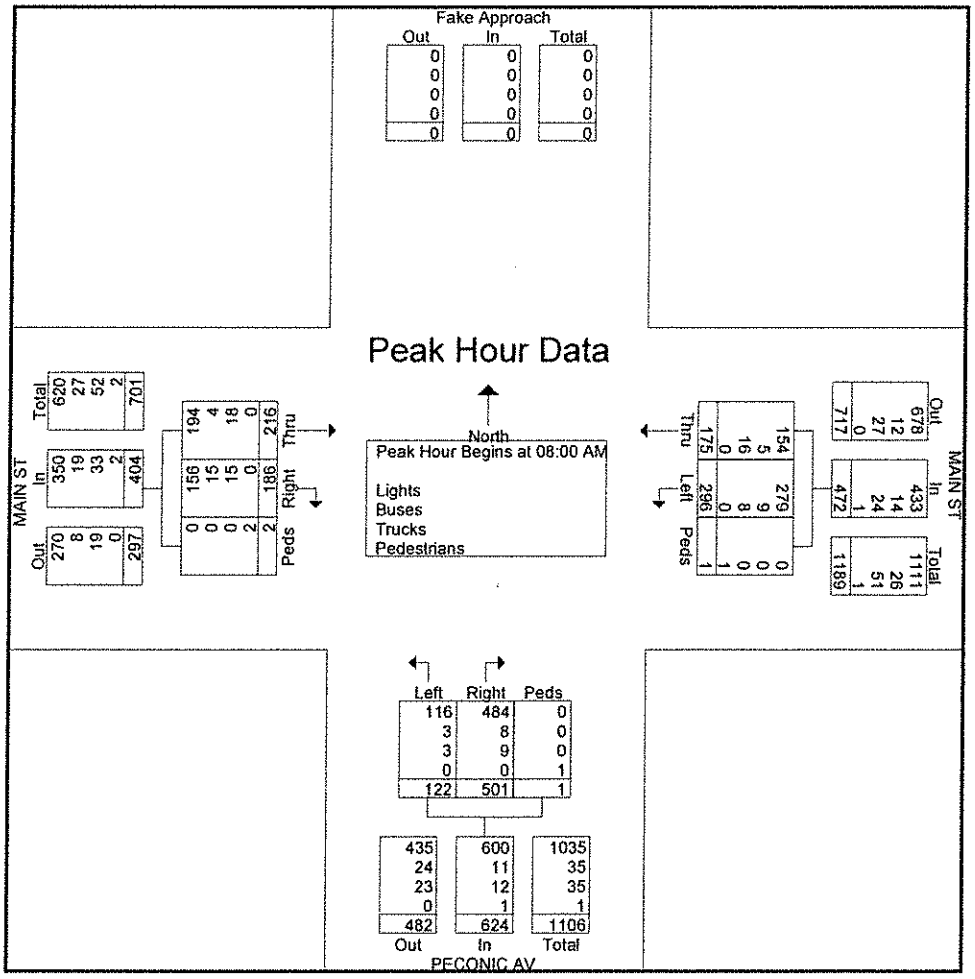
	MAIN ST Westbound				PECONIC AV Northbound				MAIN ST Eastbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	84	29	0	113	33	80	1	114	23	51	0	74	301
07:15 AM	63	28	1	92	21	91	1	113	32	45	0	77	282
07:30 AM	80	43	0	123	41	113	0	154	36	41	0	77	354
07:45 AM	81	48	0	129	50	120	1	171	65	42	0	107	407
Total	308	148	1	457	145	404	3	552	156	179	0	335	1344
08:00 AM	66	45	1	112	28	113	0	141	50	49	0	99	352
08:15 AM	65	41	0	106	22	124	1	147	48	48	1	97	350
08:30 AM	79	45	0	124	32	117	0	149	62	43	0	105	378
08:45 AM	86	44	0	130	40	147	0	187	56	46	1	103	420
Total	296	175	1	472	122	501	1	624	216	186	2	404	1500
04:00 PM	95	84	2	181	49	108	0	157	56	59	5	120	458
04:15 PM	94	67	1	162	44	97	0	141	58	59	1	118	421
04:30 PM	112	77	2	191	47	126	0	173	67	44	3	114	478
04:45 PM	83	75	2	160	41	113	2	156	62	72	2	136	452
Total	384	303	7	694	181	444	2	627	243	234	11	488	1809
05:00 PM	83	72	1	156	48	123	1	172	62	63	2	127	455
05:15 PM	77	68	1	146	57	122	1	180	45	62	0	107	433
05:30 PM	97	66	1	164	59	105	1	165	60	44	2	106	435
05:45 PM	105	42	0	147	48	104	1	153	39	53	3	95	395
Total	362	248	3	613	212	454	4	670	206	222	7	435	1718
Grand Total	1350	874	12	2236	660	1803	10	2473	821	821	20	1662	6371
Apprch %	60.4	39.1	0.5		26.7	72.9	0.4		49.4	49.4	1.2		
Total %	21.2	13.7	0.2	35.1	10.4	28.3	0.2	38.8	12.9	12.9	0.3	26.1	
Lights	1298	828	0	2126	619	1743	0	2362	762	755	0	1517	6005
% Lights	96.1	94.7	0	95.1	93.8	96.7	0	95.5	92.8	92	0	91.3	94.3
Buses	19	10	0	29	26	23	0	49	13	33	0	46	124
% Buses	1.4	1.1	0	1.3	3.9	1.3	0	2	1.6	4	0	2.8	1.9
Trucks	33	36	0	69	15	37	0	52	46	33	0	79	200
% Trucks	2.4	4.1	0	3.1	2.3	2.1	0	2.1	5.6	4	0	4.8	3.1
Pedestrians	0	0	12	12	0	0	10	10	0	0	20	20	42
% Pedestrians	0	0	100	0.5	0	0	100	0.4	0	0	100	1.2	0.7

NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 4-MAIN_ST_AT_PECONIC_AV_417700_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 2

	MAIN ST Westbound				PECONIC AV Northbound				MAIN ST Eastbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	66	**45**	**1**	112	28	113	0	141	50	**49**	0	99	352
08:15 AM	65	41	0	106	22	124	**1**	147	48	48	**1**	97	350
08:30 AM	79	45	0	124	32	117	0	149	**62**	43	0	**105**	378
08:45 AM	**86**	44	0	**130**	**40**	**147**	0	**187**	56	46	1	103	**420**
Total Volume	296	175	1	472	122	501	1	624	216	186	2	404	1500
% App. Total	62.7	37.1	0.2		19.6	80.3	0.2		53.5	46	0.5		
PHF	.860	.972	.250	.908	.763	.852	.250	.834	.871	.949	.500	.962	.893
Lights	279	154	0	433	116	484	0	600	194	156	0	350	1383
% Lights	94.3	88.0	0	91.7	95.1	96.6	0	96.2	89.8	83.9	0	86.6	92.2
Buses	9	5	0	14	3	8	0	11	4	15	0	19	44
% Buses	3.0	2.9	0	3.0	2.5	1.6	0	1.8	1.9	8.1	0	4.7	2.9
Trucks	8	16	0	24	3	9	0	12	18	15	0	33	69
% Trucks	2.7	9.1	0	5.1	2.5	1.8	0	1.9	8.3	8.1	0	8.2	4.6
Pedestrians	0	0	1	1	0	0	1	1	0	0	2	2	4
% Pedestrians	0	0	100	0.2	0	0	100	0.2	0	0	100	0.5	0.3

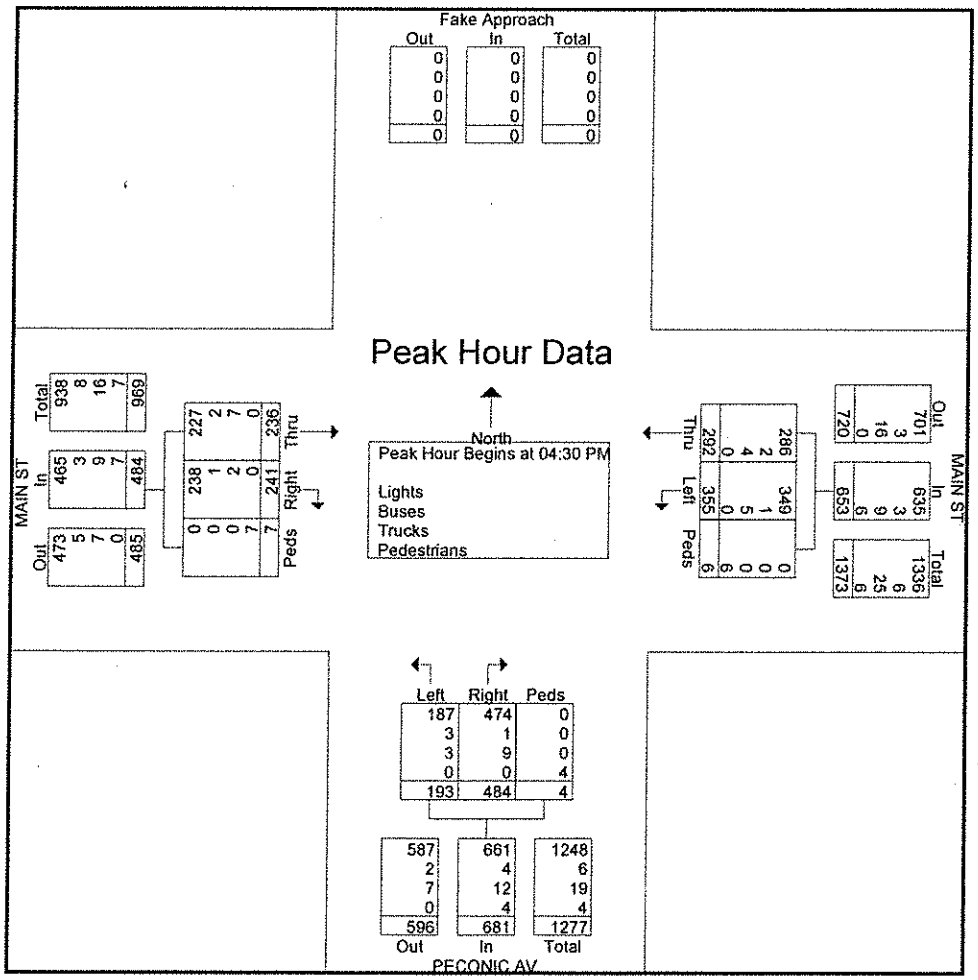


NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 4-MAIN_ST_AT_PECONIC_AV_417700_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 3

	MAIN ST Westbound				PECONIC AV Northbound				MAIN ST Eastbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	**112**	**77**	**2**	**191**	47	**126**	0	173	**67**	44	**3**	114	**478**
04:45 PM	83	75	2	160	41	113	**2**	156	62	**72**	2	**136**	452
05:00 PM	83	72	1	156	48	123	1	172	62	63	2	127	455
05:15 PM	77	68	1	146	**57**	122	1	**180**	45	62	0	107	433
Total Volume	355	292	6	653	193	484	4	681	236	241	7	484	1818
% App. Total	54.4	44.7	0.9		28.3	71.1	0.6		48.8	49.8	1.4		
PHF	.792	.948	.750	.855	.846	.960	.500	.946	.881	.837	.583	.890	.951
Lights	349	286	0	635	187	474	0	661	227	238	0	465	1761
% Lights	98.3	97.9	0	97.2	96.9	97.9	0	97.1	96.2	98.8	0	96.1	96.9
Buses	1	2	0	3	3	1	0	4	2	1	0	3	10
% Buses	0.3	0.7	0	0.5	1.6	0.2	0	0.6	0.8	0.4	0	0.6	0.6
Trucks	5	4	0	9	3	9	0	12	7	2	0	9	30
% Trucks	1.4	1.4	0	1.4	1.6	1.9	0	1.8	3.0	0.8	0	1.9	1.7
Pedestrians	0	0	6	6	0	0	4	4	0	0	7	7	17
% Pedestrians	0	0	100	0.9	0	0	100	0.6	0	0	100	1.4	0.9



NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_19_2016_337875_08-19-2016
Site Code :
Start Date : 8/19/2016
Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

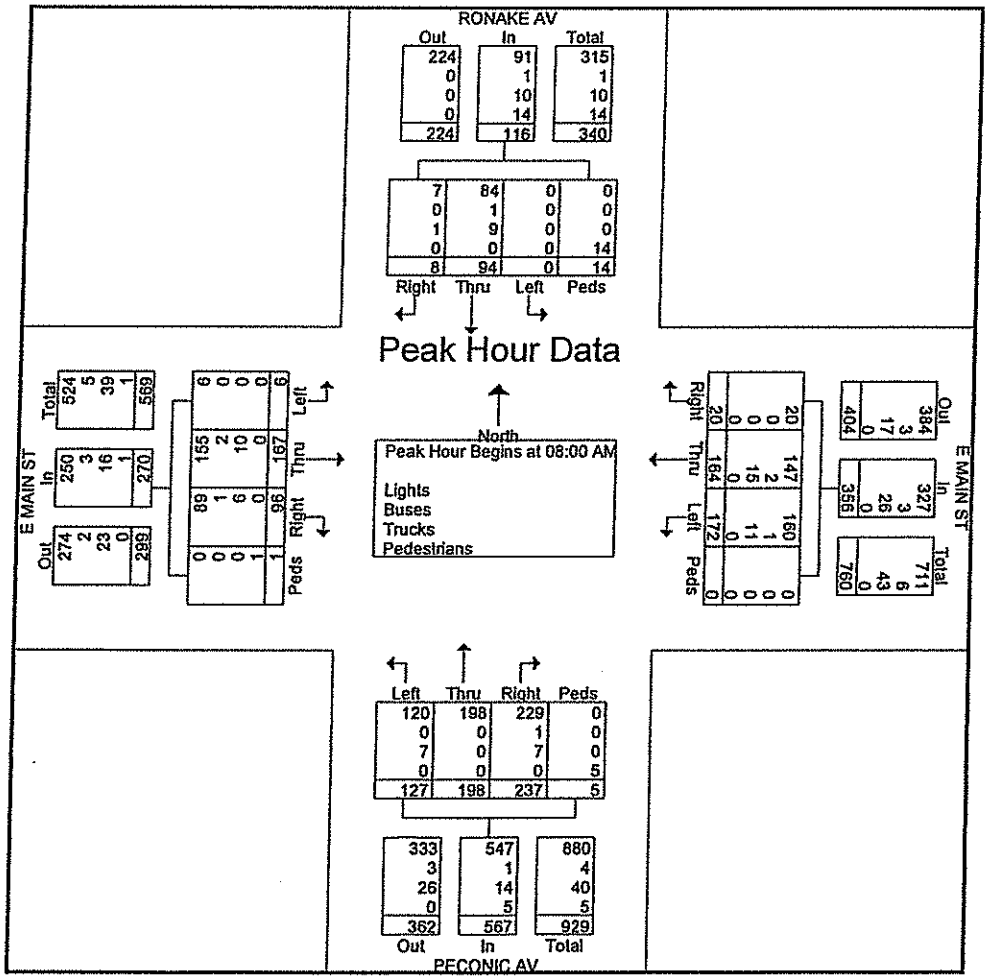
	RONAKE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	14	2	4	20	31	26	3	0	60	24	35	36	0	95	0	21	43	0	64	239
07:15 AM	0	22	0	1	23	39	30	1	0	70	21	30	41	0	92	0	33	28	0	61	246
07:30 AM	0	22	0	1	23	59	48	6	0	113	21	37	52	2	112	1	23	21	0	45	293
07:45 AM	0	26	0	0	26	53	52	3	2	110	30	49	67	1	147	0	47	30	0	77	360
Total	0	84	2	6	92	182	156	13	2	353	96	151	196	3	446	1	124	122	0	247	1138
08:00 AM	0	17	1	1	19	31	40	9	0	80	30	52	46	1	129	0	42	33	0	75	303
08:15 AM	0	17	2	6	25	33	28	3	0	64	28	42	48	1	119	3	39	22	1	65	273
08:30 AM	0	31	1	3	35	57	49	3	0	109	26	46	74	0	146	1	33	21	0	55	345
08:45 AM	0	29	4	4	37	51	47	5	0	103	43	58	69	3	173	2	53	20	0	75	388
Total	0	94	8	14	116	172	164	20	0	356	127	198	237	5	567	6	167	96	1	270	1309
04:00 PM	0	31	5	4	40	31	70	4	6	111	47	63	46	1	157	0	64	39	3	106	414
04:15 PM	0	41	4	7	52	26	77	2	0	105	48	58	36	2	144	0	61	32	5	98	399
04:30 PM	0	37	3	8	48	17	65	7	2	91	44	54	44	1	143	0	73	44	0	117	399
04:45 PM	0	44	4	1	49	45	61	5	3	114	54	35	56	4	149	0	54	47	3	104	416
Total	0	153	16	20	189	119	273	18	11	421	193	210	182	8	593	0	252	162	11	425	1628
05:00 PM	0	56	2	4	62	37	77	2	3	119	41	62	47	0	150	4	57	55	2	118	449
05:15 PM	0	50	5	11	66	33	72	5	13	123	39	61	49	0	149	2	77	60	0	139	477
05:30 PM	0	42	4	5	51	33	56	7	8	104	46	67	42	3	158	0	65	46	2	113	426
05:45 PM	0	43	7	10	60	34	57	10	2	103	39	48	50	0	137	0	58	66	1	125	425
Total	0	191	18	30	239	137	262	24	26	449	165	238	188	3	594	6	257	227	5	495	1777
Grand Total	0	522	44	70	636	610	855	75	39	1579	581	797	803	19	2200	13	800	607	17	1437	5852
Apprch %	0	82.1	6.9	11		38.6	54.1	4.7	2.5		26.4	36.2	36.5	0.9		0.9	55.7	42.2	1.2		
Total %	0	8.9	0.8	1.2	10.9	10.4	14.6	1.3	0.7	27	9.9	13.6	13.7	0.3	37.6	0.2	13.7	10.4	0.3	24.6	
Lights	0	500	43	0	543	577	800	75	0	1452	566	790	781	0	2137	13	768	592	0	1373	5505
% Lights	0	95.8	97.7	0	85.4	94.6	93.6	100	0	92	97.4	99.1	97.3	0	97.1	100	96	97.5	0	95.5	94.1
Buses	0	2	0	0	2	2	12	0	0	14	0	5	4	0	9	0	7	7	0	14	39
% Buses	0	0.4	0	0	0.3	0.3	1.4	0	0	0.9	0	0.6	0.5	0	0.4	0	0.9	1.2	0	1	0.7
Trucks	0	20	1	0	21	31	43	0	0	74	15	2	18	0	35	0	25	8	0	33	163
% Trucks	0	3.8	2.3	0	3.3	5.1	5	0	0	4.7	2.6	0.3	2.2	0	1.6	0	3.1	1.3	0	2.3	2.8
Pedestrians	0	0	0	70	70	0	0	0	39	39	0	0	0	19	19	0	0	0	17	17	145
% Pedestrians	0	0	0	100	11	0	0	0	100	2.5	0	0	0	100	0.9	0	0	0	100	1.2	2.5

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_19_2016_337875_08-19-2016
Site Code :
Start Date : 8/19/2016
Page No : 2

	RONAKE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	17	1	1	19	31	40	9	0	80	30	52	46	1	129	0	42	33	0	75	303
08:15 AM	0	17	2	6	25	33	28	3	0	64	28	42	48	1	119	3	39	22	1	65	273
08:30 AM	0	31	1	3	35	57	49	3	0	109	26	46	74	0	146	1	33	21	0	55	345
08:45 AM	0	29	4	4	37	51	47	5	0	103	43	58	69	3	173	2	53	20	0	75	388
Total Volume	0	94	8	14	116	172	164	20	0	356	127	198	237	5	567	6	167	96	1	270	1309
% App. Total	0	81	6.9	12.1		48.3	46.1	5.6	0		22.4	34.9	41.8	0.9		2.2	61.9	35.6	0.4		
PHF	.000	.758	.500	.583	.784	.754	.837	.556	.000	.817	.738	.853	.801	.417	.819	.500	.788	.727	.250	.900	.843
Lights	0	84	7	0	91	160	147	20	0	327	120	198	229	0	547	6	155	89	0	250	1215
% Lights	0	89.4	87.5	0	78.4	93.0	89.6	100	0	91.9	94.5	100	96.6	0	96.5	100	92.8	92.7	0	92.6	92.8
Buses	0	1	0	0	1	1	2	0	0	3	0	0	1	0	1	0	2	1	0	3	8
% Buses	0	1.1	0	0	0.9	0.6	1.2	0	0	0.8	0	0	0.4	0	0.2	0	1.2	1.0	0	1.1	0.6
Trucks	0	9	1	0	10	11	15	0	0	26	7	0	7	0	14	0	10	6	0	16	66
% Trucks	0	9.6	12.5	0	8.6	6.4	9.1	0	0	7.3	5.5	0	3.0	0	2.5	0	6.0	6.3	0	5.9	5.0
Pedestrians																					
% Pedestrians	0	0	0	100	12.1	0	0	0	0	0	0	0	0	100	0.9	0	0	0	100	0.4	1.5

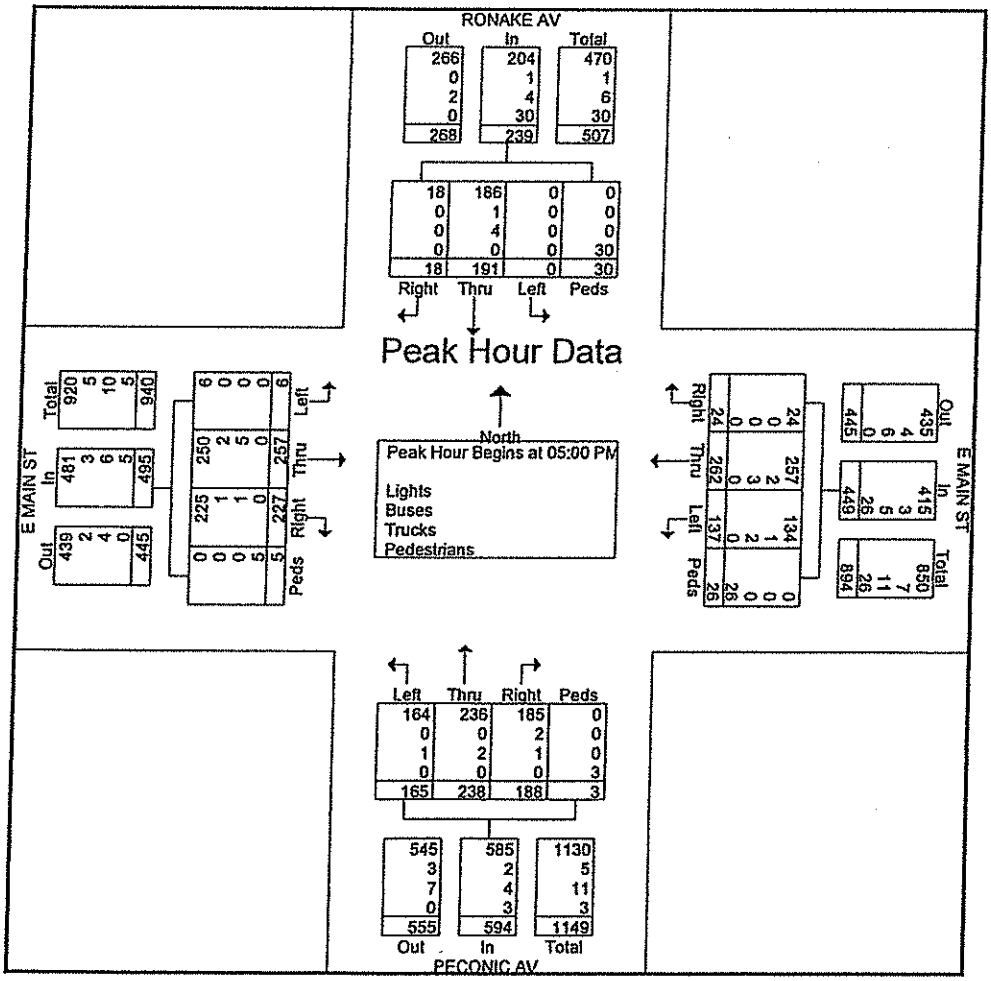


NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_19_2016_337875_08-19-2016
Site Code :
Start Date : 8/19/2016
Page No : 3

	RONAKE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	56	2	4	62	37	77	2	3	119	41	62	47	0	150	4	57	55	2	118	449
05:15 PM	0	50	5	11	66	33	72	5	13	123	39	61	49	0	149	2	77	60	0	139	477
05:30 PM	0	42	4	5	51	33	56	7	8	104	46	67	42	3	158	0	65	46	2	113	426
05:45 PM	0	43	7	10	60	34	57	10	2	103	39	48	50	0	137	0	58	66	1	125	425
Total Volume	0	191	18	30	239	137	262	24	26	449	165	238	188	3	594	6	257	227	5	495	1777
% App. Total	0	79.9	7.5	12.6		30.5	58.4	5.3	5.8		27.8	40.1	31.6	0.5		1.2	51.9	45.9	1		
PHF	.000	.853	.643	.682	.905	.926	.851	.600	.500	.913	.897	.888	.940	.250	.940	.375	.834	.860	.625	.890	.931
Lights	0	186	18	0	204	134	257	24	0	415	164	236	185	0	585	6	250	225	0	481	1685
% Lights	0	97.4	100	0	85.4	97.8	98.1	100	0	92.4	99.4	99.2	98.4	0	98.5	100	97.3	99.1	0	97.2	94.8
Buses	0	1	0	0	1	1	2	0	0	3	0	0	2	0	2	0	2	1	0	3	9
% Buses	0	0.5	0	0	0.4	0.7	0.8	0	0	0.7	0	0	1.1	0	0.3	0	0.8	0.4	0	0.6	0.5
Trucks	0	4	0	0	4	2	3	0	0	5	1	2	1	0	4	0	5	1	0	6	19
% Trucks	0	2.1	0	0	1.7	1.5	1.1	0	0	1.1	0.6	0.8	0.5	0	0.7	0	1.9	0.4	0	1.2	1.1
Pedestrians																					
% Pedestrians	0	0	0	100	12.6	0	0	0	100	5.8	0	0	0	100	0.5	0	0	0	100	1.0	3.6



NELSON AND POPE

572 Walt Whitman Road
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Groups Printed- Lights - Buses - Trucks - Pedestrians

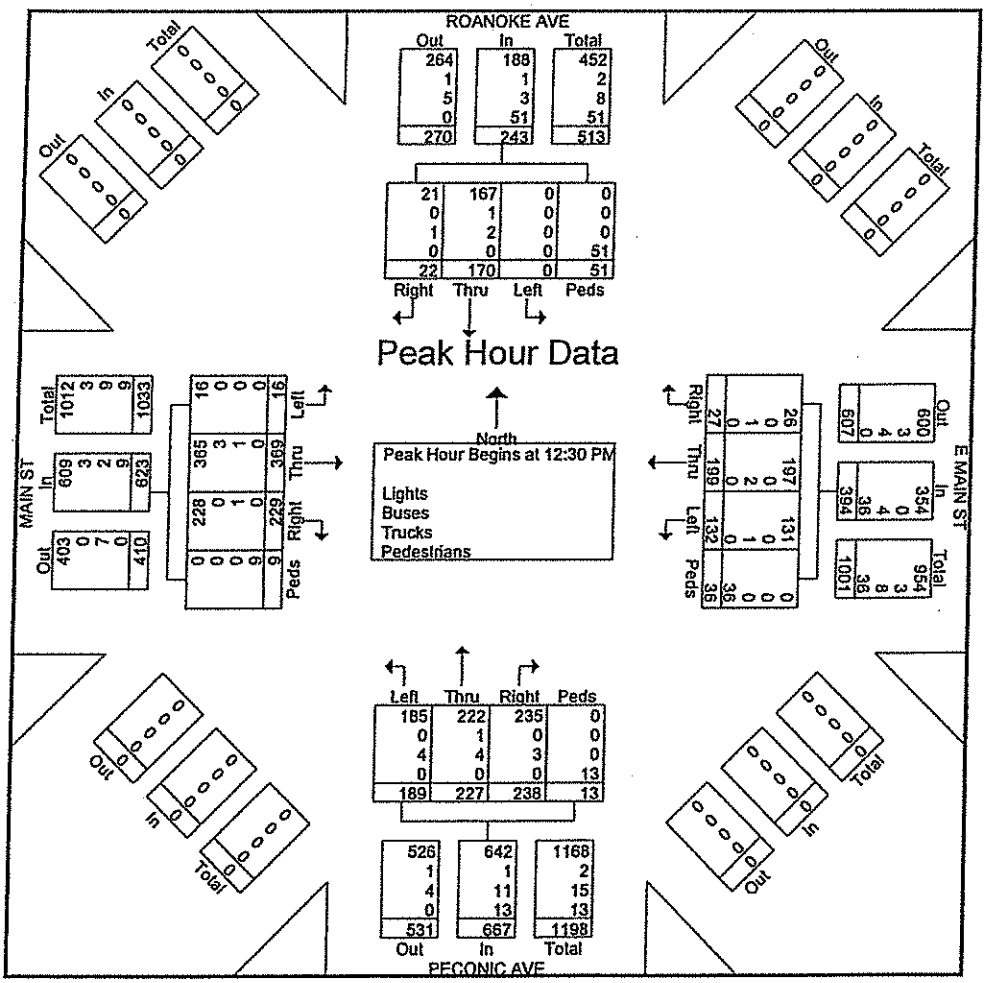
	ROANOKE AVE Southbound					E MAIN ST Westbound					PECONIC AVE Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	48	0	3	51	38	44	8	3	93	45	34	80	3	162	1	63	51	2	117	423
11:15 AM	1	33	4	17	55	39	53	8	6	106	48	61	62	0	171	3	87	45	5	140	472
11:30 AM	0	43	4	9	56	30	59	11	1	101	45	60	65	2	172	5	73	44	0	122	451
11:45 AM	0	34	6	14	54	39	38	4	9	90	48	54	73	1	176	7	89	55	0	151	471
Total	1	158	14	43	216	146	194	31	19	390	186	209	280	6	681	16	312	195	7	530	1817
12:00 PM	0	40	7	4	51	25	40	5	7	77	48	56	51	0	155	5	91	62	1	159	442
12:15 PM	0	38	5	7	50	29	38	3	6	76	53	71	50	0	174	4	86	63	4	157	457
12:30 PM	0	39	4	13	56	28	51	9	7	95	45	66	46	0	157	7	99	68	2	176	484
12:45 PM	0	48	9	24	81	36	55	5	15	111	55	59	69	0	183	1	86	50	4	141	516
Total	0	165	25	48	238	118	184	22	35	359	201	252	216	0	669	17	362	243	11	633	1899
01:00 PM	0	37	5	1	43	32	49	5	9	95	35	58	61	3	157	5	111	55	2	173	468
01:15 PM	0	46	4	13	63	36	44	8	5	93	54	44	62	10	170	3	73	56	1	133	459
01:30 PM	0	38	5	0	43	26	45	12	0	83	52	41	52	5	150	2	101	57	0	160	436
01:45 PM	0	52	2	5	59	28	62	3	1	94	56	44	50	1	151	3	93	54	0	150	454
Total	0	173	16	19	208	122	200	28	15	365	197	187	225	19	628	13	378	222	3	616	1817
Grand Total	1	496	55	110	662	386	578	81	69	1114	584	648	721	25	1978	46	1052	660	21	1779	5533
Apprch %	0.2	74.9	8.3	16.6		34.6	51.9	7.3	6.2		29.5	32.8	36.5	1.3		2.6	59.1	37.1	1.2		
Total %	0	9	1	2	12	7	10.4	1.5	1.2	20.1	10.6	11.7	13	0.5	35.7	0.8	19	11.9	0.4	32.2	
Lights	1	491	54	0	546	382	565	79	0	1026	575	640	712	0	1927	46	1036	656	0	1738	5237
% Lights	100	99	98.2	0	82.5	99	97.8	97.5	0	92.1	98.5	98.8	98.8	0	97.4	100	98.5	99.4	0	97.7	94.7
Buses	0	1	0	0	1	0	5	0	0	5	0	2	0	0	2	0	6	0	0	6	14
% Buses	0	0.2	0	0	0.2	0	0.9	0	0	0.4	0	0.3	0	0	0.1	0	0.6	0	0	0.3	0.3
Trucks	0	4	1	0	5	4	8	2	0	14	9	6	9	0	24	0	10	4	0	14	57
% Trucks	0	0.8	1.8	0	0.8	1	1.4	2.5	0	1.3	1.5	0.9	1.2	0	1.2	0	1	0.6	0	0.8	1
Pedestrians	0	0	0	110	110	0	0	0	69	69	0	0	0	25	25	0	0	0	21	21	225
% Pedestrians	0	0	0	100	16.6	0	0	0	100	6.2	0	0	0	100	1.3	0	0	0	100	1.2	4.1

NELSON AND POPE

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	ROANOKE AVE Southbound					E MAIN ST Westbound					PECONIC AVE Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	39	4	13	56	28	51	9	7	95	45	66	46	0	157	7	99	68	2	176	484
12:45 PM	0	48	9	24	81	36	55	5	15	111	55	59	69	0	183	1	86	50	4	141	516
01:00 PM	0	37	5	1	43	32	49	5	9	95	35	58	61	3	157	5	111	55	2	173	468
01:15 PM	0	46	4	13	63	36	44	8	5	93	54	44	62	10	170	3	73	56	1	133	459
Total Volume	0	170	22	51	243	132	199	27	36	394	189	227	238	13	667	16	369	229	9	623	1927
% App. Total	0	70	9.1	21		33.5	50.5	6.9	9.1		28.3	34	35.7	1.9		2.6	59.2	36.8	1.4		
PHF	.000	.885	.611	.531	.750	.917	.905	.750	.600	.887	.859	.860	.862	.325	.911	.571	.831	.842	.563	.885	.934
Lights	0	167	21	0	188	131	197	26	0	354	185	222	235	0	642	16	365	228	0	609	1793
% Lights	0	98.2	95.5	0	77.4	99.2	99.0	96.3	0	89.8	97.9	97.8	98.7	0	96.3	100	98.9	99.6	0	97.8	93.0
Buses	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	5
% Buses	0	0.6	0	0	0.4	0	0	0	0	0	0	0.4	0	0	0.1	0	0.8	0	0	0.5	0.3
Trucks	0	2	1	0	3	1	2	1	0	4	4	4	3	0	11	0	1	1	0	2	20
% Trucks	0	1.2	4.5	0	1.2	0.8	1.0	3.7	0	1.0	2.1	1.8	1.3	0	1.6	0	0.3	0.4	0	0.3	1.0
Pedestrians																					
% Pedestrians	0	0	0	100	21.0	0	0	0	100	9.1	0	0	0	100	1.9	0	0	0	100	1.4	5.7



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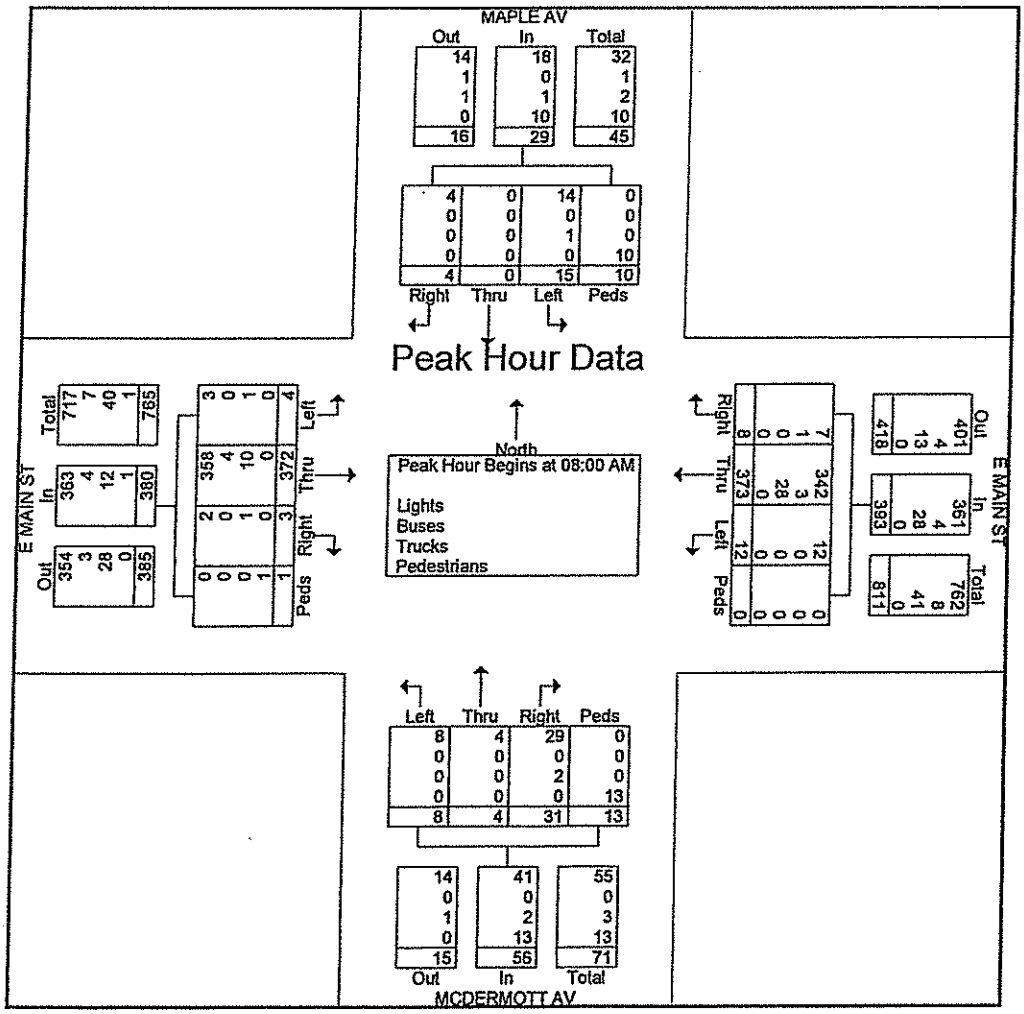
Groups Printed- Lights - Buses - Trucks - Pedestrians

	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
7:00 AM	6	1	6	3	16	2	56	1	0	59	0	0	1	1	2	1	58	0	0	59	13
7:15 AM	3	0	5	0	8	2	61	0	0	63	1	0	3	3	7	3	67	0	0	70	14
7:30 AM	1	0	6	2	9	1	102	0	0	103	3	0	6	5	14	3	64	1	0	68	19
7:45 AM	3	0	5	0	8	3	108	1	3	115	2	0	8	2	12	1	104	2	0	107	24
Total	13	1	22	5	41	8	327	2	3	340	6	0	18	11	35	8	293	3	0	304	72
8:00 AM	3	0	2	1	6	5	92	0	0	97	1	4	5	2	12	1	85	1	0	87	20
8:15 AM	3	0	0	2	5	3	71	1	0	75	0	0	7	5	12	0	76	0	0	76	16
8:30 AM	4	0	2	4	10	1	104	2	0	107	2	0	9	2	13	0	102	0	0	102	23
8:45 AM	5	0	0	3	8	3	106	5	0	114	5	0	10	4	19	3	109	2	1	115	25
Total	15	0	4	10	29	12	373	8	0	393	8	4	31	13	56	4	372	3	1	380	85
4:00 PM	10	0	2	5	17	16	119	3	4	142	5	2	12	14	33	1	108	1	3	113	30
4:15 PM	12	1	3	6	22	10	115	12	11	148	6	3	13	11	33	2	95	2	1	100	30
4:30 PM	8	3	3	10	24	14	115	3	6	138	4	3	15	4	26	5	106	0	6	117	30
4:45 PM	12	1	3	16	32	14	105	11	4	134	2	1	14	13	30	1	106	4	1	112	30
Total	42	5	11	37	95	54	454	29	25	562	17	9	54	42	122	9	415	7	11	442	1221
5:00 PM	15	2	4	3	24	10	107	4	3	124	5	3	17	6	31	3	99	1	1	104	28
5:15 PM	13	1	4	7	25	16	110	6	6	138	9	2	17	20	48	3	109	2	1	115	32
5:30 PM	9	1	1	4	15	6	104	6	2	118	9	4	20	5	38	5	98	5	1	109	28
5:45 PM	9	0	7	9	25	7	99	11	6	123	5	2	13	8	28	2	104	1	1	108	28
Total	46	4	16	23	89	39	420	27	17	503	28	11	67	39	145	13	410	9	4	436	117
Total	116	10	53	75	254	113	1574	66	45	1798	59	24	170	105	358	34	1490	22	16	1562	397
arch %	45.7	3.9	20.9	29.5		6.3	87.5	3.7	2.5		16.5	6.7	47.5	29.3		2.2	95.4	1.4	1		
otal %	2.9	0.3	1.3	1.9	6.4	2.8	39.6	1.7	1.1	45.3	1.5	0.6	4.3	2.6	9	0.9	37.5	0.6	0.4	39.3	
Lights	114	10	51	0	175	112	1494	65	0	1671	55	24	165	0	244	32	1443	21	0	1496	358
Lights	98.3	100	96.2	0	68.9	99.1	94.9	98.5	0	92.9	93.2	100	97.1	0	68.2	94.1	96.8	95.5	0	95.8	90.3
Buses	0	0	0	0	0	0	14	1	0	15	0	0	0	0	0	0	12	0	0	12	27
Buses	0	0	0	0	0	0	0.9	1.5	0	0.8	0	0	0	0	0	0	0.8	0	0	0.8	0.7
Trucks	2	0	2	0	4	1	66	0	0	67	4	0	5	0	9	2	35	1	0	38	11
Trucks	1.7	0	3.8	0	1.6	0.9	4.2	0	0	3.7	6.8	0	2.9	0	2.5	5.9	2.3	4.5	0	2.4	3
strians	0	0	0	75	75	0	0	0	45	45	0	0	0	105	105	0	0	0	16	16	241
strians	0	0	0	100	29.5	0	0	0	100	2.5	0	0	0	100	29.3	0	0	0	100	1	6.1

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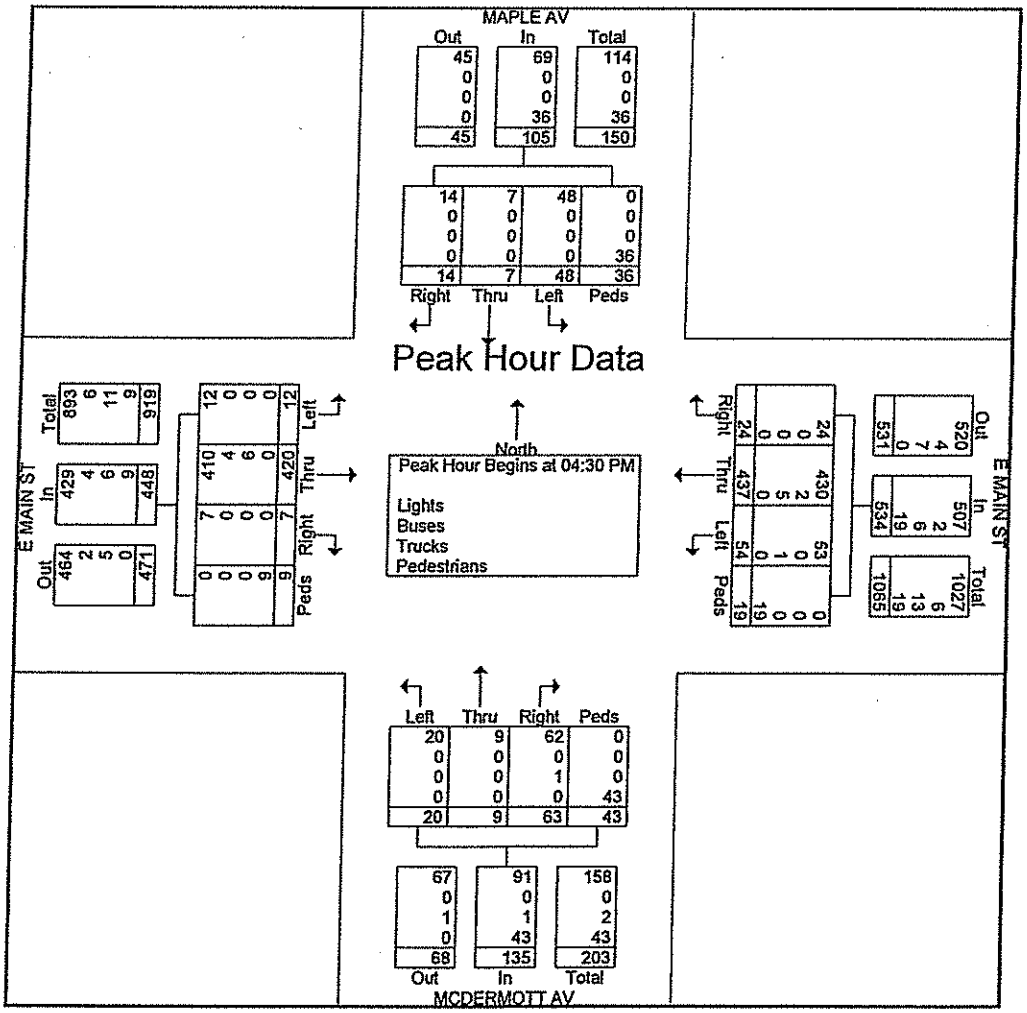
	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Hour for Entire Intersection Begins at 08:00 AM																					
:00 AM	3	0	2	1	6	5	92	0	0	97	1	4	5	2	12	1	85	1	0	87	202
:15 AM	3	0	0	2	5	3	71	1	0	75	0	0	7	5	12	0	76	0	0	76	168
:30 AM	4	0	2	4	10	1	104	2	0	107	2	0	9	2	13	0	102	0	0	102	232
:45 AM	5	0	0	3	8	3	106	5	0	114	5	0	10	4	19	3	109	2	1	115	256
Volume	15	0	4	10	29	12	373	8	0	393	8	4	31	13	56	4	372	3	1	380	858
p. Total	51.7	0	13.8	34.5		3.1	94.9	2	0		14.3	7.1	55.4	23.2		1.1	97.9	0.8	0.3		
PHF	.750	.000	.500	.625	.725	.600	.880	.400	.000	.862	.400	.250	.775	.650	.737	.333	.853	.375	.250	.826	.836
Lights	14	0	4	0	18	12	342	7	0	361	8	4	29	0	41	3	358	2	0	363	783
Lights	93.3	0	100	0	62.1	100	91.7	87.5	0	91.9	100	100	93.5	0	73.2	75.0	96.2	66.7	0	95.5	91.3
Buses	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	4	0	0	4	8
Buses	0	0	0	0	0	0	0.8	12.5	0	1.0	0	0	0	0	0	0	1.1	0	0	1.1	0.9
Trucks	1	0	0	0	1	0	28	0	0	28	0	0	2	0	2	1	10	1	0	12	43
Trucks	6.7	0	0	0	3.4	0	7.5	0	0	7.1	0	0	6.5	0	3.6	25.0	2.7	33.3	0	3.2	5.0
strians	0	0	0	10	10	0	0	0	0	0	0	0	0	13	13	0	0	0	1	1	24
estrians	0	0	0	100	34.5	0	0	0	0	0	0	0	0	100	23.2	0	0	0	100	0.3	2.8



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	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
art Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
k Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
k Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	8	3	3	10	24	14	115	3	6	138	4	3	15	4	26	5	106	0	6	117	305
4:45 PM	12	1	3	16	32	14	105	11	4	134	2	1	14	13	30	1	106	4	1	112	308
5:00 PM	15	2	4	3	24	10	107	4	3	124	5	3	17	6	31	3	99	1	1	104	283
5:15 PM	13	1	4	7	25	16	110	6	6	138	9	2	17	20	48	3	109	2	1	115	326
al Volume	48	7	14	36	105	54	437	24	19	534	20	9	63	43	135	12	420	7	9	448	1222
App. Total	45.7	6.7	13.3	34.3		10.1	81.8	4.5	3.6		14.8	6.7	46.7	31.9		2.7	93.8	1.6	2		
PHF	.800	.583	.875	.563	.820	.844	.950	.545	.792	.967	.556	.750	.926	.538	.703	.600	.963	.438	.375	.957	.937
Lights	48	7	14	0	69	53	430	24	0	507	20	9	62	0	91	12	410	7	0	429	1096
% Lights	100	100	100	0	65.7	98.1	98.4	100	0	94.9	100	100	98.4	0	67.4	100	97.6	100	0	95.8	89.7
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
% Buses	0	0	0	0	0	0	0.5	0	0	0.4	0	0	0	0	0	0	1.0	0	0	0.9	0.5
Trucks	0	0	0	0	0	1	5	0	0	6	0	0	1	0	1	0	6	0	0	6	13
% Trucks	0	0	0	0	0	1.9	1.1	0	0	1.1	0	0	1.6	0	0.7	0	1.4	0	0	1.3	1.1
estrians	0	0	0	36	36	0	0	0	19	19	0	0	0	43	43	0	0	0	9	9	107
destrians	0	0	0	100	34.3	0	0	0	100	3.6	0	0	0	100	31.9	0	0	0	100	2.0	8.8



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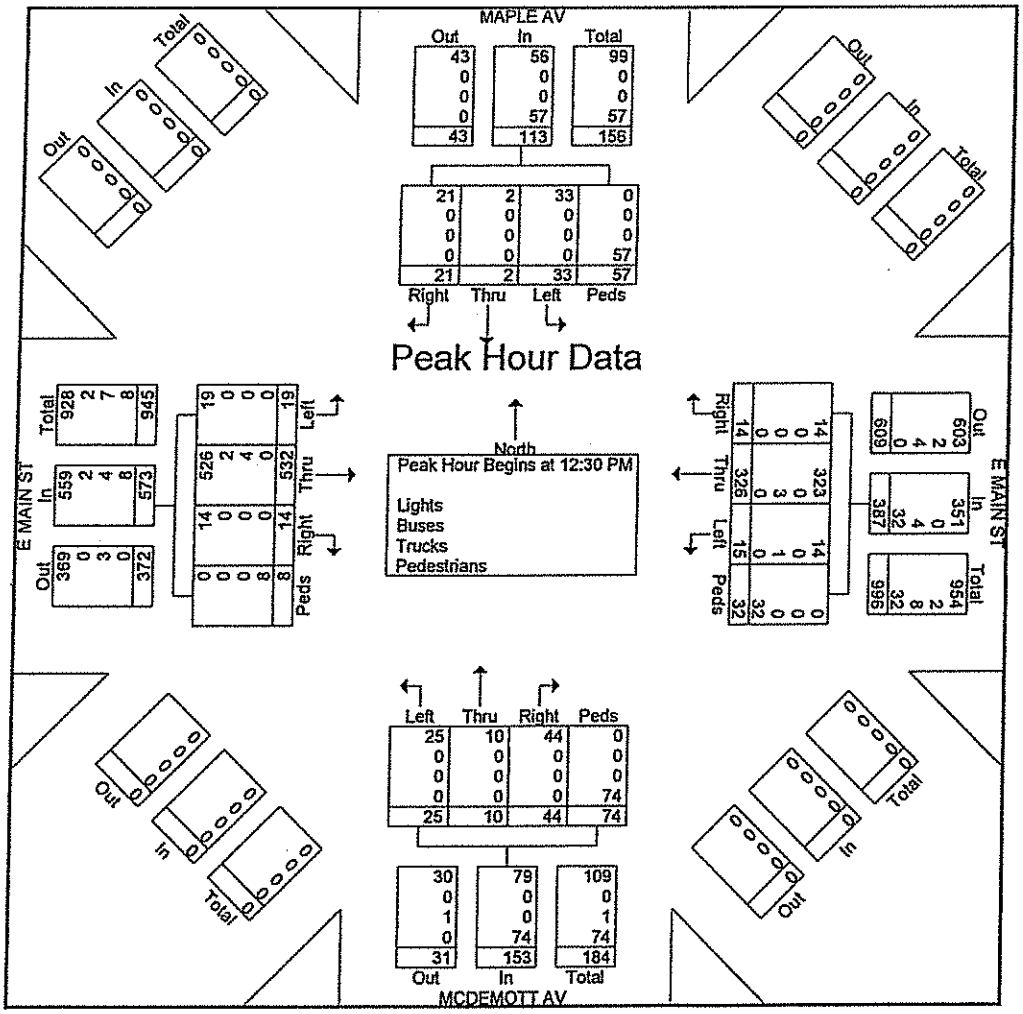
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Groups Printed- Lights - Buses - Trucks - Pedestrians

	MAPLE AV Southbound					E MAIN ST Westbound					MCDEMOTT AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
:00 AM	12	0	4	11	27	4	85	3	2	94	3	2	14	9	28	4	132	2	1	139	28E
:15 AM	7	0	4	1	12	6	86	2	1	95	3	1	12	15	31	8	118	1	0	127	26E
:30 AM	5	1	0	9	15	1	101	2	6	110	4	3	9	11	27	5	117	1	1	124	27E
:45 AM	12	3	3	12	30	2	81	1	2	86	3	1	14	27	45	3	137	5	1	146	307
Total	36	4	11	33	84	13	353	8	11	385	13	7	49	62	131	20	504	9	3	536	113E
:00 PM	5	2	2	10	19	3	70	2	3	78	1	3	21	9	34	4	130	2	0	136	267
:15 PM	6	1	4	12	23	3	91	4	0	98	5	0	15	24	44	1	124	4	4	133	29E
:30 PM	5	0	3	3	11	5	82	4	5	96	4	0	13	28	45	4	136	3	0	143	29E
:45 PM	8	1	6	22	37	5	84	4	7	100	7	3	11	17	38	7	116	2	8	133	30E
Total	24	4	15	47	90	16	327	14	15	372	17	6	60	78	161	16	506	11	12	545	116E
:00 PM	10	0	6	11	27	1	76	5	6	88	5	5	10	10	30	3	148	5	0	156	301
:15 PM	10	1	6	21	38	4	84	1	14	103	9	2	10	19	40	5	132	4	0	141	322
30 PM	4	3	12	10	29	4	55	2	8	69	4	0	8	19	31	8	126	2	3	139	26E
45 PM	12	2	7	4	25	4	82	5	14	105	4	4	19	15	42	4	123	5	4	136	30E
Total	36	6	31	46	119	13	297	13	42	365	22	11	47	63	143	20	529	16	7	572	119E
d Total	96	14	57	126	293	42	977	35	68	1122	52	24	156	203	435	56	1539	36	22	1653	3503
ɔrch %	32.8	4.8	19.5	43		3.7	87.1	3.1	6.1		12	5.5	35.9	46.7		3.4	93.1	2.2	1.3		
otal %	2.7	0.4	1.6	3.6	8.4	1.2	27.9	1	1.9	32	1.5	0.7	4.5	5.8	12.4	1.6	43.9	1	0.6	47.2	
Lights	95	14	56	0	165	41	959	35	0	1035	52	24	154	0	230	56	1517	36	0	1609	303E
Lights	99	100	98.2	0	56.3	97.6	98.2	100	0	92.2	100	100	98.7	0	52.9	100	98.6	100	0	97.3	86.E
Buses	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	7
Buses	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0	0.2	0	0	0.2	0.2
Trucks	1	0	1	0	2	1	14	0	0	15	0	0	2	0	2	0	19	0	0	19	3E
Trucks	1	0	1.8	0	0.7	2.4	1.4	0	0	1.3	0	0	1.3	0	0.5	0	1.2	0	0	1.1	1.1
trians	0	0	0	126	126	0	0	0	68	68	0	0	0	203	203	0	0	0	22	22	419
strians	0	0	0	100	43	0	0	0	100	6.1	0	0	0	100	46.7	0	0	0	100	1.3	12

File Name : 2-MAPLE_AV-MCDERMOTT_AV_AT_E_MAIN_ST_8_27_2016_339053_08-27-20
Site Code :
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	MAPLE AV Southbound					E MAIN ST Westbound					MCDEMOTT AV Northbound					E MAIN ST Eastbound					
art Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
: Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
: Hour for Entire Intersection Begins at 12:30 PM																					
2:30 PM	5	0	3	3	11	5	82	4	5	96	4	0	13	28	45	4	136	3	0	143	295
2:45 PM	8	1	6	22	37	5	84	4	7	100	7	3	11	17	38	7	116	2	8	133	308
1:00 PM	10	0	6	11	27	1	76	5	6	88	5	5	10	10	30	3	148	5	0	156	301
1:15 PM	10	1	6	21	38	4	84	1	14	103	9	2	10	19	40	5	132	4	0	141	322
l Volume	33	2	21	57	113	15	326	14	32	387	25	10	44	74	153	19	532	14	8	573	1226
pp. Total	29.2	1.8	18.6	50.4		3.9	84.2	3.6	8.3		16.3	6.5	28.8	48.4		3.3	92.8	2.4	1.4		
PHF	.825	.500	.875	.648	.743	.750	.970	.700	.571	.939	.694	.500	.846	.661	.850	.679	.899	.700	.250	.918	.952
Lights	33	2	21	0	56	14	323	14	0	351	25	10	44	0	79	19	526	14	0	559	1045
% Lights	100	100	100	0	49.6	93.3	99.1	100	0	90.7	100	100	100	0	51.6	100	98.9	100	0	97.6	85.2
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0.3	0.2
Trucks	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	4	0	0	4	8
% Trucks	0	0	0	0	0	6.7	0.9	0	0	1.0	0	0	0	0	0	0	0.8	0	0	0.7	0.7
estrians	0	0	0	57	57	0	0	0	32	32	0	0	0	74	74	0	0	0	8	8	171
edestrians	0	0	0	100	50.4	0	0	0	100	8.3	0	0	0	100	48.4	0	0	0	100	1.4	13.9



572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_20_16_341000_08-20-20
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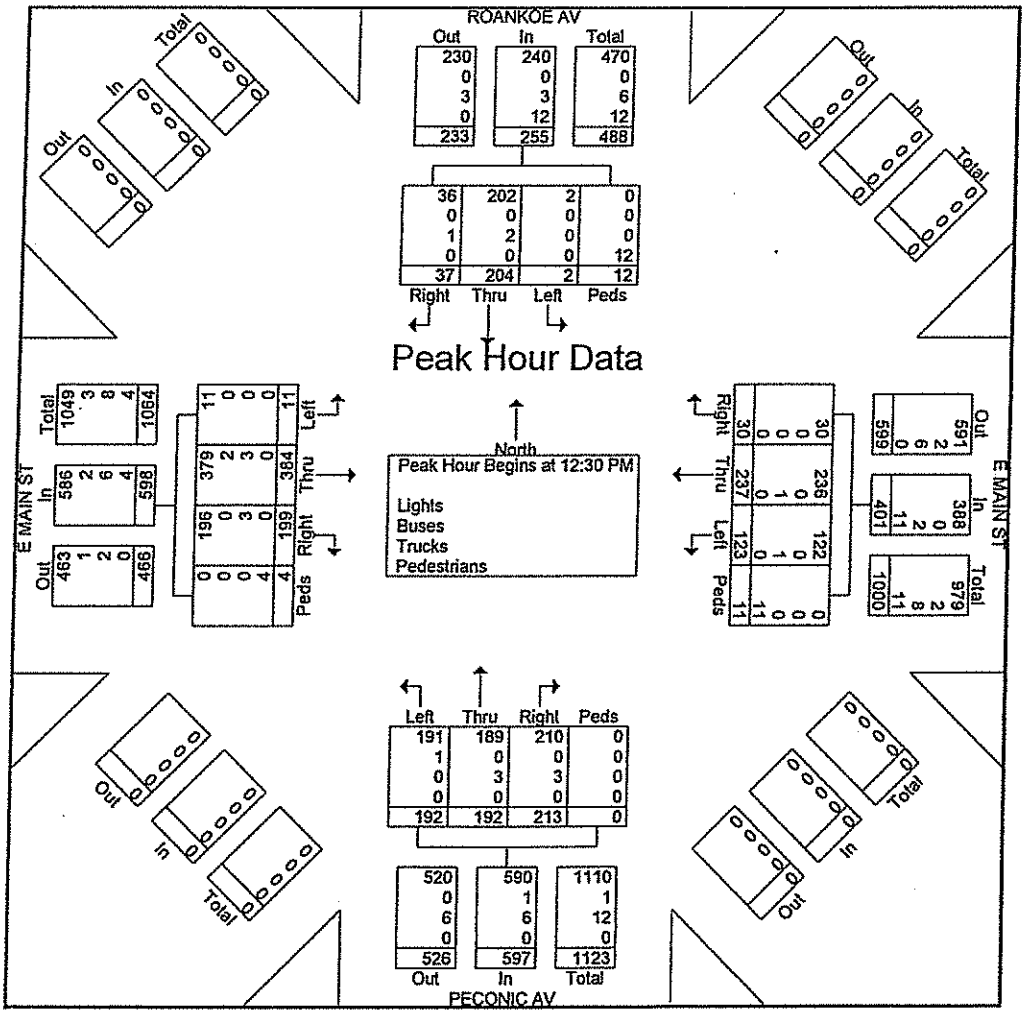
Groups Printed- Lights - Buses - Trucks - Pedestrians

	ROANKOE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
:00 AM	1	51	5	0	57	43	50	14	1	108	58	40	72	0	170	2	82	51	0	135	47(
:15 AM	0	48	2	3	53	23	51	14	2	90	52	65	55	0	172	6	78	36	0	120	43
:30 AM	0	40	7	0	47	38	42	10	0	90	35	62	33	0	130	4	77	40	0	121	38
:45 AM	0	40	5	1	46	31	48	12	0	91	38	54	45	0	137	3	103	43	0	149	42
Total	1	179	19	4	203	135	191	50	3	379	183	221	205	0	609	15	340	170	0	525	171
:00 PM	0	53	8	0	61	36	58	5	2	101	46	49	54	0	149	1	79	48	0	128	43
:15 PM	0	52	10	1	63	32	45	9	0	86	47	57	65	0	169	5	94	57	0	156	47
:30 PM	1	50	9	1	61	32	66	7	0	105	54	45	51	0	150	5	92	44	3	144	46
:45 PM	0	49	10	0	59	31	45	6	4	86	48	54	52	0	154	3	96	38	1	138	43
Total	1	204	37	2	244	131	214	27	6	378	195	205	222	0	622	14	361	187	4	566	181
:00 PM	0	52	8	3	63	29	57	8	2	96	48	42	53	0	143	0	97	52	0	149	45
:15 PM	1	53	10	8	72	31	69	9	5	114	42	51	57	0	150	3	99	65	0	167	50
:30 PM	0	44	6	5	55	40	56	10	4	110	52	49	42	0	143	4	84	43	0	131	43
:45 PM	0	50	6	5	61	34	67	7	0	108	37	51	60	0	148	8	77	16	0	101	41
Total	1	199	30	21	251	134	249	34	11	428	179	193	212	0	584	15	357	176	0	548	181
d Total	3	582	86	27	698	400	654	111	20	1185	557	619	639	0	1815	44	1058	533	4	1639	533
prch %	0.4	83.4	12.3	3.9		33.8	55.2	9.4	1.7		30.7	34.1	35.2	0		2.7	64.6	32.5	0.2		
otal %	0.1	10.9	1.6	0.5	13.1	7.5	12.3	2.1	0.4	22.2	10.4	11.6	12	0	34	0.8	19.8	10	0.1	30.7	
Lights	3	577	84	0	664	395	643	110	0	1148	551	614	633	0	1798	44	1043	528	0	1615	522
Lights	100	99.1	97.7	0	95.1	98.8	98.3	99.1	0	96.9	98.9	99.2	99.1	0	99.1	100	98.6	99.1	0	98.5	97.9
Buses	0	1	0	0	1	0	6	0	0	6	4	0	0	0	4	0	4	1	0	5	16
Buses	0	0.2	0	0	0.1	0	0.9	0	0	0.5	0.7	0	0	0	0.2	0	0.4	0.2	0	0.3	0.3
Trucks	0	4	2	0	6	5	5	1	0	11	2	5	6	0	13	0	11	4	0	15	45
Trucks	0	0.7	2.3	0	0.9	1.2	0.8	0.9	0	0.9	0.4	0.8	0.9	0	0.7	0	1	0.8	0	0.9	0.8
strians	0	0	0	27	27	0	0	0	20	20	0	0	0	0	0	0	0	0	4	4	51
estrians	0	0	0	100	3.9	0	0	0	100	1.7	0	0	0	0	0	0	0	0	100	0.2	1

572 Walt Whitman Road
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	ROANOKE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
art Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
k Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
k Hour for Entire Intersection Begins at 12:30 PM																					
2:30 PM	1	50	9	1	61	32	66	7	0	105	54	45	51	0	150	5	92	44	3	144	460
2:45 PM	0	49	10	0	59	31	45	6	4	86	48	54	52	0	154	3	96	38	1	138	437
1:00 PM	0	52	8	3	63	29	57	8	2	96	48	42	53	0	143	0	97	52	0	149	451
1:15 PM	1	53	10	8	72	31	69	9	5	114	42	51	57	0	150	3	99	65	0	167	503
al Volume	2	204	37	12	255	123	237	30	11	401	192	192	213	0	597	11	384	199	4	598	1851
App. Total	0.8	80	14.5	4.7		30.7	59.1	7.5	2.7		32.2	32.2	35.7	0		1.8	64.2	33.3	0.7		
PHF	.500	.962	.925	.375	.885	.961	.859	.833	.550	.879	.889	.889	.934	.000	.969	.550	.970	.765	.333	.895	.920
Lights	2	202	36	0	240	122	236	30	0	388	191	189	210	0	590	11	379	196	0	586	1804
% Lights	100	99.0	97.3	0	94.1	99.2	99.6	100	0	96.8	99.5	98.4	98.6	0	98.8	100	98.7	98.5	0	98.0	97.8
Buses	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	3
% Buses	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0.2	0	0.5	0	0	0.3	0.2
Trucks	0	2	1	0	3	1	1	0	0	2	0	3	3	0	6	0	3	3	0	6	17
% Trucks	0	1.0	2.7	0	1.2	0.8	0.4	0	0	0.5	0	1.6	1.4	0	1.0	0	0.8	1.5	0	1.0	0.9
estrians	0	0	0	12	12	0	0	0	11	11	0	0	0	0	0	0	0	0	4	4	27
destrians	0	0	0	100	4.7	0	0	0	100	2.7	0	0	0	0	0	0	0	0	100	0.7	1.5



572 Walt Whitman Road
Melville, NY 11747

File Name : 2-MAPLE_AV-MCDERMOTT_AV_AT_E_MAIN_ST_8_20_16_341001_08-20-20
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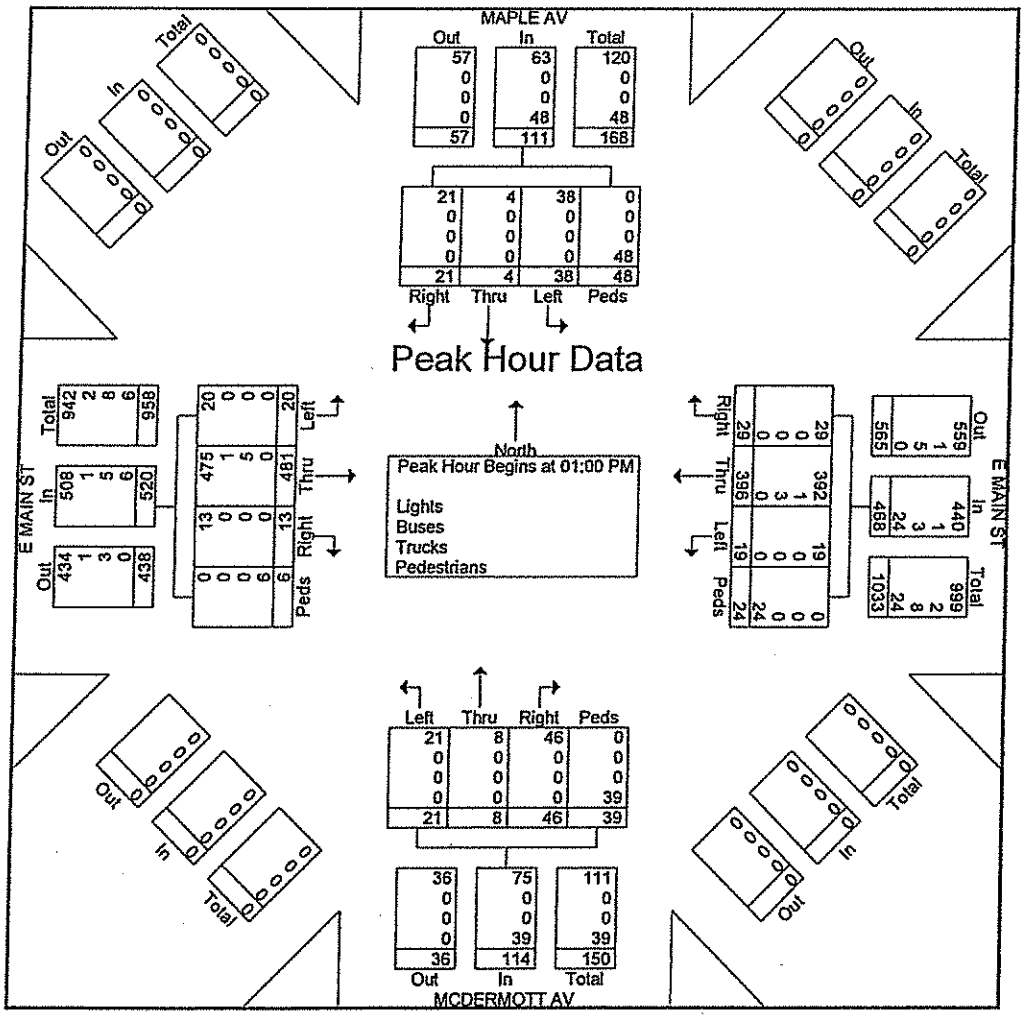
Groups Printed- Lights - Buses - Trucks - Pedestrians

	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
:00 AM	5	1	2	6	14	2	104	8	1	115	2	2	11	2	17	5	130	5	0	140	286
:15 AM	4	1	0	6	11	4	90	3	3	100	3	0	14	9	26	9	119	4	0	132	269
:30 AM	5	0	2	0	7	1	90	8	2	101	3	1	9	2	15	2	106	2	0	110	233
:45 AM	7	0	2	0	9	2	84	7	0	93	5	1	7	4	17	6	123	7	2	138	257
Total	21	2	6	12	41	9	368	26	6	409	13	4	41	17	75	22	478	18	2	520	1045
:00 PM	5	0	2	2	9	2	89	6	2	99	11	4	14	3	32	5	124	3	0	132	272
:15 PM	11	0	4	3	18	2	69	6	3	80	3	1	3	6	13	10	134	2	0	146	257
:30 PM	10	1	5	2	18	3	104	9	4	120	1	0	6	3	10	4	117	1	0	122	270
:45 PM	6	0	5	1	12	6	76	6	3	91	9	0	12	1	22	4	126	4	0	134	259
Total	32	1	16	8	57	13	338	27	12	390	24	5	35	13	77	23	501	10	0	534	1058
:00 PM	8	1	7	10	26	6	84	10	6	106	6	0	16	13	35	2	121	2	0	125	292
:15 PM	10	1	5	20	36	4	116	8	10	138	1	2	9	8	20	9	118	4	0	131	325
:30 PM	11	0	4	16	31	4	99	7	2	112	5	2	10	13	30	4	122	4	6	136	309
:45 PM	9	2	5	2	18	5	97	4	6	112	9	4	11	5	29	5	120	3	0	128	287
Total	38	4	21	48	111	19	396	29	24	468	21	8	46	39	114	20	481	13	6	520	1213
d Total	91	7	43	68	209	41	1102	82	42	1267	58	17	122	69	266	65	1460	41	8	1574	3316
orch %	43.5	3.3	20.6	32.5		3.2	87	6.5	3.3		21.8	6.4	45.9	25.9		4.1	92.8	2.6	0.5		
otal %	2.7	0.2	1.3	2.1	6.3	1.2	33.2	2.5	1.3	38.2	1.7	0.5	3.7	2.1	8	2	44	1.2	0.2	47.5	
Lights	88	7	42	0	137	41	1088	80	0	1209	57	16	121	0	194	65	1438	41	0	1544	3084
Lights	96.7	100	97.7	0	65.6	100	98.7	97.6	0	95.4	98.3	94.1	99.2	0	72.9	100	98.5	100	0	98.1	93
Buses	2	0	0	0	2	0	6	2	0	8	1	1	1	0	3	0	8	0	0	8	21
Buses	2.2	0	0	0	1	0	0.5	2.4	0	0.6	1.7	5.9	0.8	0	1.1	0	0.5	0	0	0.5	0.6
Trucks	1	0	1	0	2	0	8	0	0	8	0	0	0	0	0	0	14	0	0	14	24
Trucks	1.1	0	2.3	0	1	0	0.7	0	0	0.6	0	0	0	0	0	0	1	0	0	0.9	0.7
strians	0	0	0	68	68	0	0	0	42	42	0	0	0	69	69	0	0	0	8	8	187
estrians	0	0	0	100	32.5	0	0	0	100	3.3	0	0	0	100	25.9	0	0	0	100	0.5	5.6

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File Name : 2-MAPLE_AV-MCDERMOTT_AV_AT_E_MAIN_ST_8_20_16_341001_08-20-20
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	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
art Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
: Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
: Hour for Entire Intersection Begins at 01:00 PM																					
1:00 PM	8	1	7	10	26	6	84	10	6	106	6	0	16	13	35	2	121	2	0	125	292
1:15 PM	10	1	5	20	36	4	116	8	10	138	1	2	9	8	20	9	118	4	0	131	325
1:30 PM	11	0	4	16	31	4	99	7	2	112	5	2	10	13	30	4	122	4	6	136	309
1:45 PM	9	2	5	2	18	5	97	4	6	112	9	4	11	5	29	5	120	3	0	128	287
l Volume	38	4	21	48	111	19	396	29	24	468	21	8	46	39	114	20	481	13	6	520	1213
pp. Total	34.2	3.6	18.9	43.2		4.1	84.6	6.2	5.1		18.4	7	40.4	34.2		3.8	92.5	2.5	1.2		
PHF	.864	.500	.750	.600	.771	.792	.853	.725	.600	.848	.583	.500	.719	.750	.814	.556	.986	.813	.250	.956	.933
Lights	38	4	21	0	63	19	392	29	0	440	21	8	46	0	75	20	475	13	0	508	1086
% Lights	100	100	100	0	56.8	100	99.0	100	0	94.0	100	100	100	0	65.8	100	98.8	100	0	97.7	89.5
Buses	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
% Buses	0	0	0	0	0	0	0.3	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.2	0.2
Trucks	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	8
% Trucks	0	0	0	0	0	0	0.8	0	0	0.6	0	0	0	0	0	0	1.0	0	0	1.0	0.7
estrians	0	0	0	48	48	0	0	0	24	24	0	0	0	39	39	0	0	0	6	6	117
destrians	0	0	0	100	43.2	0	0	0	100	5.1	0	0	0	100	34.2	0	0	0	100	1.2	9.6



NELSON & POPE

AM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

GROWTH FACTOR: 1.90%
NO. OF YEARS: 2
GROWTH RATE: 1.040

LOCATION	DIR	MVMT	EXISTING VOLUME	SEASONAL ADJUSTMENT VOLUMES	AMBIENT NO BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	122	122	127
		THROUGH	0	0	0
		RIGHT	501	501	522
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	216	216	225
		RIGHT	186	186	194
	WB	LEFT	296	296	308
		THROUGH	175	175	182
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	147	147	153
9	EB	LEFT	296	296	308
		THROUGH	423	423	440
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	312	312	325
		RIGHT	27	27	29
NYS RT 25 AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	2	2	3
		THROUGH	2	2	3
		RIGHT	31	31	33
	SB	LEFT	18	18	19
		THROUGH	3	3	4
		RIGHT	9	9	10
11	EB	LEFT	2	2	3
		THROUGH	409	409	426
		RIGHT	4	4	5
	WB	LEFT	18	18	19
		THROUGH	370	370	385
		RIGHT	12	12	13
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	598	598	622
		RIGHT	55	55	58
	SB	LEFT	15	15	16
		THROUGH	467	467	486
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	75	75	78
		THROUGH	0	0	0
		RIGHT	25	25	26

NELSON & POPE

AM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

OTHER
PLANNED
PROJECTS

LOCATION	DIR	MVMT	%EN	%EX
				Site
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT		
		THROUGH		
		RIGHT	5%	
	SB	LEFT		
		THROUGH		
		RIGHT		
8	EB	LEFT		
		THROUGH	30%	
		RIGHT		
	WB	LEFT		5%
		THROUGH		30%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT		
		THROUGH		
		RIGHT		
	SB	LEFT		
		THROUGH		
		RIGHT		
9	EB	LEFT		
		THROUGH	35%	
		RIGHT		
	WB	LEFT		
		THROUGH		35%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT		35%
		THROUGH		15%
		RIGHT		20%
	SB	LEFT		
		THROUGH	15%	
		RIGHT		
11	EB	LEFT		
		THROUGH		
		RIGHT	35%	
	WB	LEFT	20%	
		THROUGH		
		RIGHT		
Peconic Ave at Parking Lot Access	NB	LEFT		
		THROUGH	5%	
		RIGHT	30%	
	SB	LEFT		
		THROUGH		5%
		RIGHT		
24	EB	LEFT		
		THROUGH		
		RIGHT		
	WB	LEFT		30%
		THROUGH		
		RIGHT		

NELSON & POPE

AM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

LOCATION	DIR	MVMT	TOTAL NO BUILD VOLUME	TRAFFIC GENERATED BY PROPOSED PROJECT	TOTAL BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	128	0	128
		THROUGH	0	0	0
		RIGHT	540	1	541
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	259	6	265
		RIGHT	194	0	194
	WB	LEFT	325	3	328
		THROUGH	224	17	241
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	153	0	153
9	EB	LEFT	309	0	309
		THROUGH	492	7	499
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	383	20	403
		RIGHT	30	0	30
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	31	20	51
		THROUGH	15	9	24
		RIGHT	49	12	61
	SB	LEFT	19	0	19
		THROUGH	10	3	13
		RIGHT	10	0	10
11	EB	LEFT	3	0	3
		THROUGH	464	0	464
		RIGHT	19	7	26
	WB	LEFT	27	4	31
		THROUGH	416	0	416
		RIGHT	13	0	13
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	641	1	642
		RIGHT	70	6	76
	SB	LEFT	16	0	16
		THROUGH	506	3	509
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	102	17	119
		THROUGH	0	0	0
		RIGHT	26	0	26

NELSON & POPE

PM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

GROWTH FACTOR: 1.90%
NO. OF YEARS: 2
GROWTH RATE: 1.040

LOCATION	DIR	MVMT	EXISTING VOLUME	SEASONAL ADJUSTMENT VOLUMES	AMBIENT NO BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	193	193	201
		THROUGH	0	0	0
		RIGHT	484	484	504
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	236	236	246
		RIGHT	241	241	251
	WB	LEFT	355	355	370
		THROUGH	292	292	304
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	233	233	243
9	EB	LEFT	323	323	336
		THROUGH	398	398	414
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	413	413	430
		RIGHT	44	44	46
NYS RT 25 AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	18	18	19
		THROUGH	7	7	8
		RIGHT	58	58	61
	SB	LEFT	38	38	40
		THROUGH	7	7	8
		RIGHT	11	11	12
11	EB	LEFT	7	7	8
		THROUGH	379	379	395
		RIGHT	4	4	5
	WB	LEFT	42	42	44
		THROUGH	491	491	511
		RIGHT	22	22	23
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	658	658	685
		RIGHT	55	55	58
	SB	LEFT	15	15	16
		THROUGH	581	581	605
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	60	60	63
		THROUGH	0	0	0
		RIGHT	19	19	20

NELSON & POPE

PM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 15068

OTHER
PLANNED
PROJECTS

Site

LOCATION	DIR	MVMT	%EN	%EX
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT		
		THROUGH		
		RIGHT	5%	
	SB	LEFT		
		THROUGH		
		RIGHT		
8	EB	LEFT		
		THROUGH	30%	
		RIGHT		
	WB	LEFT		5%
		THROUGH		30%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT		
		THROUGH		
		RIGHT		
	SB	LEFT		
		THROUGH		
		RIGHT		
9	EB	LEFT		
		THROUGH	35%	
		RIGHT		
	WB	LEFT		
		THROUGH		35%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT		35%
		THROUGH		15%
		RIGHT		20%
	SB	LEFT		
		THROUGH	15%	
		RIGHT		
11	EB	LEFT		
		THROUGH		
		RIGHT	35%	
	WB	LEFT	20%	
		THROUGH		
		RIGHT		
Peconic Ave at Parking Lot Access	NB	LEFT		
		THROUGH	5%	
		RIGHT	30%	
	SB	LEFT		
		THROUGH		5%
		RIGHT		
24	EB	LEFT		
		THROUGH		
		RIGHT		
	WB	LEFT		30%
		THROUGH		
		RIGHT		

NELSON & POPE

PM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

LOCATION	DIR	MVMT	TOTAL NO BUILD VOLUME	TRAFFIC GENERATED BY PROPOSED PROJECT	TOTAL BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	205	0	205
		THROUGH	0	0	0
		RIGHT	535	5	540
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	300	33	333
		RIGHT	251	0	251
	WB	LEFT	395	3	398
		THROUGH	349	17	366
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	244	0	244
9	EB	LEFT	336	0	336
		THROUGH	498	38	536
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	499	20	519
		RIGHT	46	0	46
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	37	20	57
		THROUGH	16	9	25
		RIGHT	71	12	83
	SB	LEFT	41	0	41
		THROUGH	20	16	36
		RIGHT	12	0	12
11	EB	LEFT	8	0	8
		THROUGH	451	0	451
		RIGHT	33	38	71
	WB	LEFT	60	22	82
		THROUGH	562	0	562
		RIGHT	23	0	23
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	720	5	725
		RIGHT	82	33	115
	SB	LEFT	16	0	16
		THROUGH	632	3	635
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	78	17	95
		THROUGH	0	0	0
		RIGHT	20	0	20

NELSON & POPE

SAT PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

GROWTH FACTOR: 1.90%
NO. OF YEARS: 3
GROWTH RATE: 1.060

LOCATION	DIR	MVMT	EXISTING VOLUME	SEASONAL ADJUSTMENT VOLUMES	AMBIENT NO BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	192	192	204
		THROUGH	0	0	0
		RIGHT	405	405	430
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	395	395	419
		RIGHT	199	199	211
	WB	LEFT	327	327	347
		THROUGH	274	274	291
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	241	241	256
9	EB	LEFT	203	203	216
		THROUGH	597	597	633
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	360	360	382
		RIGHT	30	30	32
NYS RT 25 AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	21	21	23
		THROUGH	8	8	9
		RIGHT	46	46	49
	SB	LEFT	38	38	41
		THROUGH	4	4	5
		RIGHT	21	21	23
11	EB	LEFT	20	20	22
		THROUGH	481	481	510
		RIGHT	13	13	14
	WB	LEFT	19	19	21
		THROUGH	396	396	420
		RIGHT	29	29	31
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	635	635	674
		RIGHT	75	75	80
	SB	LEFT	32	32	34
		THROUGH	499	499	529
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	60	60	64
		THROUGH	0	0	0
		RIGHT	19	19	21

NELSON & POPE

SAT PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

OTHER
PLANNED
PROJECTS

Site

LOCATION	DIR	MVMT	%EN	%EX
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT		
		THROUGH		
		RIGHT	5%	
	SB	LEFT		
		THROUGH		
		RIGHT		
8	EB	LEFT		
		THROUGH	30%	
		RIGHT		
	WB	LEFT		5%
		THROUGH		30%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT		
		THROUGH		
		RIGHT		
	SB	LEFT		
		THROUGH		
		RIGHT		
9	EB	LEFT		
		THROUGH	35%	
		RIGHT		
	WB	LEFT		
		THROUGH		35%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT		35%
		THROUGH		15%
		RIGHT		20%
	SB	LEFT		
		THROUGH	15%	
		RIGHT		
11	EB	LEFT		
		THROUGH		
		RIGHT	35%	
	WB	LEFT	20%	
		THROUGH		
		RIGHT		
Peconic Ave at Parking Lot Access	NB	LEFT		
		THROUGH	5%	
		RIGHT	30%	
	SB	LEFT		
		THROUGH		5%
		RIGHT		
24	EB	LEFT		
		THROUGH		
		RIGHT		
	WB	LEFT		30%
		THROUGH		
		RIGHT		

NELSON & POPE

SAT PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

LOCATION	DIR	MVMT	TOTAL NO BUILD VOLUME	TRAFFIC GENERATED BY PROPOSED PROJECT	TOTAL BUILD VOLUME
NYS RT 25	NB	LEFT	207	0	207
(W. MAIN ST/E. MAIN ST)		THROUGH	0	0	0
AT		RIGHT	464	7	471
PECONIC AVENUE	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	483	43	526
		RIGHT	211	0	211
	WB	LEFT	378	6	384
		THROUGH	352	33	385
		RIGHT	0	0	0
NYS RT 25	NB	LEFT	0	0	0
(E. MAIN ST)		THROUGH	0	0	0
AT		RIGHT	0	0	0
ROANOKE AVENUE	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	257	0	257
9	EB	LEFT	217	0	217
		THROUGH	730	50	780
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	473	39	512
		RIGHT	33	0	33
NYS RT 25	NB	LEFT	57	39	96
(E. MAIN ST)		THROUGH	23	17	40
AT		RIGHT	68	22	90
MAPLE AVENUE/	SB	LEFT	41	0	41
McDERMOTT AVENUE		THROUGH	20	21	41
		RIGHT	23	0	23
11	EB	LEFT	22	0	22
		THROUGH	572	0	572
		RIGHT	49	50	99
	WB	LEFT	41	28	69
		THROUGH	478	0	478
		RIGHT	31	0	31
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	711	7	718
		RIGHT	110	43	153
	SB	LEFT	34	0	34
		THROUGH	563	6	569
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	93	33	126
		THROUGH	0	0	0
		RIGHT	21	0	21

Appendix B: Other Planned Developments

Pending Approval:

- **Riverhead Plaza**- SCTM No. 0600-104-2-19, the removal of approximately 71,343 sq. ft. of existing building and the construction of two pad site restaurants and a movie theater at an existing shopping center on Old Country Rd. between Ostrander Ave. and Oliver St. Approximately 59,240 sq. ft. of building area will be added, including a 50,340 sq. ft., 1,246 seat movie theater with 10 auditoriums and a snack bar, a 6,300 sq. ft., 250 seat restaurant, and a 2,600 sq. ft., 125 seat restaurant with drive-through. A portion of the existing building with part of the former Wal-Mart store and two other businesses will be demolished to make way for the movie theater. The two proposed restaurants will be located in the parking area at the front of the site to the west of the main entrance from Old Country Rd.
- **428 East Main Street,** 20-unit hotel and a 201-seat restaurant to be located on the northwest corner of East Main Street and Ostrander Avenue.
- **203-2013 East Main Street,** 170 apartment units and 3800 SF commercial space.
- **Suffolk County Historical Society**, SCTM No. 0600-128-3-46, construction of an approximately 725 sq. ft. addition for handicapped accessibility.
- **J. Petrocelli Development Associates**, SCTM No. 0600-129-5-3.3, construction of a 30-stall parking lot.
- **Viva L' Arte,** SCTM No. 0600-128-6-58.1, construction of a two-story art gallery building on East Main St. with office mezzanine and apartment mezzanine (1,779 sq. ft. first floor and 1,805 sq. ft. second floor and 428 sq. ft. for each mezzanine for a total of 4,440 sq. ft.).
- **Farm Country Kitchen**, SCTM Nos. 0600-124-04-32 & 33 and 0600-124-03-26, for conversion of an existing take-out food service on West Main St. to a 69-seat restaurant and the construction of an off-site parking lot on Raynor Ave. with 27 stalls.
- **Thea Cohen Residences**, SCTM No. 0600-127-7-24.1, the conversion of a storage building into a single-family residence on a property with two existing residences.
- **Emanon Center,** SCTM No. 0600-124-04-9 & 10, demolition of existing structures and construction of one building 3,240 sq. ft. for a convenience store and a two-story building with 1,950 sq. ft. of office and 2,497.5 sq. ft. of retail.
- **Development in Southampton**: Development in Southampton in the Riverside Area (please contact the Town of Southampton)-Large scale redevelopment is planned.

Recently approved:

- **715-725 Roanoke Ave.**, SCTM No. 0600-126-02-8, an additional medical office building in addition to two existing medical buildings. The building will be two-stories of 2,475 sq. ft. each with an unfinished basement.
- **Peconic Crossing**- SCTM No. 600-128-3-68.2, to demolish an existing building (Long Island Science Center) and construct a new five-story residential building with 45 residential apartment units, 34-parking stalls, and an art gallery/studio.
- **206 Raynor Ave.**, SCTM#0600-124-02-9, preliminary approval to construct a commercial building with a footprint of 1,056 sq. ft. and a lower level of 629 sq. ft. (Three use scenarios approved-either all industrial/manufacturing, first floor office and lower level storage, or all warehouse/storage use.)
- **Fedun Warehouse,** SCTM#0600-128-1-13.1, a 5000 SF warehouse at 427 Lincoln St., Riverhead.

Detailed Average Rate Trip Calculations
For 3.24 Th.Sq.Ft. GFA of Convenience Market (Open 15-16 Hours)(852) - [R]

Project:
Phase:

Open Date:
Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	0.00	0.00	1.00	0
7-9 AM Peak Hour Enter	15.51	0.00	1.00	50
7-9 AM Peak Hour Exit	15.51	0.00	1.00	51
7-9 AM Peak Hour Total	31.02	24.36	1.00	101
4-6 PM Peak Hour Enter	16.94	0.00	1.00	55
4-6 PM Peak Hour Exit	17.63	0.00	1.00	57
4-6 PM Peak Hour Total	34.57	17.61	1.00	112
AM Pk Hr, Generator, Enter	16.63	0.00	1.00	54
AM Pk Hr, Generator, Exit	15.97	0.00	1.00	52
AM Pk Hr, Generator, Total	32.60	23.64	1.00	106
PM Pk Hr, Generator, Enter	17.75	0.00	1.00	58
PM Pk Hr, Generator, Exit	18.47	0.00	1.00	59
PM Pk Hr, Generator, Total	36.22	16.69	1.00	117
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.00	0.00	1.00	0
Sunday 2-Way Volume	0.00	0.00	1.00	0
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 2.475 Th.Sq.Ft. GFA of Medical-Dental Office Building(720) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	36.13	10.18	1.00	89
7-9 AM Peak Hour Enter	1.89	0.00	1.00	5
7-9 AM Peak Hour Exit	0.50	0.00	1.00	1
7-9 AM Peak Hour Total	2.39	1.89	1.00	6
4-6 PM Peak Hour Enter	1.00	0.00	1.00	2
4-6 PM Peak Hour Exit	2.57	0.00	1.00	7
4-6 PM Peak Hour Total	3.57	2.47	1.00	9
AM Pk Hr, Generator, Enter	2.35	0.00	1.00	6
AM Pk Hr, Generator, Exit	1.15	0.00	1.00	3
AM Pk Hr, Generator, Total	3.50	2.35	1.00	9
PM Pk Hr, Generator, Enter	1.67	0.00	1.00	4
PM Pk Hr, Generator, Exit	2.60	0.00	1.00	7
PM Pk Hr, Generator, Total	4.27	2.50	1.00	11
Saturday 2-Way Volume	8.96	9.17	1.00	22
Saturday Peak Hour Enter	2.07	0.00	1.00	5
Saturday Peak Hour Exit	1.56	0.00	1.00	4
Saturday Peak Hour Total	3.63	1.93	1.00	9
Sunday 2-Way Volume	1.55	1.80	1.00	4
Sunday Peak Hour Enter	0.21	0.00	1.00	1
Sunday Peak Hour Exit	0.19	0.00	1.00	0
Sunday Peak Hour Total	0.40	0.00	1.00	1

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 1.95 Th.Sq.Ft. GFA of General Office Building(710) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	11.03	6.15	1.00	22
7-9 AM Peak Hour Enter	1.37	0.00	1.00	3
7-9 AM Peak Hour Exit	0.19	0.00	1.00	0
7-9 AM Peak Hour Total	1.56	1.40	1.00	3
4-6 PM Peak Hour Enter	0.25	0.00	1.00	0
4-6 PM Peak Hour Exit	1.24	0.00	1.00	3
4-6 PM Peak Hour Total	1.49	1.37	1.00	3
AM Pk Hr, Generator, Enter	1.37	0.00	1.00	3
AM Pk Hr, Generator, Exit	0.19	0.00	1.00	0
AM Pk Hr, Generator, Total	1.56	1.40	1.00	3
PM Pk Hr, Generator, Enter	0.25	0.00	1.00	0
PM Pk Hr, Generator, Exit	1.24	0.00	1.00	3
PM Pk Hr, Generator, Total	1.49	1.37	1.00	3
Saturday 2-Way Volume	2.46	2.21	1.00	5
Saturday Peak Hour Enter	0.23	0.00	1.00	0
Saturday Peak Hour Exit	0.20	0.00	1.00	0
Saturday Peak Hour Total	0.43	0.72	1.00	1
Sunday 2-Way Volume	1.05	1.43	1.00	2
Sunday Peak Hour Enter	0.09	0.00	1.00	0
Sunday Peak Hour Exit	0.07	0.00	1.00	0
Sunday Peak Hour Total	0.16	0.44	1.00	0

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 2.497 Th.Sq.Ft. GLA of Shopping Center(820) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	42.70	21.25	1.00	107
7-9 AM Peak Hour Enter	0.60	0.00	1.00	1
7-9 AM Peak Hour Exit	0.36	0.00	1.00	1
7-9 AM Peak Hour Total	0.96	1.31	1.00	2
4-6 PM Peak Hour Enter	1.78	0.00	1.00	4
4-6 PM Peak Hour Exit	1.93	0.00	1.00	5
4-6 PM Peak Hour Total	3.71	2.74	1.00	9
AM Pk Hr, Generator, Enter	0.00	0.00	1.00	0
AM Pk Hr, Generator, Exit	0.00	0.00	1.00	0
AM Pk Hr, Generator, Total	0.00	0.00	1.00	0
PM Pk Hr, Generator, Enter	0.00	0.00	1.00	0
PM Pk Hr, Generator, Exit	0.00	0.00	1.00	0
PM Pk Hr, Generator, Total	0.00	0.00	1.00	0
Saturday 2-Way Volume	49.97	22.62	1.00	125
Saturday Peak Hour Enter	2.51	0.00	1.00	6
Saturday Peak Hour Exit	2.31	0.00	1.00	6
Saturday Peak Hour Total	4.82	3.10	1.00	12
Sunday 2-Way Volume	25.24	17.23	1.00	63
Sunday Peak Hour Enter	1.53	0.00	1.00	4
Sunday Peak Hour Exit	1.59	0.00	1.00	4
Sunday Peak Hour Total	3.12	2.78	1.00	8

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 69 Seats of High Turnover (Sit-Down) Restaurant(932) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	4.83	0.00	1.00	333
7-9 AM Peak Hour Enter	0.24	0.00	1.00	17
7-9 AM Peak Hour Exit	0.23	0.00	1.00	15
7-9 AM Peak Hour Total	0.47	0.70	1.00	32
4-6 PM Peak Hour Enter	0.23	0.00	1.00	16
4-6 PM Peak Hour Exit	0.18	0.00	1.00	12
4-6 PM Peak Hour Total	0.41	0.73	1.00	28
AM Pk Hr, Generator, Enter	0.35	0.00	1.00	24
AM Pk Hr, Generator, Exit	0.25	0.00	1.00	17
AM Pk Hr, Generator, Total	0.60	0.86	1.00	41
PM Pk Hr, Generator, Enter	0.37	0.00	1.00	26
PM Pk Hr, Generator, Exit	0.35	0.00	1.00	24
PM Pk Hr, Generator, Total	0.72	0.96	1.00	50
Saturday 2-Way Volume	6.21	0.00	1.00	428
Saturday Peak Hour Enter	0.28	0.00	1.00	19
Saturday Peak Hour Exit	0.25	0.00	1.00	18
Saturday Peak Hour Total	0.53	0.86	1.00	37
Sunday 2-Way Volume	5.17	0.00	1.00	357
Sunday Peak Hour Enter	0.36	0.00	1.00	25
Sunday Peak Hour Exit	0.29	0.00	1.00	20
Sunday Peak Hour Total	0.65	0.86	1.00	45

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 1.685 Th.Sq.Ft. GFA of Warehousing(150) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	8.73	0.00	1.00	15
7-9 AM Peak Hour Enter	4.09	0.00	1.00	7
7-9 AM Peak Hour Exit	1.09	0.00	1.00	2
7-9 AM Peak Hour Total	5.18	0.00	1.00	9
4-6 PM Peak Hour Enter	0.65	0.00	1.00	1
4-6 PM Peak Hour Exit	1.94	0.00	1.00	3
4-6 PM Peak Hour Total	2.59	0.00	1.00	4
AM Pk Hr, Generator, Enter	1.69	0.00	1.00	3
AM Pk Hr, Generator, Exit	0.91	0.00	1.00	1
AM Pk Hr, Generator, Total	2.59	0.00	1.00	4
PM Pk Hr, Generator, Enter	0.35	0.00	1.00	1
PM Pk Hr, Generator, Exit	1.48	0.00	1.00	2
PM Pk Hr, Generator, Total	1.83	0.00	1.00	3
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.00	0.00	1.00	0
Sunday 2-Way Volume	0.00	0.00	1.00	0
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	LN(T) = .86LN(X) + 2.24, R^2 = 0.77
7-9 AM Peak Hr. Total:	LN(T) = .55LN(X) + 1.88
	R^2 = 0.67 , 0.79 Enter, 0.21 Exit
4-6 PM Peak Hr. Total:	LN(T) = .64LN(X) + 1.14
	R^2 = 0.64 , 0.25 Enter, 0.75 Exit
AM Gen Pk Hr. Total:	LN(T) = .7LN(X) + 1.11
	R^2 = 0.75 , 0.65 Enter, 0.35 Exit
PM Gen Pk Hr. Total:	LN(T) = .78LN(X) + .72
	R^2 = 0.8 , 0.19 Enter, 0.81 Exit
Sat. 2-Way Volume:	0, R^2 = 0
Sat. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	0, R^2 = 0
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Note: A zero indicates no data available.
ource: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 45 Dwelling Units of Apartments(220) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	8.81	0.00	1.00	396
7-9 AM Peak Hour Enter	0.11	0.00	1.00	5
7-9 AM Peak Hour Exit	0.46	0.00	1.00	21
7-9 AM Peak Hour Total	0.57	0.00	1.00	26
4-6 PM Peak Hour Enter	0.61	0.00	1.00	28
4-6 PM Peak Hour Exit	0.33	0.00	1.00	14
4-6 PM Peak Hour Total	0.94	0.00	1.00	42
AM Pk Hr, Generator, Enter	0.17	0.00	1.00	8
AM Pk Hr, Generator, Exit	0.42	0.00	1.00	19
AM Pk Hr, Generator, Total	0.59	0.00	1.00	27
PM Pk Hr, Generator, Enter	0.57	0.00	1.00	26
PM Pk Hr, Generator, Exit	0.36	0.00	1.00	16
PM Pk Hr, Generator, Total	0.93	0.00	1.00	42
Saturday 2-Way Volume	2.16	0.00	1.00	97
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.84	0.00	1.00	38
Sunday 2-Way Volume	4.17	0.00	1.00	188
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	T = 6.06(X) + 123.56, R^2 = 0.87
7-9 AM Peak Hr. Total:	T = .49(X) + 3.73
	R^2 = 0.83 , 0.2 Enter, 0.8 Exit
4-6 PM Peak Hr. Total:	T = .55(X) + 17.65
	R^2 = 0.77 , 0.65 Enter, 0.35 Exit
AM Gen Pk Hr. Total:	T = .54(X) + 2.45
	R^2 = 0.82 , 0.29 Enter, 0.71 Exit
PM Gen Pk Hr. Total:	T = .6(X) + 14.91
	R^2 = 0.8 , 0.61 Enter, 0.39 Exit
Sat. 2-Way Volume:	T = 7.85(X) + -256.19, R^2 = 0.85
Sat. Pk Hr. Total:	T = .41(X) + 19.23
	R^2 = 0.56 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	T = 6.42(X) + -101.12, R^2 = 0.82
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 96 Dwelling Units of Apartments(220) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	7.35	0.00	1.00	705
7-9 AM Peak Hour Enter	0.11	0.00	1.00	10
7-9 AM Peak Hour Exit	0.42	0.00	1.00	41
7-9 AM Peak Hour Total	0.53	0.00	1.00	51
4-6 PM Peak Hour Enter	0.48	0.00	1.00	46
4-6 PM Peak Hour Exit	0.26	0.00	1.00	24
4-6 PM Peak Hour Total	0.73	0.00	1.00	70
AM Pk Hr, Generator, Enter	0.16	0.00	1.00	16
AM Pk Hr, Generator, Exit	0.40	0.00	1.00	38
AM Pk Hr, Generator, Total	0.57	0.00	1.00	54
PM Pk Hr, Generator, Enter	0.46	0.00	1.00	44
PM Pk Hr, Generator, Exit	0.29	0.00	1.00	29
PM Pk Hr, Generator, Total	0.76	0.00	1.00	73
Saturday 2-Way Volume	5.18	0.00	1.00	497
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.61	0.00	1.00	59
Sunday 2-Way Volume	5.37	0.00	1.00	515
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	T = 6.06(X) + 123.56, R^2 = 0.87
7-9 AM Peak Hr. Total:	T = .49(X) + 3.73
	R^2 = 0.83 , 0.2 Enter, 0.8 Exit
4-6 PM Peak Hr. Total:	T = .55(X) + 17.65
	R^2 = 0.77 , 0.65 Enter, 0.35 Exit
AM Gen Pk Hr. Total:	T = .54(X) + 2.45
	R^2 = 0.82 , 0.29 Enter, 0.71 Exit
PM Gen Pk Hr. Total:	T = .6(X) + 14.91
	R^2 = 0.8 , 0.61 Enter, 0.39 Exit
Sat. 2-Way Volume:	T = 7.85(X) + -256.19, R^2 = 0.85
Sat. Pk Hr. Total:	T = .41(X) + 19.23
	R^2 = 0.56 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	T = 6.42(X) + -101.12, R^2 = 0.82
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 1 Dwelling Units of Apartments(220) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	6.65	3.07	1.00	7
7-9 AM Peak Hour Enter	0.10	0.00	1.00	0
7-9 AM Peak Hour Exit	0.41	0.00	1.00	0
7-9 AM Peak Hour Total	0.51	0.73	1.00	1
4-6 PM Peak Hour Enter	0.40	0.00	1.00	0
4-6 PM Peak Hour Exit	0.22	0.00	1.00	0
4-6 PM Peak Hour Total	0.62	0.82	1.00	1
AM Pk Hr, Generator, Enter	0.16	0.00	1.00	0
AM Pk Hr, Generator, Exit	0.39	0.00	1.00	0
AM Pk Hr, Generator, Total	0.55	0.76	1.00	1
PM Pk Hr, Generator, Enter	0.41	0.00	1.00	0
PM Pk Hr, Generator, Exit	0.26	0.00	1.00	0
PM Pk Hr, Generator, Total	0.67	0.85	1.00	1
Saturday 2-Way Volume	6.39	2.99	1.00	6
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.52	0.74	1.00	1
Sunday 2-Way Volume	5.86	2.73	1.00	6
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.51	0.75	1.00	1

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 0.428 Th.Sq.Ft. GFA of General Office Building(710) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	11.03	6.15	1.00	5
7-9 AM Peak Hour Enter	1.37	0.00	1.00	1
7-9 AM Peak Hour Exit	0.19	0.00	1.00	0
7-9 AM Peak Hour Total	1.56	1.40	1.00	1
4-6 PM Peak Hour Enter	0.25	0.00	1.00	0
4-6 PM Peak Hour Exit	1.24	0.00	1.00	1
4-6 PM Peak Hour Total	1.49	1.37	1.00	1
AM Pk Hr, Generator, Enter	1.37	0.00	1.00	1
AM Pk Hr, Generator, Exit	0.19	0.00	1.00	0
AM Pk Hr, Generator, Total	1.56	1.40	1.00	1
PM Pk Hr, Generator, Enter	0.25	0.00	1.00	0
PM Pk Hr, Generator, Exit	1.24	0.00	1.00	1
PM Pk Hr, Generator, Total	1.49	1.37	1.00	1
Saturday 2-Way Volume	2.46	2.21	1.00	1
Saturday Peak Hour Enter	0.23	0.00	1.00	0
Saturday Peak Hour Exit	0.20	0.00	1.00	0
Saturday Peak Hour Total	0.43	0.72	1.00	0
Sunday 2-Way Volume	1.05	1.43	1.00	0
Sunday Peak Hour Enter	0.09	0.00	1.00	0
Sunday Peak Hour Exit	0.07	0.00	1.00	0
Sunday Peak Hour Total	0.16	0.44	1.00	0

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Land Use Data
For 5 Gross Floor Area 1000 SF of MWAREHOUSE 1
(151) Mini-Warehouse

Project: 221 E Main

Open Date: 6/5/2017
Analysis Date: 6/5/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	1 (EN / EX)	0	0.14	0.04	0.27	0.38	66	55	45	False		
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	1 (EN / EX)	0	0.26	0.07	0.64	0.52	57	50	50	False		
Saturday Peak Hour of Generator Source : Trip Generation Manual 9th Edition	2 (EN / EX)	0	0.4	0.24	0.6	0.64	62	50	50	False		

Detailed Average Rate Trip Calculations
For 160 Dwelling Units of Apartments(220) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	6.83	0.00	1.00	1093
7-9 AM Peak Hour Enter	0.10	0.00	1.00	16
7-9 AM Peak Hour Exit	0.41	0.00	1.00	66
7-9 AM Peak Hour Total	0.51	0.00	1.00	82
4-6 PM Peak Hour Enter	0.43	0.00	1.00	69
4-6 PM Peak Hour Exit	0.23	0.00	1.00	37
4-6 PM Peak Hour Total	0.66	0.00	1.00	106
AM Pk Hr, Generator, Enter	0.16	0.00	1.00	26
AM Pk Hr, Generator, Exit	0.39	0.00	1.00	63
AM Pk Hr, Generator, Total	0.56	0.00	1.00	89
PM Pk Hr, Generator, Enter	0.42	0.00	1.00	68
PM Pk Hr, Generator, Exit	0.27	0.00	1.00	43
PM Pk Hr, Generator, Total	0.69	0.00	1.00	111
Saturday 2-Way Volume	6.25	0.00	1.00	1000
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.53	0.00	1.00	85
Sunday 2-Way Volume	5.79	0.00	1.00	926
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	T = 6.06(X) + 123.56, R^2 = 0.87
7-9 AM Peak Hr. Total:	T = .49(X) + 3.73
	R^2 = 0.83 , 0.2 Enter, 0.8 Exit
4-6 PM Peak Hr. Total:	T = .55(X) + 17.65
	R^2 = 0.77 , 0.65 Enter, 0.35 Exit
AM Gen Pk Hr. Total:	T = .54(X) + 2.45
	R^2 = 0.82 , 0.29 Enter, 0.71 Exit
PM Gen Pk Hr. Total:	T = .6(X) + 14.91
	R^2 = 0.8 , 0.61 Enter, 0.39 Exit
Sat. 2-Way Volume:	T = 7.85(X) + -256.19, R^2 = 0.85
Sat. Pk Hr. Total:	T = .41(X) + 19.23
	R^2 = 0.56 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	T = 6.42(X) + -101.12, R^2 = 0.82
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Summary of Pass-By Trips
For 8 Th.Sq.Ft. GLA of Shopping Center(820) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Driveway Volume	Pass-By Trips	Volume Added to Adjacent Streets
Average Weekday			
7-9 AM Peak Hour Enter	21	0	21
7-9 AM Peak Hour Exit	12	0	12
7-9 AM Peak Hour Total	33	0	33
4-6 PM Peak Hour Enter	53	43	10
4-6 PM Peak Hour Exit	57	46	11
4-6 PM Peak Hour Total	110	89	21
Saturday			
Saturday Peak Hour Enter	88	34	54
Saturday Peak Hour Exit	81	31	50
Saturday Peak Hour Total	169	65	104

Pass-By Trips were calculated on the basis of the following:

Weekday P.M. Peak Period Pass-By Trip Percentage: Ln(T)=-0.29Ln(X)+5.00, R^2=0.37
Saturday Midday Pk. Pd. Pass-By Trip Percentage: T=-0.02(X)+38.59, R^2=0.29

Number of Pass-By Studies:100 for Weekday PM PK PD and 11 for Saturday.

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Summary of Pass-By Trips
For 25.1 Th.Sq.Ft. GLA of Shopping Center(820) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Driveway Volume	Pass-By Trips	Volume Added to Adjacent Streets
Average Weekday			
7-9 AM Peak Hour Enter	42	0	42
7-9 AM Peak Hour Exit	25	0	25
7-9 AM Peak Hour Total	67	0	67
4-6 PM Peak Hour Enter	114	66	48
4-6 PM Peak Hour Exit	123	72	51
4-6 PM Peak Hour Total	237	138	99
Saturday			
Saturday Peak Hour Enter	185	70	115
Saturday Peak Hour Exit	171	65	106
Saturday Peak Hour Total	356	136	220

Pass-By Trips were calculated on the basis of the following:

Weekday P.M. Peak Period Pass-By Trip Percentage: Ln(T)=-0.29Ln(X)+5.00, R^2=0.37
Saturday Midday Pk. Pd. Pass-By Trip Percentage: T=-0.02(X)+38.59, R^2=0.29

Number of Pass-By Studies:100 for Weekday PM PK PD and 11 for Saturday.

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 3.584 Th.Sq.Ft. GFA of Museum(580) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	0.00	0.00	1.00	0
7-9 AM Peak Hour Enter	0.24	0.00	1.00	1
7-9 AM Peak Hour Exit	0.04	0.00	1.00	0
7-9 AM Peak Hour Total	0.28	0.00	1.00	1
4-6 PM Peak Hour Enter	0.03	0.00	1.00	0
4-6 PM Peak Hour Exit	0.15	0.00	1.00	1
4-6 PM Peak Hour Total	0.18	0.00	1.00	1
AM Pk Hr, Generator, Enter	0.14	0.00	1.00	1
AM Pk Hr, Generator, Exit	0.21	0.00	1.00	0
AM Pk Hr, Generator, Total	0.35	0.00	1.00	1
PM Pk Hr, Generator, Enter	0.00	0.00	1.00	0
PM Pk Hr, Generator, Exit	0.00	0.00	1.00	0
PM Pk Hr, Generator, Total	0.00	0.00	1.00	0
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.47	0.00	1.00	2
Saturday Peak Hour Exit	0.19	0.00	1.00	0
Saturday Peak Hour Total	0.66	0.00	1.00	2
Sunday 2-Way Volume	0.00	0.00	1.00	0
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 20 Occupied Rooms of Hotel(310) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	8.92	6.04	1.00	178
7-9 AM Peak Hour Enter	0.39	0.00	1.00	8
7-9 AM Peak Hour Exit	0.28	0.00	1.00	5
7-9 AM Peak Hour Total	0.67	0.84	1.00	13
4-6 PM Peak Hour Enter	0.34	0.00	1.00	7
4-6 PM Peak Hour Exit	0.36	0.00	1.00	7
4-6 PM Peak Hour Total	0.70	0.87	1.00	14
AM Pk Hr, Generator, Enter	0.35	0.00	1.00	7
AM Pk Hr, Generator, Exit	0.29	0.00	1.00	6
AM Pk Hr, Generator, Total	0.64	0.84	1.00	13
PM Pk Hr, Generator, Enter	0.42	0.00	1.00	8
PM Pk Hr, Generator, Exit	0.32	0.00	1.00	7
PM Pk Hr, Generator, Total	0.74	0.89	1.00	15
Saturday 2-Way Volume	10.50	4.11	1.00	210
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.87	0.94	1.00	17
Sunday 2-Way Volume	8.48	3.42	1.00	170
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.75	0.88	1.00	15

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 201 Seats of Quality Restaurant(931) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	2.86	1.96	1.00	575
7-9 AM Peak Hour Enter	0.00	0.00	1.00	0
7-9 AM Peak Hour Exit	0.00	0.00	1.00	0
7-9 AM Peak Hour Total	0.03	0.16	1.00	6
4-6 PM Peak Hour Enter	0.17	0.00	1.00	34
4-6 PM Peak Hour Exit	0.09	0.00	1.00	18
4-6 PM Peak Hour Total	0.26	0.52	1.00	52
AM Pk Hr, Generator, Enter	0.11	0.00	1.00	22
AM Pk Hr, Generator, Exit	0.05	0.00	1.00	10
AM Pk Hr, Generator, Total	0.16	0.41	1.00	32
PM Pk Hr, Generator, Enter	0.18	0.00	1.00	36
PM Pk Hr, Generator, Exit	0.12	0.00	1.00	24
PM Pk Hr, Generator, Total	0.30	0.56	1.00	60
Saturday 2-Way Volume	2.81	2.05	1.00	565
Saturday Peak Hour Enter	0.19	0.00	1.00	38
Saturday Peak Hour Exit	0.14	0.00	1.00	28
Saturday Peak Hour Total	0.33	0.58	1.00	66
Sunday 2-Way Volume	2.15	1.78	1.00	432
Sunday Peak Hour Enter	0.15	0.00	1.00	30
Sunday Peak Hour Exit	0.09	0.00	1.00	18
Sunday Peak Hour Total	0.24	0.50	1.00	48

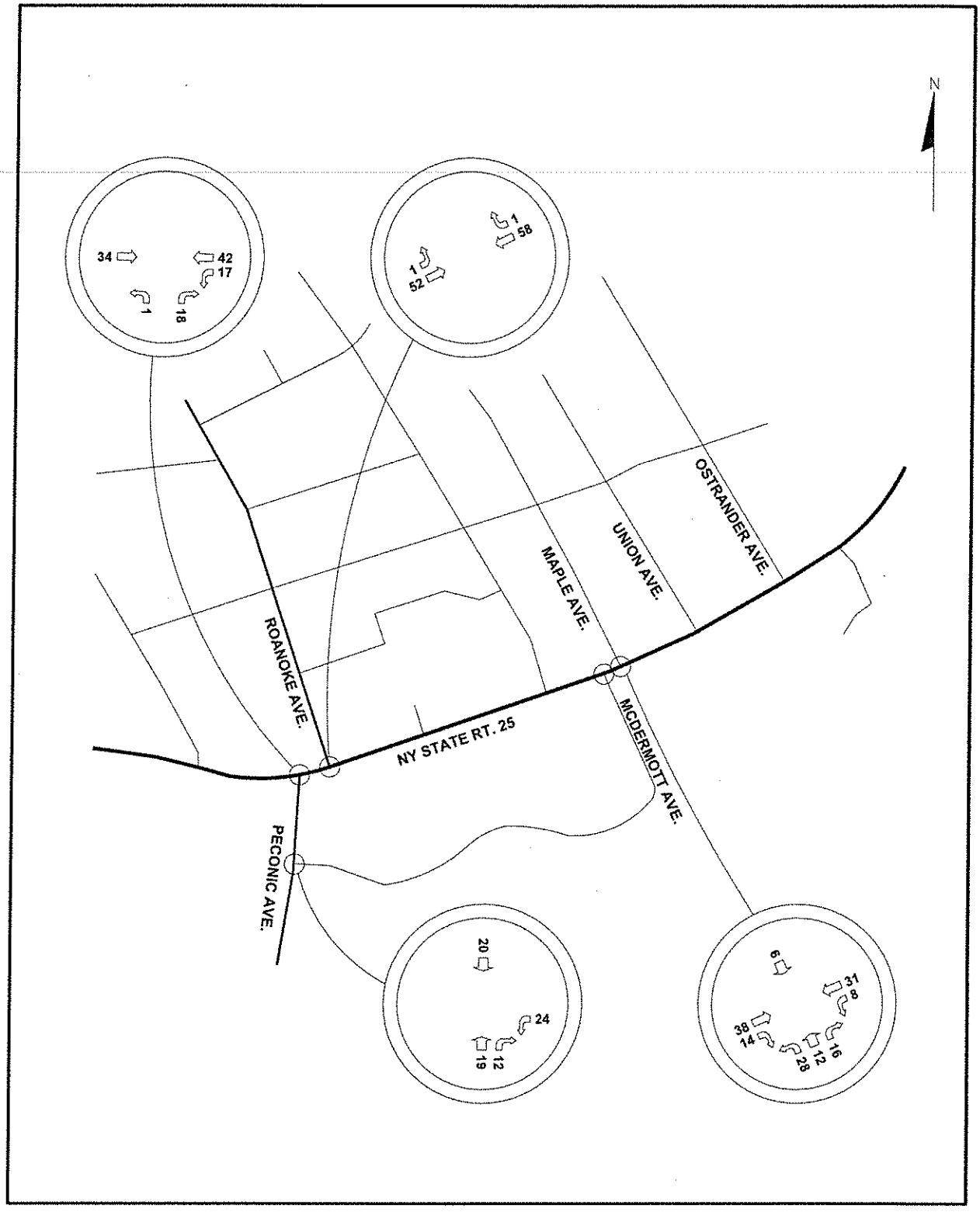
Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Land Use Data
For 5 Gross Floor Area 1000 SF of MWAREHOUSE 1
(151) Mini-Warehouse

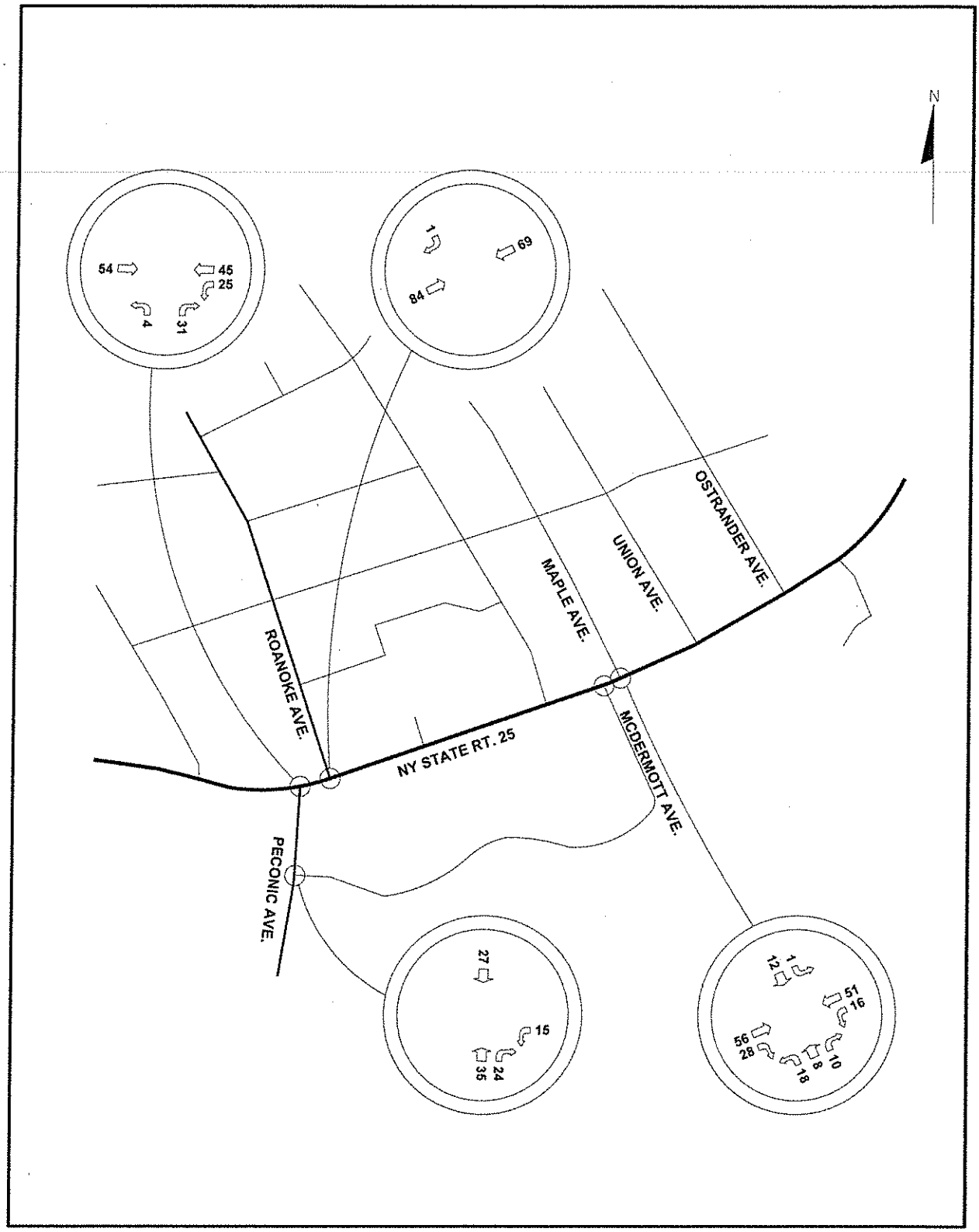
Project: 221 E Main

Open Date: 6/5/2017
Analysis Date: 6/5/2017

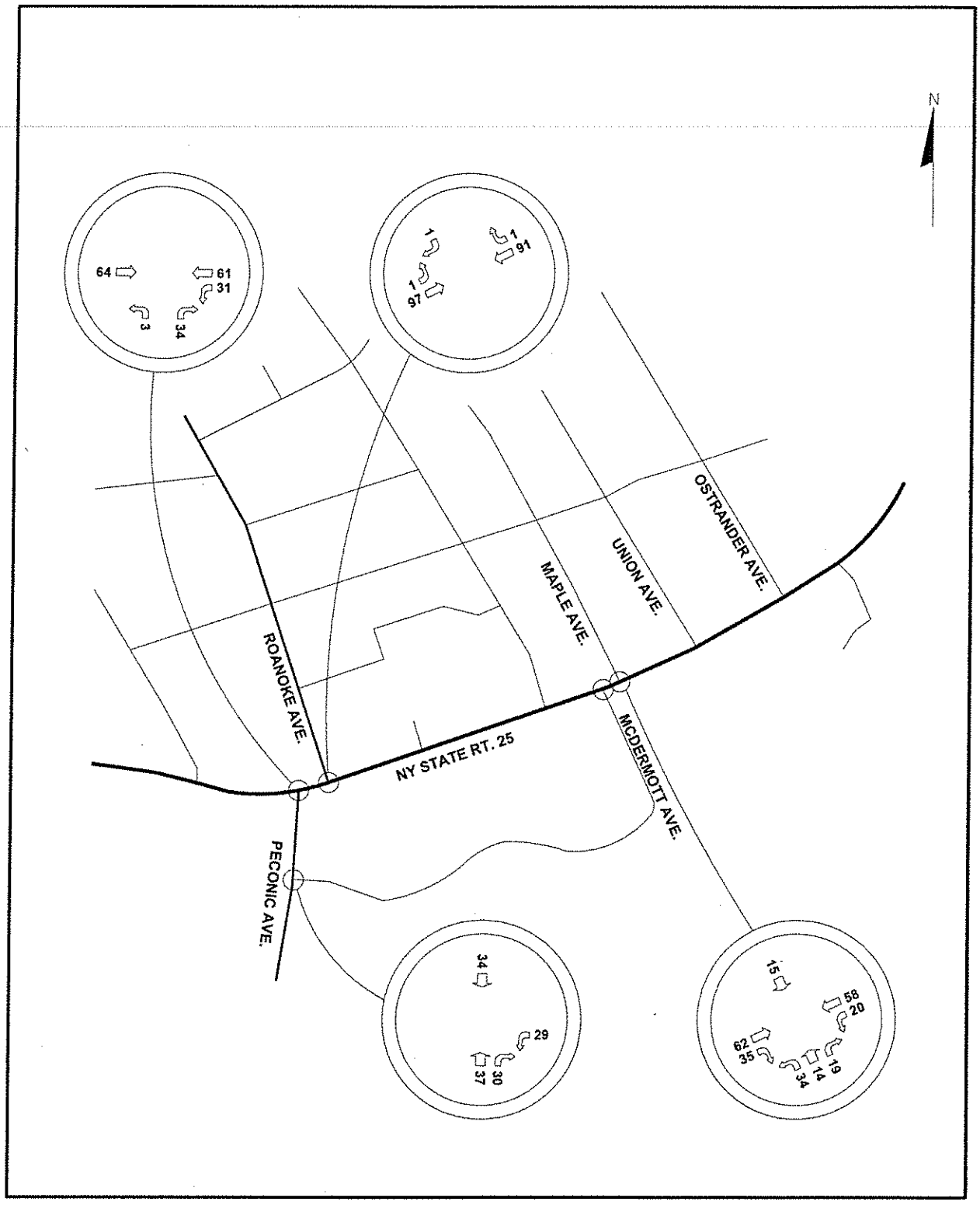
Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	1	0	0.14	0.04	0.27	0.38	66	55	45	False		
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	1	0	0.26	0.07	0.64	0.52	57	50	50	False		
Saturday Peak Hour of Generator Source : Trip Generation Manual 9th Edition	2	0	0.4	0.24	0.6	0.64	62	50	50	False		



Other Planed Project AM Peak Hour Traffic Volumes



Other Planed Project PM Peak Hour Traffic Volumes



Other Planed Project Saturday Peak Hour Traffic Volumes

Appendix C: Trip Generation

Detailed Land Use Data
For 118 Dwelling Units of APT 1
(220) Apartment

Project: 221 E Main St

Open Date: 6/7/2017
Analysis Date: 6/7/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	60	0	0.51	0.1	1.02	0.73	235	20	80	False	T = 0.49(X) + 3.73	0.83
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	73	0	0.62	0.1	1.64	0.82	233	65	35	False	T = 0.55(X) + 17.65	0.77
Saturday Peak Hour of Generator Source : Trip Generation Manual 9th Edition	61	0	0.52	0.26	1.05	0.74	178	50	50	False	T = 0.41(X) + 19.23	0.56

Detailed Land Use Data

For 1.5 Gross Leasable Area 1000 SF of CENTERSHOPPING 2

(820) Shopping Center

Project: 221 E Main St

Open Date: 6/7/2017

Analysis Date: 6/7/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic	1	0	0.96	0.1	9.05	1.31	310	62	38	False	Ln(T) = 0.61 Ln(X) + 2.24	0.56
Source : Trip Generation Manual 9th Edition												
Weekday PM Peak Hour of Adjacent Street Traffic	6	2	3.71	0.68	29.27	2.74	376	48	52	False	Ln(T) = 0.67 Ln(X) + 3.31	0.81
Source : Trip Generation Manual 9th Edition												
Saturday Peak Hour of Generator	7	0	4.82	1.46	18.32	3.1	458	52	48	False	Ln(T) = 0.65 Ln(X) + 3.78	0.83
Source : Trip Generation Manual 9th Edition												

Detailed Land Use Data
For 535 Seats of RESTAURANTQ 1
(931) Quality Restaurant

Project: 221 E Main St

Open Date: 6/7/2017
Analysis Date: 6/7/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic	16	0	0.03	0.01	0.04	0.16	321	50	50	False		
Source : Trip Generation Manual 9th Edition												
Weekday PM Peak Hour of Adjacent Street Traffic	139	61	0.26	0.07	0.5	0.52	326	67	33	False		
Source : Trip Generation Manual 9th Edition												
Saturday Peak Hour of Generator	177	0	0.33	0.16	0.5	0.58	308	59	41	False	T = 0.38(X) - 16.72	0.64
Source : Trip Generation Manual 9th Edition												

Detailed Land Use Data

For 12.62 Gross Leasable Area 1000 SF of CENTERSHOPPING 1

(820) Shopping Center

Project: 221 E Main St

Open Date: 6/7/2017

Analysis Date: 6/7/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	12	0	0.96	0.1	9.05	1.31	310	62	38	False	Ln(T) = 0.61 Ln(X) + 2.24	0.56
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	47	16	3.71	0.68	29.27	2.74	376	48	52	False	Ln(T) = 0.67 Ln(X) + 3.31	0.81
Saturday Peak Hour of Generator Source : Trip Generation Manual 9th Edition	61	0	4.82	1.46	18.32	3.1	458	52	48	False	Ln(T) = 0.65 Ln(X) + 3.78	0.83

Appendix D: Level of Service Definitions

LEVEL OF SERVICE: SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The levels of service range between level of service A (relatively congestion-free) and level of service F (congested).

The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents at an intersection. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road. The portion of the total delay attributed to the control facility is called the control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Control delay may also be referred to as signal delay for signalized intersections.

Level of service criteria for signalized intersections is determined in terms of the average control delay per vehicle. The following average control delays are used to determine approach levels of service:

Level of Service A	$\leq$ 10.0 seconds per vehicle
Level of Service B	> 10.0 and $\leq$ 20.0 seconds per vehicle
Level of Service C	> 20.0 and $\leq$ 35.0 seconds per vehicle
Level of Service D	> 35.0 and $\leq$ 55.0 seconds per vehicle
Level of Service E	> 55.0 and $\leq$ 80.0 seconds per vehicle
Level of Service F	> 80.0 seconds per vehicle

Level of Service A describes operations with very low control delay. This occurs when progression is extremely favorable; most vehicles arrive during the green phase and do not stop at all. Short traffic signal cycles may contribute to low delay.

Level of Service B generally occurs with good progression and/or short traffic signal cycle lengths. More vehicles stop than for level of service A, causing higher average delays.

Level of Service C has higher delays than level of service B. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures, where motorists are required to wait through an entire signal cycle, may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.

Level of Service D At this level, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths or high volume-to-capacity ratios. The proportion of stopping vehicles increases. Individual cycle failures are noticeable.

Level of Service E is considered the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high volume-to-capacity ratios. Individual cycle failures occur frequently.

Level of Service F is considered unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may occur at volume to capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

LEVEL OF SERVICE: TWO WAY STOP CONTROLLED INTERSECTIONS

The quality of traffic service at a two-way stop controlled, or "TWSC," intersection is measured according to the level of service and capacity of individual legs. The level of service ranges from LOS A to LOS F, just as with signalized intersections.

The right of way at the TWSC intersection is controlled by stop signs on two opposing legs of an intersection (on one leg of a "T"-type intersection). The capacity of a controlled leg is based on the distribution of gaps in the major street traffic flow, driver judgment in selecting a gap through which to execute the desired maneuver and the follow up time required by each driver in a queue.

The level of service for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during conditions with ideal geometry and in the absence of incidents, control, and traffic. This program only quantifies that portion of the total delay attributed to traffic control measures, either traffic signals or stop signs. This delay is called control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Average control delay for any particular minor movement is a function of the approach and the degree of saturation.

The expectation is that TWSC intersections are designed to carry smaller traffic volumes than signalized intersections. Therefore, the delay threshold times are lower for the same LOS grades. The following average control delays are used to determine approach levels of service:

Level of Service A	$\leq$ 10 seconds per vehicle
Level of Service B	> 10 and $\leq$ 15 seconds per vehicle
Level of Service C	> 15 and $\leq$ 25 seconds per vehicle
Level of Service D	> 25 and $\leq$ 35 seconds per vehicle
Level of Service E	> 35 and $\leq$ 50 seconds per vehicle
Level of Service F	> 50 seconds per vehicle

Appendix E: Capacity Analysis/Level of Service Worksheets & Summary Tables

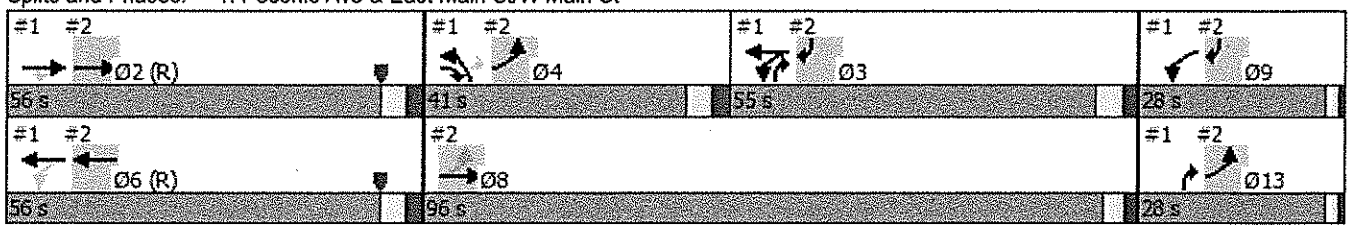
Existing Capacity Analyses

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	216	186	296	175	122	501					
Future Volume (vph)	216	186	296	175	122	501					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	68.9	96.5	140.7	115.7	21.6	99.3					
Actuated g/C Ratio	0.38	0.54	0.78	0.64	0.12	0.55					
v/c Ratio	0.33	0.25	0.33	0.19	0.72	0.70					
Control Delay	42.9	24.0	6.8	1.7	95.2	33.7					
Queue Delay	1.8	0.0	1.0	1.0	0.0	0.8					
Total Delay	44.7	24.0	7.8	2.6	95.2	34.6					
LOS	D	C	A	A	F	C					
Approach Delay	35.1			5.9	46.4						
Approach LOS	D			A	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 31.2 Intersection LOS: C
Intersection Capacity Utilization 52.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

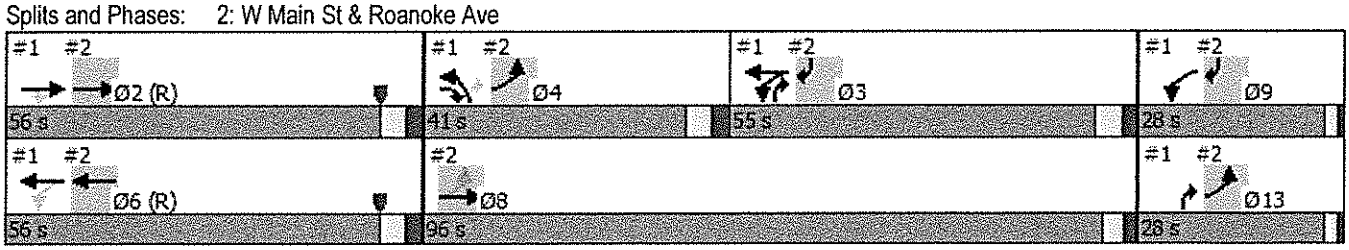


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	296	423	312	147						
Future Volume (vph)	296	423	312	147						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	93.4	150.0	68.9	71.7						
Actuated g/C Ratio	0.52	0.83	0.38	0.40						
v/c Ratio	0.48	0.33	0.33	0.28						
Control Delay	18.8	2.7	41.1	37.7						
Queue Delay	3.5	0.8	0.0	0.0						
Total Delay	22.3	3.5	41.2	37.7						
LOS	C	A	D	D						
Approach Delay		11.2	41.2							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 22.8 Intersection LOS: C
Intersection Capacity Utilization 35.7% ICU Level of Service A
Analysis Period (min) 15

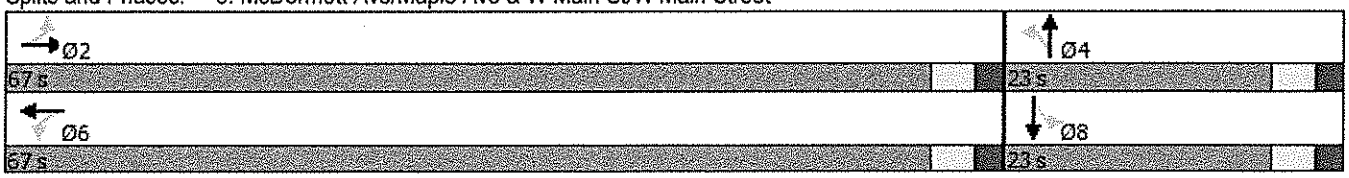
Splits and Phases: 2: W Main St & Roanoke Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	2	409	18	370	2	2	18	3
Future Volume (vph)	2	409	18	370	2	2	18	3
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		67.3		67.3		7.2		7.2
Actuated g/C Ratio		0.86		0.86		0.09		0.09
v/c Ratio		0.32		0.32		0.27		0.30
Control Delay		2.8		2.8		17.1		31.5
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		2.8		2.8		17.1		31.5
LOS		A		A		B		C
Approach Delay		2.8		2.8		17.1		31.5
Approach LOS		A		A		B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 4.6	Intersection LOS: A
Intersection Capacity Utilization 49.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	72	25	598	55	15	467
Future Volume (Veh/h)	72	25	598	55	15	467
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	78	27	650	60	16	508
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1220	680			710	
vC1, stage 1 conf vol	680					
vC2, stage 2 conf vol	540					
vCu, unblocked vol	1220	680			710	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	81	94			98	
cM capacity (veh/h)	411	451			889	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	78	27	710	16	508
Volume Left	78	0	0	16	0
Volume Right	0	27	60	0	0
cSH	411	451	1700	889	1700
Volume to Capacity	0.19	0.06	0.42	0.02	0.30
Queue Length 95th (ft)	17	5	0	1	0
Control Delay (s)	15.8	13.5	0.0	9.1	0.0
Lane LOS	C	B		A	
Approach Delay (s)	15.2		0.0	0.3	
Approach LOS	C				

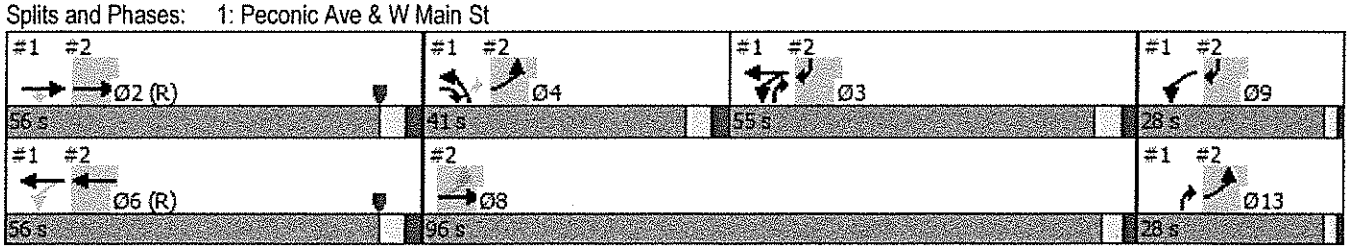
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	236	241	355	292	193	484					
Future Volume (vph)	236	241	355	292	193	484					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	69.6	103.5	134.3	109.3	28.0	98.6					
Actuated g/C Ratio	0.39	0.58	0.75	0.61	0.16	0.55					
v/c Ratio	0.35	0.29	0.43	0.32	0.73	0.59					
Control Delay	44.6	22.4	9.8	2.5	87.7	29.0					
Queue Delay	1.5	0.0	1.4	0.5	0.0	0.3					
Total Delay	46.1	22.4	11.2	3.0	87.7	29.3					
LOS	D	C	B	A	F	C					
Approach Delay	34.1			7.5	46.0						
Approach LOS	C			A	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 28.2 Intersection LOS: C
Intersection Capacity Utilization 57.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & W Main St

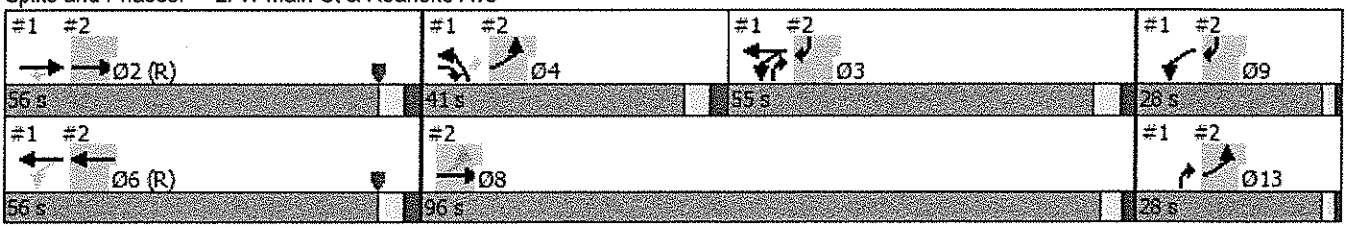


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	323	398	413	233						
Future Volume (vph)	323	398	413	233						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	92.7	150.0	69.6	64.7						
Actuated g/C Ratio	0.52	0.83	0.39	0.36						
v/c Ratio	0.51	0.28	0.41	0.43						
Control Delay	22.9	2.4	43.9	44.6						
Queue Delay	3.9	0.6	0.1	0.1						
Total Delay	26.7	2.9	44.0	44.7						
LOS	C	A	D	D						
Approach Delay		13.6	44.0							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 28.8 Intersection LOS: C
Intersection Capacity Utilization 40.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: W Main St & Roanoke Ave

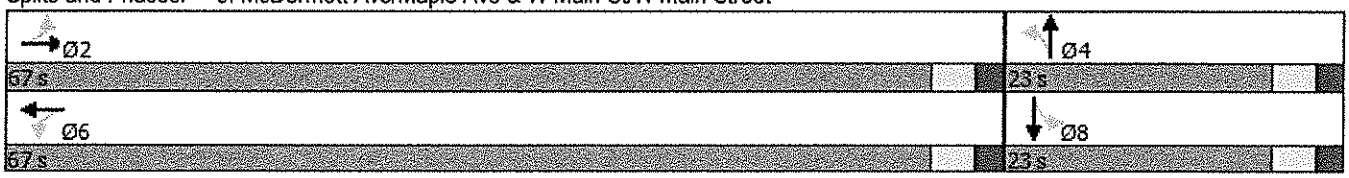


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	7	379	42	491	18	7	38	7
Future Volume (vph)	7	379	42	491	18	7	38	7
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		66.0		66.0		8.8		8.8
Actuated g/C Ratio		0.81		0.81		0.11		0.11
v/c Ratio		0.27		0.44		0.43		0.46
Control Delay		3.4		4.6		19.7		38.9
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		3.4		4.6		19.7		38.9
LOS		A		A		B		D
Approach Delay		3.4		4.6		19.7		38.9
Approach LOS		A		A		B		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 81.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 7.5 Intersection LOS: A
Intersection Capacity Utilization 66.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	60	19	658	55	15	581
Future Volume (Veh/h)	60	19	658	55	15	581
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	65	21	715	60	16	632
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1409	745			775	
vC1, stage 1 conf vol	745					
vC2, stage 2 conf vol	664					
vCu, unblocked vol	1409	745			775	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	82	95			98	
cM capacity (veh/h)	364	414			841	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	65	21	775	16	632
Volume Left	65	0	0	16	0
Volume Right	0	21	60	0	0
cSH	364	414	1700	841	1700
Volume to Capacity	0.18	0.05	0.46	0.02	0.37
Queue Length 95th (ft)	16	4	0	1	0
Control Delay (s)	17.0	14.2	0.0	9.4	0.0
Lane LOS	C	B		A	
Approach Delay (s)	16.3		0.0	0.2	
Approach LOS	C				

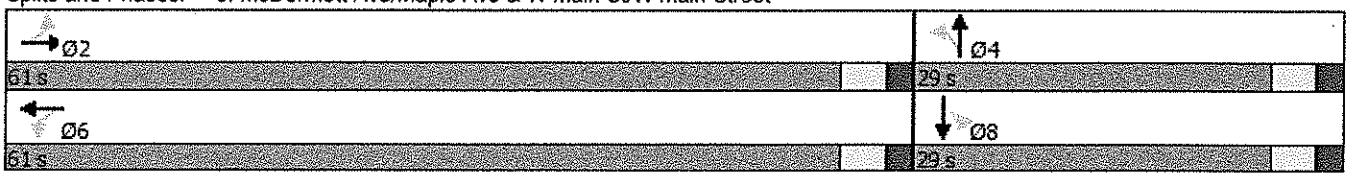
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	8	451	82	562	57	25	41	36
Future Volume (vph)	8	451	82	562	57	25	41	36
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	61.0	61.0	61.0	61.0	29.0	29.0	29.0	29.0
Total Split (%)	67.8%	67.8%	67.8%	67.8%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		56.2		56.2		13.0		13.0
Actuated g/C Ratio		0.71		0.71		0.16		0.16
v/c Ratio		0.43		0.66		0.69		0.54
Control Delay		6.6		10.7		34.6		37.1
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		6.6		10.7		34.6		37.1
LOS		A		B		C		D
Approach Delay		6.6		10.7		34.6		37.1
Approach LOS		A		B		C		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 79.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 87.6% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street

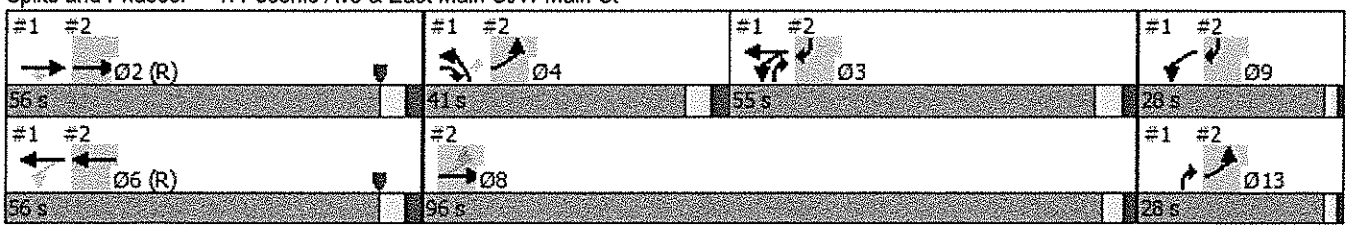


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	395	199	327	274	192	405					
Future Volume (vph)	395	199	327	274	192	405					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	72.3	103.7	136.8	111.8	25.5	95.9					
Actuated g/C Ratio	0.40	0.58	0.76	0.62	0.14	0.53					
v/c Ratio	0.58	0.25	0.44	0.29	0.78	0.49					
Control Delay	49.2	21.2	16.9	2.2	94.9	27.5					
Queue Delay	20.9	0.0	2.2	0.5	0.0	0.2					
Total Delay	70.1	21.2	19.1	2.7	94.9	27.7					
LOS	E	C	B	A	F	C					
Approach Delay	53.7			11.6	49.3						
Approach LOS	D			B	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 37.7 Intersection LOS: D
Intersection Capacity Utilization 64.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

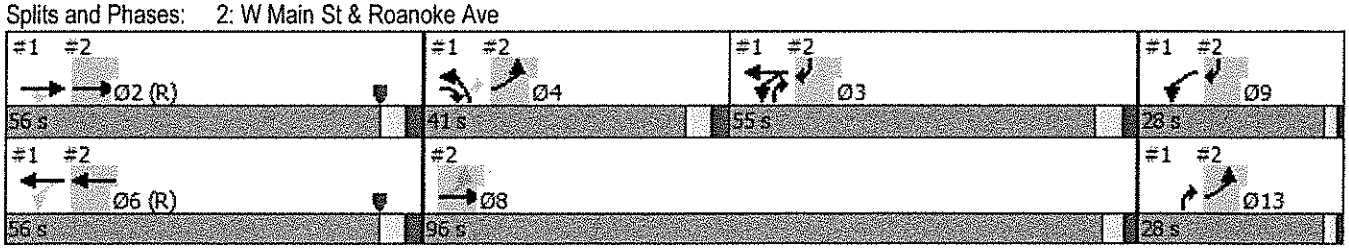


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	203	597	360	241						
Future Volume (vph)	203	597	360	241						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	90.0	150.0	72.3	64.5						
Actuated g/C Ratio	0.50	0.83	0.40	0.36						
v/c Ratio	0.33	0.43	0.33	0.47						
Control Delay	29.1	2.3	40.3	46.5						
Queue Delay	8.4	0.4	0.1	0.0						
Total Delay	37.5	2.7	40.4	46.5						
LOS	D	A	D	D						
Approach Delay		11.6	40.4							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 35.7% ICU Level of Service A
Analysis Period (min) 15

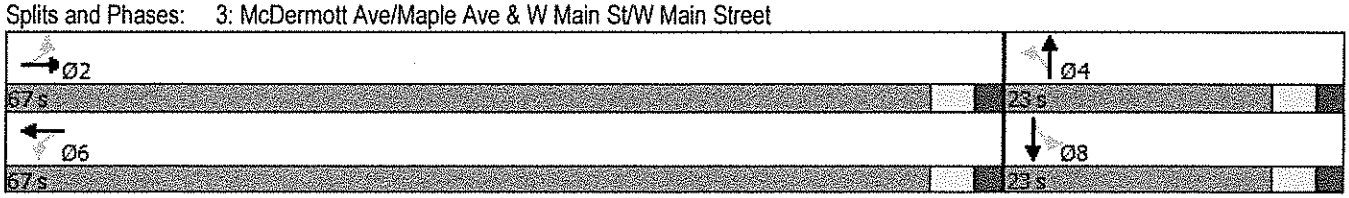
Splits and Phases: 2: W Main St & Roanoke Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	20	481	19	396	21	8	38	4
Future Volume (vph)	20	481	19	396	21	8	38	4
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		66.0		66.0		8.7		8.7
Actuated g/C Ratio		0.81		0.81		0.11		0.11
v/c Ratio		0.36		0.36		0.43		0.47
Control Delay		3.9		3.8		22.0		33.8
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		3.9		3.8		22.0		33.8
LOS		A		A		C		C
Approach Delay		3.9		3.8		22.0		33.8
Approach LOS		A		A		C		C

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 81.6			
Natural Cycle: 40			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 7.2		Intersection LOS: A	
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	60	19	635	75	32	499
Future Volume (Veh/h)	60	19	635	75	32	499
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	65	21	690	82	35	542
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1343	731			772	
vC1, stage 1 conf vol	731					
vC2, stage 2 conf vol	612					
vCu, unblocked vol	1343	731			772	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	83	95			96	
cM capacity (veh/h)	375	422			843	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	65	21	772	35	542
Volume Left	65	0	0	35	0
Volume Right	0	21	82	0	0
cSH	375	422	1700	843	1700
Volume to Capacity	0.17	0.05	0.45	0.04	0.32
Queue Length 95th (ft)	15	4	0	3	0
Control Delay (s)	16.6	14.0	0.0	9.5	0.0
Lane LOS	C	B		A	
Approach Delay (s)	16.0		0.0	0.6	
Approach LOS	C				

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

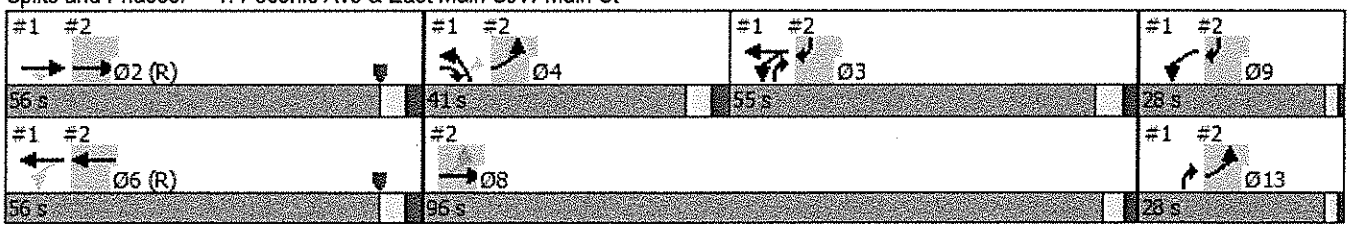
No Build Capacity Analyses

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	259	194	325	224	128	540					
Future Volume (vph)	259	194	325	224	128	540					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	63.7	91.8	140.1	115.1	22.2	104.5					
Actuated g/C Ratio	0.35	0.51	0.78	0.64	0.12	0.58					
v/c Ratio	0.43	0.27	0.37	0.24	0.74	0.72					
Control Delay	49.3	27.2	14.3	1.7	95.8	31.4					
Queue Delay	4.1	0.0	2.7	1.0	0.0	0.9					
Total Delay	53.3	27.2	17.0	2.7	95.8	32.3					
LOS	D	C	B	A	F	C					
Approach Delay	42.1			11.1	44.4						
Approach LOS	D			B	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 33.2 Intersection LOS: C
Intersection Capacity Utilization 56.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

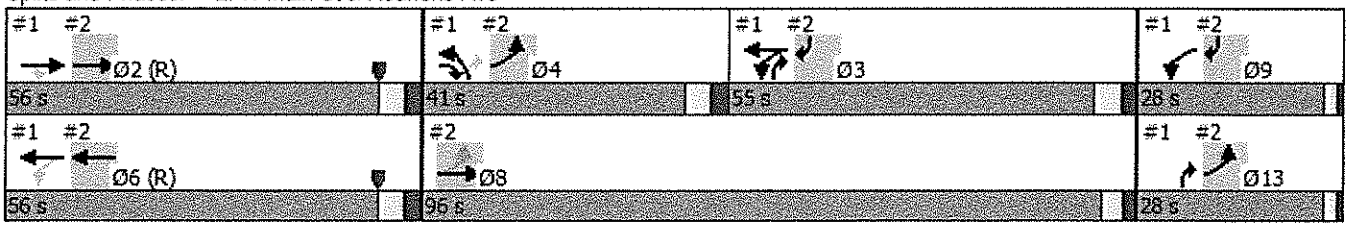


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	309	492	383	153						
Future Volume (vph)	309	492	383	153						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	98.6	150.0	63.7	76.4						
Actuated g/C Ratio	0.55	0.83	0.35	0.42						
v/c Ratio	0.50	0.38	0.43	0.28						
Control Delay	18.6	2.8	47.4	34.5						
Queue Delay	4.3	0.9	0.2	0.0						
Total Delay	22.9	3.7	47.5	34.5						
LOS	C	A	D	C						
Approach Delay		11.1	47.5							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 24.7 Intersection LOS: C
Intersection Capacity Utilization 38.5% ICU Level of Service A
Analysis Period (min) 15

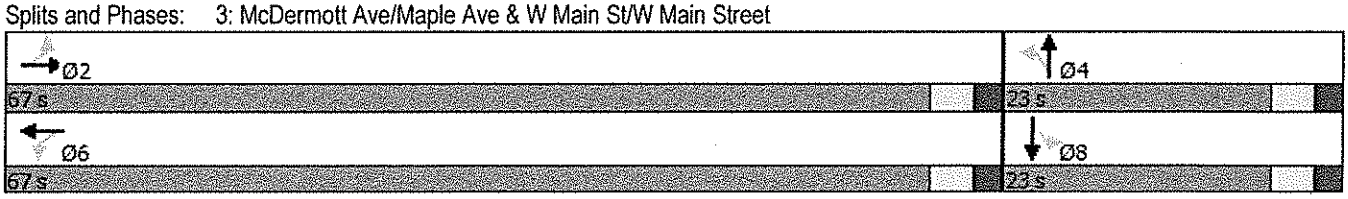
Splits and Phases: 2: W Main St & Roanoke Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	3	464	27	416	31	15	19	10
Future Volume (vph)	3	464	27	416	31	15	19	10
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		62.1		62.1		9.7		9.7
Actuated g/C Ratio		0.76		0.76		0.12		0.12
v/c Ratio		0.43		0.42		0.57		0.31
Control Delay		5.1		5.1		31.2		30.6
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		5.1		5.1		31.2		30.6
LOS		A		A		C		C
Approach Delay		5.1		5.1		31.2		30.6
Approach LOS		A		A		C		C

Intersection Summary		
Cycle Length: 90		
Actuated Cycle Length: 81.8		
Natural Cycle: 40		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.57		
Intersection Signal Delay: 8.7	Intersection LOS: A	
Intersection Capacity Utilization 56.1%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	104	27	641	71	16	506
Future Volume (Veh/h)	104	27	641	71	16	506
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	29	697	77	17	550
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1320	736			774	
vC1, stage 1 conf vol	736					
vC2, stage 2 conf vol	584					
vCu, unblocked vol	1320	736			774	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	71	93			98	
cM capacity (veh/h)	384	419			842	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	113	29	774	17	550
Volume Left	113	0	0	17	0
Volume Right	0	29	77	0	0
cSH	384	419	1700	842	1700
Volume to Capacity	0.29	0.07	0.46	0.02	0.32
Queue Length 95th (ft)	30	6	0	2	0
Control Delay (s)	18.2	14.2	0.0	9.4	0.0
Lane LOS	C	B		A	
Approach Delay (s)	17.4		0.0	0.3	
Approach LOS	C				

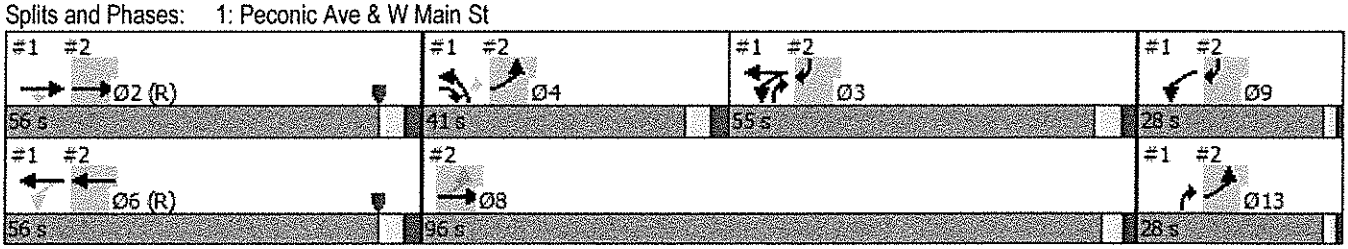
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	300	251	395	349	205	535					
Future Volume (vph)	300	251	395	349	205	535					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	64.8	99.2	133.8	108.8	28.5	103.4					
Actuated g/C Ratio	0.36	0.55	0.74	0.60	0.16	0.57					
v/c Ratio	0.48	0.31	0.50	0.39	0.77	0.62					
Control Delay	50.1	24.3	21.0	2.6	89.8	27.7					
Queue Delay	5.7	0.0	4.6	0.7	0.0	0.4					
Total Delay	55.9	24.3	25.6	3.3	89.8	28.1					
LOS	E	C	C	A	F	C					
Approach Delay	41.5			15.1	45.2						
Approach LOS	D			B	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 32.6 Intersection LOS: C
Intersection Capacity Utilization 63.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & W Main St

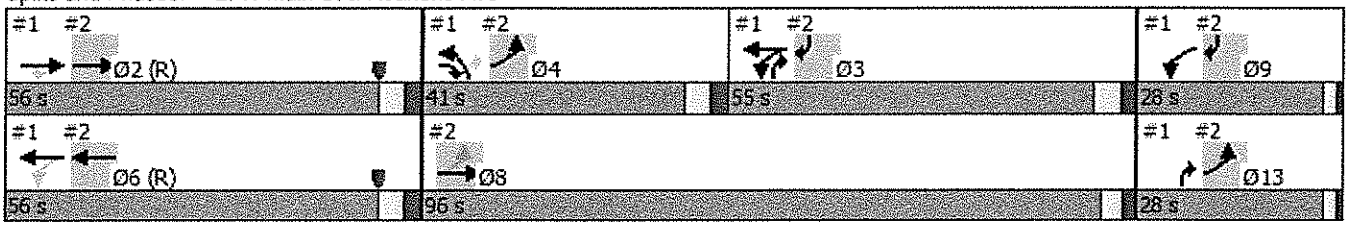


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	336	498	499	244						
Future Volume (vph)	336	498	499	244						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	97.5	150.0	64.8	69.0						
Actuated g/C Ratio	0.54	0.83	0.36	0.38						
v/c Ratio	0.53	0.35	0.53	0.42						
Control Delay	23.3	2.5	49.2	42.2						
Queue Delay	5.4	0.6	0.4	0.1						
Total Delay	28.7	3.1	49.6	42.2						
LOS	C	A	D	D						
Approach Delay		13.4	49.6							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 30.2 Intersection LOS: C
Intersection Capacity Utilization 43.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: W Main St & Roanoke Ave

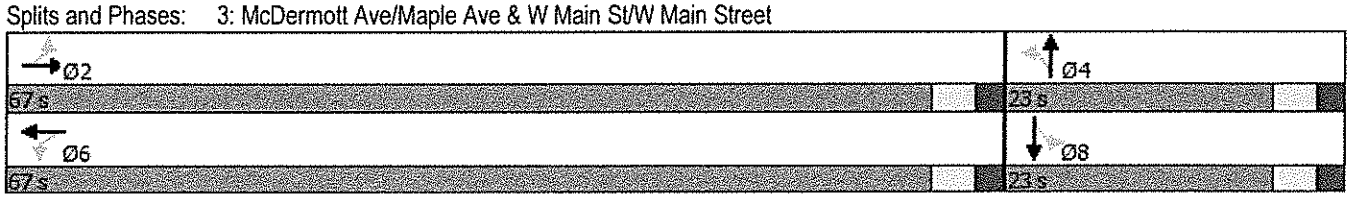


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	8	451	60	562	37	16	41	20
Future Volume (vph)	8	451	60	562	37	16	41	20
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		62.1		62.1		10.4		10.4
Actuated g/C Ratio		0.75		0.75		0.13		0.13
v/c Ratio		0.38		0.57		0.60		0.58
Control Delay		4.8		7.2		29.5		44.9
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		4.8		7.2		29.5		44.9
LOS		A		A		C		D
Approach Delay		4.8		7.2		29.5		44.9
Approach LOS		A		A		C		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 82.5
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 80.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	79	21	720	83	16	632
Future Volume (Veh/h)	79	21	720	83	16	632
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	86	23	783	90	17	687
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1549	828			873	
vC1, stage 1 conf vol	828					
vC2, stage 2 conf vol	721					
vCu, unblocked vol	1549	828			873	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	74	94			98	
cM capacity (veh/h)	332	371			773	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	86	23	873	17	687
Volume Left	86	0	0	17	0
Volume Right	0	23	90	0	0
cSH	332	371	1700	773	1700
Volume to Capacity	0.26	0.06	0.51	0.02	0.40
Queue Length 95th (ft)	25	5	0	2	0
Control Delay (s)	19.6	15.3	0.0	9.8	0.0
Lane LOS	C	C		A	
Approach Delay (s)	18.7		0.0	0.2	
Approach LOS	C				

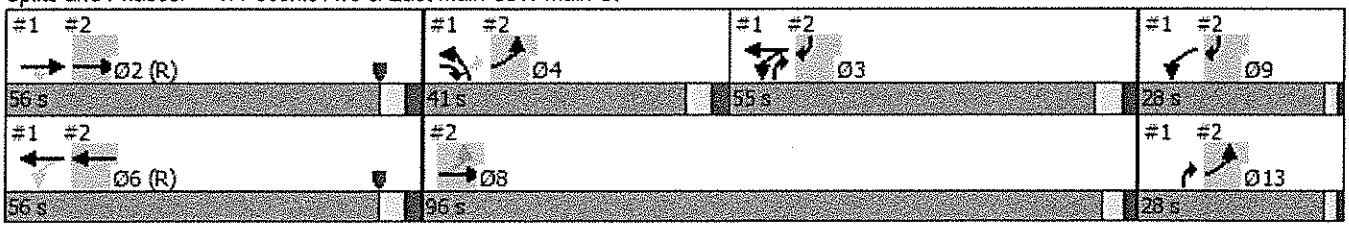
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	483	211	378	352	207	464					
Future Volume (vph)	483	211	378	352	207	464					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	63.9	96.7	135.4	110.4	26.9	104.3					
Actuated g/C Ratio	0.36	0.54	0.75	0.61	0.15	0.58					
v/c Ratio	0.81	0.28	0.55	0.37	0.80	0.52					
Control Delay	63.9	24.8	46.8	2.3	94.9	24.0					
Queue Delay	53.5	0.0	55.1	0.6	0.0	0.2					
Total Delay	117.4	24.8	101.9	2.9	94.9	24.2					
LOS	F	C	F	A	F	C					
Approach Delay	89.3			54.2	46.0						
Approach LOS	F			D	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 63.5 Intersection LOS: E
Intersection Capacity Utilization 72.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

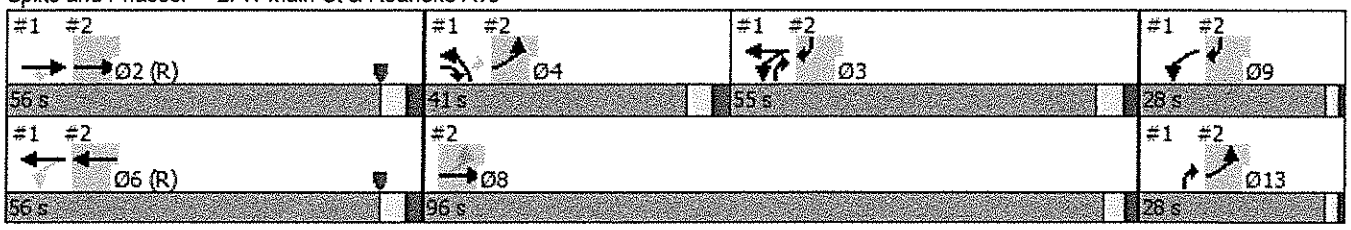


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	217	730	473	257						
Future Volume (vph)	217	730	473	257						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	98.4	150.0	63.9	71.5						
Actuated g/C Ratio	0.55	0.83	0.36	0.40						
v/c Ratio	0.34	0.52	0.49	0.46						
Control Delay	25.8	2.9	48.8	41.9						
Queue Delay	9.9	0.8	0.5	0.1						
Total Delay	35.8	3.6	49.3	42.0						
LOS	D	A	D	D						
Approach Delay		11.0	49.3							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 27.2 Intersection LOS: C
Intersection Capacity Utilization 42.6% ICU Level of Service A
Analysis Period (min) 15

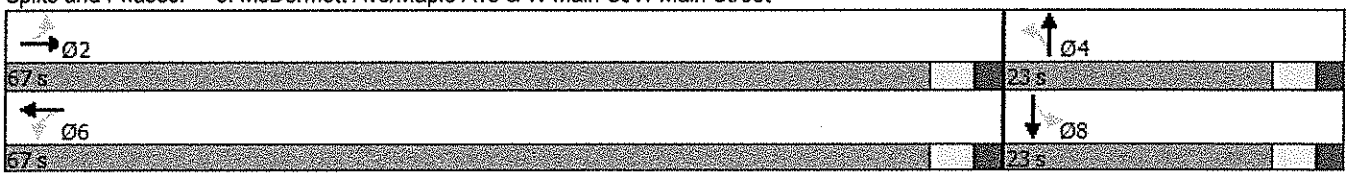
Splits and Phases: 2: W Main St & Roanoke Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	22	572	41	478	57	23	41	20
Future Volume (vph)	22	572	41	478	57	23	41	20
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		62.1		62.1		12.9		12.9
Actuated g/C Ratio		0.73		0.73		0.15		0.15
v/c Ratio		0.50		0.51		0.70		0.53
Control Delay		7.0		7.2		40.2		36.8
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		7.0		7.2		40.2		36.8
LOS		A		A		D		D
Approach Delay		7.0		7.2		40.2		36.8
Approach LOS		A		A		D		D

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 85			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 62.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	93	21	711	110	34	563
Future Volume (Veh/h)	93	21	711	110	34	563
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	101	23	773	120	37	612
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1519	833			893	
vC1, stage 1 conf vol	833					
vC2, stage 2 conf vol	686					
vCu, unblocked vol	1519	833			893	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	70	94			95	
cM capacity (veh/h)	333	369			759	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	101	23	893	37	612
Volume Left	101	0	0	37	0
Volume Right	0	23	120	0	0
cSH	333	369	1700	759	1700
Volume to Capacity	0.30	0.06	0.53	0.05	0.36
Queue Length 95th (ft)	31	5	0	4	0
Control Delay (s)	20.5	15.4	0.0	10.0	0.0
Lane LOS	C	C		A	
Approach Delay (s)	19.5		0.0	0.6	
Approach LOS	C				

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

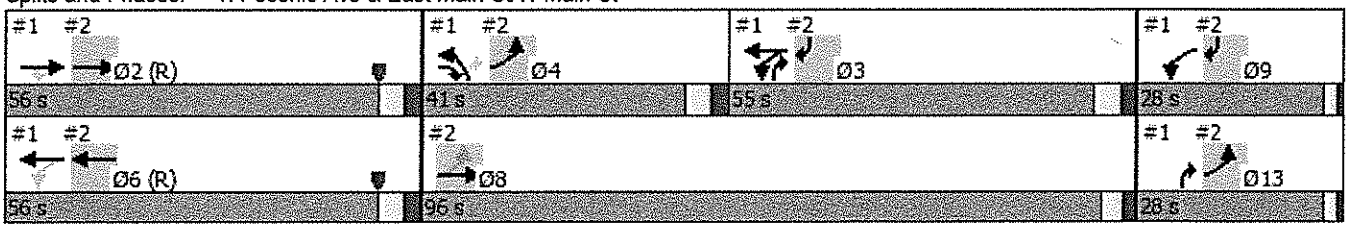
Build Capacity Analyses

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	265	194	328	241	128	541					
Future Volume (vph)	265	194	328	241	128	541					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	63.2	91.6	139.8	114.8	22.5	105.0					
Actuated g/C Ratio	0.35	0.51	0.78	0.64	0.12	0.58					
v/c Ratio	0.44	0.27	0.37	0.26	0.73	0.71					
Control Delay	49.9	27.3	15.5	1.7	94.5	31.0					
Queue Delay	4.7	0.0	3.2	0.9	0.0	0.9					
Total Delay	54.6	27.3	18.7	2.7	94.5	31.9					
LOS	D	C	B	A	F	C					
Approach Delay	43.0			11.9	43.8						
Approach LOS	D			B	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 33.2 Intersection LOS: C
Intersection Capacity Utilization 57.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

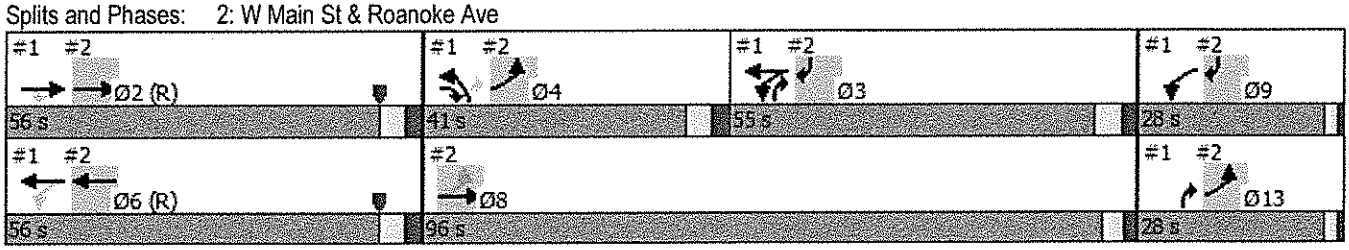


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	309	499	403	153						
Future Volume (vph)	309	499	403	153						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	99.1	150.0	63.2	76.6						
Actuated g/C Ratio	0.55	0.83	0.35	0.43						
v/c Ratio	0.50	0.38	0.46	0.28						
Control Delay	18.7	2.8	48.2	34.3						
Queue Delay	4.3	1.0	0.2	0.0						
Total Delay	23.0	3.8	48.4	34.3						
LOS	C	A	D	C						
Approach Delay		11.1	48.4							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 25.2 Intersection LOS: C
Intersection Capacity Utilization 39.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: W Main St & Roanoke Ave

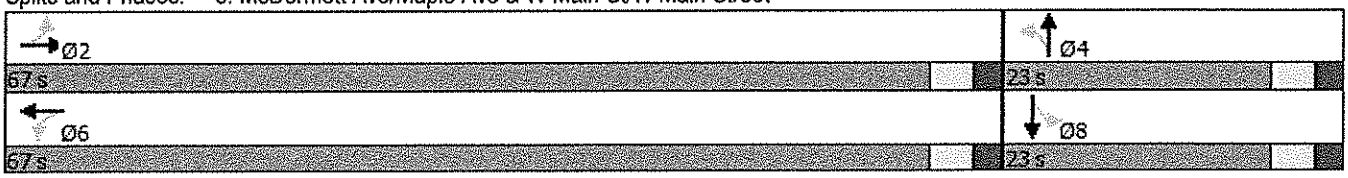


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	3	464	31	416	51	24	19	13
Future Volume (vph)	3	464	31	416	51	24	19	13
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		62.1		62.1		13.1		13.1
Actuated g/C Ratio		0.73		0.73		0.15		0.15
v/c Ratio		0.46		0.45		0.69		0.26
Control Delay		6.6		6.6		40.4		28.0
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		6.6		6.6		40.4		28.0
LOS		A		A		D		C
Approach Delay		6.6		6.6		40.4		28.0
Approach LOS		A		A		D		C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 85.2
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 12.0 Intersection LOS: B
Intersection Capacity Utilization 62.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	119	26	642	76	16	509
Future Volume (Veh/h)	119	26	642	76	16	509
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	129	28	698	83	17	553
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1326	740			781	
vC1, stage 1 conf vol	740					
vC2, stage 2 conf vol	587					
vCu, unblocked vol	1326	740			781	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	66	93			98	
cM capacity (veh/h)	382	417			837	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	129	28	781	17	553
Volume Left	129	0	0	17	0
Volume Right	0	28	83	0	0
cSH	382	417	1700	837	1700
Volume to Capacity	0.34	0.07	0.46	0.02	0.33
Queue Length 95th (ft)	37	5	0	2	0
Control Delay (s)	19.1	14.3	0.0	9.4	0.0
Lane LOS	C	B		A	
Approach Delay (s)	18.3		0.0	0.3	
Approach LOS	C				

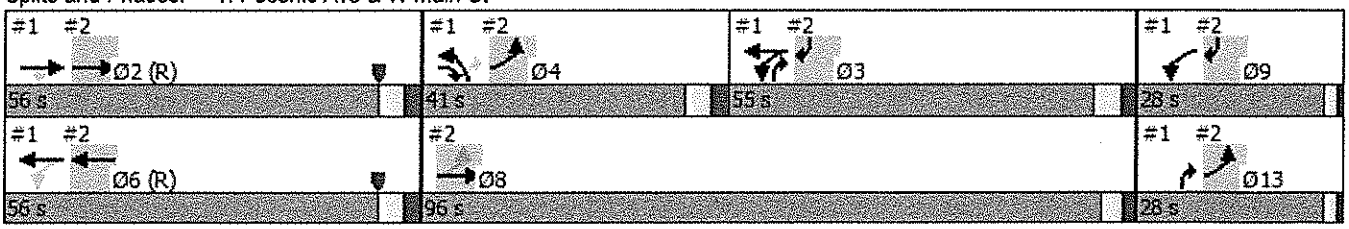
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	333	251	398	366	205	540					
Future Volume (vph)	333	251	398	366	205	540					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	63.6	98.1	133.7	108.7	28.6	104.6					
Actuated g/C Ratio	0.35	0.54	0.74	0.60	0.16	0.58					
v/c Ratio	0.54	0.31	0.51	0.40	0.76	0.62					
Control Delay	52.8	24.9	26.2	2.4	89.5	27.1					
Queue Delay	13.9	0.0	8.4	0.8	0.0	0.4					
Total Delay	66.7	24.9	34.6	3.2	89.5	27.5					
LOS	E	C	C	A	F	C					
Approach Delay	48.7			19.6	44.6						
Approach LOS	D			B	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 36.1 Intersection LOS: D
Intersection Capacity Utilization 65.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & W Main St

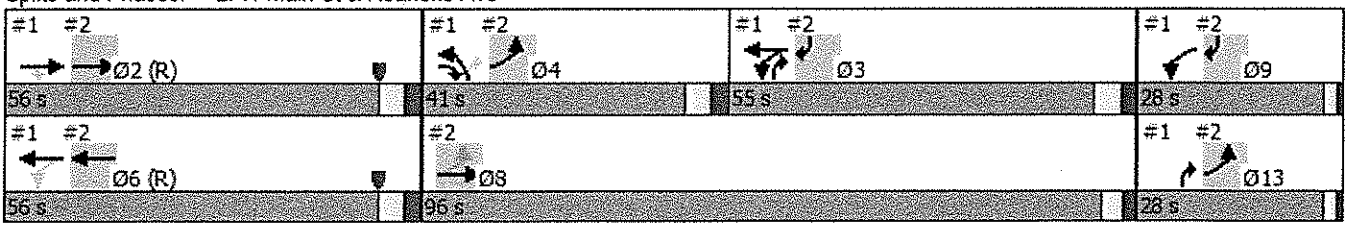


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	336	536	519	244						
Future Volume (vph)	336	536	519	244						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	98.7	150.0	63.6	70.1						
Actuated g/C Ratio	0.55	0.83	0.35	0.39						
v/c Ratio	0.53	0.37	0.56	0.41						
Control Delay	23.8	2.5	50.7	41.4						
Queue Delay	6.4	0.7	0.5	0.1						
Total Delay	30.2	3.2	51.3	41.4						
LOS	C	A	D	D						
Approach Delay		13.6	51.3							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 30.7 Intersection LOS: C
Intersection Capacity Utilization 44.3% ICU Level of Service A
Analysis Period (min) 15

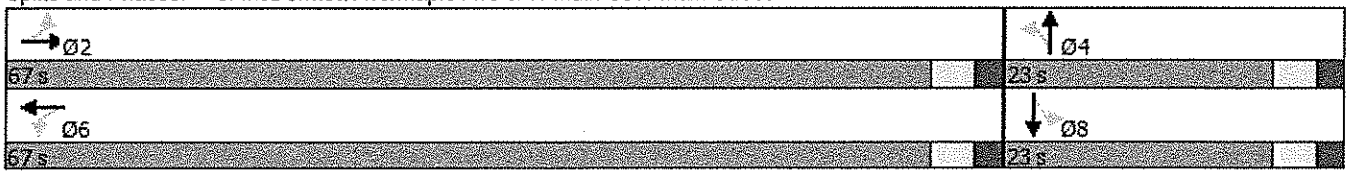
Splits and Phases: 2: W Main St & Roanoke Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	8	451	82	562	57	25	41	36
Future Volume (vph)	8	451	82	562	57	25	41	36
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		62.1		62.1		13.3		13.3
Actuated g/C Ratio		0.73		0.73		0.16		0.16
v/c Ratio		0.42		0.64		0.73		0.58
Control Delay		6.1		9.9		41.0		42.6
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		6.1		9.9		41.0		42.6
LOS		A		A		D		D
Approach Delay		6.1		9.9		41.0		42.6
Approach LOS		A		A		D		D

Intersection Summary		
Cycle Length: 90		
Actuated Cycle Length: 85.5		
Natural Cycle: 55		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.73		
Intersection Signal Delay: 14.7	Intersection LOS: B	
Intersection Capacity Utilization 87.6%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street

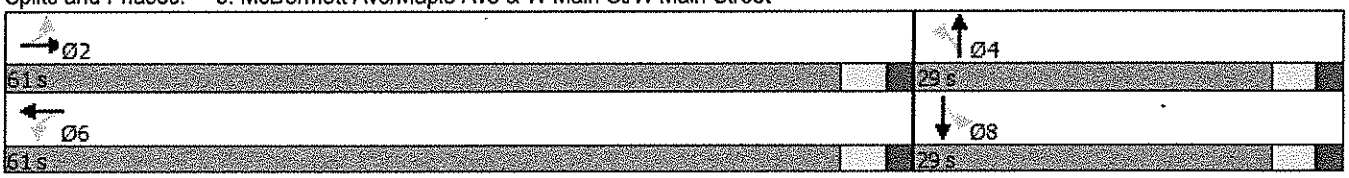


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	8	451	82	562	57	25	41	36
Future Volume (vph)	8	451	82	562	57	25	41	36
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	61.0	61.0	61.0	61.0	29.0	29.0	29.0	29.0
Total Split (%)	67.8%	67.8%	67.8%	67.8%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		56.2		56.2		13.0		13.0
Actuated g/C Ratio		0.71		0.71		0.16		0.16
v/c Ratio		0.43		0.66		0.69		0.54
Control Delay		6.6		10.7		34.6		37.1
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		6.6		10.7		34.6		37.1
LOS		A		B		C		D
Approach Delay		6.6		10.7		34.6		37.1
Approach LOS		A		B		C		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 79.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 87.6% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	95	20	725	115	16	635
Future Volume (Veh/h)	95	20	725	115	16	635
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	103	22	788	125	17	690
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1574	850			913	
vC1, stage 1 conf vol	850					
vC2, stage 2 conf vol	724					
vCu, unblocked vol	1574	850			913	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	68	94			98	
cM capacity (veh/h)	326	360			746	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	103	22	913	17	690
Volume Left	103	0	0	17	0
Volume Right	0	22	125	0	0
cSH	326	360	1700	746	1700
Volume to Capacity	0.32	0.06	0.54	0.02	0.41
Queue Length 95th (ft)	33	5	0	2	0
Control Delay (s)	21.1	15.6	0.0	9.9	0.0
Lane LOS	C	C		A	
Approach Delay (s)	20.1		0.0	0.2	
Approach LOS	C				

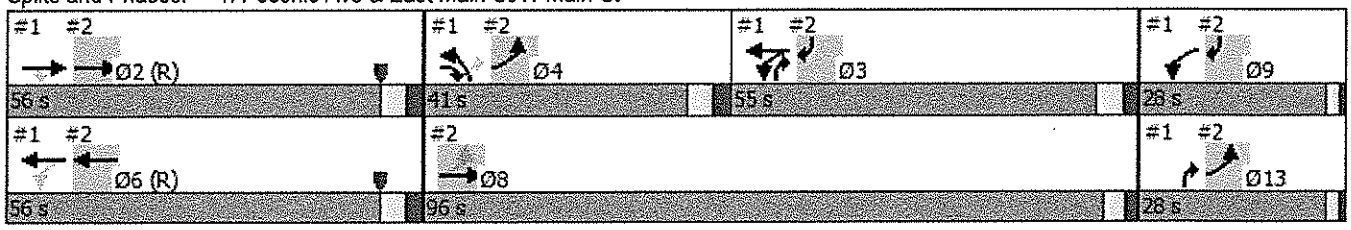
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	526	211	384	385	207	471					
Future Volume (vph)	526	211	384	385	207	471					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	63.1	95.8	135.4	110.4	26.9	105.1					
Actuated g/C Ratio	0.35	0.53	0.75	0.61	0.15	0.58					
v/c Ratio	0.89	0.28	0.58	0.41	0.80	0.52					
Control Delay	71.5	25.2	57.1	2.4	94.9	23.8					
Queue Delay	51.0	0.0	57.6	0.7	0.0	0.2					
Total Delay	122.4	25.2	114.7	3.1	94.9	24.0					
LOS	F	C	F	A	F	C					
Approach Delay	94.6			58.8	45.6						
Approach LOS	F			E	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 67.2 Intersection LOS: E
Intersection Capacity Utilization 75.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

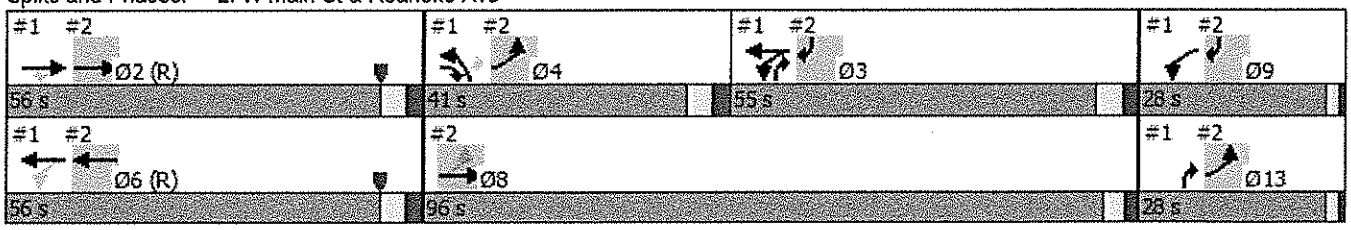


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	217	780	512	257						
Future Volume (vph)	217	780	512	257						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	99.2	150.0	63.1	72.4						
Actuated g/C Ratio	0.55	0.83	0.35	0.40						
v/c Ratio	0.35	0.56	0.53	0.45						
Control Delay	25.8	3.3	50.5	41.3						
Queue Delay	11.5	0.9	1.7	0.1						
Total Delay	37.3	4.3	52.1	41.4						
LOS	D	A	D	D						
Approach Delay		11.5	52.1							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 28.2 Intersection LOS: C
Intersection Capacity Utilization 45.2% ICU Level of Service A
Analysis Period (min) 15

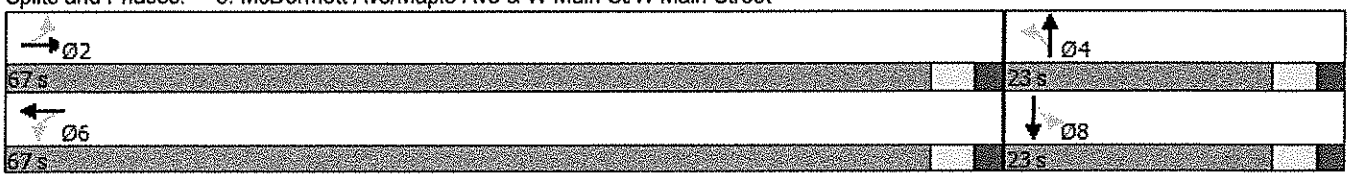
Splits and Phases: 2: W Main St & Roanoke Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	22	572	69	478	96	40	41	41
Future Volume (vph)	22	572	69	478	96	40	41	41
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		62.0		62.0		17.4		17.4
Actuated g/C Ratio		0.69		0.69		0.19		0.19
v/c Ratio		0.65		0.60		0.92		0.53
Control Delay		10.8		10.2		67.9		37.3
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		10.8		10.2		67.9		37.3
LOS		B		B		E		D
Approach Delay		10.8		10.2		67.9		37.3
Approach LOS		B		B		E		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 89.4	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 84.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	126	21	718	153	34	569
Future Volume (Veh/h)	126	21	718	153	34	569
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	137	23	780	166	37	618
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1555	863			946	
vC1, stage 1 conf vol	863					
vC2, stage 2 conf vol	692					
vCu, unblocked vol	1555	863			946	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	58	94			95	
cM capacity (veh/h)	324	354			725	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	137	23	946	37	618
Volume Left	137	0	0	37	0
Volume Right	0	23	166	0	0
cSH	324	354	1700	725	1700
Volume to Capacity	0.42	0.06	0.56	0.05	0.36
Queue Length 95th (ft)	51	5	0	4	0
Control Delay (s)	24.0	15.9	0.0	10.2	0.0
Lane LOS	C	C		B	
Approach Delay (s)	22.8		0.0	0.6	
Approach LOS	C				

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	60.7%	ICU Level of Service	B	
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	22	572	69	478	96	40	41	41
Future Volume (vph)	22	572	69	478	96	40	41	41
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	64.0	64.0	64.0	64.0	26.0	26.0	26.0	26.0
Total Split (%)	71.1%	71.1%	71.1%	71.1%	28.9%	28.9%	28.9%	28.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.0		5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		59.1		59.1		18.4		18.4
Actuated g/C Ratio		0.68		0.68		0.21		0.21
v/c Ratio		0.67		0.61		0.84		0.49
Control Delay		12.4		11.6		52.8		33.0
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		12.4		11.6		52.8		33.0
LOS		B		B		D		C
Approach Delay		12.4		11.6		52.8		33.0
Approach LOS		B		B		D		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 87.5	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 84.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street



Appendix F: Parking Data

Friday 8/19/16-Nelson & Pope Riverhead NY parking count

	Parking Areas									
Time	Main St	Maple Ave	L	M	N	Q	R	T	U	V
10:00AM	41	4	111	24	8	50	9	7	10	45
10:30AM	43	4	121	26	8	47	9	6	16	44
11:00AM	54	4	119	25	9	44	6	7	17	65
11:30AM	50	4	121	32	8	42	9	7	20	66
12:00PM	42	4	102	25	8	44	9	8	22	64
12:30PM	41	4	116	22	9	36	10	8	25	69
1:00PM	39	4	121	25	6	43	11	8	21	78
1:30PM	44	4	102	26	7	43	12	8	20	77
2:00PM	40	4	98	23	8	40	12	11	22	78
2:30PM	36	4	88	21	6	38	10	12	22	65
3:00PM	34	4	87	25	8	33	9	12	16	65
3:30PM	36	4	88	25	7	36	8	14	11	65
4:00PM	33	4	98	22	9	40	8	12	14	77
4:30PM	36	4	65	25	10	35	8	12	15	68
5:00PM	45	4	66	23	6	33	7	10	14	87
5:30PM	50	2	65	24	5	30	5	8	16	88
6:00PM	45	2	69	24	3	25	4	8	18	74
6:30PM	45	2	54	22	5	25	4	6	18	65
7:00PM	35	6	65	18	4	21	3	3	18	65
7:30PM	33	6	55	15	3	19	3	2	15	66
8:00PM	30	6	45	14	3	19	1	2	15	64
Capacity	68	19	287	59	57	52	27	33	87	167
% Utlization	79%	32%	42%	54%	18%	96%	44%	42%	29%	53%

Saturday 8/27/16-Nelson & Pope Riverhead NY parking count

	Parking Areas									
Time	Main St	Maple Ave	L	M	N	Q	R	T	U	V
10:00AM	32	2	79	23	21	27	3	15	11	76
10:30AM	28	2	80	23	25	31	6	17	11	80
11:00AM	33	2	83	24	29	37	7	17	11	88
11:30AM	41	3	89	28	33	43	9	23	11	91
12:00PM	44	3	92	34	39	50	10	30	12	93
12:30PM	49	2	98	38	40	49	10	30	21	108
1:00PM	45	2	98	41	40	49	9	30	25	120
1:30PM	33	0	91	41	40	50	9	30	25	134
2:00PM	32	0	87	45	37	49	11	30	28	141
2:30PM	22	3	83	46	35	48	11	30	31	146
3:00PM	23	3	81	41	35	48	10	30	31	140
3:30PM	29	3	73	39	34	48	10	30	31	131
4:00PM	35	3	67	37	35	49	10	30	30	118
4:30PM	33	3	62	35	34	47	11	30	27	111
5:00PM	30	3	58	35	28	48	11	30	25	108
5:30PM	31	3	44	32	23	46	10	28	25	108
6:00PM	22	3	42	31	18	45	9	28	23	101
6:30PM	26	1	32	28	15	38	6	24	20	103
7:00PM	24	1	33	22	14	41	8	22	22	98
7:30PM	22	1	35	32	12	33	7	20	18	75
8:00PM	28	1	35	22	15	36	6	20	19	77
Capacity	68	19	287	59	57	52	27	33	87	167
% Utlization	72%	16%	34%	78%	70%	96%	41%	91%	36%	87%

APPENDIX D

COMMUNITY SERVICES-RELATED CORRESPONDENCE

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Riverhead Central School District (CSD)
700 Osborn Avenue
Riverhead, NY 11901
attn.: Nancy Carney, Superintendent

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Superintendent Carney:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

The 117 apartments are distributed as 29 studio units, 60 one-bedroom units, and 28 two-bedroom units. We estimate that a total of 14 school-age children would reside at the facility, when fully-occupied.

I am writing to obtain information in regard to Riverhead CSD facilities and conditions that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- Current enrollments of each school in the Riverhead CSD, for Special Education and for General Education students;
- The current per-student estimate of district expenditures for both Special Education and General Education students; and
- Any information regarding enrollment, facility or fiscal conditions of concern to the Riverhead CSD.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./ 31 McDermott Ave. Riverhead

Supplemental EAF

Constance Lassandro <cmlassandro@aol.com>
Tuesday, June 06, 2017 10:00 AM
Phil Malicki
Cmlassandro@aol.com
Fwd: Riverview Project

Sent from

Connie Lassandro
CML Consultant
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Baiting Hollow NY 11933
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516 384-2516 mobile
cmlassandro@aol.com

From: Nancy.Carney@riverhead.net
To: cmlassandro@aol.com
Sent: 6/2/2017 3:29:38 PM Eastern Standard Time
Subject: Riverview Project

Connie,

As per council, we do not take positions on individual projects or make comments. We will comply with Education law in all instances.

Nancy Carney

Superintendent

Riverhead Central School District

700 Osborne Ave

Riverhead, NY 11901

(631) 369-6717, Fax (631) 369-6816

nancy.carney@riverhead.net

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Town of Riverhead Police Department (RPD)
Riverhead Town Justice
210 Howell Avenue
Riverhead, New York 11901
attn: David Hegermiller, Chief of Police

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Chief Hegermiller:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

I am writing to obtain information on RPD facilities, services, and capabilities that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- Precinct in which the project site is located;
- Location of the stationhouse; and
- Patrol sector assigned to the site.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

RIVERHEAD POLICE DEPARTMENT

210 Howell Avenue, Riverhead, New York 11901

David J. Hegermiller
Chief of Police

Tel (631) 727-4500 Ext 335
Fax (631) 727-8630

March 21, 2017

RECEIVED
MAR 24 2017

Mr. Phillip Malicki, CEP, AICP, LEED AP
Senior Environmental Planner
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, NY 11747-2188

Dear Mr. Malicki:

I am in receipt of your letter with regards to the E.A.F. for the Riverview Lofts project (formerly the 221 East Main Street/31 McDermott Avenue project), located in the downtown section of the Town of Riverhead, and offer the following responses to your questions:

1. The Riverhead Police Department does not consist of various precincts. The project site is located entirely within the Department's jurisdiction.

2. Riverhead Police Headquarters is located at 210 Howell Avenue, Riverhead, New York.

3. The proposed site lies within the 601 patrol sector.

At this point in time, we should be able to assume the additional police services needed for your proposed project. Obviously, as with all development in our Township, the increase in population and vehicles will have a negative impact on our agency.

If you have any questions or if I can be of further assistance, please feel free to contact me at (631) 727-4500, ext. 335.

Yours for service,

David J. Hegermiller
Chief of Police

DJH/mk

CC: file

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Riverhead Volunteer Fire Department
540 Roanoke Avenue
Riverhead, New York 11901
attn: Kevin Brooks, Chief of Department

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Chief Brooks:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

I am writing to obtain information on the facilities, services, and capabilities of the Riverhead Volunteer Fire Department that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- The location of the substation(s) which would serve the site;
- A listing of the major pieces of firefighting equipment at each facility;
- The number of firefighters assigned to each facility;
- Indicate any specialized firefighting capabilities of the District; and
- Indicate whether the firefighters are volunteers or full-time.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

RECEIVED
PM FEB 24 2017
NELSON & POPE

ALLEN M. SMITH
Attorney and Counselor at Law

737 Roanoke Avenue
Tel: (631) 727-3947 Riverhead, New York 11901 Fax (631) 727-3950

February 21, 2017

Phil Malicki, CEP, AICP, LEED AP
Nelson, Pope and Voorhis, LLC
572 Walt Whitman Road
Melville, New York 11747

Re: Your File NVP #16068

Dear Mr. Malicki:

Please be advised that I am General Counsel to the Riverhead Fire District. Please accept this letter in response to your letter addressed to Kevin Brooks, Chief of the Department dated January 26, 2017.

The properties referenced in your letter are within the Riverhead Fire District and are protected by the Riverhead Fire Department.

This letter may not be taken to express any opinion about this/these project(s) or the Fire Department's ability to respond to emergencies now or in the future.

It is the District's position that it is incumbent on the project(s) developer(s) to design and construct this/these project(s) in full compliance with all applicable laws, codes, regulations, standards, etc..

At such time as this/these project(s) have been fully designed and engineered the District expects that the Town of Riverhead Fire Marshall shall present the same to the District and Department. The District and Department reserve their right to comment on the same at an appropriate future date.

Very truly yours,

ALLEN M. SMITH

AMS/amw

cc: Board of Fire Commissioners
cc: Chiefs of the Department

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Riverhead Volunteer Ambulance Corps, Inc.
1111 Osborn Avenue
PO Box 924
Riverhead, New York 11901
attn: William Wilkinson, Chief

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Chief Wilkinson:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

I am writing to obtain information on the public ambulance service facilities and capabilities that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- The location of the ambulance substation(s) which would serve the site;
- The number of emergency medical technicians (EMTs) assigned to each facility;
- Indicate any specialized emergency medical capabilities; and
- Indicate whether the EMTs are volunteers or full-time.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

Riverhead
Volunteer Ambulance Corps, Inc.
P.O. Box 924
Riverhead, NY 11901
(631) 727-1686

February 14 2017

Mr. Philip Malicki
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, NY 11747-2188

Dear Mr. Malicki,

Riverhead Volunteer Ambulance Corps can and will provide emergency medical services to your Riverview Lofts project located on East Main Street Riverhead, NY.

If you have any additional questions feel free to contact me.

Regards,

Rod Richardson
Chief
Riverhead Volunteer Ambulance

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Riverhead Water District
1035 Pulaski Street
Riverhead, NY 11901
attn.: Mark Conklin, Superintendent

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use project
Supplemental EAF
NPV #16068

Dear Ms. Kennedy:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces (including two restaurants totaling 481 seats) are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

Assuming the wastewater flow design rates of the Suffolk County Department of Health Services, it is anticipated that the project will consume about 31,560 gallons of water daily.

I am writing to obtain information on water supply facilities that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- The locations of the wells nearest the subject site;
- The aquifer from which the above wells pump;
- The locations and sizes of the RWD distribution system pipes that may be used to supply the site;
- A copy of the district's 2015 Expanded Data Package; and
- A Letter of Water Availability for the project.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

RWD Riverhead Water District

1035 Pulaski Street, Riverhead, New York 11901-3043
Phone: 631.727.3205 FAX: 631.369.4608

Mark K Conklin, Superintendent
Email: conklin@townofriverheadny.gov

Thomas Kruger, Assistant Superintendent
Email: kruger@townofriverheadny.gov

RECEIVED
DEC 06 2016
NELSON & POPE

December 2, 2016

Mr. Phil Malicki
Nelson & Pope
572 Walt Whitman Road
Melville NY 11747

Re: 2015 Drinking Water Quality Report & Supplemental Data

Dear Mr. Malicki:

Pursuant to your request, enclosed please find the above document. If you have any questions or if we may be of further assistance to you, please do not hesitate to contact us.

Very truly yours,

LYNN M BARAUSKAS
Account Clerk Typist

LMB
Enclosure

2015 drinking water quality report

RIVERHEAD WATER DISTRICT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 5103705

Town Board Members
Supervisor Sean M. Walter
Councilman John Dunleavy
Councilwoman Jodi Giglio
Councilman Tim Hubbard
Councilman James Wooten

Superintendent
Mark Conklin

Assistant Superintendent
Thomas Krueger

ANNUAL WATER SUPPLY REPORT **MAY 2016**

Dear Water District Resident:

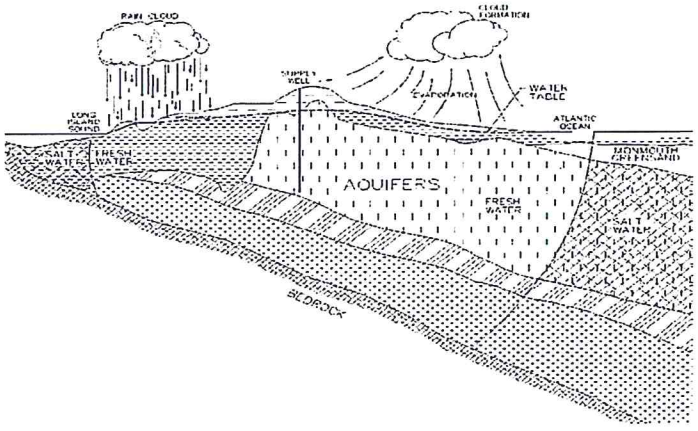
We are pleased to present to you the Riverhead Water District's 2015 Consumer Confidence Report/Annual Water Supply Statement. As shown in this report, the Riverhead Water District continues to provide the residents with a source of water for all of our domestic needs which is reliable and of high quality. Our water is continuously tested to ensure that it meets all drinking water standards. As the Town grows, so does our Water District. We have completed the construction of additional wells and pumping stations to increase our water supply capabilities. Simultaneously, we encourage all of our residents to conserve water so we can limit the expense connected with the construction of new additional facilities just to meet the water demands for the few peak days during the summer.

Our Water District staff works hard to make sure every resident has clean water every time he or she turns on the tap. Additional information about our Water District and our water supply can be found on our Town website, www.townofriverheadny.gov.

SOURCE OF OUR WATER

The source of water for the District is groundwater pumped from seventeen (17) active wells located throughout the community that are drilled into the Glacial and Magothy aquifers beneath Long Island, as shown on the adjacent figure. Generally, the water quality of the aquifer is good to excellent, although there are localized areas of contamination.

The population served by the Riverhead Water District during 2015 was approximately 33,777. The total amount of water withdrawn from the aquifer in 2015 was 3.04 billion gallons, of which approximately 89.8 percent was billed directly to the residents of the District.



THE LONG ISLAND AQUIFER SYSTEM

INFORMATION ABOUT OUR DRINKING WATER

This report is required to be delivered to all residents of our District in compliance with Federal and State regulations. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. The Riverhead Town Board and the District employees are committed to ensuring that you and your family receive the highest quality water.

COST OF WATER

During 2015, the District utilized a unit price billing schedule with the consumer being billed at a rate of $10.90 for the first 5,000 gallons per quarter plus $1.50 for each additional 1,000 gallons for the District's 3/4 inch service size. The billing rate is $19.90 per quarter for first 12,000 gallons for 1 inch meters plus $1.50 for each additional 1,000 gallons. For rates for larger water service sizes, please go to the Town's website.

CONTACTS FOR ADDITIONAL INFORMATION

We are pleased to report that our drinking water is safe and meets all Federal and State requirements with the exception of iron and manganese. If you have any questions about this report or concerning your water utility, please contact Water District Supt. Mark Conklin at (631) 727-3205 or the Suffolk County Department of Health Services at (631) 852-5810. Water District issues are normally discussed at Town Board meetings that are held on the first and third Tuesday of each month. Log on to the website at www.townofriverheadny.gov for times and locations or call (631-727-3205).

The Riverhead Water District monitors for different parameters and contaminants in your drinking water as required by Federal and State laws. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. For more information on contamination and potential health risks, please contact the USEPA Safe Drinking Water Hotline at 1-800-426-4791 or www.epa.gov/safewater.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants.

In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water suppliers. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants, can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by microbial pathogens are available from the Safe Drinking Water Hotline (1-800-426-4791).

The USEPA established a Lead and Copper Rule that requires all public water suppliers to sample and test for lead and copper at the tap. The first testing was required in 1992. All results were excellent indicating that the District's corrosion control treatment program was effective in preventing the leaching of lead and copper from your home's plumbing into your drinking water. The same testing was last conducted in 2013 with the same excellent results.

WATER CONSERVATION MEASURES

The underground water system of Long Island has more than enough water for present water demands. However, saving water will ensure that our future generations will always have a safe and abundant water supply.

The Riverhead Water District continues to implement a water conservation program to help reduce the peak day water use. Several years ago, there were a few days where the total water demand on the District started to exceed the pumping capacity of our system.

Most of this water use was due to lawn irrigation. While the District is proceeding with the construction of new wells to meet the increased water demand, water conservation is necessary to insure we have sufficient water supply during these peak periods for our normal needs as well as the fire fighting protection. A detailed newsletter explaining the water conservation program is attached to this water report. The Riverhead Water District requests that all residents help us conserve water.

WATER QUALITY

In accordance with State regulations, the Riverhead Water District routinely monitors your drinking water for numerous parameters. We test your drinking water for coliform bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes and synthetic organic contaminants. Over 135 separate parameters are tested in each of our wells numerous times per year. The table presented on page 3 depicts the quality of your drinking water. It should be noted that many of these parameters are naturally found in all Long Island drinking water and do not pose any adverse health effects.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. The source of the nitrates is the nitrogen in fertilizers and from on-site septic systems. If you are caring for an infant you should ask advice from your health care provider.

WATER TREATMENT

The Riverhead Water District provides treatment at all wells to improve the quality of the water pumped prior to distribution to the consumer. The pH of the pumped water is adjusted upward to reduce corrosive action between the water and water mains and in-house plumbing by the addition of lime. The water is also chlorinated with calcium hypochlorite to protect against the growth of bacteria in the distribution system. The District also adds iron sequestering agents at all wells as part of the District's overall water treatment program to supplement corrosion control and to maintain iron in the soluble state to minimize water stains on laundry and plumbing fixtures.

The District has constructed an ion exchange filtration system at Plant No. 16 for the removal of perchlorate. Perchlorate is a manmade substance most often associated with the production of fertilizers and fireworks. Research has indicated that continuous high levels of perchlorate may effect the thyroid gland. Although the USEPA has not set a drinking water standard for perchlorate, the NYS Dept. of Health has enacted an action level of 18.0 ug/l. Perchlorate is not present in the majority of the District wells, however, the District has recenlty installed treatment for perchlorate at one of their sites, Plant No. 16 on Edwards Avenue.

2015 DRINKING WATER QUALITY REPORT - TABLE OF DETECTED PARAMETERS

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Maximum Range)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant
Inorganic Contaminants							
Lead	No	August/September 2013	ND - 1.3 ND[1]	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	No	August/September 2013	ND - 0.49 0.30[1]	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Arsenic[2]	No	03/04/15	ND - 5.8	ug/l	n/a	MCL = 10	Naturally occuring
Barium	No	05/27/15	ND - 0.065	mg/l	2	MCL = 2.0	Naturally occurring
Magnesium	No	07/16/15	ND - 3.8	mg/l	n/a	MCL = 22	Naturally occurring
Nickel	No	06/01/15	ND - 0.9	ug/l	n/a	MCL = 100	Naturally occurring
Ammonia (As Nitrogen)	No	06/01/15	ND - 0.28	mg/l	n/a	MCL = 5.0	Runnoff from fertilizer and leaching from septic tanks and sewage
Calcium	No	07/16/15	ND - 17.0	mg/l	n/a	No MCL	Naturally occurring
Sodium	No	05/27/15	4.4 - 100.0	mg/l	n/a	No MCL[3]	Naturally occurring
Chloride	Yes	05/27/15	5.0 - 279.0	mg/l	n/a	MCL = 250	Naturally occurring
Iron	Yes[4]	09/23/15	ND - 950	ug/l	n/a	MCL = 300[4]	Naturally occurring
Manganese	No[4]	10/16/15	ND - 150	ug/l	n/a	MCL = 300	Naturally occurring
Nitrate	No	10/16/15	ND - 7.2	mgl	10	MCL = 10[6]	Runnoff from fertilizer and leaching from septic tanks and sewage
Sulfate	No	05/20/15	ND - 69.1	mg/l	n/a	MCL = 250	Naturally occurring
Unregulated Contaminants							
Perchlorate	No	03/23/15	ND - 13.5	ug/l	n/a	AL = 18[5]	Fertilizers
Synthetic Organic Contaminants Including Pesticides and Herbicides							
bis-(2-ethylhexyl)phthalate	No	06/10/15	ND - 0.9	ug/l	--	MCL = 6	Discharge from industrial facilities
Volatile Organic Contaminants							
None Detected	--	--	ND	--	--	--	--
Radionuclides							
Gross Alpha	No	02/24/12	ND - 0.652	pCi/L	n/a	MCL = 15	Naturally occurring
Radium 226 & 228	No	02/29/12	ND - 0.937	pCi/L	n/a	MCL = 5	Naturally occurring
Unregulated Contaminant Monitoring Rule[5]							
1,2,3-Trichloropropane	No	03/19/14	ND - 0.3	ug/l	n/a	MCL = 5	Industrial solvents, soil fumigant & degreasing agents
Chromium	No	03/19/14	ND - 2.6	ug/l	100	MCL = 100	Natural deposits
Molybdenum	No	03/19/14	ND - 1.2	ug/l	n/a	No MCL	Naturally occurring
Strontium	No	03/19/14	24.6 - 99.2	ug/l	n/a	No MCL	Naturally occurring
Vanadium	No	03/19/14	ND - 3.4	ug/l	n/a	No MCL	Naturally occurring
Hexavelent Chromium	No	03/19/14	ND - 2.6	ug/l	n/a	MCL = 100	Natural deposits
Chlorate	No	03/19/14	ND - 5.2	ug/l	n/a	No MCL	Naturally occurring

Definitions:

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Milligrams per liter (mg/l) - Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l) - Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Non-Detects (ND) - Laboratory analysis indicates that the constituent is not present.

pCi/L - pico Curies per Liter is a measure of radioactivity in water.

[1] - During 2013 we collected and analyzed 31 samples for lead and copper. The 90% percentile is presented as the maximum result. The Action Levels for both lead and copper were not exceeded at any site tested. Retesting is scheduled for 2016. If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. Riverhead Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at http://www.epa.gov/safewater/lead.

[2] – NYS and EPA have promulgated a drinking water arsenic standard of 10 parts per billion. While your drinking water meets the standard for arsenic, it does contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effect on low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

[3] - No MCL has been established for sodium. However, 20 mg/l is a recommended guideline for people on high restricted sodium diets and 270 mg/l for those on moderate sodium diets.

[4] - Iron has no health effects. At 1,000 ug/L a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/L, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/L represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multi-vitamins may contain 3,000 or 4,000 micrograms of iron per capsule. The Food and Nutrition Board of the National Research Council determined an estimated safe and adequate daily dietary intake of manganese to be 2,000-5,000 micrograms for adults. However, many peoples diets lead them to consume even higher amounts of manganese, especially those who consume high amounts of vegetables or are vegetarian. The infant population is of the greatest concern. It would be better if the drinking water were not used to make infant formula since it already contains iron and manganese. Excess manganese produces a brownish color in laundered good and impairs the taste of tea, coffee and other beverages. Concentrations may cause a dark brown or black stain on porcelain plumbing fixtures. As with iron, manganese may form a coating on distribution pipes. These may slough off, causing brown blotches on laundered clothing or black particles in the water.

[5] - Perchlorate is an unregulated contaminant. However, the NYS Dept. of Health has established an action level of 18 ug/l. At Plant No. 5 on Middle Road, Well No. 5-1 is blended with Well No. 5-2 to provide a manganese level below the MCL.

[6] - Water from some of the wells within the Riverhead Water District have a slightly elevated nitrate level. This level is below the maximum contaminant level of 10.0 parts per million. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. The source of the nitrates is the nitrogen in fertilizers and from on-site septic systems. If you are caring for an infant, you should ask advice from your health care provider.

WATER SYSTEM IMPROVEMENTS

The Riverhead Water District has recently completed the construction of an ion exchange water treatment filter to remove perchlorate from the water at their Plant No. 16 site. The perchlorate level from this well or any other District well has never exceeded NYS drinking water guidelines. The District considered implementing treatment as a top priority and in the best interest of its residents. This filter is currently in service reducing perchlorate to non-detectable levels. The District is evaluating what additional improvements to the water system that will be needed in the next few years.

Copies of a Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2015, are available at the Riverhead Water District office located at 1035 Pulaski Street, Riverhead, New York, the Town Clerk's office and the local Public Library.

We, at the Riverhead Water District, work around the clock to provide top quality water to every tap throughout the community. We ask that all our customers help us protect our water supply, which will improve our way of life and our children's future.

The Riverhead Water District normally conducts over 1,000 water quality tests throughout the year, testing for over 130 different contaminants which have been undetected in our water supply including:

Cadmium	Aldicarb Sulfone	Carbon Tetrachloride
Mercury	Aldicarbsulfoxide	1,1-Dichloropropene
Selenium	Aldicarb	1,2-Dichloroethane
Silver	Total Aldicarbs	Trichloroethene
Color	Oxamyl	1,2-Dichloropropane
Turbidity	Methomyl	Dibromomethane
Odor	3-Hydroxycarbofuran	Trans-1,3-Dichloropropene
Total Alkalinity	Carbofuran	cis-1,3-Dichloropropene
Detergents (MBAS)	Carbaryl	1,1,2-Trichloroethane
Free Cyanide	Glyphosate	Tetrachloroethene
Fluoride	Diquat	1,3-Dichloropropane
Antimony	Endothall	Chlorobenzene
Beryllium	1,2-Dibromoethane (EDB)	1,1,1,2-Tetrachloroethane
Thallium	1,2-Dibromo-3-Chl.Propane	Bromobenzene
Lindane	Dioxin	1,1,2,2-Tetrachloroethane
Heptachlor	Chloroacetic Acid	2-Chlorotoluene
Aldrin	Bromoacetic Acid	4-Chlorotoluene
Heptachloro Epoxide	Dichloroacetic Acid	1,2-Dichlorobenzene
Dieldrin	Trichloroacetic Acid	1,3-Dichlorobenzene
Endrin	Dibromoacetic Acid	1,4-Dichlorobenzene
Methoxychlor	Total Haloacetic Acid	1,24-Trichlorobenzene
Toxaphene	Chloroform	Hexachlorobutadiene
Chlordane	Bromodichloromethane	1,2,3-Trichlorobenzene
Total PCBs	Dibromochloromethane	Benzene
Propachlor	Bromoform	Toluene
Alachlor	Total Trihalomethanes	Ethylbenzene
Simazine	Gross Beta	M.P-Xylene
Atrazine	Radium 226	O-Xylene
Metolachlor	Dichlorodifluoromethane	Styrene
Metribuzin	Chloromethane	Isopropylbenzene (Cumene)
Butachlor	Vinyl Chloride	N-Propylbenzene
2,4-D	Bromomethane	1,3,5-Trimethylbenzene
2,4,5-TP (Silvex)	Chloroethane	Tert-Butylbenzene
Dinoseb	Trichlorofluoromethane	1,2,4-Trimethylbenzene
Dalapon	Chlorodifluoromethane	Sec-Butylbenzene
Picloram	1,1-Dichloroethene	4-Isopropyltoluene (P-Cumene)
Dicamba	Methylene Chloride	N-Butylbenzene
Pentachlorophenol	Trans-1,2-Dichloroethene	Methyl Tert.Butyl Ether (MTBE)
Hexachlorocyclopentadiene	1,1-Dichloroethane	
bis(2-Ethylhexyl)adipate	cis-1,2-Dichloroethene	
Trihalomethanes (THMs)	2,2-Dichloropropane	
Hexachlorobenzene	Bromochloromethane	
Benzo(A)Pyrene	1,1,1-Trichloroethane	

SOURCE WATER ASSESSMENT

The NYSDOH has completed a source water assessment for this system, based on available information. Known and possible contamination sources to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contaminant can travel through the environment to reach the well. The susceptibility rating is an estimate of the potential for contamination of the source water. It does not mean that the water delivered to consumers is, or will become, contaminated. (See section "Water Quality" for a list of contaminants that have been detected.) The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, our water is derived from 17 active wells. The source water assessment has rated most of the wells as having a high susceptibility to industrial solvents, pesticides and nitrates and microbial contamination. The elevated susceptibility ratings are due primarily to the various land uses and their related point sources of contamination in the assessment area. The land uses include unsewered commercial, industrial and residential, as well as agricultural land use. While the source water assessment rates our well as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

A copy of the assessment, including a map of the assessment area, can be obtained by contacting the Water District.



RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (mg/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348[1]		WELL NO. 2 S-7261[1]		WELL NO. 3A S-15117[1]		WELL NO. 4-1 S-30271[1]		WELL NO. 4-2 S-34732[1]	
			MAX. RESULT (raw/treat)	AVG. RESULT (raw/treat)	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
INORGANIC												
ARSENIC	10.0 ug/l	3.0 ug/l	5.8[5]	5.2	4.6[5]	4.2	3.7[5]	3.6	ND	ND	2.2[5]	2.0
BARIUM	2.0 mg/l	0.2 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM	5.0 ug/l	5.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHROMIUM	0.10 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
COPPER	[1.3] mg/l	0.02 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE	2.2 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LEAD	[15.0] ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MERCURY	2.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SELENIUM	10.0 mg/l	5.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SILVER	0.1 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SODIUM	**20/270 mg/l	0.2 mg/l	4.7	4.7	4.5	4.5	4.4	4.4	5.0	5.0	5.3	5.3
SPECIFIC CONDUCTIVITY	None	None	82	82	84	84	78	78	75	75	97	97
ZINC	5.0 mg/l	0.02 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
COLOR	15 Units	5 Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ODOR	3 Units	0 Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
IRON	0.3 mg/l	0.02 mg/l	0.2	0.2	***1.0[6]	***0.8	0.1	0.1	0.02	0.02	***0.7[4]	***0.6
MANGANESE	0.3 mg/l	0.01 mg/l	ND	ND	0.04	0.0	ND	ND	ND	ND	0.04	0.04
AMMONIA	None	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	0.3	0.3
NITRITE	1.0 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NITRATE	10.0 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORIDE	250 mg/l	2.0 mg/l	6.1	6.1	6.2	6.2	5.7	5.7	5.9	5.9	8.1	8.1
TOTAL HARDNESS	None	1.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL ALKALINITY	None	0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (BEFORE TREATMENT)	None	None	6.5	6.5	7.0	7.0	6.6	6.6	6.7	6.7	6.4	6.4
TOTAL DISSOLVED SOLIDS	None	5.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SULFATE	250 mg/l	5.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	15.4	15.4
ANTIMONY	6.0 ug/l	5.9 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BERYLLIUM	4.0 ug/l	0.3 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CALCIUM	None	1.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAGNESIUM	None	1.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NICKEL	0.10 mg/l	0.04 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	0.001	0.001
THALLIUM	2.0 ug/l	0.3 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYANIDE	0.2 mg/l	0.010 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PERCHLORATE	18.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
** - 20 mg/l IS THE LIMIT FOR PEOPLE ON HIGHLY RESTRICTED SODIUM DIETS AND 270 mg/l FOR THOSE ON MODERATELY RESTRICTED SODIUM DIETS
[ ] - USEPA/NYSDH ACTION LEVEL
*** - EXCEEDS NEW YORK STATE MAXIMUM CONTAMINANT LEVEL FOR POTABLE WATER BEFORE TREATMENT.
THE STANDARD FOR IRON IS A SECONDARY STANDARD FOR AESTHETICS ONLY. IRON POSES NO HEALTH RISKS.
( ) - NUMBER OF SAMPLES COLLECTED AND TESTING DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348(1)		WELL NO. 2 S-7261(1)		WELL NO. 3A S-15117(1)		WELL NO. 4-1 S-30271(1)		WELL NO. 4-2 S-34732(1)	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC)												
LINDANE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEPTACHLOR	0.4 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALDRIN	5.0 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEPTACHLOR EPOXIDE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIELDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHOXYCHLOR	40.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOXAPHENE	3.0 ug/l	2.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORDANE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL PCBs	0.5 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PROPACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALACHLOR	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SIMAZINE	4.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ATRAZINE	3.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METOLACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METRIBUZIN	50.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BUTACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-10834[1]		WELL NO. 2 S-7261[1]		WELL NO. 3A S-15117[1]		WELL NO. 4-1 S-30271[1]		WELL NO. 4-2 S-34732[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC) (CONT'D.)												
2,4-D	50.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-TP (SILVEX)	10.0 ug/l	0.13 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DINOSEB	7.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DALAPON	200 ug/l	0.7 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PICLORAM	500 ug/l	0.6 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DICAMBA	50.0 ug/l	0.08 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PENTACHLOROPHENOL	1.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	50.0 ug/l	0.64 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-ETHYLHEXYL)ADIPATE	400 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-ETHYLHEXYL)PHTHALATE	6.0 ug/l	3.0 ug/l	ND	ND	0.9	0.9	ND	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	1.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO(A)PYRENE	0.2 ug/l	0.1 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALDICARB SULFONE	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALDICARBSULFOXIDE	4.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALDICARB	3.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL ALDICARBS	7.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
OXAMYL	200 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHOMYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-HYDROXYCARBOFURAN	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBOFURAN	40.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBARYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GLYPHOSATE	700 ug/l	10.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIQUAT	20 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDOTHALL	100 ug/l	50.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DIBROMOETHANE (EDB)	0.05 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DIBROMO-3-CHL.PROPANE	0.2 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348[1]		WELL NO. 2 S-7261[1]		WELL NO. 3A S-15117[1]		WELL NO. 4-1 S-30271[1]		WELL NO. 4-2 S-34732[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS												
DICHLORODIFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOCHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NOS. 2 & 3 ARE OUT OF SERVICE

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348(1) MAX. RESULT	WELL NO. 1A S-108348(1) AVG. RESULT	WELL NO. 2 S-7261(1) MAX. RESULT	WELL NO. 2 S-7261(1) AVG. RESULT	WELL NO. 3A S-15117(1) MAX. RESULT	WELL NO. 3A S-15117(1) AVG. RESULT	WELL NO. 4-1 S-30271(1) MAX. RESULT	WELL NO. 4-1 S-30271(1) AVG. RESULT	WELL NO. 4-2 S-34732(1) MAX. RESULT	WELL NO. 4-2 S-34732(1) AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
1,3-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBUTADIENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M,P-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
STYRENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE (CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-PROPYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348[1]		WELL NO. 2 S-7261[1]		WELL NO. 3A S-15117[1]		WELL NO. 4-1 S-30271[1]		WELL NO. 4-2 S-34732[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
TERT-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-ISOPROPYLTOLUENE (P-CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT.BUTYL ETHER (MTBE)	10.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-109348(1)		WELL NO. 2 S-7261(1)		WELL NO. 3A S-15117(1)		WELL NO. 4-1 S-30271(1)		WELL NO. 4-2 S-34732(1)	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
TRIHALOMETHANES AND HALOACETIC ACIDS												
CHLOROACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL HALOACETIC ACID	60 ug/l	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL TRIHALOMETHANES	80 ug/l	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RADIONUCLIDES												
GROSS ALPHA	15 pCi/L	< 3 pCi/L	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
GROSS BETA	50 pCi/L	< 3 pCi/L	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
RADIUM 226	5 pCi/L	< 3 pCi/L	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
RADIUM 228	5 pCi/L	< 3 pCi/L	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	

CONT. - CONTAMINANT
ND - NOT DETECTED
pCi/L - PICOGRAMS PER LITER
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

WELL NOS. 2 & 3 ARE OUT OF SERVICE

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348 MAX. RESULT	WELL NO. 1A S-108348 AVG. RESULT	WELL NO. 2 S-7261 MAX. RESULT	WELL NO. 2 S-7261 AVG. RESULT	WELL NO. 3A S-15117 MAX. RESULT	WELL NO. 3A S-15117 AVG. RESULT	WELL NO. 4-1 S-30271 MAX. RESULT	WELL NO. 4-1 S-30271 AVG. RESULT	WELL NO. 4-2 S-34732 MAX. RESULT	WELL NO. 4-2 S-34732 AVG. RESULT
UCMR3												
1,4 DIOXANE	50 ug/l	0.7 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOLATILES												
1,1-DICHLOROETHANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLORPROPANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-BUTADIENE	50 ug/l	0.1 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOCHLOROMETHANE	50 ug/l	0.06 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORODIFLUOROMETHANE	5.0 ug/l	0.08 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PERFLUOROCHEMICALS												
PERFLUOROBUTANESULFONIC ACI	5.0 ug/l	0.9 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUOROHEPTANOIC ACID	5.0 ug/l	0.01 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUOROHEXANESULFONIC ACI	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUORONONANOIC ACID	5.0 ug/l	0.02 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUOROOCTANESULFONIC ACI	5.0 ug/l	0.04 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUOROOCTANOIC ACID	5.0 ug/l	0.02 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
METALS												
CHROMIUM	100 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
COBALT		1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM		1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
STRONTIUM		0.3 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VANADIUM		0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXAVELENT CHROMIUM		0.03 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORATE		20 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HORMONES												
17-ALPHA-ETHYNYLESTRADIOL	50 ug/l	0.0004 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
17-BETA-ESTRADIOL	50 ug/l	0.0009 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
4-ANDROSTENE-3,17-DIONE	50 ug/l	0.0003 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
EQUILIN	50 ug/l	0.004 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
ESTRIOL	50 ug/l	0.0008 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
ESTRONE	50 ug/l	0.002 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
TESTOSTERONE	50 ug/l	0.0001 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED

CONT. - CONTAMINANT
ND - NOT OETECTED
Pg/L - PICOGRAMS PER LITER
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (mg/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685[1]		WELL NO. 5-2A S-124088[1]		WELL NO. 7-1 S-34272		WELL NO. 7-2 S-89133[1]		WELL NO. 7-3 S-105439[1]	
			MAX. RESULT (raw/treat)	AVG. RESULT (raw/treat)	MAX. RESULT (raw/treat)	AVG. RESULT (raw/treat)	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
INORGANIC												
ARSENIC	10.0 ug/l	3.0 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
BARIUM	2.0 mg/l	0.2 mg/l	0.07	0.07	0.03	0.03			0.003	0.003	ND	ND
CADMIUM	5.0 ug/l	5.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHROMIUM	0.10 mg/l	0.01 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
COPPER	[1.3] mg/l	0.02 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
FLUORIDE	2.2 mg/l	0.1 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
LEAD	[15.0] ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
MERCURY	2.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
SELENIUM	10.0 mg/l	5.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
SILVER	0.1 mg/l	0.01 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
SODIUM	**20/270 mg/l	0.2 mg/l	18.0	18.0	15.0	15.0			4.4	4.4	4.9	4.9
SPECIFIC CONDUCTIVITY	None	None	227	227	197	197			58	58	82	82
ZINC	5.0 mg/l	0.02 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
COLOR	15 Units	5 Units	ND	ND	ND	ND			ND	ND	ND	ND
ODOR	3 Units	0 Units	ND	ND	ND	ND			ND	ND	ND	ND
IRON	0.3 mg/l	0.02 mg/l	0.03	0.03	0.03	0.03			ND	ND	ND	ND
MANGANESE	0.3 mg/l	0.01 mg/l	0.4[10]/0.2[3]	0.3/0.1	0.1[7]/0.2[3]	0.02/0.1			ND	ND	ND	ND
AMMONIA	None	0.1 mg/l	0.2	0.2	ND	ND			ND	ND	ND	ND
NITRITE	1.0 mg/l	0.1 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
NITRATE	10.0 mg/l	0.1 mg/l	7.2[6]	6.0	3.40	3.40			0.3	0.3	0.2	0.2
CHLORIDE	250 mg/l	2.0 mg/l	36.2	36.2	29.40	29.40			6.1	6.1	5.4	5.4
TOTAL HARDNESS	None	1.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL ALKALINITY	None	0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
pH (BEFORE TREATMENT)	None	None	6.4	6.4	6.70	6.70			6.8	6.8	6.7	6.7
TOTAL DISSOLVED SOLIDS	None	5.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
SULFATE	250 mg/l	5.0 mg/l	21.0	21.0	22.7	22.7			ND	ND	ND	ND
ANTIMONY	6.0 ug/l	5.9 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BERYLLIUM	4.0 ug/l	0.3 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CALCIUM	None	1.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
MAGNESIUM	None	1.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
NICKEL	0.10 mg/l	0.04 mg/l	ND	ND	ND	ND			0.001	0.001	0.0006	0.0006
THALLIUM	2.0 ug/l	0.3 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CYANIDE	0.2 mg/l	0.010 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
PERCHLORATE	18.0 ug/l	1.0 ug/l	ND	ND	1.20	1.20			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
** - 20 mg/l IS THE LIMIT FOR PEOPLE ON HIGHLY RESTRICTED SODIUM DIETS AND 270 mg/l FOR THOSE ON MODERATELY RESTRICTED SODIUM DIETS
[ ] - USEPA/NYSDH ACTION LEVEL
*** - EXCEEDS NEW YORK STATE MAXIMUM CONTAMINANT LEVEL FOR POTABLE WATER BEFORE TREATMENT.
THE STANDARD FOR IRON IS A SECONDARY STANDARD FOR AESTHETICS ONLY. IRON POSES NO HEALTH RISKS.
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685[1]		WELL NO. 5-2A S-88466[1]		WELL NO. 7-1 S-34272[1]		WELL NO. 7-2 S-89133[1]		WELL NO. 7-3 S-105439[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC)												
LINDANE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	OUT OF SERVICE		ND	ND	ND	ND
HEPTACHLOR	0.4 ug/l	0.025 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALDRIN	5.0 ug/l	0.025 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEPTACHLOR EPOXIDE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIELDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ENDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METHOXYCHLOR	40.0 ug/l	0.25 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOXAPHENE	3.0 ug/l	2.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLORDANE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL PCBs	0.5 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
PROPACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALACHLOR	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
SIMAZINE	4.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ATRAZINE	3.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METOLACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METRIBUZIN	50.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BUTACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685[1] MAX. RESULT	WELL NO. 5-1 S-66685[1] AVG. RESULT	WELL NO. 5-2A S-88466[1] MAX. RESULT	WELL NO. 5-2A S-88466[1] AVG. RESULT	WELL NO. 7-1 S-34272[1] MAX. RESULT	WELL NO. 7-1 S-34272[1] AVG. RESULT	WELL NO. 7-2 S-89133[1] MAX. RESULT	WELL NO. 7-2 S-89133[1] AVG. RESULT	WELL NO. 7-3 S-105439[1] MAX. RESULT	WELL NO. 7-3 S-105439[1] AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC) (CONT'D.)												
2,4-D	50.0 ug/l	0.25 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
2,4,5-TP (SILVEX)	10.0 ug/l	0.13 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DINOSEB	7.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DALAPON	200 ug/l	0.7 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
PICLORAM	500 ug/l	0.6 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DICAMBA	50.0 ug/l	0.08 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
PENTACHLOROPHENOL	1.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	50.0 ug/l	0.64 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
bis(2-ETHYLHEXYL)ADIPATE	400 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
bis(2-ETHYLHEXYL)PHTHALATE	6.0 ug/l	3.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEXACHLOROBENZENE	1.0 ug/l	0.25 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BENZO(A)PYRENE	0.2 ug/l	0.1 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALDICARB SULFONE	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALDICARBSULFOXIDE	4.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALDICARB	3.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL ALDICARBS	7.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
OXAMYL	200 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METHOMYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
3-HYDROXYCARBOFURAN	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CARBOFURAN	40.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CARBARYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
GLYPHOSATE	700 ug/l	10.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIQUAT	20 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ENDOTHALL	100 ug/l	50.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DIBROMOETHANE (EDB)	0.05 ug/l	0.02 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DIBROMO-3-CHL.PROPANE	0.2 ug/l	0.02 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685[1]		WELL NO. 5-2 S-88466[1]		WELL NO. 7-1 S-34272		WELL NO. 7-2 S-89133[1]		WELL NO. 7-3 S-105439[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS												
DICHLORODIFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
VINYL CHLORIDE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METHYLENE CHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
cis-1,2 DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
2,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOCHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CARBON TETRACHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIBROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
cis-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TETRACHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685(1) MAX. RESULT	WELL NO. 5-1 S-66685(1) AVG. RESULT	WELL NO. 5-2 S-88466(1) MAX. RESULT	WELL NO. 5-2 S-88466(1) AVG. RESULT	WELL NO. 7-1 S-34272 MAX. RESULT	WELL NO. 7-1 S-34272 AVG. RESULT	WELL NO. 7-2 S-89133(1) MAX. RESULT	WELL NO. 7-2 S-89133(1) AVG. RESULT	WELL NO. 7-3 S-105439(1) MAX. RESULT	WELL NO. 7-3 S-105439(1) AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
1,3-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
CHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2,3-TRICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
2-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
4-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,3-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,4-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEXACHLOROBUTADIENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
M,P-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
O-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
STYRENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ISOPROPYLBENZENE (CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
N-PROPYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685 (1)		WELL NO. 5-2 S-88466 (1)		WELL NO. 7-1 S-34272		WELL NO. 7-2 S-89133 (1)		WELL NO. 7-3 S-105439 (1)	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
TERT-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
SEC-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
4-ISOPROPYLTOLUENE (P-CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
N-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METHYL TERT.BUTYL ETHER (MTBE)	10.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

ND - NOT DETECTED
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

GREENLAWN WATER DISTRICT

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685(1) MAX. RESULT	WELL NO. 5-1 S-66685(1) AVG. RESULT	WELL NO. 5-2 S-88466(1) MAX. RESULT	WELL NO. 5-2 S-88466(1) AVG. RESULT	WELL NO. 7-1 S-34272 MAX. RESULT	WELL NO. 7-1 S-34272 AVG. RESULT	WELL NO. 7-2 S-89133(1) MAX. RESULT	WELL NO. 7-2 S-89133(1) AVG. RESULT	WELL NO. 7-3 S-105439(1) MAX. RESULT	WELL NO. 7-3 S-105439(1) AVG. RESULT
TRIHALOMETHANES AND HALOACETIC ACIDS												
CHLOROACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
BROMOACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIBROMOACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL HALOACETIC ACID	60 ug/l	< 2.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLOROFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMODICHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIBROMOCHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL TRIHALOMETHANES	80 ug/l	< 1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
RADIONUCLIDES												
GROSS ALPHA	15 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
GROSS BETA	50 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
RADIUM 226	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
RADIUM 228	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED

CONT. - CONTAMINANT
ND - NOT DETECTED
pCi/L - PICOGRAMS PER LITER
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685		WELL NO. 5-2 S-88466		WELL NO. 7-1 S-34272		WELL NO. 7-2 S-89133		WELL NO. 7-3 S-105439	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
UCMR3												
1,4 DIOXANE	50 ug/l	0.7 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
VOLATILES												
1,1-DICHLOROETHANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2,3-TRICHLORPROPANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,3-BUTADIENE	50 ug/l	0.1 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOCHLOROMETHANE	50 ug/l	0.06 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLORODIFLUOROMETHANE	5.0 ug/l	0.08 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
PERFLUOROCHEMICALS												
PERFLUOROBUTANESULFONIC ACI	5.0 ug/l	0.9 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUOROHEPTANOIC ACID	5.0 ug/l	0.01 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUOROHEXANESULFONIC ACI	5.0 ug/l	0.03 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUORONONANOIC ACID	5.0 ug/l	0.02 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUOROOCTANESULFONIC ACI	5.0 ug/l	0.04 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUOROOCTANOIC ACID	5.0 ug/l	0.02 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
METALS												
CHROMIUM	100 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
COBALT		1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
MOLYBDENUM		1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
STRONTIUM		0.3 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
VANADIUM		0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEXAVELENT CHROMIUM		0.03 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLORATE		20 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HORMONES												
17-ALPHA-ETHYNYLESTRADIOL	50 ug/l	0.0004 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
17-BETA-ESTRADIOL	50 ug/l	0.0009 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
4-ANDROSTENE-3,17-DIONE	50 ug/l	0.0003 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
EQUILIN	50 ug/l	0.004 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
ESTRIOL	50 ug/l	0.0008 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
ESTRONE	50 ug/l	0.002 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
TESTOSTERONE	50 ug/l	0.0001 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (mg/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-17707[1] MAX. RESULT	WELL NO. 11-1 S-17707[1] AVG. RESULT	WELL NO. 11-2 S-1229181[1] MAX. RESULT	WELL NO. 11-2 S-1229181[1] AVG. RESULT	WELL NO. 12-1 S-49605[1] MAX. RESULT	WELL NO. 12-1 S-49605[1] AVG. RESULT	WELL NO. 12-2 S-35110 MAX. RESULT	WELL NO. 12-2 S-35110 AVG. RESULT	WELL NO. 15-1A S-129655[3] MAX. RESULT	WELL NO. 15-1A S-129655[3] AVG. RESULT
INORGANIC												
ARSENIC	10.0 ug/l	3.0 ug/l	ND	ND	3.0[5]	2.6	ND	ND	OUT OF	SERVICE	ND	ND
BARIUM	2.0 mg/l	0.2 mg/l	0.01	0.01	0.004	0.004	0.01	0.01			0.06	0.06
CADMIUM	5.0 ug/l	5.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CHROMIUM	0.10 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
COPPER	[1.3] mg/l	0.02 mg/l	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*			*ND*	*ND*
FLUORIDE	2.2 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
LEAD	[15.0] ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
MERCURY	2.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
SELENIUM	10.0 mg/l	5.0 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
SILVER	0.1 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
SODIUM	**20/270 mg/l	0.2 mg/l	5.6	5.6	7.9	7.9	5.0	5.0			9.4	9.4
SPECIFIC CONDUCTIVITY	None	None	132	132	126	126	165	165			285[3]	274
ZINC	5.0 mg/l	0.02 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
COLOR	15 Units	5 Units	ND	ND	ND	ND	ND	ND			ND	ND
ODOR	3 Units	0 Units	ND	ND	ND	ND	ND	ND			ND	ND
IRON	0.3 mg/l	0.02 mg/l	ND	ND	ND	ND	ND	ND			0.02	0.02
MANGANESE	0.3 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
AMMONIA	None	0.1 mg/l	ND	ND	0.2	0.2	ND	ND			ND	ND
NITRITE	1.0 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
NITRATE	10.0 mg/l	0.1 mg/l	0.1	0.1	ND	ND	0.8	0.8			2.5	2.5
CHLORIDE	250 mg/l	2.0 mg/l	6.3	6.3	7.8	7.8	5.0	5.0			102.0[31]	18.6
TOTAL HARDNESS	None	1.0 mg/l	ND	ND	ND	ND	ND	ND			*ND*	*ND*
TOTAL ALKALINITY	None	0 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
pH (BEFORE TREATMENT)	None	None	8.0	8.0	7.6	7.6	7.0	7.0			7.2	7.2
TOTAL DISSOLVED SOLIDS	None	5.0 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
SULFATE	250 mg/l	5.0 mg/l	12.3	12.3	ND	ND	14.8	14.8			69.1	69.1
ANTIMONY	6.0 ug/l	5.9 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BERYLLIUM	4.0 ug/l	0.3 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CALCIUM	None	1.0 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
MAGNESIUM	None	1.0 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
NICKEL	0.10 mg/l	0.04 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
THALLIUM	2.0 ug/l	0.3 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CYANIDE	0.2 mg/l	0.010 mg/l	ND	ND	ND	ND	ND	ND			ND	ND
PERCHLORATE	18.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			1.8	1.8

CONT. - CONTAMINANT
** - 20 mg/l IS THE LIMIT FOR PEOPLE ON HIGHLY RESTRICTED SODIUM DIETS AND 270 mg/l FOR THOSE ON MODERATELY RESTRICTED SODIUM DIETS
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-17707[1] MAX. RESULT	WELL NO. 11-1 S-17707[1] AVG. RESULT	WELL NO. 11-2 S-122918T[1] MAX. RESULT	WELL NO. 11-2 S-122918T[1] AVG. RESULT	WELL NO. 12-1 S-49605[1] MAX. RESULT	WELL NO. 12-1 S-49605[1] AVG. RESULT	WELL NO. 12-2 S-35110[1] MAX. RESULT	WELL NO. 12-2 S-35110[1] AVG. RESULT	WELL NO. 15-1A S-129655[1] MAX. RESULT	WELL NO. 15-1A S-129655[1] AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC)												
LINDANE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND
HEPTACHLOR	0.4 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALDRIN	5.0 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
HEPTACHLOR EPOXIDE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DIELDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ENDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METHOXYCHLOR	40.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TOXAPHENE	3.0 ug/l	2.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CHLORDANE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TOTAL PCBs	0.5 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
PROPACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALACHLOR	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
SIMAZINE	4.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ATRAZINE	3.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METOLACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METRIBUZIN	50.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BUTACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX CONT LEVEL	DETECT LIMITS	WELL NO. 11-1 S-17707 (1) MAX. RESULT	WELL NO. 11-1 S-17707 (1) AVG. RESULT	WELL NO. 11-2 S-122918T (1) MAX. RESULT	WELL NO. 11-2 S-122918T (1) AVG. RESULT	WELL NO. 12-1 S-49605 (1) MAX. RESULT	WELL NO. 12-1 S-49605 (1) AVG. RESULT	WELL NO. 12-2 S-35110 (1) MAX. RESULT	WELL NO. 12-2 S-35110 (1) AVG. RESULT	WELL NO. 15-1A S-129655 (1) MAX. RESULT	WELL NO. 15-1A S-129655 (1) AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC) (CONT'D.)												
2,4-D	50.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND
2,4,5-TP (SILVEX)	10.0 ug/l	0.13 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DINOSEB	7.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DALAPON	200 ug/l	0.7 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
PICLORAM	500 ug/l	0.6 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DICAMBA	50.0 ug/l	0.08 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
PENTACHLOROPHENOL	1.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
HEXACHLOROCYCLOPENTADIENE	50.0 ug/l	0.64 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
bis(2-ETHYLHEXYL)ADIPATE	400 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
bis(2-ETHYLHEXYL)PHTHALATE	6.0 ug/l	3.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
HEXACHLOROBENZENE	1.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BENZO(A)PYRENE	0.2 ug/l	0.1 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALDICARB SULFONE	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALDICARBSULFOXIDE	4.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALDICARB	3.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TOTAL ALDICARBS	7.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
OXAMYL	200 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METHOMYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
3-HYDROXYCARBOFURAN	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CARBOFURAN	40.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CARBARYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
GLYPHOSATE	700 ug/l	10.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DIQUAT	20 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ENDOTHALL	100 ug/l	50.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2-DIBROMOETHANE (EDB)	0.05 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2-DIBROMO-3-CHL.PROPANE	0.2 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND			ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-17707[1] MAX. RESULT	WELL NO. 11-1 S-17707[1] AVG. RESULT	WELL NO. 11-2 S-122918[1] MAX. RESULT	WELL NO. 11-2 S-122918[1] AVG. RESULT	WELL NO. 12-1 S-49605[1] MAX. RESULT	WELL NO. 12-1 S-49605[1] AVG. RESULT	WELL NO. 12-2 S-35110 MAX. RESULT	WELL NO. 12-2 S-35110 AVG. RESULT	WELL NO. 15-1A S-129655[1] MAX. RESULT	WELL NO. 15-1A S-129655[1] AVG. RESULT
VOLATILE ORGANICS												
DICHLORODIFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	OUT OF SERVICE		ND	ND
CHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
VINYL CHLORIDE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TRICHLOROFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METHYLENE CHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TRANS-1,2-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
cis-1,2 DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
2,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BROMOCHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1,1-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CARBON TETRACHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TRICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DIBROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TRANS-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
cis-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1,2-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TETRACHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-1707[1] MAX. RESULT	WELL NO. 11-1 S-1707[1] AVG. RESULT	WELL NO. 11-2 S-122918[1] MAX. RESULT	WELL NO. 11-2 S-122918[1] AVG. RESULT	WELL NO. 12-1 S-49605[1] MAX. RESULT	WELL NO. 12-1 S-49605[1] AVG. RESULT	WELL NO. 12-2 S-35110 MAX. RESULT	WELL NO. 12-2 S-35110 AVG. RESULT	WELL NO. 15-1A S-129655[1] MAX. RESULT	WELL NO. 15-1A S-129655[1] AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
1,3-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND
CHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1,1,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BROMOBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1,2,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2,3-TRICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
2-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
4-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,3-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,4-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2,4-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
HEXACHLOROBUTADIENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2,3-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
M,P-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
O-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
STYRENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ISOPROPYLBENZENE (CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
N-PROPYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,3,5-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-17707[1] MAX. RESULT	WELL NO. 11-1 S-17707[1] AVG. RESULT	WELL NO. 11-2 S-122918T[1] MAX. RESULT	WELL NO. 11-2 S-122918T[1] AVG. RESULT	WELL NO. 12-1 S-49605[1] MAX. RESULT	WELL NO. 12-1 S-49605[1] AVG. RESULT	WELL NO. 12-2 S-35110 MAX. RESULT	WELL NO. 12-2 S-35110 AVG. RESULT	WELL NO. 15-1A S-129655[1] MAX. RESULT	WELL NO. 15-1A S-129655[1] AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
TERT-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND
1,2,4-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
SEC-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
4-ISOPROPYLTOLUENE (P-CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
N-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METHYL TERT.BUTYL ETHER (MTBE)	10.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND

ND - NOT DETECTED
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-17707 (1) MAX. RESULT	WELL NO. 11-1 S-17707 (1) AVG. RESULT	WELL NO. 11-2 S-122918T (1) MAX. RESULT	WELL NO. 11-2 S-122918T (1) AVG. RESULT	WELL NO. 12-1 S-49605 (1) MAX. RESULT	WELL NO. 12-1 S-49605 (1) AVG. RESULT	WELL NO. 12-2 S-35110 MAX. RESULT	WELL NO. 12-2 S-35110 AVG. RESULT	WELL NO. 15-1A S-129655 (1) MAX. RESULT	WELL NO. 15-1A S-129655 (1) AVG. RESULT
TRIHALOMETHANES AND HALOACETIC ACIDS												
CHLOROACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND
BROMOACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TRICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DIBROMOACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TOTAL HALOACETIC ACID	60 ug/l	< 2.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CHLOROFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BROMODICHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DIBROMOCHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BROMOFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TOTAL TRIHALOMETHANES	80 ug/l	< 1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
RADIONUCLIDES												
GROSS ALPHA	15 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED
GROSS BETA	50 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED
RADIUM 226	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED
RADIUM 228	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED

ND - NOT DETECTED
pCi/L - PICOGRAMS PER LITER
WELL 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-17707 MAX. RESULT	WELL NO. 11-1 S-17707 AVG. RESULT	WELL NO. 11-2 S-122918T MAX. RESULT	WELL NO. 11-2 S-122918T AVG. RESULT	WELL NO. 12-1 S-49605 MAX. RESULT	WELL NO. 12-1 S-49605 AVG. RESULT	WELL NO. 12-2 S-35110 MAX. RESULT	WELL NO. 12-2 S-35110 AVG. RESULT	WELL NO. 15-1A S-129655 MAX. RESULT	WELL NO. 15-1A S-129655 AVG. RESULT
UCMR3												
1,4 DIOXANE	50 ug/l	0.7 ug/l	ND	ND	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND
VOLATILES												
1,1-DICHLOROETHANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2,3-TRICHLORPROPANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,3-BUTADIENE	50 ug/l	0.1 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BROMOCHLOROMETHANE	50 ug/l	0.06 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BROMOMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND			ND	ND.
CHLORODIFLUOROMETHANE	5.0 ug/l	0.08 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CHLOROMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
PERFLUOROCHEMICALS												
PERFLUOROBUTANESULFONIC ACI	5.0 ug/l	0.9 ug/l	NOT	TESTED	NOT	TESTED	ND	ND			NOT	TESTED
PERFLUOROHEPTANOIC ACID	5.0 ug/l	0.01 ug/l	NOT	TESTED	NOT	TESTED	ND	ND			NOT	TESTED
PERFLUOROHEXANESULFONIC ACI	5.0 ug/l	0.03 ug/l	NOT	TESTED	NOT	TESTED	ND	ND			NOT	TESTED
PERFLUORONONANOIC ACID	5.0 ug/l	0.02 ug/l	NOT	TESTED	NOT	TESTED	ND	ND			NOT	TESTED
PERFLUOROOCTANESULFONIC ACI	5.0 ug/l	0.04 ug/l	NOT	TESTED	NOT	TESTED	ND	ND			NOT	TESTED
PERFLUOROOCTANOIC ACID	5.0 ug/l	0.02 ug/l	NOT	TESTED	NOT	TESTED	ND	ND			NOT	TESTED
METALS												
CHROMIUM	100 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
COBALT		1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
MOLYBDENUM		1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
STRONTIUM		0.3 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
VANADIUM		0.2 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
HEXAVELENT CHROMIUM		0.03 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CHLORATE		20 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
HORMONES												
17-ALPHA-ETHYNYLESTRADIOL	50 ug/l	0.0004 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED
17-BETA-ESTRADIOL	50 ug/l	0.0009 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED
4-ANDROSTENE-3,17-DIONE	50 ug/l	0.0003 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED
EQUILIN	50 ug/l	0.004 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED
ESTRIOL	50 ug/l	0.0008 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED
ESTRONE	50 ug/l	0.002 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED
TESTOSTERONE	50 ug/l	0.0001 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED			NOT	TESTED

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (mg/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 15-2 S-129686[1] MAX. RESULT	WELL NO. 15-2 S-129686[1] AVG. RESULT	WELL NO. 15-3 S-129657[1] MAX. RESULT	WELL NO. 15-3 S-129657[1] AVG. RESULT	WELL NO. 16 S-129453[2] MAX. RESULT	WELL NO. 16 S-129453[2] AVG. RESULT	WELL NO. 17-1 S-130317[1] MAX. RESULT	WELL NO. 17-1 S-130317[1] AVG. RESULT
INORGANIC										
ARSENIC	10.0 ug/l	3.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BARIUM	2.0 mg/l	0.2 mg/l	0.02	0.02	0.02	0.02	0.009	0.009	0.02	0.02
CADMIUM	5.0 ug/l	5.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHROMIUM	0.10 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
COPPER	[1.3] mg/l	0.02 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE	2.2 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
LEAD	[15.0] ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
MERCURY	2.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
SELENIUM	10.0 mg/l	5.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
SILVER	0.1 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
SODIUM	**20/270 mg/l	0.2 mg/l	8.4	8.4	8.5	8.5	9.0[2]	8.7	100.0	100.0
SPECIFIC CONDUCTIVITY	None	None	222[3]	209	173[3]	167	143	143	789[14]	620.9
ZINC	5.0 mg/l	0.02 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
COLOR	15 Units	5 Units	ND	ND	ND	ND	ND	ND	ND	ND
ODOR	3 Units	0 Units	ND	ND	ND	ND	ND	ND	ND	ND
IRON	0.3 mg/l	0.02 mg/l	ND	ND	ND	ND	0.04[2]	0.04	ND	ND
MANGANESE	0.3 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND	0.1	0.1
AMMONIA	None	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
NITRITE	1.0 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
NITRATE	10.0 mg/l	0.1 mg/l	0.8	0.8	0.8	0.8	4.4[2]	4.0	0.8	0.8
CHLORIDE	250 mg/l	2.0 mg/l	65.2[32]	13.8	15.3[3]	10.3	14.2[2]	13.9	***279.0[25]	136.7
TOTAL HARDNESS	None	1.0 mg/l	ND	ND	ND	ND	58.3	58.3	ND	ND
TOTAL ALKALINITY	None	0 mg/l	ND	ND	ND	ND	20.8	20.8	ND	ND
pH (BEFORE TREATMENT)	None	None	7.2	7.2	7.2	7.2	7.0[2]	6.6	7.2	7.2
TOTAL DISSOLVED SOLIDS	None	5.0 mg/l	ND	ND	ND	ND	94.0	94.0	ND	ND
SULFATE	250 mg/l	5.0 mg/l	47.9	47.9	25.5	25.5	19.3[2]	18.8	38.9	38.9
ANTIMONY	6.0 ug/l	5.9 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BERYLLIUM	4.0 ug/l	0.3 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CALCIUM	None	1.0 mg/l	ND	ND	ND	ND	17.0	17.0	ND	ND
MAGNESIUM	None	1.0 mg/l	ND	ND	ND	ND	3.8	3.8	ND	ND
NICKEL	0.10 mg/l	0.04 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
THALLIUM	2.0 ug/l	0.3 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CYANIDE	0.2 mg/l	0.010 mg/l	ND	ND	ND	ND	ND	ND	ND	ND
PERCHLORATE	18.0 ug/l	1.0 ug/l	ND	ND	1.3	1.3	13.5[5]	9.8	2.5	2.5

CONT. - CONTAMINANT
ND - NOT DETECTED
** - 20 mg/l IS THE LIMIT FOR PEOPLE ON HIGHLY RESTRICTED SODIUM DIETS AND 270 mg/l FOR THOSE ON MODERATELY RESTRICTED SODIUM DIETS
[ ] - USEPA/NYSDH ACTION LEVEL
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 15-2 S-129656[1] MAX. RESULT	WELL NO. 15-2 S-129656[1] AVG. RESULT	WELL NO. 15-3 S-129657[1] MAX. RESULT	WELL NO. 15-3 S-129657[1] AVG. RESULT	WELL NO. 16 S-129453[2] MAX. RESULT	WELL NO. 16 S-129453[2] AVG. RESULT	WELL NO. 17-1 S-130317[2] MAX. RESULT	WELL NO. 17-1 S-130317[2] AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC)										
LINDANE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
HEPTACHLOR	0.4 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ALDRIN	5.0 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
HEPTACHLOR EPOXIDE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DIELDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ENDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
METHOXYCHLOR	40.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TOXAPHENE	3.0 ug/l	2.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHLORDANE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL PCBs	0.5 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
PROPACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ALACHLOR	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
SIMAZINE	4.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ATRAZINE	3.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
METOLACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
METRIBUZIN	50.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BUTACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 15-2 S-129656[1] MAX. RESULT	WELL NO. 15-2 S-129656[1] AVG. RESULT	WELL NO. 15-3 S-129657[1] MAX. RESULT	WELL NO. 15-3 S-129657[1] AVG. RESULT	WELL NO. 16 S-129453[2] MAX. RESULT	WELL NO. 16 S-129453[2] AVG. RESULT	WELL NO. 17-1 S-130317[2] MAX. RESULT	WELL NO. 17-1 S-130317[2] AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC) (CONT'D.)										
2,4-D	50.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-TP (SILVEX)	10.0 ug/l	0.13 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DINOSEB	7.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DALAPON	200 ug/l	0.7 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
PICLORAM	500 ug/l	0.6 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DICAMBA	50.0 ug/l	0.08 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
PENTACHLOROPHENOL	1.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	50.0 ug/l	0.64 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-ETHYLHEXYL)ADIPATE	400 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-ETHYLHEXYL)PHTHALATE	6.0 ug/l	3.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	1.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BENZO(A)PYRENE	0.2 ug/l	0.1 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ALDICARB SULFONE	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ALDICARBSULFOXIDE	4.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ALDICARB	3.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL ALDICARBS	7.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
OXAMYL	200 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
METHOMYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
3-HYDROXYCARBOFURAN	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CARBOFURAN	40.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CARBARYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
GLYPHOSATE	700 ug/l	10.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DIQUAT	20 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ENDOTHALL	100 ug/l	50.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DIBROMOETHANE (EDB)	0.05 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DIBROMO-3-CHL.PROPANE	0.2 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 15-2 S-129656[1]		WELL NO. 15-3 S-129657[1]		WELL NO. 16 S-129453[4]		WELL NO. 17-1 S-130317[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS										
DICHLORODIFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
2,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMOCHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 15-2 S-129656[1] MAX. RESULT	WELL NO. 15-2 S-129656[1] AVG. RESULT	WELL NO. 15-3 S-129657[1] MAX. RESULT	WELL NO. 15-3 S-129657[1] AVG. RESULT	WELL NO. 16 S-129453[4] MAX. RESULT	WELL NO. 16 S-129453[4] AVG. RESULT	WELL NO. 17-1 S-130317[1] MAX. RESULT	WELL NO. 17-1 S-130317[1] AVG. RESULT
VOLATILE ORGANICS (CONT'D.)										
1,3-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMOBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
4-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBUTADIENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
M,P-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
O-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
STYRENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE (CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
N-PROPYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 15-2 S-129656 (1)		WELL NO. 15-3 S-129657 (1)		WELL NO. 16 S-129453 (1)		WELL NO. 17-1 S-130317 (1)	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS (CONT'D.)										
TERT-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
4-ISOPROPYLTOLUENE (P-CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
N-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT.BUTYL ETHER (MTBE)	10.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND

ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT LEVEL	DETECT. LIMITS	WELL NO. 15-2 S-129656[1] MAX. RESULT	WELL NO. 15-2 S-129656[1] AVG. RESULT	WELL NO. 15-3 S-129657[1] MAX. RESULT	WELL NO. 15-3 S-129657[1] AVG. RESULT	WELL NO. 16 S-129453[4] MAX. RESULT	WELL NO. 16 S-129453[4] AVG. RESULT	WELL NO. 17-1 S-130317[1] MAX. RESULT	WELL NO. 17-1 S-130317[1] AVG. RESULT
TRIHALOMETHANES AND HALOACETIC ACIDS										
CHLOROACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMOACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL HALOACETIC ACID	60 ug/l	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL TRIHALOMETHANES	80 ug/l	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
RADIONUCLIDES										
GROSS ALPHA	15 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
GROSS BETA	50 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
RADIUM 226	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
RADIUM 228	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
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RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 15-2 S-129656 MAX. RESULT	WELL NO. 15-2 S-129656 AVG. RESULT	WELL NO. 15-3 S-129657 MAX. RESULT	WELL NO. 15-3 S-129657 AVG. RESULT	WELL NO. 16 S-129453 MAX. RESULT (raw/treated)	WELL NO. 16 S-129453 AVG. RESULT (raw/treated)	WELL NO. 17-1 S-130317 MAX. RESULT	WELL NO. 17-1 S-130317 AVG. RESULT
UCMR3										
1,4 DIOXANE	50 ug/l	0.7 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
VOLATILES										
1,1-DICHLOROETHANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLORPROPANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
1,3-BUTADIENE	50 ug/l	0.1 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMOCHLOROMETHANE	50 ug/l	0.06 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHLORODIFLUOROMETHANE	5.0 ug/l	0.08 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
PERFLUOROCHEMICALS										
PERFLUOROBUTANESULFONIC ACI	5.0 ug/l	0.9 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
PERFLUOROHEPTANOIC ACID	5.0 ug/l	0.01 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
PERFLUOROHEXANESULFONIC ACI	5.0 ug/l	0.03 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
PERFLUORONONANOIC ACID	5.0 ug/l	0.02 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
PERFLUOROOCTANESULFONIC ACI	5.0 ug/l	0.04 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
PERFLUOROOCTANOIC ACID	5.0 ug/l	0.02 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
METALS										
CHROMIUM	100 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
COBALT		1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM		1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
STRONTIUM		0.3 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
VANADIUM		0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
HEXAVELENT CHROMIUM		0.03 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHLORATE		20 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
HORMONES										
17-ALPHA-ETHYNYLESTRADIOL	50 ug/l	0.0004 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
17-BETA-ESTRADIOL	50 ug/l	0.0009 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
4-ANDROSTENE-3,17-DIONE	50 ug/l	0.0003 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
EQUILIN	50 ug/l	0.004 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
ESTRIOL	50 ug/l	0.0008 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
ESTRONE	50 ug/l	0.002 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
TESTOSTERONE	50 ug/l	0.0001 ug/l	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Riverhead Sewer District (RSD)
2 River Avenue
Riverhead, NY 11901
attn.: Michael Reichel, Superintendent

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Superintendent Reichel:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces (including two restaurants totaling 481 seats) are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

Assuming the wastewater flow design rates of the Suffolk County Department of Health Services, it is anticipated that the project will consume about 31,560 gallons of water daily. Thus, it is expected that this same 31,560 gpd represents the amount of sanitary wastewater to be conveyed via the Town's sewer system to the treatment facility of the Riverhead Sewer District.

I am writing to obtain information on sanitary wastewater facilities that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- Confirmation whether the Town Sanitary Sewer System and the Town Stormwater Sewer System are or are not a single, "combined" sewer system.
- Whether a determination has been made regarding how the project will be connected to the RSD collection network. RSD has indicated that three connections are envisioned; one for each restaurant, and one for the balance of the project. Discussions between the RSD and the Applicant's engineer (Galli Engineering P.C.) indicate two options: to the north-south oriented line beneath McDermott Avenue (the option preferred by the RSD), or to the 12-inch main that crosses east-west beneath the site. The latter option would entail connection about 139 feet west of the existing manhole on McDermott Avenue, along with cutting in two new manholes for the two restaurants. Additionally, the grease traps involved would normally be exterior to the building, but the RSD would allow these to be installed in the parking area, as long as they are installed in the ground.
- The location and nature of the treatment facility at which the project's wastewater will be treated.

- The capacity of the treatment facility, and the current average daily flow to it.
- A Letter of Availability for the project.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

Phil Malicki

From: Michael Reichel <reichel@townofriverheadny.gov>
Sent: Wednesday, March 22, 2017 10:59 AM
To: Phil Malicki
Subject: Re: Riverview Lofts, GOSR Analysis & Review; NP&V #16068

Phil , this email is responding to the letters that were sent to the Riverhead Sewer District with respect to 221 East Main ST. Riverhead . The property is located within the boundaries of the Riverhead Sewer District .The collection system is not a combined system . It is for sanitary sewer only . The location of the treatment plant is #2 River Ave Riverhead N.Y. The plant's permitted capacity is 1.5 MGD . Plans for connection were submitted and are currently under review . A letter of availability will be issued after an analysis of the flow impacts to the collection and conveyance system is complete . The owners are proposing to construct a building over the sewer district's main which is also part of the review process .
If you have any questions or need additional information please contact me . Mike

---

From: Phil Malicki <PMalicki@nelsonpope.com>
Sent: Tuesday, March 21, 2017 10:24 AM
To: Michael Reichel
Cc: Chic Voorhis
Subject: Riverview Lofts, GOSR Analysis & Review; NP&V #16068

As requested, here is a copy of the we letter sent to you.

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

PSE&G Long Island
Customer Order Fulfillment Department
175 East Old Country Road
Hicksville, NY 11801
attn.: Carolyn Mackin, Manager

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Ms. Macklin:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

The project is expected to use electricity; however, an estimate as to the amount of such usage is not presently available.

I am writing to obtain information on PSE&G electricity facilities, services, and capabilities that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- The location and capacity of the electric lines serving the site or area; and
- Confirmation that PSE&G can and would serve the project with electricity.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you should have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

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November 4, 2016

National Grid
25 Hub Drive
Melville, NY 11747
attn: Valarie Hunter Account Representative

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Ms. Hunter:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

The project may use natural gas as a heating source; however, it is premature to make such a decision at the present time, so that an estimate as to the amount of such usage is not presently available.

I am writing to obtain information on natural gas facilities, services, and capabilities that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- A map or text description of the location(s) and sizes of the nearest natural gas lines in the vicinity; and
- A letter confirming that natural gas service can and would be provided to the project.

If you have any additional information or comments that would be pertinent, please include them. Finally, if you should have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./ 31 McDermott Ave. Riverhead

Supplemental EAF