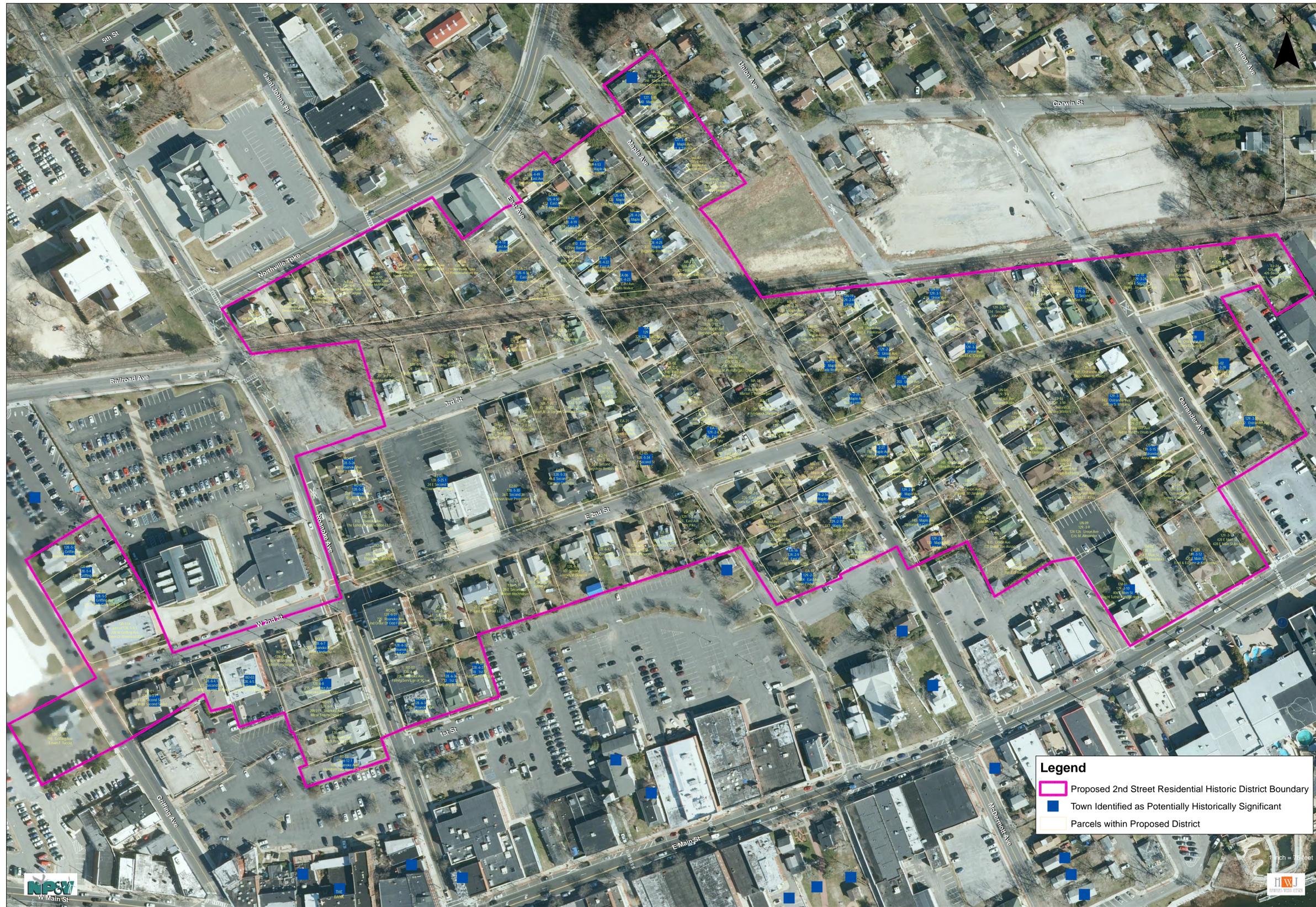


Second Street Riverhead Historic District
Application for Placement on the National Register of Historical Places





Town of Riverhead, NY. Second Street District Survey Summary

3/20/2015

OVERVIEW

The geographic location of Riverhead is at the west end of the Peconic Bay where it meets the fresh water of the Peconic River. This was the eastern most point of Long Island where one could easily cross from the north fork to the south fork, and was the natural location for a small shire to form. This was the spot where the roads, the river, the bay and (by 1844) the railroad all met. The majority of the land that now comprises Riverhead was then called Aquabouke and was part of a patent purchased from the Indians by the residents of Southold in 1649, though a record Deed to confirm this transaction does not appear until December 7th 1665. This natural crossing point was of little other historical relevance until sometime after 1659 when a small piece of the land was granted to John Tooker and Joshua Horton, where they built a saw mill utilizing the river's water power. In 1728 the first courthouse was framed and served as courthouse and jail. This was the start of the town center as we now know it.

Though the Suffolk County Seat had been at the "river head" since 1727, in the mid 1700s Riverhead was still a small village. The sparsely populated area was for the largest part agriculturally barren, and poor by most standards. The land had been overworked and the local farmers had not yet realized the value of fish as fertilizer or established a regular shipping trade protocol to import fertilizers from elsewhere. Immediately after the American Revolution many local residents were deep in debt. Much land had been confiscated after the war, and sold off at the discretion of the military. Court records of the time showed over a hundred writs of debt payable to the "Court of Common Plea". For almost three decades there were only four houses in the town center, and essentially no new growth. Among them were the Griffing Hotel, the Joseph Osborn house, the millhouse built by William Albertson, the Courthouse (which also served as a home for David Horton), the jailhouse and little else. It took nearly a generation for agriculture, the local economy and general commerce to begin moving again.

Soon thereafter, right around the turn of the 19th century, farmers began to fish bunker for use as fertilizer. This marked a turning point. The farmers were then able to cultivate crops that would facilitate production of better manure fertilizer, providing a more permanent soil improvement, and the basis for a stabilized agricultural economy. This contributed to increased local commerce for the entire community. The ensuing spur in growth eventually allowed Riverhead to become a bustling center at the east end of Long Island.

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Officially formed in 1792, the Town of Riverhead ultimately became a center for commerce, judiciary process, building materials, agriculture and much more. By 1815 Hubbard and Wells Griffing had built the sloop McDonough, the first of many to be built locally after the war. By 1825 the downtown had grown considerably and had numerous new businesses. Many with owner's names that are still prominent in Riverhead today. William Griffing, Elijah Terry and William Jagger, all local residents, each now had shops downtown. John Corwin built a small hotel, where he lived, on property adjacent to what eventually would be the Griffing Hotel (owned by Henry L. Griffing). The first Riverhead fire Engine Company, "Red Bird" was organized in 1833. By 1834 Corwin had enlarged his hotel significantly. In 1856 Charles Hallett, a great contributor to the prosperity of Riverhead, opened a planing mill. Ten years later he built a second planing mill powered by steam on the north side of the river. By 1870 Mr. Hallett had also started a paper mill and two years later had expanded to begin milling flour as well. His patrons spanned the island from Queens to Greenport. Many homes of these founding individuals and families still stand in Riverhead.

SELECTION CRITERIA

The area of Riverhead selected for the following survey is directly adjacent to the already designated Main Street National Register District to the south, which is primarily commercial in nature. While working through the Second Street district selection process, sponsors expressed the importance of understanding that this district was predominantly a residential one. This had developed in a time period spanning a century between the 1840s and 1940s, as a neighborhood for the professionals, merchants, laborers, ship builders, craftsman and new immigrants alike, all of whom worked downtown. The Second Street neighborhood is comprised of structures that, for the most part, have also remained residential in modern usage. For this reason it has a distinct flavor all its own. It should, by this logic, be the residential counterpart to the commercial Main Street.

The nearly 150 significant structures in this neighborhood include everything from large ornate Queen Anne Victorian homes with complex roof forms to modest Colonial Revivals, Italianate, Greek Revival, Capes and many simple National Folk style cottages. Some exhibit influences from combinations of these period styles. Though many were interpretations of European styles of the day the architecture is all primarily domestic. Overall the resulting character, as a conspicuously residential district, is a theme that is apparent to even the most casual observer.

BOUNDARY

The boundary for this district (encompassing just under 35 acres) was a natural progression in the process that has been underway for over a decade. To the south is the Main Street National Register District. The northern boundary of that district essentially coincides with the southern boundary of the subject Second Street District. The northern boundary of the Second Street District is derivative of the locally designated Riverhead Downtown Historic District but essentially offsets one block north to also include contiguous homes north of the railroad, along the southern spur of Northville Turnpike, that meet the selection criteria. This northern boundary is a stretch of the turnpike that was originally known as Fourth Street. The east and west boundaries run along the north/south streets (Griffing Avenue and Ostrander Avenue) that are at each end of Second Street. This area of focus covers a specific contiguity that experienced a definitive and formative growth spurt, speaking directly to the historic character of residential Riverhead. The actual path of the boundary articulations relates to the contiguous groupings of characteristic and contributory homes along these streets. A secondary but also vital criteria was to include as many of the period structures, with significant history or attributes, as possible within the guidelines.

METHODOLOGY

Undertaking this Second Street survey is just one part of a continuing effort for the area. Previous endeavors have included the Main Street National Register District immediately to the south (approved in 2012), which is predominantly commercial in nature, and the Downtown Riverhead Historic District (locally designated by the Town of Riverhead in 2006). The Main Street effort afforded qualification for 37 different contributing resources to receive rehabilitation tax credits, and contributed significantly to much needed ongoing town revitalization efforts. Prior to that the Riverhead Landmarks Preservation Commission (LPC) and the Town took on the larger Downtown Riverhead Historic District, which is an area that encompasses the entire downtown (effectively the Main Street and Second Street districts combined). This district is quite sizeable, boasting 220 contributing structures that range from the 1840s through the early 1960s.

The LPC and town leaders have worked tirelessly to raise awareness and find ways that provide incentives for developers to preserve and restore instead of demolish and rebuild. They have worked closely with the residents to help foster a culture that values such a colorful and storied past. These past endeavors were both accompanied by strategic advance communication initiatives, that proved very effective keeping the town board and property owners apprised of the potential associated benefits and opportunities. Rewards for their efforts have included



unanimous approvals for both of these nominations, as well as successful historic restoration of several locally prominent structures (including the 1933 Art Deco Suffolk Theater and the 1951 Woolworth Building) that may have otherwise been lost. This campaign, the potential tax credits and the Landmark Code for the local district appear to have already influenced one owner in the proposed Second Street district. 428 East Main Street (EM-04 in the survey), it was believed, was a candidate for demolition. The prominent local developer seems now intent on a major restoration as a destination restaurant.

The Second Street effort has been sponsored by The Town of Riverhead and the LPC. Funding was provided under a New York State D.E.C. Brownfield Opportunity Area Grant. Nelson Pope & Voorhis, LLC (NPV) and Hawkins Webb Jaeger, PLLC (HWJ) have been engaged as planning and survey consultants, to aid in the survey and mapping work as well as preparation of the survey and report documentation.

The majority of fieldwork for this project was conducted in July and August of 2014. This was done in the form of on-site visual observation, and photography from the public right of way. Base mapping was prepared utilizing Geographic Information Systems (GIS), with parcel database information and original boundary provided by the Town of Riverhead. The GIS is also the tool that allows us to calculate the 1,510,214 s.f. (34.67 ac.) area for district boundary. The parcel database is provided through Suffolk County Real Property by license agreement with the Town of Riverhead – and sublicense agreement with NPV as consultant to the Town. The Town also provided a preliminary table of points identifying all residential structures with potentially historic significance. These points, the preliminary boundary and all parcel outlines were mapped using a 2013 aerial photograph as the base. The data was then merged with the SHPO Building-Structure Inventory for the area. The boundary was also slightly modified to incorporate several additional structures believed to have the potential for historic significance. The parcel identification numbering convention was designed to emulate that of the already established SHPO inventory. Map points have been tagged to correspond with the data and photographs in an EXCEL spreadsheet. The spreadsheet format is based on examples of previous surveys provided by SHPO. Initial data used was based upon existing information provided by the LPC and supplemented through fieldwork and research.

RECOMMENDATIONS

The process of surveying, compiling, and reporting such a comprehensive collection of historical data has provided a clear and concise yield that was entirely predictable. The obvious benefit is simply that each of the individual participants comes away with a better understanding of the significance of the subject neighborhood,

and thereby a better understanding of the associated historical value. Each participant comes away with a clearer understanding of the process and protocol required to establish such a district and the importance of doing so. The unexpected benefit however, might be that the collective knowledge associated with this kind of team effort is greater than the sum of its individual parts. It will generally be far more consistent and effective tool when disseminating information to the community. The collective knowledge will offer more intuitive inspirations for specific methods of informing and educating the decision making public.

The next steps toward historic preservation have already begun with a robust advance outreach campaign, to inform all of the residents that will be affected. This should include a simple, plain language, bullet point outline illustrating some of the obvious benefits already gained by the way of the Main Street National Register. In a small community, such as this, it should include town meetings, mailings and a personal, boots on the ground, outreach campaign through the LPC, local merchants and civic leaders alike. All available local media (print, and electronic) should be engaged to whatever extent possible. This should all be done in advance of any official notifications or potentially intimidating legalese. It will be important to preemptively dispel any misconceptions the residents may have about how a National Register designation will affect them. Experience has taught us that misinformation is our biggest adversary. A well informed public will be our greatest ally.

BIBLIOGRAPHY

Wood Brick and Stone – A Walking and Driving Tour of Historic Downtown Riverhead

Copyright 2008 Riverhead Landmarks Preservation Commission

SEEKING THE PAST – Writings from 1832-1905 relating to History of the Town of Riverhead

Copyright 2004 Riverhead Free Library, Edited by Tom Twomey

History of the Town of Riverhead Written by Hon. George Miller in 1876

RIVERHEAD Written by R.M. Bayles in 1882

Riverhead: The Halcyon Years 1861-1919 by Thomas M. Stark Copyright 2005

Map of Suffolk County, L.I. NY. From Actual Surveys by J. Chace Jr. Published by John Douglass 1858

Atlas of Long Island, NY. From Recent and Actual Surveys by Beers Comstock & Cline 1873

Atlas of a Part of Suffolk County, L.I., NY. South Side Ocean Shore Vol. II New York: E. Belcher Hyde, 1916

Town of Riverhead Tax Assessor's Archives

Town of Riverhead, NY. Second and Ostrander District Survey Summary

8/8/2015

OVERVIEW

The geographic location of Riverhead is at the west end of the Peconic Bay where it meets the fresh water of the Peconic River. This was the eastern most point of Long Island where one could easily cross from the North Fork to the South Fork, and was the natural location for a small shire to form. This was the spot where the roads, the river, the bay and (by 1844) the railroad all met. The majority of the land that now comprises Riverhead was then called Aquebogue (with many variant spellings) and was part of a patent purchased from the Indians by the residents of Southold in 1649, though a record deed to confirm this transaction does not appear until December 7th 1665. This natural crossing point was of little other historical relevance until sometime after 1659 when a small piece of the land was granted to John Tooker and Joshua Horton, where they built a saw mill utilizing the river's water power. In 1728 the first courthouse was framed and served as courthouse and jail. This was the start of the town center as we now know it.

Though the Suffolk County seat had been at the "River Head" since 1727, in the mid-to-late 1700s what is now downtown Riverhead was still a small village with just a few houses, a tavern and a few mills. The land around the court house was mostly sandy and not fit for agriculture. Most of the town's population lived in areas with good soil, either to the east in the what are today the hamlets of Aquebogue, Jamesport and Laurel or to the north on the string of hamlets stretching along Sound Avenue. Even in the areas with the best soil, the land had been overworked and the local farmers had not yet realized the value of fish as fertilizer or established a regular shipping trade protocol to import fertilizers from elsewhere.

Immediately after the American Revolution many local residents were deep in debt. Much land had been confiscated after the war, and sold off at the discretion of the military. Court records of the time showed over a hundred writs of debt payable to the "Court of Common Plea". For almost three decades there were only four houses in the town center, and essentially no new growth. Among them were the Griffing Hotel, the Joseph Osborn house, the millhouse built by William Albertson, the Courthouse (which also served as a home for David Horton), the jailhouse and little else. It took nearly a generation for agriculture, the local economy and general commerce to begin moving again.

The Town of Riverhead was separated from Southold in 1792. But, it would still be another couple of decades before a real town center began to form. Around the turn of the 19th century, farmers began to fish for bunker (menhaden) for use

as fertilizer. This marked a turning point. The farmers were then able to cultivate crops that would facilitate production of better manure, providing a more permanent soil improvement, and the basis for a stabilized agricultural economy. This contributed to increased local commerce for the entire community. The ensuing spur in growth in agricultural prosperity eventually allowed downtown Riverhead to become a bustling commercial center for the east end of Long Island.

Downtown Riverhead ultimately became a center for commerce, judiciary process, building materials, agriculture, entertainment and much more. By 1815 Hubbard and Wells Griffing had built the sloop McDonough, the first of many to be built locally after the war. By 1825 the downtown had grown considerably and had numerous new businesses. Many with owner's names that are still prominent in Riverhead today. William Griffing, Elijah Terry and William Jagger, all local residents, each now had shops downtown. John Corwin built a small hotel, where he lived, on property adjacent to what eventually would be the Griffing Hotel (owned by Henry L. Griffing). The first Riverhead fire Engine Company, "Red Bird" was organized in 1833. By 1834 Corwin had enlarged his hotel significantly.

Starting in the 1840's the surrounding agricultural areas gradually recovered from the post-Revolutionary war agricultural depression that had severely hit the area. Two factors drove this growing agricultural prosperity -- the growing New York City markets to the west and the increased availability of fertilizer to restore worn out lands. In addition, as steam power made water access easier on the Peconic estuary and the construction of the Long Island Railroad in 1844 provided easier access to urban markets, downtown suddenly began to grow rapidly as a commercial hub. Mills on the Peconic River also increased in importance and number, especially with the Perkins textile mill at Upper Mills. Growing governmental business led to a new and larger county court house in 1855. Inns and taverns sprang up to serve travelers doing business in the town. Numerous commercial and residential buildings were constructed in the two decades before the Civil War. Downtown also got its first two churches and schools during these two decades -- well after most of the other hamlets in the town. In 1856 Charles Hallett, a great contributor to the prosperity of Riverhead, opened a planing mill. Ten years later he built a second planing mill powered by steam on the north side of the river. By 1870 Mr. Hallett had also started a paper mill and two years later had expanded to begin milling flour as well. His patrons spanned the island from Queens to Greenport.

Initially, virtually all the businesses and homes were strung out on East and West Main Streets, with the most important businesses clustering near the intersection with Peconic Avenue. Some businesses operated along Peconic Avenue (then called Bridge Street because it had the only bridge to the South Fork.) There were also a few mills and houses on the south side of the Peconic River, technically in Southampton Town, but always considered an integral part of

Riverhead's downtown. There was another cluster of mills and homes about two upstream at a place then called Upper Mills.

However, as the downtown area continued to grow, additional streets were laid out north of Main Street to accommodate new homes. First and Second Street, appeared about 1840, as did East Avenue. The 1858 shows First Street running from East Street one block to Abner (now Roanoke) Avenue. Second Street was a block and a half, running from East Street a little past Abner. This was the beginning. Later, additional streets were laid out perpendicular to Main Street. By the 1873 Beers Map, Second Street had been extended all the way to Griffing Avenue on the west and Third Street appeared north of Second. Within the next couple of decades, as the commercial center continued to expand, Union and Maple Avenues and eventually Ostrander Avenue were laid out perpendicular to Main Street and Second Street was extended eastward to intersect all of these newer cross streets.

This is basically the area proposed for the Second and Ostrander district. In the 19th century, downtown also expanded to the northwest, well beyond the railroad tracks. However, that area, potentially another National Register district, is no longer contiguous with the Second and Ostrander district, having been largely cut off by the railroad tracks, parking lots and 20th century development. Downtown residential construction also ultimately expanded further to the northeast in the 20th century, but most of the houses constructed in those areas are after our period of significance and less interesting architecturally.

Significance

The Second and Ostrander district, encompassing the whole length of East and West Second Streets as well as nearby parts of the avenues that cross Second, is significant for several reasons. First of all, it is a largely intact residential neighborhood built between 1840 and 1940 to support the nearby commercial district that grew up along Main Street during the same time period and that was placed on the National Register in 2012. That district is almost entirely commercial in nature. The adjacent Second and Ostrander district is almost entirely residential. The two districts complement and support each other.

The areas nearest to the core of the 19th century Main Street commercial area were the homes to the merchants who owned the stores on Main Street, the lawyers who served the local clientele and practiced in the nearby Suffolk County Courthouse, the doctors who took care of patients from the whole surrounding area and the bankers who got rich on them all. Together these men formed the backbone of Riverhead's commercial and merchant classes. Further out are the more modest homes of skilled craftsmen such as a taxidermist, harness maker and a gunsmith. Just a slightly longer walk away from Main Street were the even-more-modest homes of the laborers who made their living downtown.

The owners of these homes represent a wide range of professions, and give a good snap-shop picture of what a agricultural-center town looked like in the late 19th and early 20th centuries. In addition to the expected merchants, lawyers, clergy and doctors, there were a surprising number of other occupations represented: harness maker, cigar maker, gun smith, shoe and boot maker, telegraph operator. These included both the owner of the town's Democratic newspaper and the home of a long-time Republican congressman. There was even a taxidermist and a carpenter who moonlighted as the town's undertaker.

The homes also represent a cross section of the surprisingly diverse ethnic and cultural groups that made Riverhead their homes in the 19th and early 20th centuries. The oldest homes were mostly built by descendants of the area's original Puritan families who first settled Riverhead in the early 18th century. But, the mix soon included others who moved to Riverhead from other parts of Long Island and from nearby states, presumably for the economic opportunities the growing town offered.

Starting in the mid-19th century, there was significant Irish immigration to Riverhead, and many of these settled in Third Street area and the upper reaches of East and Maple Avenues. They became the nucleus of St. John's RC Church, which started in the district on East Avenue and is today located just a little further north on the same street, but just beyond the bounds of the proposed district. Later in the century, a different group of immigrants -- East European Jews -- were attracted by the commercial opportunities in town. By the end of the century, they owned a number of stores along Main Street and of course a number of the homes in the residential areas just to the north. Mixed in with these groups were individuals of Swiss, German and French origin.

And finally, in the 20th centuries, the smaller homes along the upper reaches of East, Maple and Union Avenue began to attract African Americans. Many of these had first come north as part of the Great Migration to work as farm workers, but some gradually moved into town. Indeed, in 2011 Maple Avenue was renamed Pfc. Garfield Langhorn Avenue in honor the son of one of these families who became a Vietnam War hero.¹ The Langhorn family, following a pattern for typical for African-Americans who moved to the area in large numbers in the 1920s through 1950s as part of the Great Migration to work on area farms. By the 1960s, they were moving beyond farm labor and often moving in to town. In the case of the Longhorn family, this was to a small house, probably originally built for Irish immigrants, on the upper reaches of Maple Avenue. The house has since been demolished.

Of the 150 resources in the survey district, 133 were built between 1840 and 1940. Virtually all of these, 128 or 87% of the total number of resources in the district can be considered as contributing.² While there are many resources in excellent condition, others are far from pristine condition, but definitely restorable. If we include resources through the early 1960s, as was done in the neighboring

Main Street National Register District, this would bring the total to 145 resources or nearly 97 percent of the total. Remarkably, only five structures have been built in the last 50 years and only a few have been lost.. In essence, this district encompasses a true snapshot of one small town's growth over a century of time.

The area is also architecturally significant. Because it developed gradually over an entire century from 1840 through 1940, there are examples of virtually every style of architecture that was popular during those decades. These range from the Greek Revival style of the earliest homes in the district and a lone Gothic Revival. Then, starting in the 1850s there are a large number of Italianates. Some of these are full-blown architectural masterpieces, while others are more modest and the smallest have just a few Italianate features. Following the Italianate are Colonial Revival and Queen Anne homes. Alongside these are some very simple homes that can only be characterized as National Folk.

Moving into the 20th century, we find newer versions of the Colonial Revival, as well as gambrel-roofed Dutch Revivals and the ubiquitous Four Square. Many homes have features of more than one style -- either they were built that way or because of subsequent modifications. However, because the older parts of the district developed gradually, with considerable infilling and rebuilding, most streets have a pleasing variety of homes from one to the next. Nowhere are there rows of nearly identical structures, and seldom are there rows of more than three or four houses built in the same decade.

1840s: Greek Revival

Development in the Second and Ostrander District began in 1835 with the purchase of a 170-acre parcel north of Main Street by Chapman Davis, Charles Vail and Elijah Terry from the Jagger family. The three later divided this parcel amongst themselves.³ The south end of this so called "Jagger parcel," which ran about a mile-and-a-half north to Middle Road, included all of the proposed district except for the west end abutting Griffing Avenue, which still belonged to the Griffing family at the time. Up until this point, all homes and commercial development in the rapidly growing village had been along what is now East and West Main Streets and Peconic Avenue.

Davis, Vail and Terry became the original developers of the area. In 1837, the town laid out a road running northerly from Main Road through their parcel to Middle Road.⁴ First called Center Street, the name changed to Suffolk Highway and then to Abner Street before finally becoming Roanoke Avenue later in the 19th century. Most likely, the developers laid out East Street, as well as First and Second Streets about the same time to facilitate development of their property. Much like subdivision roads today, probably these were initially private roads, as they were not recorded in the town's official records as public thoroughfares.

The oldest homes in the district are five structures that likely date to the 1840s, shortly after these streets were opened. Like the Davis-Corwin House at 133 East Main Street and the original part of the Congregational Church from the same period (both in the adjacent Main Street National Register District), three of these homes display Greek Revival features.

The most fully developed is the Corwin-Davis House at 215 Roanoke Avenue, originally home to B. B. Corwin. Like the other two Greek Revival homes in the district, it is an end gable story-and-a-half design. It has fine fluted corner pilasters, a typical Greek Revival doorway and belly windows on the two sides. Nothing is known about B.B. Corwin, but later it became the home of John C Davis, who was a partner with Nathan Corwin in a general store downtown and in the firm of Corwin, Davis & Company that owned a lumber yard.

The second end-gable story-and-a-half Greek Revival was probably built by Allen T. Terrell. He was born in Connecticut about 1825. In 1860 he was a telegraph operator at the railroad station, later he was trackmaster of entire Long Island Railroad system. Finally, he became a produce dealer and merchant.

The third Greek Revival probably also built in the 1840s is barely recognizable today and a bit of a mystery. This house may have started out in a different location as it does not appear on the 1858 Chace map. By 1873, it belonged to Azariah Anderson, a stone cutter who worked with George B. Hill whose monument business still survives today as Riverhead's oldest business on Griffing Avenue in the Main Street National Register District. Later, probably around 1900, this house was enlarged to a full two stories with Queen Anne influences.

For many years, it has been in the Hockeiser family, which operated a variety store nearby on Main Street for many years in the mid 20th century.

The fourth house probably also built in the 1840s is the Corwin-Katz house at 12 First Street. This was constructed by Henry W. Corwin, a master builder, for himself. He was responsible for the Methodist church in Riverhead and many other fine buildings in the area. This nicely restored structure shows Gothic Revival features, including the centered front gable with pointed top window and matching pointed shutters.

The east wing of 62 East Second also likely dates to this decade, or possibly the early 1850s. It was originally a small side-gable Cape-style house, typical of the homes built in the agricultural areas of the town in the early 19th century. It was probably built as a parsonage for the Congregational Church. The 1858 Chace map shows it as occupied by Clark Lockwood, a minister born in Connecticut who served in the Riverhead Congregational Church from 1853 to 1857 and then moved to the sister church in Northville where he served from 1858-61. The house may have served as the residence of earlier ministers of the Congregational Church as far back as 1836. The much larger two-and-a-half

story front-gable Italianate part of this house was added to this small wing, probably in the 1870s, long after Lockwood had moved on.

1850s: Italianates and Irish

By the 1850s, tastes in Riverhead had switched to the Italianate -- closely following national trends. The most elaborate and beautifully restored Italianate is the Wells-Robinson house at 223 Roanoke Avenue. It was built by Joshua L. Wells Jr. who was a partner with Silas S. Terry in a general store and lumber yard in the 1850s. Next it was owned by Dr. Henry P. and Carrie Corwin Terry who moved to Riverhead after retiring from a medical practice in Cutchogue in 1890 and became the chief organizer of Suffolk County National Bank, which still has its headquarters in Riverhead just across Second Street. Still later this was the in-town house of Leland Robinson, an agricultural produce dealer.

Equally remarkable are the two Italianates at 214 and 218 Griffing. The Slade-Hallett House was built for newspaper publisher James B. Slade who also owned the "boneyard" where bones were converted to fertilizer. Later it was the home of Samuel Terry Hudson, whose Riverhead Agricultural Works was a leading manufacturer of farm equipment in the area. The house next door was built by Charles Hallett, a nephew of P.T. Barnum, who ran a mill that was then the largest enterprise in town. He produced flour and paperboard -- and the wood moldings and trim that reputedly were used in his self-designed home. He also used the water power and steam engines in his mill to produce electricity. His Electric Light Co. was one of two companies that served homes and businesses in downtown Riverhead. His home was the first in town with electric lights.

Another imposing Italianate, with Tuscan windows on the gable end, from the same period is the Vail house now at 214 Roanoke Avenue. Built for Mrs. J. Vail, it stood originally on the corner of Roanoke Avenue and Second, but was moved about 100 feet south in 1928 to make way for the Odd Fellows Hall which now occupies that location.

Although somewhat modified with some Arts and Crafts features early in the 20th century, the large house next door at 206 Roanoke on the corner of First Street also began life as a high-style Italianate. The large windows, broad eaves and belvedere all speak to that period. Originally it probably resembled the Wells-Robinson House at 223 Roanoke. The "modernization" probably occurred early in the 20th century when this was the home of Howell Montoe Reeve, a founder of the Suffolk County Trust Company, whose elegant original building survives just a block away in the Main Street National Register District.

The two-and-a-half-story house across the street at 209-211 Roanoke Avenue also dates to the 1850s, or earlier. It first belonged to William Walkman, an English-born watch maker. He was already living in Riverhead by 1850, but

possibly not at this location. The structure itself has been extensively modified a couple of times, but the basic shape survives from the mid-19th century.

Around the corner at 18 First Street, the Fenimore Meyer House was also built in the 1850s. It belonged to William. H. Edwards on 1858 map. He was a carpenter who served also as an undertaker. Presumably his finely detailed Italianate demonstrated the latest styles in which he could build. In 1902 Jacob Meyer bought the house and enlarged it. In 1896 Meyer had bought out the 42-year-old business of leading merchant Jonas Fishel, which he renamed the Meyer's Dept. Store. The large store was located immediately to the south the facing Main Street, so the walk to the back door of his business would have been only about 100 feet. Rumor has it that Meyer had an underground tunnel connecting house and store, but this is likely untrue. The house is a two-story symmetrical Italianate design with front centered three-story mansard-roofed tower featuring ornate cast iron crest work. The front-gable roof was a 20th century addition over the original more typical Italianate flat roof.

Just slightly less imposing is the two-and-a-half-story three-bay cross-gable Italianate at 204 East Street. In 1873 it was owned by Francis Kline, a Bavarian born shoemaker. Later it was owned by Charles E. Bunce who opened a store in 1883 selling stoves, cooking utensils and dinnerware. He was also a plumber.

At the other end of the economic spectrum are several more modest homes on East Avenue. Number 216 probably began as a Cape-style house that belonged to F. C. Hill on the 1858 map, but was later modified to look more like a Craftsman bungalow. Hill worked in his family's monument business. Just up the street, parts of 302 probably date to the 1850s or even 40s. It was built by William Elton, a British-born boot and shoe maker.

Further up East Avenue, the story-and-a-half front-gable National Folk style cottage at 308 East Street belonged to John Howser, a gunsmith, in 1858. Later it would become St. John's missionary church. By the 1850s, there was a significant population of Irish immigrants, several living in the immediate vicinity of this address. They wanted to have a Roman Catholic church. So, in 1859, John Walsh, one of the first in a wave of Irish immigrants into Riverhead, purchased the property under his own name, but then surreptitiously conveyed it to Bishop McLaughlin for use as a Catholic mission -- the predecessor of St. John's Church which still stands couple of blocks to the north on East Street.

Numbers 318-20 and 311 East Avenue also appear on the 1858 map. At the far end of the spectrum is the small story-and-a-half side-gable cottage now at 326 East Avenue. This was likely built as worker housing near Main Street in the mid-19th century, but moved to its present location in the early 20th century after this part of East Street was opened.

The first map of the area is the 1858 Chace "Map of Suffolk County" (see Figure 1). At that time, Second Street extended only from the boundary of the Jaegger parcel described earlier, a little west of Roanoke Avenue (then called Abner Avenue) to at East Street (now East Avenue). Third Street had not been laid out and there were no north-south cross streets further east off of Main Street. About half of the approximately two dozen homes shown on this map within the district's lines survive today, although some have had major alterations.

1860s and 70s: More Italianates and the beginnings of Colonial Revival

The next map of the area showing homes is the Beers *Atlas of Long Island* from 1873 (See Figure 2). By this point, Second Street had been extended all the way westward to Griffing Avenue, East Street (now East Avenue) had been extended north of the railroad tracks and Third Street had appeared between East Avenue and Abner Avenue, now renamed Roanoke Avenue. To the east, two more streets had also appeared parallel to East Avenue: Concord Street (now called Maple Avenue) and Union Street (now Union Avenue). However, neither of these streets extended north beyond the railroad tracks. Since the earlier map in 1858, considerable development had taken place in the area, with all but a few areas of these streets lined with homes.

The district saw continued development and expansion in the 1860s and 70s. At the top end of Riverhead's economic spectrum were several elaborate Italianates. The fanciest homes were on the two edges of the district. To the west, is the 1868 Jeremiah Edwards House on Griffing Avenue. This two-story cross-gabled Italianate with heavy crown and ornate bracket pairs all around was designed by Riverhead's leading architect George H. Skidmore, whose practice extended over much of Long Island. Edwards was a druggist, as well as a Democratic politician, officer of the Masonic Lodge and a director of the Riverhead Savings Bank.

Just up the street, the Moore-Barnes House 224 Griffing was probably built at about the same time. This two-story Italianate has an elaborate archetypical square cupola with triple graduated arch windows on each of the four sides. It was owned by A.G. Moore on 1873 map. Albert G. Moore, born in New Jersey about 1820, was a toolmaker in the 1860 census, a plane maker in 1865 and a carpenter in 1880.

At the other end of the district is the elaborate cross-gable Italianate built in 1876 by Dr. Joseph L Johnson. Dr. Johnson was a NYU medical school graduate. Today this serves as the Tuthill Funeral Home and is one of the few survivors of the grand homes of Riverhead's professional and entrepreneurial class that once lined East Main Street.

The large the large two-and-a-half-story cross-gable Colonial Revival with asymmetrical front gable dormers 43 East Second also dates from these

decades. It was owned by Wm. Swezey on the 1873 map. William Sweezy, born in 1847 into an old Riverhead family, ran a men's clothing store. He also owned the largest ice house in town, capable of storing 6,000 tons in 1906, from which he shipped ice to New York City by train. He was a nephew of the Perkins brothers, Riverhead's wealthiest family.

Moving slightly down the economic scale, we find a series of homes built in these decades that are simpler stylistically and sometimes difficult to classify.

For instance, number 302 East Street shows some Italianate influences, although the later additions are more Queen Anne. William Elton was born in London in 1826, emigrated to the U.S. in 1844 and established a boot and shoe making business in Riverhead the same year. Later this became a shoe store. His son, James Elton, born 1855, was in the fish oil business by 1880, took over his father's shoe business in 1885, in 1895 became manager of the Long Island and New England Steamboat Company, and was also a bank director.

At 306 is a cross-gable Queen Anne built by Elisha Wells, is also typical of the period. He was born 1844, a carpenter from an old Riverhead family. Next, at 316, is the two-and-a-half-story Colonial Revival house built by John Housner. He was a gunsmith with a shop in his house. And, a little north of that, number 324 shows some Italianate influences. It was built by John C. Knoess, born 1823 in Germany. He was both a taxidermist and tailor, with a shop next to his house.

The sections of Union and Maple Avenues nearest Main Street also began to fill with houses of the merchant and professional classes. For instance, 135 Union, another typical home of the period, was owned by A. Downs on 1873 map. Austin Downs was a 64-year-old lawyer in 1870. His son, Austin, Jr., was a horse trainer in Brooklyn in 1880, but was back in Riverhead, living in this house as a veterinary surgeon in 1910. The two-and-a-half-story front-gable house has few architectural flourishes except for the pointed window in the front gable..

Similarly, at 153 Maple the two-story front-gable house built in 1870 (although it does not appear on the 1873 map) also has few distinguishing characteristics, except for the Queen Anne trim on the front porch which is probably a later addition. This was probably built by Sidney W. Reeve, a harness maker from an old Riverhead family.

Growing Irish presence

As we move further up East Avenue (near and across the railroad tracks), houses built in the same period are much prepossessing and harder to classify. For instance, 402 East Avenue, which can best be characterized as National Folk in style, was likely built by Moses Benjamin, a druggist who operated a drug store in the Perkins-Benjamin building [ck] on the corner of Main Street and Roanoke in the NR district. Since Benjamin lived on East Main Street in a house that still

survives as part of the East End Arts complex, this modest home was probably built as a rental property. Similarly, the modest front gable house with minor Italianate influence built by William Brown in 1875 at number 425, just north of the railroad tracks was also probably a rental as Brown lived on Main Road. In both cases early tenants were likely Irish immigrants.

This area near and across the railroad tracks had become the center of a significant Irish community by the 1870s. For example, 425 East Avenue, a vaguely Italianate two-story two-bay house with low-sloped side gables was owned by John Lynch on 1873 map. John Lynch, born 1844 in Ireland, was a tailor. Similarly, the 1873 map shows most of the other homes on East Street north of railroad tracks belonging to families with Irish names such as Welch, Daugherty or Bartlett

Around the corner, on Third Street, most of the homes were part of the same Irish neighborhood. Number 28, which may have been Colonial Revival, but has lost most of its original details, was owned by John Bartlett on the 1873 map, M. Bartley on 1916 map (perhaps misspelling of the same names). John Bartley, born in Ireland about 1821, was a tailor. He was one of two trustees when St. John's R.C. Parish was incorporated in 1864.

Number 37, a one-and-a-half-story side gable Eclectic National Folk cottage with some later Craftsman influences, was owned by R. Bartlett on 1873 map. Robert Bartlett was an Irish-born boatman on the 1865 census.

Number 48, a cross-gable with some Italianate influence, was owned by J. Flannigan on 1873 and J. Flanagan on 1916 map. John Flanagan was born in Ireland about 1843. On the 1920 census, he was one of 7 Irish families on Third Street.

Number 58, a modest story-and-a-half with Queen Anne influence, was owned by T. Welch on 1873 map and M. Walsh on 1916 map (perhaps misspelling of the same surnames). Thomas Walsh, a farm laborer, was born in Ireland c. 1839. Mary Walsh, his daughter, lived here in 1920 with a brother John.

However, the street was not entirely Irish, typically mixed. In-between at No 57: is the two-story side-gable gambrel Colonial Revival owned by Charles Davis on the 1873 map. In 1870, Davis is listed as a 68-year-old gardener and his son, in the same house, was a carpenter.

1880s and 90s

About 16 houses in the district date to these decades. In the pattern that became common, some are scattered around amongst older homes -- such as 36 East Second with its Queen Anne cross gables and the modest Colonial Revival at 404 East Avenue. Again, the homes built in these decades display

the diversity of occupations and origins of the homeowners. For instance, 152 Maple was probably built by Lorimer Raynor, a surveyor. Number 213 was built by William Biggs and his daughter Viola who were cigar makers -- one of several families in that business in Riverhead. And Mrs Albertina Robinson, who lived at 311 Maple, was born in Switzerland of French parents.

There are also clusters of homes a little further out from downtown, built as the residential area expanded. For instance, the Colonial Revival homes at 152, 150, 213 and 311 Maple Avenue.

Another cluster of relatively modest homes appeared along Northville Turnpike (originally Fourth Street) built as the residential border moved further out from the downtown core. Again, we get a diverse sample of owners -- Lafayette Hand, a railroad dispatcher, at number 9, J. Madison Corwin, a carpenter at number 19, Lewis E. Young, owner of a butcher shop, at number 13, Frank L. Corwin, a house painter and decorator at number 21 and Thomas Fury, a warden in the nearby county jail, at number 95. Most of these homes are stylistically less full blown, generally with some Queen Anne or Colonial Revival features popular in the period.

Northville Turnpike itself was laid out in 1875 as a diagonal shortcut for farmers in the hamlet of Northville to reach downtown Riverhead, cutting a mile or two off of their wagon ride. However, initially, that road started where it intersects East Street.⁵ The section on which these houses are located was first called Fourth Street, as it still is on the 1909 E. Belcher Hyde map of the area, and probably predates the rest of Northville Turnpike into which it is incorporated today.

There is another cluster on the upper reaches of Union Avenue, at 153, 213, 219 and 223. The latter two are very modest structures, the first owned by a coal company salesperson, Charles Elton, probably as a rental and the second owned by English-born dress maker Carrie Weeks. Number 153 is a late Italianate built by Thomas Britten a carpenter who later became Fire Department chief.

The most interesting of these houses is the Queen Anne building at 213 Union. It was built by Charles Skidmore, whose father and uncle owned a large mill in downtown Riverhead that manufactured sashes and blinds (i.e., windows and shutters) and other wooden trim elements. Undoubtedly some of the company's products are displayed such as the original porch railings and possibly the several original Queen Anne decorative stained glass windows that survive in this nicely preserved structure. Another uncle was the architect George Skidmore, a likely source of the above-average design.

1900-1919

The first two decades of the 20th century saw a further expansion of the residential neighborhood to the north and east. These two decades also saw the

construction of 42 surviving homes in the district -- more than in any other twenty-year period. Ostrander Avenue was opened and East Second was extended eastward from East Avenue to intersect Maple, Union and Ostrander avenues. In addition most of the north-south streets were extended further north.

The best example of a streetscape from the early 20th century is Ostrander Avenue. This street shows up in a contemporary postcard as a broad avenue lined by small trees and fine new homes. How did Riverhead get a street with a Dutch family name like Ostrander? Certainly it was not because of early Dutch influence, which was virtually absent on the East End of Long island.

The *County Review*, one of two newspapers that served Riverhead in the early 20th century, reported on March 31, 1905 that "Surveyor Larimer M. Raynor is laying out the lines for the extension of Second Street and of Ostrander and the cutting up of Mrs. Ostrander's property on East Main Street into building lots."⁶ Raynor, a scion of an old North Fork family, we have meet before. He built the house at 152 Maple Avenue. But, who was Mrs. Ostrander and how did Riverhead get a street named after a Dutch family?

Although always referred to in the press as "Mrs. Ostrander," her first name was Anna. At that time, she was one of Riverhead's wealthiest women, a person at the pinnacle of local society. How she came to own this land is an interesting story that exemplifies how land development worked in Riverhead. She was born Anna Bostick, the daughter of a New York City stock broker of Dutch dissent. She was also the widow of William C. Ostrander, a wealthy lawyer born in New York City into another Dutch family. His father was a New York merchant and president of a the Mercantile Fire Insurance Company. Like Anna's father, he had a very Dutch sounding name, Cornelius Van Buren Ostrander, and had moved to the city from the Dutch community of Ulster County. So far, not much of a connection to Riverhead in this story.

But, if we go back to the beginning of our story of development of the district, as described above, this was part of a 170 acre parcel running north of Main Street acquired by a consortium of investors in 1835 from the Jagger family and latter divided among the consortium. Elija Terry got the eastern portion.⁷ Silas S. Terry, who was partner in a general store and a lumber yard apparently inherited the property. He in turn left it to his daughter, Patience Maria Terry (born 1822) who somehow became the second wife of Cornelius Van Buren Ostrander, the New York City merchant with roots amongst the Dutch settlers of Ulster County in upstate New York.

She shows up as "Mrs. Ostrander" on the 1873 Beers map. This in itself is unusual, as her husband was still alive at the time. The second marriage produced only one son, William C. Ostrander (1853-1894), a New York lawyer who married Anna Bostwick the daughter of a New York stock broker. William was also a real estate speculator and apparently moved back to his mother's

hometown and bought additional properties in the East End. His obituary described him as "a wealthy man."⁸ After William's death, Anna became a grand dame of Riverhead society, living with a widowed daughter on Griffing Avenue.

Ostrander Avenue was envisioned as a wide tree-lined boulevard when it was laid out by Raynor (see above) in 1905. Clearly the goal was to make Mrs. Ostrander's lots as valuable as possible. Beautiful homes quickly went up at 130-132, 131, 138 and 146.

The first house on Mrs. Ostrander's property was 428 East Main, on the corner of Ostrander Avenue. It was completed in 1905 by Henry H. Preston. Preston was born about 1845 on Shelter Island and served in the Civil War, where he was wounded and declared a hero. A statue was recently erected in his honor on Shelter Island. He served as town clerk in Shelter Island before moving to Riverhead in 1902 when elected as the county's first full-time sheriff. He moved into the house about the time he retired from the sheriff's office and devoted himself full time to his insurance business. His two-story eclectic house has a square-hipped roof with center gables in front and on both sides. The corner pilasters and pedimented gable over the front porch gave it a Greek Revival appearance.

Next door to the east, the two-and-a-half story Shingle Style house at 420 East Main was also built about the same time. It was owned by B. Frank Howell on the 1916 map. He was of an old Riverhead family, born in 1838, he moved to Riverhead in 1869 and opened a coal and wood business similar to the one his father ran in New York City. He also sold oats, corn and bran and was the cashier of a bank.

These two houses, essentially an eastward extension of the residential development on Main Street, were featured on two contemporary postcards, one of which had a note about them being in "modern" styles.

A local paper reported in 1907 that Dennis Homan had acquired directly from Mrs. Ostrander the first lot on newly-laid out Ostrander Avenue, number 127, immediately behind the Preston and Howell houses.⁹ Homan was a 26-year-old duck farmer, the son of George Homan, one of Riverhead's four cigar manufacturers.¹⁰ However, a home was not built on this parcel until 1958. But, other homes quickly appeared on the new Avenue.

The two-and-a-half-story three-bay hip-roofed Colonial Revival with a wrap-around porch at numbers 130-132 was probably built by Mrs. John W. Reeves before 1908, the year of her death. She was a widow of a wealthy farmer, who apparently decided build a bigger house than her previous one on Second Street. By 1920, this house belonged to Otis G. Pike, the secretary and treasurer of a bank. This was the birthplace and home of Otis G. Pike, Jr., who represented the East End in Congress from 1961 to 1979. It is still in the Pike family in 2015.

The two-and-a-half story Queen Anne with wide front porch across the street was also built about 1910. According to the 1916 map it was owned by Horace H. Williamson, the owner and editor of the *Riverhead News*, the area's Democratic paper and one of the predecessors to the current *News-Review*.

The two-and-a-half story Colonial Revival at number 138, like all the homes on Ostrander, with a full front porch, was also built about the same time. It was likely built by F. Porter Howell, a Calverton duck farmer, who like many in that business choose not to live on the odoriferous farm. He was also a bank director. Number 146 next door, also with a full front porch, was built in 1912, was also owned by F. Porter Howell on 1916 map. This was probably constructed for a family member or rental, on a parcel carved out of the lot of his house next door. In 1920 it was occupied by a female Scottish-born music teacher.

During the same period, the 1869 Italianate was moved from Main Street to 149 Ostrander and became the home of Kirk Bagshaw, a clerk in the County Treasurer's Office. The full width front porch was likely added at this time.

During these same decades, the new eastward extension of Second Street and newer sections of Maple and Union to the north became prime locations for new construction. On the newer section of East Second, homes went up on 315, 328, 332, 414, 422 and 425. Most of these were some variant on the Colonial Revival styles popular in those decades. As usual, their occupants were also an eclectic mix. At 315 was Ezra Young, a trucker from an old North Fork family; 332 was the Pennsylvania-born jeweler William H. Burnwite; next door at 328 was a smaller but similar house that Burnwite probably built as a rental; further east at 414 was Everett Leek, a stationary engineer at the county jail; beyond him at 422 was Charles Howell, a school principal turned insurance agent from another old North Fork Family and finally another member of the Howell family across the street at 425

Another boomlet took place on Maple Avenue. At 147, Horatio F. Buxton from Rhode island owned a general store. Other new homes went up at 204, 212, 218, 226, 305, 329-31, 340 and 349. The lower numbered ones (nearer Main Street) were substantial homes, generally Colonial Revival in inspiration, some possibly built on speculation. The ones in the 300s were generally smaller, probably mostly built as rentals.

But, perhaps the most interesting story is 329-31, a two-story cross-gable Colonial Revival owned by S. Goldman on 1916 map. Shephard Goldman was a Russian Jew whose children were born in this country starting in 1906. He was a butcher and owned his own slaughterhouse. He became one of the founders of Riverhead's Jewish synagogue. Another interesting house, 422 East Street,

was built by the Swiss-born manager of a salting house, William Carlson. Also on East were two small houses at 215 and 426.

Union Avenue showed a similar pattern. Here the most interesting house in the period is Craftsman bungalow with a dominant front gable dormer. It was owned by T. Skidmore on the 1916 map. On the 1910 census, Theodore Skidmore was 66 years old, and a sash and blind maker. He was a son of Luther Skidmore who founded the company, one of Riverhead's biggest businesses. He was also the brother of George H. Skidmore, Riverhead's leading architect. Perhaps it is not surprising that this house is more stylistically pure and up-to-date than many of the other homes built during the period. More conventional Colonial Homes went up at 203, 204 and 210 Union Avenue.

The first two decades of the twentieth century saw numerous infill projects in the older section of East Second and nearby cross streets, sometimes as the result of building on previously empty lots, sometimes replacing older homes and other times the result of subdivision of larger yards of older houses. Amongst these houses is the two-story hip-roofed residence with Queen Anne massing built by lawyer Jetur Hand at 17 East Second Street. Further down Second, numbers 33 and 55 were built on what had been the back yard of a home on First Street. Both houses show a combination of Queen Anne and Colonial Revival influences. Number 33 belonged to George Hill Moore, born in 1886, he was an undertaker according to the 1920 census. He was third generation in one of Riverhead's oldest businesses, a gravestone and monument company that still operates on Griffing Avenue.

Perhaps the most spectacular home built in this time period is the 1905 Northridge-Price house at 46 East Second. This three-story cross-gable Victorian Shingle Style house features both round and hipped turrets and a porte cochere. It was designed by William Sidney Jones for August Price. Jones was an assistant who continued the practice of Riverhead's leading architect, George Skidmore. Price was a Brooklyn Attorney, who married a local woman but lost the house by 1919. Later it became the home and offices of Dr. John Northridge, a prominent local pediatrician. The design borrowed many Skidmore details from the Fishel house (since demolished) one of Riverhead's finest on East Main Street and also from the nearby 1907 First Congregational Church, a joint Skidmore-Jones design.

There was also scattered building elsewhere, such as 13 Northville Turnpike, 169 Roanoke and 41 Third.

1920s & 30s

After a break for World War I, construction continued at a brisk pace in the 1920s with at least 17 more homes built in the district during that decade. Some of these were high end, such as the three-story Colonial Revival built by Dr. Hallock Luce at 21 East Second Street on an infill lot. His father, a Northville farmer, thought him too spindly for that occupation, so sent him to medical school. Bron in 1892, he was a graduate of Amherst College and Columbia Medical School. He became a general practitioner. He initially practiced in Jamesport, but moved to Second Street in 1925 when he rented the Vail house on the corner. According to period newspaper accounts, he acquired the old Gilbert Aldrich residence in March of 1927, had it torn down, acquired 17 feet from the Hand family to the west and built a "handsome new residence" which he moved his family into in September 1927. He was one of the principal organizers of the effort to create Central Suffolk Hospital in the 1950s. He practiced medicine in a suite of rooms in the wing to the right of his Second Street home until just a few weeks before his death at age 82 in 1975. He delivered over 6,000 local babies in his first 40 years of practice, with more to come in his final decades. He was known for never sending out a bill in his life, but rather relying on his patients to pay him when they could.¹¹

Just down the street, at 59, is the Colonial Revival Cape Cod with twin front gabled dormers built on what had been the back yard of the Blydenburg home on First Street. At the other end of the district, the two-story side-gable gambrel trimmed Colonial Revival was added to the row of fine houses at 139 Ostrander in 1928.

The biggest spurt of building was along Maple Avenue, with new houses going up at 143, 225, 317, 323, 334 and 336 -- most in variants of the Colonial Revival styles (including a couple of Four Squares) popular in the period. Another standard Colonial Revival Four Square appeared at 111 Northville Turnpike.

This decade saw the beginning of non-residential intrusions into the district. The 1850s Vail House that originally stood at the corner of Second and Roanoke Avenue was moved slightly to the south to make way at 220 Roanoke for the three-story brick Federal Style Odd Fellows Lodge designed by August H. Galow. Note the trademark diagonal brick panels under the third story windows, similar to those on the Commercial Building (Peconic and E. Main) also by Galow. Town Hall also occupied the first floor and the police department was in the basement until 1976.

The rather generic two-story office building at 206 Griffing was also built in this decade, according to the town assessors' records. although it appears a couple of decades newer.

1930s

The intrusion of non-residential buildings continued in the 30s with two notable structures. The first is the 1931 former headquarters of Riverhead Fire Department at 24 East Second Street. Designed by William Sidney Jones who had carried on the Architectural practice of George H. Skidmore after Skidmore's death in 1904, this two-story brick Dutch Revival with limestone voussoirs corbels, ornamental gable end parapet copings and large octagonal bell cupola. It replaced an older fire house on the same site built some time after 1873. The building was approved early in 1929, just before the stock market crash, but not completed until early 1931, after some difficulties with the \$50,000 bond that was issued to pay for it.¹² The original individual arched garage door openings have long since been combined for wide overhead doors to accommodate modern fire trucks. A house next door was demolished and a two-story addition was built sometime before 1975.

At 21 West Second, the former Post Office building, a one-story Colonial Revival with Federal influences and monumental stone steps was erected as part of FDR's Works Progress Administration, as was the nearby Pulaski Street School (a little outside the district) completed a few years later.

With the Great Depression, residential construction slowed markedly, with only five homes built in the 1930s. Most of these were modest such as the one-story hipped-roof National Folk cottages at 141 Union Avenue and 212 East Avenue. The most interesting home from the period is the one-and-a-half-story side-gable Tudor cottage at 223 East Street built in 1935 according to Assessor's Office records.

Post World War II

After World War II, residential construction came to a virtual standstill. Assessors office records date the Colonial Revivals at 311 East and 312 Roanoke to 1945 and 1948 respectively, but stylistically both look at least a couple of decades older. The only other new homes were at 410 East (1948), 145 Union (1951), 51 East Second (1959), 150 Union (1960), 49 Third (1960) and the last new home built in the district at 38 Third (1989). Assessors records date a couple of other homes to this period, but these are probably errors. There were also two small office structures, 15 West Second (1965) and 117 Ostrander (1958). As the downtown business district reached its peak, the lack of residential construction nearby may seem odd, but there were very few available lots and the automobile made it easier for new construction to move further out from the downtown core where post-war style subdivisions on former farmland were possible.

No residences have been constructed since the turn of the 21st century, but there is a new group home at 226 East Street built in 2007 to fit in with the newly designated local historic district. It incorporates the Greek Revival doorway of

the 1840s home that previously stood on that site. And finally, the Italianate structure at 23 West Second which appears to date from the mid-19th century is actually the last addition to the Law Firm offices of Twomey Latham Shea & Kelly, built about 2005. It is an exact replica of the pre-1876 Tuthill-Vail house that was moved from the site to the east in the 1930s in order to build the Post Office and later was demolished by the law firm to build this replica .

SELECTION CRITERIA

The area of Riverhead selected for the following survey is directly adjacent to the already designated Main Street National Register District to the south, which is primarily commercial in nature. While working through the Second Street district selection process, sponsors expressed the importance of understanding that this district was predominantly a residential one. This had developed in a time period spanning a century between the 1840s and 1940s, as a neighborhood for the professionals, merchants, laborers, ship builders, craftsman and new immigrants alike, all of whom worked downtown. The Second Street neighborhood is comprised of structures that, for the most part, have also remained residential in modern usage. For this reason it has a distinct flavor all its own. It should, by this logic, be the residential counterpart to the commercial Main Street.

The nearly 150 significant structures in this neighborhood include everything from large ornate Queen Anne Victorian homes with complex roof forms to modest Colonial Revivals, Italianate, Greek Revival, Capes and many simple National Folk style cottages. Some exhibit influences from combinations of these period styles. Though many were interpretations of European styles of the day the architecture is all primarily domestic. Overall the resulting character, as a conspicuously residential district, is a theme that is apparent to even the most casual observer.

BOUNDARY

The boundary for this district (encompassing just under 35 acres) was a natural progression in the process that has been underway for over a decade. To the south is the Main Street National Register District. The northern boundary of that district essentially coincides with the southern boundary of the subject Second Street District. The northern boundary of the Second Street District is derivative of the locally designated Riverhead Downtown Historic District but essentially offsets one block north to also include contiguous homes north of the railroad, along the southern spur of Northville Turnpike, that meet the selection criteria. This northern boundary is a stretch of the turnpike that was originally known as Fourth Street. The east and west boundaries run along the north/south streets (Griffing Avenue and Ostrander Avenue) that are at each end of Second Street. This area of focus covers a specific contiguity that experienced a definitive and formative growth spurt, speaking directly to the historic character of residential Riverhead. The actual path of the boundary articulations relates to the contiguous groupings of characteristic and contributory homes along these streets. A secondary but also vital criteria was to include as many of the period structures, with significant history or attributes, as possible within the guidelines.

METHODOLOGY

Undertaking this Second Street survey is just one part of a continuing effort for the area. Previous endeavors have included the Main Street National Register District immediately to the south (approved in 2012), which is predominantly commercial in nature, and the Downtown Riverhead Historic District (locally designated by the Town of Riverhead in 2006). The Main Street effort afforded qualification for 37 different contributing resources to receive rehabilitation tax credits, and contributed significantly to much needed ongoing town revitalization efforts. Prior to that the Riverhead Landmarks Preservation Commission (LPC) and the Town took on the larger Downtown Riverhead Historic District, which is an area that encompasses the entire downtown (effectively the Main Street and Second Street districts combined). This district is quite sizeable, boasting 220 contributing structures that range from the 1840s through the early 1960s.

The LPC and town leaders have worked tirelessly to raise awareness and find ways that provide incentives for developers to preserve and restore instead of demolish and rebuild. They have worked closely with the residents to help foster a culture that values such a colorful and storied past. These past endeavors were both accompanied by strategic advance communication initiatives, that proved very effective keeping the town board and property owners apprised of the potential associated benefits and opportunities. Rewards for their efforts have included

unanimous approvals for both of these nominations, as well as successful historic restoration of several locally prominent structures (including the 1933 Art Deco Suffolk Theater and the 1951 Woolworth Building) that may have otherwise been lost. This campaign, the potential tax credits and the Landmark Code for the local district appear to have already influenced one owner in the proposed Second Street district. 428 East Main Street (EM-04 in the survey), it was believed, was a candidate for demolition. The prominent local developer seems now intent on a major restoration as a destination restaurant.

The Second Street effort has been sponsored by The Town of Riverhead and the LPC. Funding was provided under a New York State D.E.C. Brownfield Opportunity Area Grant. Nelson Pope & Voorhis, LLC (NPV) and Hawkins Webb Jaeger, PLLC (HWJ) have been engaged as planning and survey consultants, to aid in the survey and mapping work as well as preparation of the survey and report documentation.

The majority of fieldwork for this project was conducted in July and August of 2014. This was done in the form of on-site visual observation, and photography from the public right of way. Base mapping was prepared utilizing Geographic Information Systems (GIS), with parcel database information and original boundary provided by the Town of Riverhead. The GIS is also the tool that allows us to calculate the 1,510,214 s.f. (34.67 ac.) area for district boundary. The parcel database is provided through Suffolk County Real Property by license agreement with the Town of Riverhead – and sublicense agreement with NPV as consultant to the Town. The Town also provided a preliminary table of points identifying all residential structures with potentially historic significance. These points, the preliminary boundary and all parcel outlines were mapped using a 2013 aerial photograph as the base. The data was then merged with the SHPO Building-Structure Inventory for the area. The boundary was also slightly modified to incorporate several additional structures believed to have the potential for historic significance. The parcel identification numbering convention was designed to emulate that of the already established SHPO inventory. Map points have been tagged to correspond with the data and photographs in an EXCEL spreadsheet. The spreadsheet format is based on examples of previous surveys provided by SHPO. Initial data used was based upon existing information provided by the LPC and supplemented through fieldwork and research.

RECOMMENDATIONS

The process of surveying, compiling, and reporting such a comprehensive collection of historical data has provided a clear and concise yield that was entirely predictable. The obvious benefit is simply that each of the individual participants comes away with a better understanding of the significance of the subject neighborhood, and thereby a better understanding of the associated historical value. Each participant comes away with a clearer understanding of the process and protocol required to establish such a district and the importance of doing so. The unexpected benefit however, might be that the collective knowledge associated with this kind of team effort is greater than the sum of its individual parts. It will generally be far more consistent and effective tool when disseminating information to the community. The collective knowledge will offer more intuitive inspirations for specific methods of informing and educating the decision making public.

The next steps toward historic preservation have already begun with a robust advance outreach campaign, to inform all of the residents that will be affected. This should include a simple, plain language, bullet point outline illustrating some of the obvious benefits already gained by the way of the Main Street National Register. In a small community, such as this, it should include town meetings, mailings and a personal, boots on the ground, outreach campaign through the LPC, local merchants and civic leaders alike. All available local media (print, and electronic) should be engaged to whatever extent possible. This should all be done in advance of any official notifications or potentially intimidating legalese. It will be important to preemptively dispel any misconceptions the residents may have about how a National Register designation will affect them. Experience has taught us that misinformation is our biggest adversary. A well informed public will be our greatest ally.

BIBLIOGRAPHY

Wood Brick and Stone – A Walking and Driving Tour of Historic Downtown Riverhead, Copyright 2008 Riverhead Landmarks Preservation Commission
Seeking the Past – Writings from 1832-1905 relating to History of the Town of Riverhead, Copyright 2004 Riverhead Free Library, Edited by Tom Twomey
History of the Town of Riverhead Written by Hon. George Miller in 1876
Riverhead Written by R.M. Bayles in 1882
Riverhead: The Halcyon Years 1861-1919 by Thomas M. Stark Copyright 2005
Map of Suffolk County, L.I. NY. From Actual Surveys by J. Chace Jr. Published by John Douglass 1858
Atlas of Long Island, NY. From Recent and Actual Surveys by Beers Comstock & Cline 1873
Atlas of Suffolk County, L.I., NY., Vol. II New York: E. Belcher Hyde, 1909
Atlas of a Part of Suffolk County, L.I., NY. South Side Ocean Shore Vol. II New York: E. Belcher Hyde, 1916
Town of Riverhead Tax Assessor's Archives
Downs, Arthur Channing, Jr, ed. *Riverhead Town Records, 1792-1886.* The Long Islander, 1967.

Fig. 2



Excerpt from the 1873 Atlas of Long Island by Beers Comstock & Cline showing the Second Street area.

Fig. 3.



Excerpt from the 1909 Belcher Hyde map showing the Second Street area.

¹ *Riverhead Patch*, June 17, 2011. The Langhorn family lived at 356 Maple Avenue, in a house no longer standing.

² Excludes five properties that are either vacant or parking lots.

³ Stark, p. 6.

⁴ *Riverhead Town Records*, p. 338

⁵ *Riverhead Town Records* 503-4.

⁶ *The County Review*, March 31, 1905, p. 1.

⁷ Stark, p. 6.

⁸ *New York Tribune*, June 12, 1894, p. 7.

⁹ *County Review*, July 26, 1907

¹⁰ Stark, p. 27-8.

¹¹ *County Review*, March 24, 1927, March 31, 1927, May 19, 1927, June 25, 1927, September 19, 1927; *Long Island Traveler-Watchman.*, August 14, 1975

¹² *County Review*, February 12, 1931.

RIVERHEAD SECOND STREET NEIGHBORHOOD SURVEY

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	128.-5-25.1	24	E	Second	St	Police and Fire Protection, Electrical Signal	E2-01	Yes	Garage	Brick	Not Visible	Rear	1931	yes	Originally headquarters of Riverhead Fire Department. Designed by William Sidney Jones who had carried on the Architectural practice of George H. Skidmore after Skidmore's death in 1904	2 story brick Dutch Revival with limestone voussoirs (jack arches), corbels and ornamental gable end parapet copings. Large octagonal bell roofed cupola with bronze wind vane and look-out walk with railing. Individual arched garage door openings have long since been combined for wide modern doors to accommodate modern fire trucks. A later 1 story addition was built sometime between 1939 and 1975
	128.-5-30	36	E	Second	St	One Story Small Structure - Multi occupant	E2-02	Partially	No	Vinyl Siding	Brick	No	1900* House shown on 1858 map this location. 2 sty house appears on 1916 map	yes	Owned by Frank C. Cooper on 1916 map. Mr. Cooper was a local shoe store owner.	2 story asymmetric cross gable Queen Anne massing. All Queen Anne windows replaced with modern insulated double hung. Original friezes and scalloped shingles gone. Belt flares are replicated in modern materials
	128.-5-31	46	E	Second	St	Three Family Year-Round Residence	E2-03	Yes	Garage	Cedar Shingles	Not Visible	No	1905*	yes	Price Northridge House: Designed by William Sidney Jones for August Price. A Brooklyn Attorney, Price married a local woman but lost the house by 1919. Later offices of Dr. John Northridge, a local Pediatrician. Borrowed many Skidmore details from the Fishel house (since demolished)	3 story cross gable Victorian Shingle Style with round and hipped turrets. Faithfully maintained with cedar shingle siding, original frieze work crowns and flared gable with brackets. Clustered Tuscan columns carry entry pediment feature of full wraparound porch with columns, a Porte Cochere, and shingled modesty panels. Round pavillion at turret side of porch.
	128.-5-32	54	E	Second	St	One Family Year-Round Residence	E2-04		No	Painted Shingles	Concrete	No	1930*	yes		2 1/2 story 3 bay simple side gable Eclectic Colonial Revival with cedar perfection siding and a gabled asymmetrical roof over brick front porch. 6/1 double hung windows remain, storms added later.
	128.-5-34	62	E	Second	St	Multiple Residences	E2-05	No	(2) Detached Apartments	Vinyl Siding	Concrete	Yes	1928* House shown on 1858 map this location. 2 sty house appears on 1916 map	yes	Originally owned by C. Lockwood then by G.O. Wells after 1873. Clark Lockwood, born in Connecticut c.1804, listed in the 1860 census in Riverhead. In 1870 he was a clergyman in Southold Town, in 1880 he was in Islip. James C. Millard, a bookkeeper, born about 1845, and his wife Sarah lived here in the 1900 and 1915 census. Owned by M. Millard after 1916	2 story 3 bay front gable Italianate with flat winged rakes. 1 story original east wing, possibly older than 2 story element, has changed in size over the years according to historical maps. now vinyl clad - latest front addition post 1976. 6/6 windows gone
	129.-3-20	314	E	Second	St	Two Family Year-Round Residence	E2-06	No	Garage	Asbestos Shingles	Stucco	? Side	1934*	yes		2 1/2 story front single hip on clipped gable Eclectic Colonial Revival original 6/1 double hung windows with neo classical tuscan detailed entry portico gable. Two later 1 story additions
	129.-3-21	324	E	Second	St	One Family Year-Round Residence	E2-07	No	Garage	Asbestos Shingles	Brick	Rear	1910*	yes	Owned by Hubbard on 1916 map. Roscoe Hubbard, born about 1883, was the delivery man for a biscuit company.	2 1/2 story side gambrel Eclectic Colonial Revival with twin front gabled dormer and rear shed dormer. Full front porch later enclosed. Detached 2 story multi-bay vernacular garage added later.

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	129.-3-22	328	E	Second	St	One Family Year-Round Residence	E2-08	Yes	Shed	Wood Shingles	CMU	No	1912*	yes	Owned by Wm. H. Burnite on 1916 map sharing single lot with structure now shown as 332 E 2nd. This was probably an income unit for Burnite. In 1925 it was rented to Charles Cowan, the manager of a grocery store.	2 story asymmetric front gambrel Eclectic Colonial Revival cedar perfection clad with shed dormer one side. One story rear shed addition later enclosed for porch. Original 2/1 double hung windows.
	129.-3-23	332	E	Second	St	One Family Year-Round Residence	E2-09		Garage	Unknown Shingle	Concrete	No	1914*	yes	Owned by Wm. H. Burnite on 1916 map sharing single lot with structure now shown as 328 E 2nd Burnite owned a jewelry shop on the west side of Roanoake Avenue. He and his wife moved from Harrisburg, PA about 1903 and was living here in the 1910 census.	2 story asymmetrical cross gambrel Eclectic Colonial Revival. Hip dormer opposite cross gambrel, center front gabled entry vestibule. Clipped sw corner, prow shaped oriel se corner, yankee gutters and some 2/2 windows remain.
	129.-3-24	404	E	Second	St	One Family Year-Round Residence	E2-10	No	Shed	Unknown Shingle	Concrete	Front vestibule was part of open porch	1939* House shown on 1916 map	yes	Owned by Charles Pettens on 1916 map. Pettens was a carpenter born in Pennsylvania.	2 1/2 story front gable with rear single story gable Eclectic Colonial Revival west side glass porch later enclosed. Front entry asymmetrical gable vestibule and metal roofed french 2 window bay balancing front vestibule. Double hung windows remain, only attic window is original 2/1
	129.-3-25	414	E	Second	St	Two Family Year-Round Residence	E2-11		Garage	Asbestos Shingles	Not Visible	No	between 1905-1916	yes	Owned by S.E. Leek on 1916 map. Everett Leek, born about 1885, was the stationary engineer at the county jail at the other end of Second Street.	Front gable 2 1/2 story Eclectic Colonial Revival with 2 story rear wing and 1 story west wing. Asymmetrical full front and part side wrap around queen anne detailed wd porch, attached 1 car garage
	129.-3-26	422	E	Second	St	One Family Year-Round Residence	E2-12	No	Shed	Vinyl Siding	Brick / CMU	Entry vestibule	between 1905-1916	yes	Owned by Mrs. C. Howell on 1916 map. Charles H. Howell moved to Riverhead about 1880 from Franklinville. He was principal of the Riverhead Union School from 1880-1888, and also ran an insurance agency. Old North Fork family.	1 1/2 story front gable Eclectic Colonial Revival cottage 1 bay wide with side shed first addition and entry vestibule
	129.-3-19	315	E	Second	St	Two Family Year-Round Residence	E2-13	Yes	Garage two bay hipped roof	Cedar Shingles painted	Brick	No	1910*	yes	Owned by Ezra Young on 1916 map. Young was listed in the census as a truckman with his own car [i.e., truck]. Old Riverhead family.	2 1/2 story cross gable Eclectic Colonial Revival with Entry at main gable. Original configuration double hung windows with dated alum. Storms. Full wraparound asymmetrical front and side roof over porch, later enclosed. Trimmed and appointed with Shingle Style and Queen Anne influences.
	129.-2-40.2	225	E	Second	St	One Family Year-Round Residence	E2-14	partially	No	Vinyl Siding	Rock faced concrete block	No	1930*	yes		2 story front gable single bay Colonial Revival on original rock faced concrete block foundation. Front low hipped sun porch later enclosed. Side Entry Portico Gable with spindle post columns over brick stoop. Double hung insul. replacement windows with faux divided lites
	129.-2-18	151	E	Second	St	One Family Year-Round Residence	E2-15	no	No	Vinyl Siding	Concrete	Yes	1959*	no	On property subdivided from 1870 house adjacent on corner of Maple	1 story multi-gable Eclectic Minimal cottage. New decorative synthetic traditional style siding, modern insulated double hung windows

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	129.-1-1	59	E	Second	St	One Family Year-Round Residence	E2-16	yes	Shed	Stone and shingle siding	Concrete	No	1920*	yes	On property formerly of C.M. Blydenburgh shown already subdivided on 1916 map	1 1/2 story side gable Colonial Revival Cape Cod with twin front gabled dormers. Simple posted front gable Portico over brick stoop. Front random rectangular granite veneer.
	128.-6-43	55	E	Second	St	One Family Year-Round Residence	E2-17	Yes	Garage two bay side gable	Cedar Shingles	Not Visible	No	1900* House probably built after 1909 map	yes	Owned by M. J. S. Davis on 1916 map	2 1/2 story cross gable Queen Anne with Entry at subordinate cross gable. Original configuration modern replacement double hung windows . Full wraparound asymmetrical front and side roof with square columns over raised wood porch. Recently trimmed and appointed with applied Victorian Stick style banding, barge boards and diagonal sticking.
	128.-6-42	49	E	Second	St	Two Family Year-Round Residence	E2-18	No	Shed	Asbestos Shingles	Stone	Multiple rear	1840s or 1850s	yes	Possibly one of the oldest houses in downtown Riverhead. Allen T. Terrell, born in Connecticut c. 1825, in 1860 was a telegraph operator at railroad station, later was trackmaster of entire LIRR system, also a produce dealer and merchant. Owned by A.T. Terrell on 1873 map and later by A. Terrell estate through 1916.	1 1/2 story front gable with Greek Revival influence. Large frieze band and corner pilasters. Asymmetrical full front and side wraparound wood low porch with low slope hipped roof and Tuscan columns. Rear 1 story near flat-roof wing of near original era. At least one low eave architypal "belly" window remaining. Many original six-over-six windows on first floor. Some Greek Revival doorway elements remain.
	128.-6-41	43	E	Second	St	Multi-Family Year-Round Residence	E2-19	No	2 story multi-bay Garage	Cedar and asbestos shingles	Not Visible	Rear / Car Port	1870*	yes	Owned by Wm. Swezey on 1873 map William Swezey, born 1847. Old Riverhead family. Ran men's clothing store. Also owned largest ice houses in town, capable of storing 6,000 tons in 1906. Shipped ice to NYC. Nephew of Perkins brothers, Riverhead's wealthiest family. Later owned by John Bagshaw on 1916 map. Bagshaw, born c. 1858 in England, was an insurance and real estate agent. Most additions built after that date. In 1920, his son Kirk Bradshaw was a clerk in the county treasurer's office.	Large 2 1/2 story cross gable Colonial Revival with asymmetrical front gable dormers. Multiple mixed vernacular modifications of unknown era. Low slope asymmetric front roof over porch with twin front pediments and integrated with east side porte-cochere. Queen Anne influence spindle-work and columns. Large rear gambrel addition. Some single pane 2/1 double hung windows remain. Original mid-19th century six-over-six windows on sides.
	128.-6-40	33	E	Second	St	One Family Year-Round Residence	E2-20	Yes	3 bay hipped roof Garage with shed roof addition	Wood Clapboard	Concrete	No	1900*	yes	Structure shown on the property in 1873 owned by Charles Hallock. Charles M. Hallock, from an old Riverhead family, was in the 1880 census as a 29-year-old printer in this area. A different structure matching current configuration shows on 1916 map owned by G.H. Moore. George Hill Moore, born in 1886, was an undertaker according to the 1920 census. He was third generation in one of Riverhead's oldest businesses, a gravestone and monument company that still operates on Griffing Avenue.	2 1/2 story front gable Colonial Revival with asymmetrical cross gable. Full asymmetrical wraparound raised wood porch with modesty panels and Queen Anne influence column filigree. Original arch top front attic window. Double hung 1/1 replacement windows with later applied vernacular faux shutters
	128.-6-39	29	E	Second	St	One Family Year-Round Residence	E2-21	Yes	Garage	Wood Shingles	Not Visible	No	ca. 1850	yes	This house likley dates to the 1850s and was originally a 1 1/2 story front gable Greek Revival. Owned by A. Anderson on 1873 map. Later, probably around 1900, was enlarged to a full 2 stories. In 1914, it is still in the Hockeiser family, which operated a variety store on Main Street. On 1916 map, property owned by A. Douglas	2 1/2 story cross gable with dominant front gable. Queen Anne influence with asymmetrical wraparound roof over raised wood porch and modesty panels. Queen Anne style spindles and ornamental brackets. Original 2/2 double hung windows

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	128.-6-38	21	E	Second	St	Converted Residence	E2-22	Yes	Garage	Cedar Shingles	Concrete	No	1927*	yes	Built by Dr. Hallock Luce, a general practitioner. His father, a Northville farmer, thought him too spindly for that occupation, so sent him to medical school.	3 story side gable Colonial Revival with twin bold pediments over double window attic dormers. 1 story low hipped wing on east end, hipped roof over porch on west end. Shed roof entry porch at rear. Just off center Adam style curved vault gable over front entry brick stoop. 6/1 double hung windows mostly remain.
	128.-6-35	17	E	Second	St	Two Family Year-Round Residence	E2-23	Yes	2 bay gable Garage	Cedar Shingles	Not Visible	No	1905	yes	Jetur ("Sons of Ishmael") J. W. Hand built this structure. Born c. 1870 in Bridgehampton, read law with Timothy Griffing and started his own law practice in 1897.	2 story hipped Queen Anne massing with dominant front and east side gables. Asymmetrical full front and east side low slope hipped roof over raised wood porch with plain Tuscan columns. Strong Greek revival influenced pediments with large frieze work and dentil moldings as well as ornamental window lite divisions
	129.-3-27	425	E	Second	St	One Family Year-Round Residence	E2-24	Yes	No	Vinyl Siding	CMU	No	pre-1916	yes	Owned by Robert Howell on 1916 map situated between properties then owned by C. H. Howell and Mrs. C. Howell.	1 1/2 Story symmetrical center chimney cross gable with full front low hipped roof over enclosed porch.
	126.-4-50	422		East	Ave	One Family Year-Round Residence	EA-01	Yes	Garage	Cedar Shingles	Brick	No	1910*	yes	Owned by William Carlson on 1916 map. E. William Carlson, born c. 1876 in Sweden, was the manager of a salting house according to the 1910 census.	2 1/2 story front gable symmetrical Colonial Revival with full front low hipped roof over glass enclosed porch. 2/1 double hung windows mostly remain with later alum. storms. Front porch windows are apparent later 6/1.
	128.-4-19	414		East	Ave	Two Family Year-Round Residence	EA-02	No	No	Vinyl Siding	Not Visible	Rear	pre-1873	yes	House on property shown owned by Hugh Dougherty in 1873, and Walsh on 1916 map. John (born c. 1825) and Peter (born c. 1833) Walsh are show in the 1880 census in this area. Both were Irish immigrants. This end of East Avenue was a small Irish colony at that time.	1 1/2 story side gable Colonial Revival with one story center single gable rear wing. A few 6/6 double hung windows remain. Later enclosed front shed roofed sun porch. Frieze windows on 2nd floor have all been closed and sided over.
	128.-4-20	410		East	Ave	One Family Year-Round Residence	EA-03	Yes	No	Vinyl Siding	Concrete	No	1948*	no		2 story front gable Colonial Revival triple over triple with off center simple square columned gable portico roof over brick front entry stoop. 6/6 double hung windows largely remain with alum storms.
	128.-4-21	406		East	Ave	One Family Year-Round Residence	EA-04	Yes	No	Cedar Shingles	Concrete	No	1900*	yes	Owned by Melvin on 1916 map	1 story hipped roof National Folk style bungalow with a single front hipped attic dormer for original twin four lite casement windows. Craftsman influenced open rafter tails and symmetrical front screen porch with modesty panels.
	128.-4-22	404		East	Ave	One Family Year-Round Residence	EA-05	No	Shed	Vinyl Siding	Concrete	No	1900*	yes	Owned by M. Benjamin on 1916 map	2 story hipped roof colonial revival with partial 1 story south side entry low hipped roof over glass enclosed porch entry. 2/1 double hung windows largely remain with later added alum storms. Some remnant open rafter tail craftsman details apparent.

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	128.-4-23	402		East	Ave	One Family Year-Round Residence	EA-06		No	Asbestos Shingles	Concrete	No	1870*	yes	Property part of larger lot owned by Silas Terry on 1873 map, and subdivided current lot by M. Benjamin on 1916 map. Moses Benjamin, a druggist, lived on Main Street. This was probably a rental property.	2 story gable front and cross gable National Folk style with low slope front shed roof over low entry porch on slab. Low eave windows around 2nd floor of front wing, with 1/1 double hung original sashes remaining otherwise. Rear cross gable wing with shed roof rear porch may be later addition.
	129.-2-1	324-326		East	Ave	Multiple Residences	EA-07	No	(3) Add Structures. Garage w/ Apartment	Vinyl Siding	Concrete	Yes	pre-1873	yes	Owned by J.C. Knoess on 1873 map. John C. Knoess, born 1823 in Germany, was a taxidermist and tailor with a shop in his house. Owned by Radford on 1916 map	2 story low pitch hipped roof with apparent Italianate influences. Full narrow front width shed roof over wood entry porch with modesty panels and simple square post columns. Multiple functionally flat roofed 1 and 2 story later additions at rear and north side. existing double hung window configurations mostly remain but with replacement windows.
	129.-2-2	320-318		East	Ave	Two Family Year-Round Residence	EA-08	Yes	Shed	Vinyl Siding	Not Visible	No	pre-1873	yes	Owned by J.R. Vail on 1873 map, and W. Lutz on 1916 map. William Lutz was a tailor, born c. 1855 in Germany and immigrated to the U.S. in 1879.	1 1/2 story National Folk style front gable with low hipped roof later enclosed full width front porch showing later 6/6 double hung window pairs. Original likely 2/1 or 1/1 double hungs replaced with recent 1/1 insulated units. Low side eave windows with 6 lite sashes. Apparent original yankee gutter on front porch remains.
	129.-2-3	316		East	Ave	Three Family Year-Round Residence	EA-09	Yes	Shed	Cedar Shingles	Brick	No	pre-1873	yes	Owned by J. Howser on 1873 map, John Housner was a gunsmith with a shop in his house. Owned by W. Lutz on 1916 map.	2 1/2 story Colonial Revival front gable with single north side subordinate cross gable and flat roofed full width rear wing. Full width front and south wraparound hipped roof raised wood porch. South side four window hipped roof bay. Italianate influence corbeled frieze both sides of rear wing. Tuscan columns w/railing around front porch.
	129.-2-4.2	308		East	Ave	One Family Year-Round Residence	EA-10	No	No	Vinyl Siding	Not Visible	Rear	pre-1859	yes	Was the St. John's Mission, predecessor to the first Catholic Church in Riverhead. Purchased by John Walsh in 1859, then aquired covertly by Bishop McLaughlin for 280\$ to use as the Mission. The current property configuration purchased in 1864	1 1/2 story front gable National Folk style cottage with rear clipped gable gable 1 story wing. Front full width shed roof on spindle posts over raised wood porch. Single window shed dormer on south side of main roof. All replacement 1/1 double hung insulated windows
	129.-2-4.1	306		East	Ave	Two Family Year-Round Residence	EA-11	Yes	No	Cedar Shingles	Brick	No	pre-1873	yes	Owned by G.O. Wells on 1873 map, and E. Wells on 1916 map. Elisha Wells, born 1844, was a carpenter from an old Riverhead family.	3 story front gable Queen Anne with north side cross gable. Smaller subordinate side gable opposite, sits centered over first floor hipped bow . Both asymmetrical to house. Front and side facing single window shed dormers (2) on the third floor. Full front width shed roof over raised wood porch with wood spindle posts fretwork and railings. Apparent original soffit brackets remain.

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	129.-2-5	302		East	Ave	One Family Year-Round Residence	EA-12	No	No	Wood Shingles	CMU	Yes	pre-1873	yes	William Elton on 1873 Map. Owned by J. Elton on 1916 map. William Elton was born in London in 1826, emigrated to the U.S. in 1844 and established a boot and shoe making business in Riverhead the same year. Later this became a shoe store. His son, James Elton was in the fish oil business in 1880. Born 1855, became a merchant and bank director. He took over his father's shoe business in 1885, in 1895 became manager of the Long Island and New England Steamboat Company, and in 1904 with Henry Wells, acquired a coal company. His son Charles was living here in 1920, a salesman for a coal company. This house was likely a little further south originally, but was moved so that Second Street could be extended through this area about 1905.	2 story front gable 3 bay with rear offset parallel gable addition. Possible Italianate original influence. South side 2 story bow. Front full width low hip roof over screen porch. One Queen Anne style ornamental rectangle window on the south side other 2/2 double hungs remain in distress with alum storms. Stained glass window over stairway.
	129.-2-6	224		East	Ave	Two Family Year-Round Residence	EA-13	No	Shed	Cedar Shingles	Not Visible	No	2007	no	1840s house on this lot was owned by Charles Blume on 1916 map. Original structure demolished in 2007. Only the Greek Revival doorway was saved and incorporated into the current structure.	New construction 2 story cross gable Colonial Revival with partial front partial side hipped roof over raised porch with wood railing. Well appointed in simple builder vernacular shingle style trim and cladding. Includes integrated accessibility ramp.
	129.-2-7	216		East	Ave	One Family Year-Round Residence	EA-14	No	2 bay pyramidal hipped roof Garage	Vinyl Siding	CMU	No	1920*	yes	Owned by Jas. Elton on 1916 map. See EA-12 above	1 1/2 side gable National Folk style with flared front rake roof over full width raised enclosed porch. 2nd floor front center two bay shed dormer. Small rear off center shed addition.
	129.-2-8	212		East	Ave	One Family Year-Round Residence	EA-15	No	1 1/2 bay front gable Garage	Asbestos Shingles	Concrete	No	1935*	no		1 story modern with hipped roof and non-descript inset entry. Rear shed roofed addition. 1/1 double hung corner windows.
	129.-2-9	208		East	Ave	One Family Year-Round Residence	EA-16	Yes	2 bay pyramidal hipped roof Garage	Asbestos Shingles	CMU	No	1930*	yes		2 1/2 story side gable with Craftsman influenced center 3rd floor shed roof dormer. Front full width hipped roof enclosed porch featuring off center entry opposite vernacular double hung flanking picture window unit. Rear first floor low hipped roof glass porch addition. 6/1 double hung windows mostly remain.
	129.-2-10	204		East	Ave	Three Family Year-Round Residence	EA-17	Yes	Hipped pyramidal roofed garage converted to cottage	Cedar Shingles	Not Visible	No	1860*	yes	Owned by F. Kline on 1873 map. Francis Kline was, born c. 1820 in Bavaria, was a shoemaker. Owned by C. Bunce on 1916 map. Charles E. Bunce opened a store in 1883 selling stoves, cooking utensils and dinner ware. He was also a plumber.	2 1/2 story 3 bay cross gable Italianate. Dbl. leaf front door with etched arch top glass. off center front entry in dominant gable end. Ornamental attic windows center in gables. South cross gable features ornate second floor paired window trim over first floor hipped roof bow windows. Recently renovated with cedar perfection and scalloped shingles in the gable end.

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	129.-1-3.1	215		East	Ave	One Family Year-Round Residence	EA-19	Yes	Garage	?	Not Visible	No	pre-1916	yes	Building appears on 1916 map as outbuilding on subdivided Blydenburgh property.	2 story 3 bay side gable with off center partial front entry shed roof over porch with spindle posts and railing. Off center 1 story rear gable wing with side entry spindle posted shed roof over porch. Mostly replacement 6/6 double hung windows except gable end attic square windows
	129.-1-2.1	223		East	Ave	One Family Year-Round Residence	EA-20	Yes	No	Stucco	Not Visible	Rear	1935*	yes		1 1/2 story side gable Tudor cottage. Off center steep gable entry vestibule and single front side offset 1 window gable dormer. Round top gable end window trim and ornamented rake boards. Flat roofed partial width rear addition.
	128.-5-33	311		East	Ave	One Family Year-Round Residence	EA-21	Yes	No	Asbestos Shingles	Concrete	? Rear	1945*	yes		2 1/2 story side gable Colonial Revival with full width shed roofed enclosed glass porch. Shed roofed rear addition partial width.
	128.-4-17	411		East	Ave	Residential Vacant Land	EA-22							no		Empty Lot
	128.-4-16	417		East	Ave	One Family Year-Round Residence	EA-23	no	Garage / cottage.	Vinyl Siding	Not Visible	Rear	1870*	no	Owned by John Lynch on 1873 map. John Lynch, born 1844 in Ireland, was a tailor in 1900 census. Owned by Ed Young on 1916 map. Edwin Young, born 1863, was a furniture maker	2 story low slope side gable Italianate 2 bay with full width front shed roof on original spindle posts and scroll cut brackets over porch on slab. Flat roof over 1st floor south side windowed bow. Multiple later rear additions
	128-4-15	425		East	Ave	One Family Year-Round Residence	EA-24	partially	No	vinyl siding	brick	no	1875*	yes	On property probably purchased from S.S Terry, owned by Wm. Brown on 1916 map. Brown lived on Main Road, so this was probably a rental.	1 1/2 story 2 bay front gable Italianate with full width front low slope hip roof on spindle posts and wood railings over raised wood porch. Low side eave windows. Transom window remains over front entry door. Most other 2/1 double hungs remain with alum storms. Rear flat roof wing with side parapets
	126-4-49	426		East	Ave	One Family Year-Round Residence	EA-25	No	No	vinyl siding	Not visible	possible rear	1873-1916	yes	Owned by the Estate of Downs on 1916 map	1 1/2 story steep slope cross gable National Folk style with possible Gothic Revival influence. 1 bay deep dominant side gable with larger rear gable wing and possible later rear roof height increase. Symmetrical configuration with small 2nd floor window above front door. Most other 2/2 dbl hung windows remain with alum storms.
	129.-3-10	406	E	Main	St	Funeral Home	EM-01	Yes	Garage	Wood Shingles	Concrete	East and west 1 story wings	1876	yes	Dr. Johnson House - Later became Tuthill Funeral Home: Dr. Joseph L. Johnson, a NYU medical school graduate apparently died by 1900, leaving a widow Lulu Gaddis Johnson. In 1910 she was living here with her father, David E. Gaddis, a school teacher. They had two servants.	2 1/2 story impeccably restored/maintained cross gable Italianate. Full front width flat roof on ornate detailed square wood posts with brackets and railings over wraparound brick foundation porch. Ornate matched bracket pairs at eaves all around. Detailed arched brow cross head at double 3rd story windows.

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	129.-3-11	414	E	Main	St	Vacant Land Located in Commercial Areas	EM-02							no		Parking Lot across from Riverhead Aquarium behind Tuthill Funeral Home
	129.-3-12	420	E	Main	St	Converted Residence	EM-03	Yes	Shed	Cedar Shingles	Concrete	No	1908*	yes	Owned by B. Frank Howell on 1916 map. Born in 1838, he moved to Riverhead in 1869 and opened a coal and wood business similar to the one his father ran in NYC. He also sold oats, corn and bran and was the cashier of a bank. Probably from an old North Fork family.	2 1/2 story dilapidated Shingle style cross gable with full front shed roof over glazed porch. East end of porch features round pavilion with later added insulated casement windows. Ornamental oval window in attic gable, diamond pattern divided lites in one attic shed dormer.
	129.-3-13	428	E	Main	St	Converted Residence	EM-04	Yes	Shed	Painted Shingles	Brick	No	1890*	yes	Owned by H.H. Preston on 1916 map. Henry H. Preston, born c. 1845, wounded in Civil War, moved from Shelter Island to Riverhead in 1902 when elected County Clerk. He was also in the insurance business.	2 story dilapidated eclectic Greek Revival square hipped with center gables front and both sides. The front pedimented gable extending over a full front and partial east side wraparound raised wood porch. Later enclosed 2nd floor sun porch with flared modesty panels under pediment. Many pairs of 2/1 double hung windows remain. Original Tuscan columns since replaced.
	128.-6-36	12		1st	St	Converted Residence	FI-01	Yes	Shed	Wood Shingles	Not Visible	No	pre-1858	yes	Corwin-Katz House: Probably built by Henry W. Corwin, master builder, (Methodist Church and other notable local structures) as his own home. Later home of long time residents Morris and Rose Katz, prominent clothier and members of local Jewish community. Now A.B. Tohill Attorneys	2 1/2 story side gable Gothic Revival with prominent centered front gable featuring a pointed top window with matching pointed shutters. Full wraparound front and both sides raised wood porch. Heavy cornice and Greek influenced bead and reel frieze with Tuscan columns and railing at porch. Small flat roof bays on both sides. well restored/maintained.
	128.-6-37.1	18		1st	St	Converted Residence	FI-02	Yes	No	Wood Shingles	stone/block	No	1885* Believed but unconfirmed to have been built closer to 1850	yes	Fenimore Meyer House: Probably built by James Davis. Later home of Mr. and Mrs. Jacob Meyer. In 1896 Meyer bought out the 42 year old business of leading merchant Jonas Fishel to found Meyer's Dept. Store. In 1902 Jacob Meyer bought the house, enlarged it, and moved in.	2 story front gable Italianate with front center 3 story mansard roof tower featuring ornate wrought iron crest work. Front symmetrical raised wood porch with low hip roof and Tuscan columns with low wood railing, ornate frieze and archetypical brackets on house and porch. Ornate trimmed deep hooded arch top windows on tower. The gable roof was a 20th century addition over the original more typical Italianate flat roof.
	128.-3-38.1	193		Griffing	Ave	Office Building	GR-01		No	Wood Shingles	Brick	Added commercial multilane Porte Cochere	1868*	yes	The Jeremiah Edwards House: Edwards a Democratic politician, officer of the Masonic Lodge, Director of the Riverhead Savings Bank and a Druggist. Designed by George H. Skidmore. Restored by Riverhead Savings Bank after years of neglect. Now occupied by Real Estate office	2 1/2 story cross gable Italianate with heavy crown and ornate bracket pairs all around. Front centered stacked triple windows with cathedral arch hood over ornate balcon fenestres. Note the still remaining multicolored slate roof. Two bay carport/drive up window added by the Bank in mid 20th century.
		206		Griffing	Ave	Office Building	GR-01a	Yes		Brick			Pre-1929	no		2 story flat roof office building non-contributory
	128.-5-5	214		Griffing	Ave	Office Building	GR-02	Yes	No	Asbestos shingles	brick	rear later addition	1850s	yes	The Slade-Hallett House: Built for newspaper pub. James B. Slade, also owned the "boneyard" where bones were converted to fertilizer. Later by Samuel Terry Hudson of Riverhead Agricultural Works. Later by Archibald Hallet, son of Charles Hallet (resident of 218 Griffing).	2 story 3 bay flat roof Italianate. Original lantern cupola since removed. Off center low slope hip roof portico with delicate column pairs. Prominent original cornice with detailed bracket pairs. Original tall 2/2 double hung windows with apparent original heavy bracketed crossheads. Single story bow oriel on south side rear

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	128.-5-4	218		Griffing	Ave	Office Building	GR-03	Yes	Garage	Vinyl clapboard siding	not visible	rear later addition	1850s or early 1860s	yes	The Charles Hallett House: Hallett, the nephew of P.T. Barnum, ran a mill that was the largest enterprise in town. He produced flour, paperboard, and wood moldings that reputedly were used in his self designed home, the first in town with electric lights. His Electric Light Co. also served Riverhead	2 story single bay front gable Italianate with 1 story wraparound front and south side flat roof over low masonry replacement porch. Flat winged gable with prominent cornice and intricate original paired brackets. Turned spindle porch columns and associated carved brackets are vernacular replacements. tall 2/2 double hung windows appear original but with alum. storms.
	128.-5-3	224		Griffing	Ave	Office Building	GR-04	Yes	No shed or garage. Original granite wall along front of lawn	Vinyl clapboard siding	stone	Possible rear	1870*	yes	The Moore Barnes House: owned by A.G. Moore on 1873 map. Albert G. Moore, born in NJ c. 1820, was a toolmaker in the 1860 census, a plane maker in 1865 and a carpenter in 1880. Owned by W. Barnes in 1916. Col Walter F. Barnes was retired after 37 years with the NY National Guard.	2 story Italianate with front south wing and two flat winged gables. Ornate cornice work with paired brackets and dentil into the gables. Elaborate archtypical square lantern cupola with triple graduated arch windows on each of the four sides. Flat roof raised front porch with Tuscan columns and spindle rilings above lattice panels. Large cross heads on windows with pediments over the gable centered units.
	127.-1-48	340		Maple	Ave	One Family Year-Round Residence	MA-01		2 bay gabled garage	vinyl siding	brick		pre-1916	yes	Owned by Mrs. P. Novasiki on 1916 map	2 1/2 story 2 bay Colonial Revival front gable with full width front shed roofed and later enclosed porch. Small hipped roof 1st floor side bay. Some remaining 6/1 double hung windows with storms on main house.
	127.-1-47	336		Maple	Ave	One Family Year-Round Residence	MA-02		2 bay garage	cementitious shingles		Rear ?	1922*	yes		2 story 2 bay Colonial Revival front gable with full width front shed roofed and later enclosed porch. Small hipped roof 1st floor side bay. Rear 1st floor addition. Original 2/2 double hung windows remain in main house.
	127.-1-46	334		Maple	Ave	One Family Year-Round Residence	MA-03		double width gabled garage	cementitious shingles	rock face concrete block		1927*	yes	House on this property owned by Mrs. Downs on 1916 map. Austin Downs, probably from an old Riverhead family, was a vetinary doctor living on Maple Ave. in 1915.	2 1/2 story 3 bay hipped roof Colonial Revival with full width front hipped roof glass porch and center entry. Third floor front centered pedimented gable dormer.6/1 double hung windows mostly remain with storms.
	129.-2-23	226		Maple	Ave	One Family Year-Round Residence	MA-04	Yes	Shed	Wood clapboard	Concrete	No	pre-1916	yes	Owned by J. Hagan on 1916 map. Either James, John or Charles J. Hagan.	2 story 2 bay front gable Colonial Revival with full width later enclosed front side wrap porch. Double hung window configurations with replacement 1/1 sashes. North side prominent 2 story gable wing with centered 2 story bow windows.
	129.-2-24	218		Maple	Ave	Two Family Year-Round Residence	MA-05	Yes	Small shed	Cedar Shingles	Concrete	No	pre-1916	yes	2 story house (2nd structure on north end of larger lot) shown on property owned by Mrs. C. Amman on 1916 map. Her son George A. Amman, a photogrpaher, was living here in 1915. He was probably the son of Christian Amman, born in Germany, and variously a butcher or carpenter.	2 1/2 story front gable 2 bay Colonial Revival with full depth subordinate south side gable featuring diamond divided lites in attic window. Low hip roofed front glass porch with off center entry and brick stoop. Prominent frieze work and front gable pediment.
	129.-2-25	212		Maple	Ave	Multiple Residences	MA-06	Yes	Accessory Structure	Cedar Shingles	Stone	No	after 1916	yes	This house likely was built soon after the 1916 map, on property that had been owned by Mrs. G Amman and was later subdivided.	2 1/2 story Colonial Revival front gable with symmetrical subordinate side gables north and south. Full width front hip roofed center entry glass porch. South side 1st floor shed roofed wing. Strong frieze and front gable pediment, and Italianate influenced twin arch top attic windows.

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	129.-2-26	204		Maple	Ave	Three Family Year-Round Residence	MA-07	Yes	Garage	Vinyl Siding	Not Visible	No	ca-1910	yes	Main house structure on property shown owned by Mrs. G. Amman on 1916 map. See MA-05 above (note: this lot listed as MA-06 on SHPO building structure inventory form dated 5/18/77)	2 story front gable Colonial Revival with front and south side wraparound low roof raised porch. Front and side stair to porch. Large shed roof 2 story wings both sides. Extensive vernacular modifications to cladding and trim. South side flat roof 1 story bow oriel.
	129.-2-27	156		Maple	Ave	One Family Year-Round Residence	MA-08	partially	No	Vinyl Siding	Brick	2 story at rear	1860*	yes	Possibly owned by D.Porter shown on 1873 map. Owned by A. Downs on 1916 map. See Austin Downs in MA-03 above	2 1/2 story cross gable Queen Anne. South side gable wing features 1 story bay oriel. Entry nested in corner with low slope roof over. Flared hood over 2nd floor front window pair. Pointed top window centered in front and rear attic gables with original ornamental T spindles. Barge board rakes and ogee on rafter tails
	129.-2-28	152		Maple	Ave	Multi-family Year-Round Residence	MA-09	No	No	Vinyl Siding	Concrete	Rear	1890*	yes	Owned by Raynor on 1916 map. Lorimer Raynor was a surveyor who was in Riverhead in 1900 but had moved to Union Avenue by 1920. He laid out Ostrander Avenue and the Second Street extension in 1905.	2 1/2 story 2 bay Colonial Revival side gable with full width low slope hipped roof raised front porch later enclosed. Front gable attic dormer original probable windows closed over with vernacular round vent. Yankee gutter system remains. Likely later added rear 2 story additions
	129.-2-29	150		Maple	Ave	One Family Year-Round Residence	MA-10	No	Garage	?		Side / Rear	1890*	no	Owned by Robert Rhodes on 1916 map. The 1920 census lists him as having his "own income."	2 story cross gable with enclosed front wraparound porch. South side 2 story gable features full height low slope roof bow oriel. Multiple apparent rear additions and vernacular modifications. Likely former Italianate influence.
	129.-2-30	140		Maple	Ave	Special Schools and Institutions adult home.	MA-11	Yes	Garage	Cedar Shingles	Not Visible	No	1880*	yes	Owned by Carrie B. Humphrey on 1916 map. She was a stenographer. In 1910 she and her husband, Raymond, a lawyer, were living with her parents, J. Phineas Lane, on East Street. By 1920, she was a widow in NYC.	2 1/2 story front gable 3 bay Colonial Revival with full front and south side wraparound shed roofed raised porch. Round top attic window. Queen Anne influence vernacular renovation with heavy cornice at roof, scrolled brackets and turned spindle posts at the front porch.
	129.-2-31	130		Maple	Ave	One Family Year-Round Residence	MA-12	Yes	Garage	Vinyl Siding	Concrete	No	possibly 1880*	yes	Property owned by W.J. Bussanian on 1916 map	2 story Colonial Revival side gable with full width shed dormers front and rear. Front 1 story wing with shed roof and front facing gable over off center porch entry
	129.-2-15	147		Maple	Ave	Multiple Residences	MA-13	Yes	Shed	Wood Shingles / Clapboard	Brick	? Rear	pre-1916	yes	Owned by H.F. Buxton on 1916 map. Horatio F. Buxton, born in Rhode Island, owned a general store	2 1/2 story 3 bay front gable with stepped lower rear gable. Full width front and south side wraparound hip roof over raised porch. Plain square columns and modesty panels with off center front entry steps. Some remaining 2/1 double hung windows
	129.-2-16	153		Maple	Ave	Two Family Year-Round Residence	MA-14	Yes	2 Car garage	Wood Shingles	Concrete	Possible rear	1870*	yes	Owned by S.W. Reeves on 1916 map. Sidney W. Reeve was a harness maker from an old Riverhead family.	2 story 2 bay front gable Colonial Revival with possible Italianate influenced south side low slope hip roofed 1 story bow oriel. Rear gable steps higher. Full width front low hip roof over raised front porch with off center entry and steps. Later replacement Queen Anne style turned spindle posts, scrolled brackets and wood spindle railing. many 2/1 double hung windows remain with storms.

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	129.-2-17	157		Maple	Ave	Two Family Year-Round Residence	MA-15	No	No	Vinyl Siding	Brick	Side and rear	1870*	no	Possibly owned by D. Porter on 1873 map. Owned by J. Lutz on 1916 map. Dr. James Lutz was a dentist who served in World War I.	2 story 3 bay front gable Colonial Revival with small off center gable portico over raised wood porch. Tuscan columns and wood railings. Multiple rear and side additions. Some apparent original 2/2 double hung windows remain with storms
	129.-2-19	203		Maple	Ave	One Family Year-Round Residence	MA-16	No	Garage	Vinyl Siding	Not Visible	Rear	pre-1916	yes	Owned by W.J. Bussanian on 1916 map	2 1/2 story originally 3 bay front gable Colonial Revival with 1 story stepped rear gable. Full width front later enclosed raised porch. South side shed roofed 1 story bay . Some 2/2 double hung windows remain with storms.
	129.-2-20	207		Maple	Ave	One Family Year-Round Residence	MA-17	No	Shed	Wood / Asbestos	Not Visible	No	1880*	yes	Owned by William Burnite on 1916 map. Probably a rental unit for him.	2 story 2 bay front gable Colonial Revival. Recent vernacular partial cladding, window and front door replacement.
	129.-2-21	213		Maple	Ave	Two Family Year-Round Residence	MA-18	Partially	Garage	Wood Shingles		Rear	1890*	yes	Owned by W. Biggs on 1916 map. William Biggs and his daughter Viola were cigar makers in 1910.	2 story front gable 1 bay Colonial Revival with full width front and north side wraparound glass porch. Many apparent 6/1 original double hung windows remain. Later side and rear additions and renovations done in similar vernacular.
	129.-2-22.2	219		Maple	Ave	Residential Vacant Land	MA-19							no		Empty Lot
	129.-2-22.1	225		Maple	Ave	Two Family Year-Round Residence	MA-20	yes	No	Asbestos shingle siding	Concrete	No	1920*	yes		2 1/2 story side gable Colonial Revival. Square with centered 1 story front pedimented gable over square column double entry porch, steps both sides. 6/1 double hung windows mostly remain with storms. Prominent simple frieze at cornice with broken pediment returns on side gables.
	128.-4-26	305		Maple	Ave	One Family Year-Round Residence	MA-21	partially	One car garage	vinyl siding	rock face concrete block	rear	1910*	yes		2 story 3 bay hip roofed Colonial Revival with front hip roof 1 story glass porch. Attic front center hip dormer has been sided over.
	128.-4-25	311		Maple	Ave	One Family Year-Round Residence	MA-22	No	Garage	vinyl siding	brick		1885*	yes	Owned by Mrs. A. Robinson on 1916 map. Albertina Robinson was born in Switzerland of French parents.	2 story cross gable T plan Colonial Revival . Broad side of the house to the road with center entry. Replacement windows throughout.Little remains of the original character other than general massing.

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	128.-4-24	317		Maple	Ave	One Family Year-Round Residence	MA-23	Yes		vinyl siding	rock face concrete block	possible rear shed roof	1930*	yes		2 story 3 bay hip roofed Colonial Revival with front hip roof 1 story raised porch. Attic front center hip dormer with twin square windows. Original window configuration/locations appear to remain with replacement insulated 1/1 double hung units.
	126.-4-54	323		Maple	Ave	One Family Year-Round Residence	MA-24	Yes		vinyl siding	rock face concrete block or possibly stone	possible rear	1929*	yes		2 story 3 bay symmetrical front gable with applied front gambrel rakes. Front glass 1 story porch with low hip roof and center brick stoop entry. Apparent replacement 6/1 double hung windows in original configuration.
	126-4-53	329-331		Maple	Ave	Multiple Residences	MA-25	Yes	2 garages and 1 cottage	cedar shingle	not visible	rear	1908*	yes	Owned by S. Goldman on 1916 map. Shephard Goldman was a Russian Jew who immigrated in 1914 according to the 1920 census, but his children were born in this country starting in 1906. He was a butcher who owned his own slaughterhouse. One of the founders of Riverhead's Jewish Synagogue.	2 story 1 bay cross gable Colonial Revival with prominent gable to the road. South side 2 story gable with 1 story roofed south side entry porch. North side large 2 story wing or early addition.
	127-1-49.2	346		Maple	Ave	One Family Year-Round Residence	MA-26			cedar shingle	concrete		1900*	yes	Owned by M. D. Benjamin on 1916 map. Probably a rental property.	2 story 1 bay front gable Colonial Revival. Full width front to south side wraparound later fully enclosed porch. Rear 1 story low slope gable possible early addition with open deck. All windows have been replaced with insulated double hung units.
	127.-1-45	326		Maple	Ave	One Family Year-Round Residence	MA-27	Yes		Vinyl siding	CMU		possibly mid 1800s, and moved to site 1920s	yes	Built on property owned by M.D. Benjamin on 1916 map	1 1/2 story 3 bay cross gable with single front shed dormer and full width low slope hipped roof over raised front wood porch. Mid story eave height suggests balloon framing, and lack of eave overhang are indicative of earlier mid 19th century construction. May have been moved from downtown to make way for growth there. Much later added or replacement CMU chimney
	127.-1-44	320		Maple	Ave	One Family Year-Round Residence	MA-28	No	Garage and shed	Vinyl and cedar shingle siding	CMU		1920s but may be significantly older structure later moved to this site	yes	Built on property owned by M.D. Benjamin on 1916 map	1 1/2 story 3 bay cross gable with full width low slope hipped roof over later enclosed vinyl clad front wood porch. Roof probably the only remaining component of porch. Main roof open rafter tails remain.
	129.-2-14	143		Maple	Ave	Year-Round Multiple Residence	MA-29	Yes	2 Car Garage	Wood Clapboard	not visible	rear	ca 1920	yes	Built on property owned by C. Bunce in 1916	2 story hip roofed cross ridge Colonial Revival with full 2 story south wing and small centered single story hip roof two tuscan column portico over a low brick porch. Original wood clapboard, flat window trim and open rafter tails remain. 6/1 double hung likely original windows remain with later alum storms.
	128.-4-6	9		Northville	Tpk	Year-Round Multiple Residence	NT-01	No	2 Car 1 1/2 story Garage with lft door	vinyl siding	brick	2 story rear addition	pre 1900	yes	Owned by R. Hand on 1916 map. Lafayette R. Hand was a railroad news agent in 1900, a title searcher in 1910 and a clerk at WW I Camp Upton in 1920	2 1/2 story 3 bay front gable with original yankee gutter and top frieze configuration. Full width front low slope hip roof porch later fully enclosed. One 6/1 double hung and one leaded glass attic window remain. All other windows are likely modern replacements.

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	128.-4-7	13		Northville	Tpk	Year-Round Multiple Residence	NT-02	Yes	2 Car Garage	vinyl siding	brick		pre 1910	yes	Owned by E. Young on 1916 map. Lewis E. Young owned a butcher shop on Griffing Avenue	2 1/2 story 2 bay front gable with full width single story shed roof over raised wood front porch. West side shed roof one story
	128.-4-8	19		Northville	Tpk	Year-Round Single family Residence	NT-03	Yes	one bay Garage with shed wing	asbestos shingles	CMU		pre 1900	yes	Owned by J. M. Corwin on 1916 map. J. Madison Corwin was a carpenter. (May have been living here before 1880).	1 1/2 story single bay front gable with full width shed roof over raised wood front porch
	128.-4-9	23		Northville	Tpk	Year-Round Single family Residence	NT-04	Yes	one car Garage with loft "barn" door and later side shed addition	cedar shingle siding	brick	1 story rear gable	pre 1900	yes	Shown as owned by F. F. Skidmore on 1916 map. Frank L. Corwin lived here, he was a house painter and decorator. In 1920, the house was occupied by his widow Theresa Skidmore and her stenographer daughter.	2 story 2 bay front gable Queen Anne influence with probable original cedar perfection siding. Ornamental scallop shingles in the main gable pediment. Full width front 1 story shed roof over raised wood porch with spindle columns and some trim remaining. 1 story shed roof bay on east side. wood railing failing and mostly gone. Original 2/1 double hung and leaded glass attic windows remain w/ alum storms.
	128.-4-10	95		Northville	Tpk	Year-Round Multiple Residence vacant	NT-05	No	Large back yard garage or cottage later construction	cedar shingle	not visible	front second story	pre 1910	yes	Owned by Thomas Fury on 1916 map. Thomas Fury was a warden in the county jail.	2 story 2 bay front gable with multiple additions and front wraparound hip roofed raised wood porch. Original massing mostly obscured by additions. House vacant and borderline derelict with boarded up windows.
	128.-4-11	101		Northville	Tpk	One Family Year-Round Residence	NT-06	No	one car Garage	vinyl sided			between 1910 and 1916	yes	Owned by John Stonebank (a local plumber) on 1916 map.	2 1/2 story 2 bay front gable with full width low slope 1 story hip roof over raised front porch. Vernacular square brick columns and ornamental brick half screenwalls and off center brick steps to raised masonry porch added later. Little remaining of original structure character beyond basic massing.
	128.-4-12	107		Northville	Tpk	One Family Year-Round Residence	NT-07	Yes	two car Garage	vinyl sided	apparent brick		ca 1920s	yes	Built on property owned by J. Flannagan on 1916 map	2 story 2 bay front gable with full width 1 story shed roof over raised front wood porch. Modesty half walls, vernacular trim and shutters, and vinyl siding added later. Attic window closed over with vent.
	128.-4-13	111		Northville	Tpk	One Family Year-Round Residence	NT-08	Yes	Large two car Garage with large metal roofed shed wing addition	cedar shingle siding	not visible		ca 1920s	yes	Built on property owned by J. Flannagan on 1916 map. John Flannagan was born in Ireland, retired by 1920. Originally lived on Third Street. May have built the house next door (NT-07) as a rental.	2 1/2 story 2 bay by 2 bay four square hip roof Colonial Revival with 1 story full width later enclosed raised wood porch with hip roof. Center front attic twin window hip dormer. 2/1 double hung attic windows remain. Original cedar shingles have been maintained with façade frieze and crown. Flat window trims remain. 1/1 double hung windows with later alum. storms. Newer casements in enclosed porch.
	129.-3-28	146		Ostrander	Ave	One Family Year-Round Residence	OS-01	Yes	Garage	Asbestos Shingles	Concrete	No	1912*	yes	Owned by F. Porter Howell on 1916 map. See below re. Howell. This, or possibly his other house below, was likely rented to an Scottish-born music teacher in 1920.	2 1/2 story side gable Shingle Style with full front and rear shed dormers. Front rake flares over front raised porch with plain Tuscan columns. Center entry porch wraps to south side. Front dormer wall articulates to create inset 2nd story balcony with front privacy railing. Front porch later partially enclosed. 16/1 double hung windows mostly remain

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	129.-3-29	138		Ostrander	Ave	One Family Year-Round Residence	OS-02	Yes	Garage		Not Visible		between 1905-1916	yes	Owned by F. Porter Howell on 1916 map. Howell was a Calverton duck farmer, but like many in that business, choose not to live on the farm. He was also a bank director.	2 1/2 story 3 bay Colonial Revival side gable with off center prominent front gable. Full width front and south side wraparound low slope roof over raised porch. Queen Anne influence turned spindle posts with small scroll work brackets. Off center entry and steps to porch. Rear off center gable with single story hip roof mudroom and bay oriel. Queen Anne style ornamental window lites at main stair
	129.-3-30	130-132		Ostrander	Ave	Professional Building	OS-03	Yes	Accessory Structure	Wood Shingles	Stone	No	1910*	yes	Owned by Mrs. John W. Reeves on 1916 map. She was a widow of a farmer. By 1920, this house belonged to Otis G. Pike, the secretary and treasurer of a bank. This was the birthplace of Otis G. Pike, Jr., who represented the East End in Congress from 1961 to 1979. Is still in the Pike family in 2014.	2 1/2 story 3 bay square hip roofed Colonial Revival with protruding center bay on 2nd floor. Twin window hip dormers on front and sides. Full front and south side wraparound raised porch with wood railings and Tuscan columns.
	129.-3-14	117		Ostrander	Ave	Residence with Incidental Commercial Use	OS-04		Accessory Structure	Asbestos Shingles	Concrete	No	1958*	no		2 story side gable Colonial Revival with gambrel roof. 2 front symmetrically balanced single window 2nd floor gabled dormers, and one 3/4 width rear shed dormer.
	129.-3-15.2	129		Ostrander	Ave	Office Building	OS-05	Yes	No	Painted Shingles	Concrete	No	1958*	no	Listed as OS-06 on SHPO Building Structure Inventory Form dated 5/18/77. Originally used as a medical office.	Very narrow 1 story cross gable Eclectic Folk cottage. Dominant front to rear gable structure with clipped side gable front entry section. Clipped gable off center front entry portico with a Adam influence fan lite over paired 8/8 double hung windows, possible later addition.
	129.-3-15.1	131		Ostrander	Ave	One Family Year-Round Residence	OS-06	Yes	Garage	Wood Clapboard		No	1910*	yes	Owned by Horace H. Williamson on 1916 map. Williamson was the owner and editor of the Riverhead News, the area's Democratic paper and predecessor to the current News-Review.	2 1/2 story Hip roofed Queen Anne with front and side prominent gables. Full front and south side wraparound raised roof over wood porch. Off center stairs under gabled potico to front entry. Porch features tuscan columns and a round south corner pavillion. Diamond shaped divided lites largeley remain.
	129.-3-16	139		Ostrander	Ave	Welfare	OS-07		Garage	Painted Shingles	Concrete	Side	1928*	yes		2 story side gable gambrel trimmed Colonial Revival. Off center entry portico gable with vaulted arch over fan lite entry and brick stoop. Fan lite windows centered in each end of attic gambrel.
	129.-3-17	143		Ostrander	Ave	One Family Year-Round Residence	OS-08		Garage	Painted Shingles	Concrete	Rear	1856*	yes	Owned by E.M. Robinson on 1916 map. Ernest Robinson was the secretary and treasurer of a potato exchange in 1910. By 1920, he was a "clerical" in the county treasurer's office. This house was likely moved from another location after Ostrander Ave. was laid out in 1905.	2 story 3 bay low slope hipped roof Italianate with yankee gutters and roof over front porch. Original wood porch is gone. Original gothic influence columns are gone. 1 1/2 story north side wing with 1 story front bow oriel. Original double hung windows have been mostly replaced with 1/1 insulated units.
	129.-3-18	149		Ostrander	Ave	Two Family Year-Round Residence	OS-09		Garage	Asbestos Shingles	Brick	Rear	1869*	yes	Owned by Kirk Bagshaw on 1916 map. In 1920, he was a "clerical" in the county treasurer's office. This house was likely moved from another location after Ostrander Ave. was laid out in 1905.	2 story 3 bay low slope hipped roof Italianate with yankee gutters and roof over front porch. 2 story north side wing. Full width wood porch continues across in front of north wing. Original double hung windows have been mostly replaced with 1/1 insulated units. Rear low slope shed roof 1 story full width wing possible later addition.

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	128.-5-26	322		Roanoke	Ave	Converted Residence	RO-01	Yes	No	Vinyl Siding	Concrete	Possible rear	pre-1873	yes	Owned by G.C. Corwin on 1873 map, and George C. (Chauncey) Corwin on 1916 map. Corwin, from an old Riverhead family, was engaged in one of Riverhead's three ice businesses.	2 story L shaped cross low slope gable with Italianate influence flat winged gables. Full front low slope shed roof over slab porch which continues across in front of side gable 2 story wing. Wing features 2 story low slope bow oriel. Windows, cladding and columns all recently replaced in modern vernacular, including faux 4/4 double hung insulated window units.
	128.-5-27	318		Roanoke	Ave	Converted Residence	RO-02	Yes	No	Vinyl Siding	Concrete	No	pre-1873	yes	Owned by Benjamin Hallock on 1873 map. Hallock, born about 1825, was a sea captain in NYC in 1860. Perhaps that was how he met his English-born wife, Emma. He is listed as keeping a market in 1880. owned by Mrs. L. Sweezy on 1916 map. Hallock's daughter Laura Sweezy, born c. 1851 was widowed young, and was still living here in 1920 at age 69.	2 story L shaped cross gable low slope roof with Italianate influence flat winged gables. 1 story vaulted arch gable portico over brick entry stoop not original. Deep frieze has been replicated in vernacular cladding. Windows replaced with double hung faux 4/4 insulated units. Original paired arch italianate attic windows have been clad over.
	128.-5-28	312		Roanoke	Ave	One Story Small Structure - Multi occupant	RO-03	Yes	No	Wood Shingle	Concrete	No	1948*	yes		2 story 4 bay side gable Colonial Revival. Front 1 story off center hip roofed wing with gable feature over entry. 3 window 1 story metal mansard front roof bay opposite to entry wing. Many original 6/1 double hung windows remain with storms.
	128.-5-29	306		Roanoke	Ave	Apartments	RO-04	Yes	No	Painted Shingles	Brick and stone	Rear probable	1948*	yes	Stone foundation probably partially from Swedenborgian church built on this site in 1855. Current structure built after church was divided in half moved to become two houses about a half mile to the north.	2 1/2 story front gable Colonial Revival with full width front and both sides 1 story hipped roof probable former porch later enclosed. Attic with full shed dormers on both sides. Telescoped rear gable wing and multiple varied rear 1 story additions.
	128.-6-31	220		Roanoke	Ave	Office Building	RO-05	Yes	No	Brick	Concrete	No	1928	yes	Odd Fellows Lodge Designed by August H. Galow. Note the trademark diagonal brick panels under the 3rd story windows, similar to those on the Commercial Building (Peconic and E. Main) also by Galow. Town Hall also occupied the 1st floor and basement until 1976.	3 story Federal Style 3 bay by 5 bay brick building with Colonial Revival details. Common running brick and repeating 6th course header. Brick vousoirs with limestone keystones. Brick panels beneath 3rd floor round top windows with gothic influenced lite divisions. Prominent frieze and cornice with wood dentil. Stone band at top of 1st floor.
	128.-6-32	214		Roanoke	Ave	Converted Residence	RO-06	Yes	Shed	Vinyl Siding	Concrete	No	pre-1858	yes	Vail House: Originally constructed for Mrs. J Vail on the corner of 2nd Street. Moved prior to 1928 to construct the Odd Fellows Lodge. Served as the Riverhead Sanitorium, a birthing hospital in the 1930s run by Lucy Hallock and sister Edith.	2 story hip roofed Italianate with dominant front gable. Small arch top attic window centered over paired arch 2nd floor windows over double door front entry full front width 1 story roof over raised front wood porch with wood railings and Tuscan columns. Rear 2 story cross gables and clipped south corner front window. Tall 2/2 insulated placement double hung windows.
	128.-6-33	208		Roanoke	Ave	Office Building	RO-07	No	No	Brick	Concrete	No	1959*	no		1 story brick and concrete with commercial aluminum and mirrored glazing windows
	128.-6-34	206		Roanoke	Ave	Converted Residence	RO-08	Yes	No	Clapboard	Not Visible	No	1890*	yes	Cora Reeve Barnes House: Originally home of Howell Monroe Reeve and wife Lydia. Founder Suffolk County Trust Co.. Later of daughter Cora Belle Reeve who married Col. Walter Barnes.	2 story3 bay hip roofed italianate with arch windowed lantern cupola. Small gable attic window dormers centered in main roof facing south and west. 2 story subordinate wing on north side with west facing 1 story flat roof bow oriel. Front and south side wraparound low pitch roof 1 story porch added 1914, later (1970s) mostly enclosed. Porch still open with square column pairs at off center brick porch entry.

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	128.-6-9	209-211		Roanoke	Ave	One Story Small Structure - Multi occupant	RO-09		No	Painted synthetic Shingles	Brick	Rear	1859*	yes	Owned by W. Walkman on 1873 map. William Walkman was a 35-year old English-born master confectioner in the 1860 census. Owned by Baiting Hollow Telephone Co. on 1916 map. Founded by a group of farmers in 1901. By 1903 this company had 150 subscribers throughout the town. Last independent phone company in Suffolk County,, sold to New York Telephone in 1917.	2 story side gable Colonial Revival with full width 1 story front hip roof over wood porch with entry steps on side. Rear gable 2 story wing with single story rear additions. Added handicapped access ramp at rear
	128.-6-8	215		Roanoke	Ave	One Story Small Structure - Multi occupant	RO-10		No	Painted Shingles	Brick / Concrete	Large Rear extension	pre-1858 probably 1840s	yes	Riverhead News Building or the Corwin-Davis House: Belonged to B.B. Corwin and J.C. Davis. The Greek Key elements on the corner pilasters and front door surrounds are typical of the style in that period. Simplified versions that could be hand tooled by craftsmen of the time. John C. Davis was a partner with Nathan Corwin in a general store and later the firm of Corwin, Davis & Co. also operated a lumber yard on the Peconic River.	2 story front gable greek revival with off center front entry surround and corner pilasters. Brick and concrete front stoop probably added later. Low north and south side eave "belly" windows just beneath the frieze. Windows all replacement insulated units with faux 6/6 divided lites. Front entry likely had side lites and a partially Main Entry glazed door.
	128.-6-7	223		Roanoke	Ave	Converted Residence	RO-11	Yes	Garage	Clapboard	CMU		1824*	yes	Wells Robinson House, residence of : Joshua L. Wells Jr. who was a partner with Silas S. Terry in a general store and lumber yard in the 1850s; Dr. Henry P. and Carrie Corwin Terry; he moved to Riverhead after retiring from a medical practice in Cutchogue in 1890 and became the chief organizer of Suffolk County National Bank, which still has its headquarters in Riverhead; and Leland Robinson, an agricultural produce dealer, among others.	2 1/2 story low hip roofed Italianate with 8 window lantern cupola. Front and rear facing attic gables with paired arch top windows. 1 story flat roof front porch with ornate scrollwork columns a large frieze and detailed bracket pairs. 2 story flat roof bow oriel. large frieze at high roof with large elaborate scrolled brackets all around. Apparent original 9/6 windows at front with storms. An excellent example of Italianate style so popular regionally in the mid 19th century
	128.-6-11	203		Roanoke	Ave	Converted Residence	RO-12	Yes	No	Vinyl shiplap siding	brick	Rear addition	1858-1873	yes	Owned by Mrs. J. Martin on 1873 map. The 1870 census shows John Martin, a laborer, and his wife Mary, with two adult borders, one of whom had two children. Ten years later, Mary was a widow. Owned by William M. Litchard on 1916 map. Litchard was a traveling grocery salesman.	2 1/2 story side gambrel Colonial Revival with twin front second story gable pediments, one over a square bay and one over a bow. Full width low slope shed roof over first story raised porch with pairs of Tuscan columns and a simple molding on frieze. Low spindle railings either side of steps to center entry. Original
	128.-6-12.1	169		Roanoke	Ave	Converted Residence	RO-13	Yes	No	Vinyl clapboard and scalloped shingle siding	brick	Rear addition?	pre-1916	yes	Owned by Estate of J.H. Perkins on 1916 map	2 1/2 story cross gable Queen Anne caringly restored with modern materials. A few original stained glass Queen Anne windows remain. Narrow front wing features stained glass attic window in scalloped shingle sided stepped pediment. Subordinate west gable over 2 story oriel with stained glass windows in all three sides of the bow.
	128.-5-12	20		3rd	St	Two Family Year-Round Residence	TH-02	Yes	No	Clapboard	Stone	No	pre-1916	yes	Owned by Mrs. B.H. Lord on 1916 map. See TH-01 above	2 1/2 story 2 bay by 2 bay hip roof Colonial Revival with 1 story full width and west side wraparound raised wood porch with hip roof over Tuscan columns. Center front attic single window hip dormer. 6/1 double hung windows mostly remain with storms.

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	128.-5-13	28		3rd	St	One Family Year-Round Residence	TH-03	No	Garage	Vinyl Siding	Not Visible	Rear	pre-1873	yes	Owned by John Bartlett on 1873 map, M. Bartley on 1916 map (<i>perhaps misspelling of the same sir names</i>) John Bartley, born in Ireland c. 1821, was a tailor. He was one of two trustees when St. John's R.C. parish was incorporated in 1864.	2 story front gable presumed Colonial Revival. 1 story west side shed roof wing. Essentially no original windows or trim remain. House clad in all modern materials.
	128.-5-14	34		3rd	St	One Family Year-Round Residence	TH-04		Garage	Vinyl Siding	Concrete	No	pre-1873	yes	Owned by G. Hudson on 1873 map, Mrs. Luther Skidmore on 1916 map. Luther Skidmore came to Riverhead in 1834 from Baiting Hollow and for many years operated a sash, door and blind manufacturing operation using Peconic River water power.	2 story front gable 3 bay by 3 bay probable Italianate with 1 story full width front 1 story hip roof porch. Porch later enclosed. 1/1 insulated double hung replacement windows throughout. Typical Italianate flat gable wings with apparent yanke gutters remain.
	128.-5-15	38		3rd	St	One Family Year-Round Residence	TH-05		No	Vinyl Siding	Concrete	No	1989*	no		1 story low hip roof cottage
	128.-5-16	48		3rd	St	One Family Year-Round Residence	TH-06	Yes	Shed	Clapboard	Brick	No	pre-1873	yes	Owned by J. Flannigan on 1873 and J. Flanagan on 1916 map. John Flanagan was born in Ireland c. 1843. On the 1920 census, he was one of 7 Irish families on Third Street.	2 story cross gable possible Italianate with amin gable facing street. Low slope hip 1 story roof over front and east side wraparound wood porch with scrolled brackets and spindle posts. 6/6 , 4/4, and 1/1 mix of double hung windows. Many appear original. repairs ongoing at time of inspection.
	128.-5-17	58		3rd	St	Two Family Year-Round Residence	TH-07	Yes	Garage	Cedar Shingles	Concrete	No	pre-1873	yes	Owned by T. Welch on 1873 map and M. Walsh on 1916 map (<i>perhaps misspelling of the same sur names</i>). Thomas Walsh, a farm laborer, was born in Ireland c, 1839. Mary Walsh, his daughter, lived here in 1920 with a brother John.	1 1/2 story cross gable Queen Anne style cross gable with front and west side wraparound wood front porch. Architypical fretwork and turned spindle posts and railing distressed but remaining. Main 3 bay gable facing street.
	128.-5-18	57		3rd	St	Two Family Year-Round Residence	TH-08	Yes	Garage	Cedar Shingles	Rock face concrete block	Side	pre-1873	yes	Owned by Charles Davis on 1873 map. In 1870, Davis is listed as a 68 year old gardener and his son, in the same house, was a carpenter. Owned by Gerard Estate on 1916 map	2 story side gable gambrel trimmed Colonial Revival.Front glass porch with 1 story hip roof and center entry. Low pitch rear gable 1 story wing probable later addition. Unique 3/1 double hung windows remain with storms
	128.-5-19	49		3rd	St	One Family Year-Round Residence	TH-09	Yes	Garage	Painted Shingles	Concrete	No	1955*	no		1 1/2 story side gable modern with rear gable center wing. All contemporary insulated casement windows.
	128.-5-20	45		3rd	St	Residential Vacant Land	TH-10							no		Empty Lot

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	128.-5-21	41		3rd	St	Two Family Year-Round Residence	TH-11		Garage	Asbestos Shingles	Concrete	No	after 1916	no		2 story side gable Colonial Revival with front 1 story center gable entry vestibule. Rear center gable wing. Most windows have been replaced with insulated casement units
	128.-5-22	37		3rd	St	One Family Year-Round Residence	TH-12	Yes	No	Cedar Shingles	Concrete	Rear	1867*	yes	Owned by R. Bartlett on 1873 map. Robert Bartlet was an Irish born boatman on the 1865 census. Owned by Madden on 1916 map.	1 1/2 story side gable Eclectic National Folk cottage. Craftsman influence low slope center shed dormer on front, and 4 gang small double windows in 2nd floor gable ends. Full front and east side wraparound hip roof 1 story porch roof over porch with Tuscan columns. Large rear 1 story off center gable wing.
	129.-3-1	216		Union	Ave	One Family Year-Round Residence	UN-01	No	Garage	Asbestos Shingles	Brick	Side	1880*	yes	Owned by Miss Ellen Terry on 1916 map. On the 1920 census she was the widow of George F. Terry, a farmer, and is thought to have moved to town after his death.	1 1/2 story 2 bay front gable Italianate. Single story shed roof additions or enclosed porches along both sides. 2/2 double hung windows remain with storms.
	129.-3-2	210		Union	Ave	Two Family Year-Round Residence	UN-02	Yes	No	Asbestos Shingles	Concrete	Rear	1910*	yes	Owned by Antone Schulhoff on 1916 map. Born in Germany c. 1855, immigrated in 1861, he was a shoemaker and shoe store owner who took over the Tuthill shoe store in 1881. Property subdivided into two lots between 1916 and 1929.	2 1/2 story 3 bay front gable Colonial Revival with front and side wraparound porch later glazed in. Yankee gutters. Remnant pointed top double hung attic window remains. Rear single story gable wing.
	129.-3-3	204		Union	Ave	One Family Year-Round Residence	UN-03	Yes	Oversized gabled carriage house Garage with cupola	Painted Shingles	Concrete	No	1900*	yes	Owned by Antone Schulhoff on 1916 (See above. One of these houses was probably rented.)	2 1/2 story 3 bay front gable Italianate influence Colonial Revival with front and side wraparound porch later glazed in. Yankee gutters. Remnant pointed top double hung attic window remains. Rear single story gable wing.
	129.-3-4	156		Union	Ave	One Family Year-Round Residence	UN-04	Yes	Garage	Cedar Shingles	Concrete	No	1929*	yes		2 story side gable Italianate influence Colonial Revival with full front and rear shed dormers. Full front low slope roofed over raised porch with center brick stoop and sided modesty panels. Porch partially enclosed
	129.-3-5	150		Union	Ave	One Family Year-Round Residence	UN-05	No	No	Vinyl Siding	Concrete		1960*	no		2 story front gable modern with single story shed roof front wing and asymmetrical covered brick entry stoop.
	129.-3-6	144-146		Union	Ave	Two Family Year-Round Residence	UN-06	Yes	No	Painted Shingles	Concrete	Rear	1880*	yes	Owned by L.M. Raynor in 1916. Lorimer Raynor shows up here on the 1900 and later censuses. He was born in 1861. In 1900 he was a carpenter and teacher, in later years a surveyor	2 1/2 story 3 bay front gable Colonial Revival with off center front entry brick stoop. Italianate influence flat rake wings on gable end. Common Adam style pilasters and flat entablature entry surround. Remnant 4/4 pointed top arch window in attic. 4/4 double hung windows in remainder of home.

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	129.-3-7	138		Union	Ave	One Family Year-Round Residence	UN-07	Yes	2 bay front gable Garage	Painted Shingles	Not Visible		1918*	yes	Owned by T. Skidmore on 1916 map. On the 1910 census, Theodore Skidmore was 66 years old, and a sash and blind maker. He was a son of Luther Skidmore who founded the company, one of two in this business in town. He was the brother of George H. Skidmore, Riverhead's leading architect.	1 1/2 story side gable Craftsman bungalow with dominant front gable dormer. Full width front roof over front raised porch. Pairs of square columns on pedestal bases. Column details suggestive of a Sears Honor Bilt home called The Woodland from ca 1921
	129.-3-8	132		Union	Ave	One Family Year-Round Residence	UN-08	No	Garage	Painted Shingles	Concrete	2 story rear	early 1900s	yes	Structure of similar configuration shown on property. Owned by C.W. Conklin on 1873 map, Charles W. Conklin shows up on the 1870 and 1880 census as a carpenter and the 1900 census as a hotel keeper, but it is not certain where he lived. Owned by H. B. Howell on 1916 map. May have been a rental property for Howell.	2 story cross gable Colonial Revival with dominant gable facing street. Low slope roof over full width wraparound raised front porch. Porch partially enclosed with modern jalousied glass. Most 2/2 double hung windows remain with storms. Secondary side 2 story gable with 2 story flat roof bow oriel. Turned spindle columns with modesty panels at front porch.
	129.-3-9	124-126		Union	Ave	Parking Lot	UN-09							no		Parking Lot
	129.-2-35	125		Union	Ave	One Family Year-Round Residence	UN-10	Yes	Garage	Vinyl Siding	Not Visible	Rear canopy	pre-1873	yes	Structure of similar configuration shown on property. Owned by C.W. Conklin on 1873 map. Owned by H. B. Howell on 1916 map. See UN-08 above	2 1/2 story cross gable Colonial Revival. Full width low slope roof over 1 story raised wood front porch. South end of porch features circular covered pavillion. Apparently later applied scroll cut Queen Anne influence brackets on square wood columns. Pairs of 1/1 double hung windows at 2nd floor and attic
	129.-2-36	131		Union	Ave	Converted Residence	UN-11	Yes	No	Vinyl Siding	Brick	No	pre-1873	yes	Owned by E. C. Corwin on 1873 map, George T. Reeves on 1916 map. Reeves is here on the 1915 census. He was a clerk in the county clerk's office as early as 1880.	2 1/2 story 3 bay front gable Colonial Revival with secondary 1 story south facing side gable featuring a flat roof bow oriel. Full width low slope hip roof over raised front porch and wraps around to side wing entrance. Faux arch top applied to attic window. 6/6 double hung insulated replacement widows through most of the house. Transom windows above front units.
	129.-2-37	135		Union	Ave	One Family Year-Round Residence	UN-12	Yes	No	Asbestos Shingles	Not Visible		1870*	yes	Owned by A. Downs on 1873 map, W. J. Bussanian on 1916 map. Austin Downs was a 64-year old lawyer in 1870. His son, Austin, Jr., was a horse trainer in Brooklyn in 1880, but was back in Riverhead, living here, as a veterinary surgeon in 1910.	2 1/2 story 2 bay front gable with full width low slope 1 story roof over raised front porch. Simple square columns with off center brick steps to front door. 1/1 double hung windows remain with alum. storms. 2 story south flat roof wing. Point top attic window with dilapidated closed shutters remains.
	129.-2-38	141		Union	Ave	One Family Year-Round Residence	UN-13	Yes	2 bay flat roofed Garage	Painted Shingles	Not Visible	No	1934*	yes		1 1/2 story hip roof Folk National style cottage with narrow side to street. Triple ganged 6/1 double hung windows in hipped front dormer. Front corner glassed in entry porch with brick stoop. Minor side center gabled wing. Most 6/1 double hung windows remain, some with alum. storms.
	129.-2-39	145		Union	Ave	One Family Year-Round Residence	UN-14	No	Garage	Vinyl Siding	Concrete	Rear	1951*	no		2 story expanded irregular side gable contemporary with all insulated casement window units.

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	129.-2-40.1	153		Union	Ave	One Family Year-Round Residence	UN-15	Yes	No	Vinyl Siding	Concrete	Rear / Side	1890*	yes	Owned by T. Britton on 1916 map. Thomas Britton, was a Civil War veteran born in Nova Scotia. He was a carpenter and became Fire Department chief in 1895.	2 story front and wing gable likely original Italianate with low slope 1 story roof over entry porch nested in corner of main structure and wing. 1 1/2 story side wing features 1 story low slope hipped bow oriel. Front gable shows original point top double hung attic window. 2/2 double hung windows mostly remain with later added alum. storms.
	129.-2-41	203		Union	Ave	One Family Year-Round Residence	UN-16	Yes	Garage	Clapboard	Concrete	Rear	1900*	yes	Howser property on 1873 map. William H. Housner was a partner with Joshua Fanning in a produce and farm supply house. Owned by Antone Schulhoff on 1916 map.	2 1/2 story 3 bay front gable Italianate with full width low slope hip roof over 1 story raised wood porch and railings. Off center entry with 2 leaf arched top glazed entry door. Point top 4/4 double hung attic widow remains as does ornate corbeled and panelized brick Queen Anne influence chimney. 4/4 double hung windows mostly remain throughout. Apparent original low rock face concrete block wall around front of yard.
	129.-2-42	213		Union	Ave	One Family Year-Round Residence	UN-17	Yes	Garage	Cedar Shingles	Brick	Rear	1890*	yes	Owned by C. Skidmore on 1916 map. Charles Skidmore, born c. 1855, was a son of Luther, and brother of Theodore and George. He was also involved in the family's sash and blind business.	2 story front and side wing asymmetrical gable Queen Anne with full width front roof over 1 story porch raised wood with railings. Off center entry door and steps. Cedar perfection siding with Shingle style influence flared belt line, and scalloped shingles in gable end. Several original Queen Anne decorative stained glass windows remain. 1/1 paired double hung windows throughout elsewhere.
	129.-2-43	219		Union	Ave	One Family Year-Round Residence	UN-18	Yes	Garage	Vinyl Siding	Concrete	Side	1898*	yes	Owned by Charles Elton on 1916 map. Charles Elton was the son of James Elton. Charles was a coal company salesman living on East Street in the 1920 census. This may have been a rental. (See EA-12 above)	1 1/2 story side gable Colonial Revival with a small front gable portico over the center entry brick stoop. Front and rear center shed dormers with paired 1/1 double hung windows. Single story low hip roof south side wing at rear corner.
	129.-2-44	223		Union	Ave	One Family Year-Round Residence	UN-19	No	Garage	Vinyl Siding		Side and rear	1890*	yes	Owned by Carrie H. Weeks on 1916 map. She was born in England. In the 1900 and 1910 census Weeks shows up as a dress maker, working at home with her daughter.	Non Contributory
	128.-6-3.1	33	W	Second	St	Professional Building	W2-01	No	No	Clapboard	Not Visible	Multiple	1858-1873	yes	The Lane House is the center element and only original component of the large conglomeration of residential looking structures merged together by the Law Firm of Twomey Latham Shea & Kelly in a restoration effort to maintain the character of the street and provide adequate office space	2 story cross gable former Italianate with full wraparound porch featuring Tuscan columns and wood spindle railings. The original structure has been renovated, added to and combined with adjacent structures. Some original features remain including pointed top attic windows, second floor paired arch top windows, corbeled brick chimney and heavy frieze.
	128.-6-4.1	23	W	Second	St	Office Building	W2-02	Yes	No	Clapboard	Not Visible	No	1920*	yes	This last addition to the Law Firm offices next door was intended to emulate the Italianate style of the pre-1876 Tuthill-Vail house that was moved from the site to the east in order to build the Post Office	2 story low slope hip roofed Italianate influenced with full width street side wraparound 1 story raised wood porch. Original structure appears to comprise only the front portion of a much larger building. Triple arched windows on all four sides of lantern cupola in typical Italianate style.
	128.-6-5.1	21	W	Second	St	Office Building	W2-03	Yes	No	Brick	Concrete	No	1935*	yes	This structure and the Pulaski Street School were among thousands built by the Works Progress Administration, a relief program started by FDR to combat the impact of the Great Depression. \$11 billion was spent between 1935 and 1943 on 1.4 million projects providing 8.5 million jobs.	1 story Colonial Revival with Federal Style influences. A flat roof brick former Post Office building with quoining, voussoirs, prominent frieze and monumental stone steps up to the three pairs of divided lite french entry doors with stately arched fan lites over each pair. Large ornamental cast iron lanterns remain flanking each pair of doors.

Image	SCTM	No	pre	st	suf	Use	ID_NO	Original Condition (Y/N)	Detached Structures	Materials	Foundation	Additions	Circa	Contributory (Y/N)	Historic Significance	Architectural Notes:
	128.-6-6	15-Nov	W	Second	St	Professional Building	W2-04	No	No	Brick and concrete block	Concrete	No	1965*	no		Small 1 story Federal Style flat roof brick faced building with voussoirs and a prominent wood façade frieze and dentil molding.

* Listed as first date on Town of Riverhead Tax Assessor worksheet for year originally constructed.

Other dates listed in the Circa column have been gathered from SHPO Building-Structure inventory forms, maps listed below, or may be unsubstantiated anecdotal data from various local historical information sources.

Maps referenced are:

[Map of Suffolk County, L.I. NY. From Actual Surveys by J. Chace Jr. Published by John Douglass 1858](#)

[Atlas of Long Island, NY. From Recent and Actual Surveys by Beers Comstock & Cline 1873](#)

[Atlas of a Part of Suffolk County, L.I., NY. South Side Ocean Shore Vol. II New York: E. Belcher Hyde, 1916](#)



APPENDIX D

Toxics Targeting Information Source Guide

Information Source Guide

Toxics Targeting's Environmental Reports contain government and other information compiled on 18 categories of reported known or potential toxic sites. Each toxic site database is described below with information detailing a) the source of the information, b) the date when each database is covered to and c) when *Toxics Targeting* obtained the information..

1) **National Priority List for Federal Superfund Cleanup:** Toxic sites nominated for cleanup under the Federal Superfund program. Annual compilation of special two-page detailed profiles of NPL sites. Also includes delisted NPL sites. ASTM required.* Fannie Mae required.** Source: U. S. Environmental Protection Agency.¹
Data attributes updated from: 5/2/2013. Data obtained by Toxics Targeting: 5/2/2013.
New Facilities updated through: 5/2/2013. Data obtained by Toxics Targeting: 5/2/2013.

2) **Inactive Hazardous Waste Disposal Site Registry:** New York State database that maintains information and aids decision making regarding the investigation and cleanup of toxic sites. The Registry's data includes two-page profiles noting site name, ID number, description, classification, cleanup status, types of cleanup, owner information, types and quantities of contaminants, and assessment of health and environmental problems. Also included are sites that qualify for possible inclusion on the Registry. These Registry Qualifying sites may or may not be on the Site Registry. ASTM required.* Fannie Mae required.** Source: New York State Department of Environmental Conservation.²
Data attributes updated through: 5/2/2013. Data obtained by Toxics Targeting: 5/2/2013.
New Facilities updated to: 5/2/2013. Data obtained by Toxics Targeting: 5/2/2013.

3) **Corrective Action Activity (CORRACTS):** U. S. Environmental Protection Agency database of hazardous facilities regulated pursuant to the Resource Conservation and Recovery Act (RCRA). ASTM required.* Fannie Mae required.** Source: U. S. Environmental Protection Agency¹
Data attributes updated through: 10/17/2013. Data obtained by Toxics Targeting: 10/30/2013.
New facilities updated through: 10/17/2013. Data obtained by Toxics Targeting: 10/30/2013.

4) **CERCLIS:** Toxic sites listed in the Federal Comprehensive Environmental Response, Compensation and Liability Information System. Includes Active and No Further Remedial Action Planned (NFRAP) sites. ASTM required.* Fannie Mae required.** Source: U. S. Environmental Protection Agency.¹
Data attributes updated through: 4/25/2013. Data obtained by Toxics Targeting: 7/2/2013.
New Facilities updated through: 4/25/2013. Data obtained by Toxics Targeting: 7/2/2013.

5) **Brownfield Programs:** NYS programs for 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. ASTM required.* Source: New York State Department of Environmental Conservation.²
Data attributes updated through: 5/2/2013. Data obtained by Toxics Targeting: 5/2/2013.
New Facilities updated to: 5/2/2013. Data obtained by Toxics Targeting: 5/2/2013.

- (a) **Brownfield Cleanup Program (BCP)**
- (b) **Voluntary Cleanup Program (VCP)**
- (c) **Environmental Restoration Program (ERP)**

6) **Solid Waste Facilities:** NYS Solid Waste Registry, including, but not limited to, landfills, incinerators, transfer stations, recycling centers. ASTM required.* Fannie Mae required.** Source: New York State Department of Environmental Conservation.²
Data updated to: 12/31/2001. Data obtained by Toxics Targeting: 3/16/2002.

7) **RCRA Hazardous Waste Treatment, Storage or Disposal Facility Databases:**

(a) **Manifest Information:** New York State database of hazardous waste facilities and shipments regulated by the DEC's Bureau of Hazardous Waste Facility Compliance pursuant to NYS Law and the Resource Conservation and Recovery Act (RCRA). ASTM required.* Fannie Mae required.** Source: New York State Department of Environmental Conservation.²

New facilities updated through: 10/25/2013. New facilities obtained by Toxics Targeting: 11/5/2013.
Manifest transactions data updated to: 10/25/2013. Manifest transactions data obtained by Toxics Targeting: 11/5/2013.

(b) **RCRA Notifier & Violations Information:** U. S. Environmental Protection Agency database of hazardous facilities regulated pursuant to the Resource Conservation and Recovery Act (RCRA). ASTM required.* Fannie Mae required.** Source: U. S. Environmental Protection Agency¹
New facilities updated through: 10/17/2013. Data obtained by Toxics Targeting: 10/30/2013.
Data attributes updated through: 10/17/2013. Data obtained by Toxics Targeting: 10/30/2013.

8) **Spills Information Database:** Spills reported to the DEC as required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from Petroleum Bulk Storage Regulations) or 6 NYCRR Section 595.2 (from Chemical Bulk Storage Regulations). This database includes both *active* and *closed* spills.

ASTM required.* Fannie Mae.**

Source: NYS Department of Environmental Conservation.²

New spills through: 9/20/2013

New spills data obtained by Toxics Targeting: 9/20/2013

Spill attribute data through: 9/20/2013

Spill attribute data obtained by Toxics Targeting: 9/20/2013

Active spills: paperwork not completed.

Closed spills: paperwork completed.

Both active and closed spills may or may not have been cleaned up (see Date Cleanup Ceased in spill profiles).

9) **Major Oil Storage Facilities:** NYS database of facilities licensed pursuant to Article 12 of the Navigation Law, 6 NYCRR Parts 610 and 17 NYCRR Part 30, such as onshore facilities or vessels, with petroleum storage capacities equal to or greater than 400,000 gallons.

Tank and other data withheld by NYSDEC as of 4/1/2002.

ASTM required.* Fannie Mae required.**

Source: New York State Department of Environmental Conservation.²

Data updated through: 7/19/2013.

Data obtained by Toxics Targeting: 7/19/2013.

10) **Petroleum Bulk Storage Facilities:** County or State databases of aboveground and underground petroleum storage facilities.

ASTM required.* Fannie Mae required.**

All New York Counties except Cortland, Nassau, Rockland, Suffolk:

NYS Petroleum Bulk Storage Database. This includes all New York State counties except Cortland, Nassau, Rockland, Suffolk, and Westchester.

ASTM required.* Fannie Mae required.**

Source: NYS Department of Environmental Conservation.²

New facilities updated through: 7/19/2013.

Data obtained by Toxics Targeting: 7/19/2013.

Tank data updated through: 7/19/2013.

Data obtained by Toxics Targeting: 7/19/2013.

Westchester County: Data updated through 10/1/1998

Cortland County: **Cortland County Health Dept. Tank database.**

Source: Cortland County Health Department⁷

Data updated through: 7/15/2004

Data obtained by Toxics Targeting: 7/23/2004

Nassau County: a compilation of the following 2 databases:

Heat producing products and other products:

Source: Nassau County Department of Health.³

NOTE: This data is being withheld by the Nassau County DOH

Data updated through: 4/1/2001.

Data obtained by Toxics Targeting: 1/2/2002

Generally non-heat producing products:

Source: Nassau County Fire Marshal.⁴

Data updated through: 8/6/2009.

Data obtained by Toxics Targeting: 9/22/2009

Rockland County: **Rockland County Dept. of Health Tank database.**

Source: Rockland County Department of Health.⁵

Data updated through: 4/13/2004.

Data obtained by Toxics Targeting: 4/16/2004.

Suffolk County: **Suffolk County Dept. of Health Article 12 database**

Source: Suffolk County Department of Health Services.⁶

Data updated through: 6/21/2005.

Data obtained by Toxics Targeting: 7/12/2006.

11) **RCRA Hazardous Waste Generators and/or Transporters Databases:**

(a) **Manifest Information:** New York State database of hazardous waste facilities and shipments regulated by the NYS Department of Environmental Conservation's Bureau of Hazardous Waste Facility Compliance pursuant to New York State Law. ASTM required.* Fannie Mae required.** Source: New York State Department of Environmental Conservation.²

New facilities updated through: 10/25/2013.

New facilities obtained by Toxics Targeting: 11/5/2013.

Manifest transactions data updated to: 10/25/2013.

Manifest transactions data obtained by Toxics Targeting: 11/5/2013.

(b) **RCRA Notifier & Violations Information:** U. S. Environmental Protection Agency database of hazardous facilities regulated pursuant to the Resource Conservation and Recovery Act (RCRA).
ASTM required.* Fannie Mae required.** Source: U. S. Environmental Protection Agency¹

New facilities updated through: 10/17/2013.
Data attributes updated through: 10/17/2013.

Data obtained by Toxics Targeting: 10/30/2013.
Data obtained by Toxics Targeting: 10/30/2013.

12) **Chemical Bulk Storage Facilities:** New York State database of facilities compiled pursuant to 6NYCRR Part 596 that store regulated substances listed in 6NYCRR Part 597 in aboveground tanks with capacities greater than 185 gallons and /or in underground tanks of any size.

Tank and other data withheld by NYSDEC as of 4/1/2002.

ASTM required.* Fannie Mae required.**

Source: New York State Department of Environmental Conservation.²

Data updated through: 7/19/2013.

Data obtained by Toxics Targeting: 7/19/2013.

13) **Hazardous Substance Waste Disposal Site Study:** NYS database of waste disposal sites that may pose threats to public health or the environment, but could not be remediated using monies from the Hazardous Waste Remedial Fund.

Source: New York State Department of Environmental Conservation.²

Data updated to: 5/16/2000.

Data obtained by Toxics Targeting: 5/16/2000.

14) **Toxic Release Inventory (TRI):** Federal database of manufacturing facilities required under Section 313 of the Federal Emergency Planning and Community Right-to-Know Act to report releases to the air, water and land of any specifically listed toxic chemical. See Fannie Mae requirement** below.

Source: U. S. Environmental Protection Agency.¹ / NYS Department of Environmental Conservation²

Data updated through: 3/8/2004.

Data obtained by Toxics Targeting: 3/25/2004

15) **Toxic Wastewater Discharges (Permit Compliance System):** Federal database of discharges of wastewater to surface waters and groundwaters. See Fannie Mae requirement** below. Source: U. S. Environmental Protection Agency.¹

Data updated through: 6/17/2004.

Data obtained by Toxics Targeting: 7/19/2004.

16) **Air Discharge Facilities:** EPA AIRS database containing address information on each air emission facility and the type of air pollutant emission it is. Compliance information is also provided on each pollutant as well as the facility itself.

See Fannie Mae requirement** below.

Source: U. S. Environmental Protection Agency¹

Data updated through: 11/24/1999.

Data obtained by Toxics Targeting: 1/6/2000

17) **Civil Enforcement & Administrative Docket:** This database is the U. S. EPA's system for tracking administrative and civil judiciary cases filed on behalf of the agency by the Department of Justice. Fannie Mae required.**

Source: U. S. Environmental Protection Agency.¹

New Sites through: 10/14/1999.

Data updated through: 10/14/1999.

Data obtained by Toxics Targeting: 11/18/1999.

18) **Emergency Response Notification System (ERNS):** Federal database of spills compiled by the Emergency Response Notification System. On-site searches only.

ASTM required.* See Fannie Mae requirement** below.

Source: U. S. Environmental Protection Agency.¹

Data updated through: 1/31/2000.

Data obtained by Toxics Targeting: 2/15/2000

* American Society of Testing Materials: Standard Practice on Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527-05).

** Fannie Mae's Part X Environmental Hazards Management Procedures specify 1.0 mile searches for "any state or Federal list of hazardous waste sites (e.g. CERCLIS, HWDMS etc.)." Searches for the property and adjacent properties are specified for "chemical manufacturing plants," "obvious high risk neighbors engaging in storing or transporting hazardous waste, chemicals or substances" and "...any documented or visible evidence of dangerous waste handling... (e.g. stressed vegetation, stained soil, open or leaking containers, foul fumes or smells, oily ponds, etc." Searches for property and adjacent properties can include sites up to a quarter mile away (W. Hayward, Director, Multi-Family Business Planning and Control, Fannie Mae, personal communication, 5/94).

¹U. S. Environmental Protection Agency, 290 Broadway, NY, NY 10007-1866.

²NYS Department of Environmental Conservation, 625 Broadway, Albany, NY 12233.

³Nassau County Department of Health, Bureau of Land Resources Management, 240 Old Country Road, Mineola, NY 11501.

⁴Nassau County Fire Commission, Office of the Fire Marshal, 899 Jerusalem Avenue, P. O. Box 128, Uniondale, NY 11553.

⁵Rockland County Department of Health, The Dr. Robert Yeager Health Center, Building D, Sanatorium Road, Pomona, NY 10970.

⁶Suffolk County Department of Health, Hazardous Materials Management, 15 Horseblock Place, Farmingville, NY 11738-1220.

⁷Cortland County Department of Health, 60 Central Avenue, Cortland, NY 13045-2746



APPENDIX E

Profile Sheets

Property Inventory Form

Project Name:	Riverhead BOA Step II Nomination
Identification No.	Strategic Site 1
Street Address:	1863 West Main Street, Riverhead
Tax Map Number(s):	600 – 118 – 4 – 8.1



PROPERTY INFORMATION	
Owner:	Edward Densieski
Property Size (SF):	67,501.97 SF
Property Size (ac):	1.55 acres
Existing Land Use:	Dynamic Automotive (automobile service)
Zoning:	Riverfront Corridor (RFC)
Parking:	The site contains a large parking area.
Public Water Available:	Not within the Riverhead Water District Boundary
Size of Water Main:	12" water mains near the site

Notes: (redevelopment potential, whether it could be a strategic site, access issues, noise/air issues).	The site is located in a highly visible as one of the first properties encountered by motorists after exiting the LIE onto West Main Street eastbound. The property is close to Tanger Outlets - a major visitor attraction. Although this site is currently developed with an auto use, the site has the potential to be redeveloped as a more appropriate gateway use.
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BUILDING DESCRIPTION	
Historic District:	N/A
Building Size:	2,271 SF in coverage
# of Stories:	1 story
Condition:	Fair
Building Description:	Brick façade with garage doors for use as automotive repairs.
Accessory Building:	298 SF building and 150' monopole located behind main building

ADJACENT LAND USES:	
North:	Study area boundary, commercial uses (Tanger outlets)
South:	LIRR, Former duck farm, vacant land
East:	Open space, vacant land
West:	Vacant property and mobile homes

TRANSPORTATION ENVIRONMENT:	
Walk Score:	29 – Car Dependent *See www.walkscore.com for more information
Bus Stop within ¼ mile?	Yes
Sidewalks:	Yes
Past Land Use if not in use (note sources):	Gas station

ENVIRONMENTAL RESOURCES:

	YES	NO
Special Flood Hazard Area		<input checked="" type="checkbox"/>
Central Suffolk SGPA	<input checked="" type="checkbox"/>	
Area of Potential Archaeological Sensitivity		<input checked="" type="checkbox"/>
Within 300' of Tidal Wetlands		<input checked="" type="checkbox"/>
Within 300' of Freshwater Wetlands	<input checked="" type="checkbox"/>	
WSRR (Recreation)	<input checked="" type="checkbox"/>	

FEMA Flood Zone: **N/A**

Groundwater Management Zone: **III**

Soil Type: **Carver and Plymouth sands 3-15% slope (CpC)**

Depth to Groundwater: **Site ranges from 0-10 feet**

Groundwater Contributing Area (travel time in surface water): **Site is split between 2-5 and 5-10 year ranges**

HISTORY OF ENVIRONMENTAL CONTAMINATION:

	YES	NO
CERCLA (Superfund) Site		X
RCRA Generator		X
Hazardous Materials Storage Site		X
BCP Site		X
VCP Site		X
Previous Spill Site		X
If Yes, was the spill closed?	-	-

Local Contamination (based upon available info from EPA or NYSDEC)

Include links to any documentation of prior environmental contamination.

Evidence of contamination (Observations)

Property is registered as a Petroleum Bulk Storage Site. Seven prior UST (one waste oil and six fuel tanks) were removed prior to 1985. No current records of contamination.

See Alternative Scenario Site ID: W2

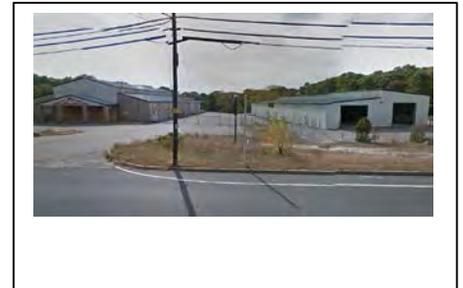
Property Inventory Form

Project Name:	Riverhead BOA Step II Nomination
Identification No.	Strategic Site 2
Street Address:	1751 West Main Street
Tax Map Number(s):	600 – 118 – 4 – 10



PROPERTY INFORMATION	
Owner:	Spirit SPE Ptfolio 2007-2 LLC
Property Size (SF):	240,377 SF
Property Size (ac):	5.52 acres
Existing Land Use:	Vacant buildings - former commercial lumberyard
Zoning:	Riverfront Corridor (RFC)
Parking:	Site is mostly paved which would provide ample parking.
Public Water Available:	Yes
Size of Water Main:	12"

Notes: (redevelopment potential, whether it could be a strategic site, access issues, noise/air issues).	The 84 Lumber site provides a gateway opportunity, which could provide a location for a visitor center with related services. Such a facility could include use of the existing rail siding on the property for a shuttle train in the future between downtown Riverhead and the visitor center and could be achievable with the new WSRR Community designation. The property has high visibility on the corridor and has been vacant since 2013.
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BUILDING DESCRIPTION	
Historic District:	N/A
Building Size:	40,237 SF in coverage for all buildings
# of Stories:	2 stories
Condition:	Abandoned buildings - somewhat deteriorated condition
Building Description:	Site contains 1 (20,294 SF) large storage building with boarded up windows and doors.
Accessory Buildings:	Site also contains 2 large vacant warehouses (13,591 SF and 6,353 SF).

ADJACENT LAND USES:	
North:	Study area boundary, Tanger Outlets and Fairfield Apartment complex
South:	LIRR tracks, open space, residential
East:	Commercial auto repair
West:	Open space

TRANSPORTATION ENVIRONMENT:	
Walk Score:	42 – Car Dependent *See www.walkscore.com for more information
Bus Stop within ¼ mile?	Yes
Sidewalks:	Yes

Past Land Use (note sources):	Formerly 84 Lumber
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ENVIRONMENTAL RESOURCES:

	YES	NO
Special Flood Hazard Area		<input checked="" type="checkbox"/>
Central Suffolk SGPA	<input checked="" type="checkbox"/>	
Area of Potential Archaeological Sensitivity		<input checked="" type="checkbox"/>
Within 300' of Tidal Wetlands		<input checked="" type="checkbox"/>
Within 300' of Freshwater Wetlands		<input checked="" type="checkbox"/>
WSRR (Recreation)	<input checked="" type="checkbox"/>	

FEMA Flood Zone: **N/A**

Groundwater Management Zone: **III**

Soil Type: **Riverhead sandy loam 3-8% slopes (RdB), Cut and fill land gently sloping (CuB), Plymouth loamy sand 3-8% slopes (PIB)**

Depth to Groundwater: **Site ranges from 2 ft to over 10 ft, about half of the site is in the over 10 ft area.**

Groundwater Contributing Area (travel time in surface water): **2-10 years**

HISTORY OF ENVIRONMENTAL CONTAMINATION:

	YES	NO
CERCLA (Superfund) Site		X
RCRA Generator		X
Hazardous Materials Storage Site		X
BCP Site		X
VCP Site		X
Previous Spill Site		X
If Yes, was the spill closed?	-	-

Local Contamination (based upon available info from EPA or NYSDEC)

Include links to any documentation of prior environmental contamination.

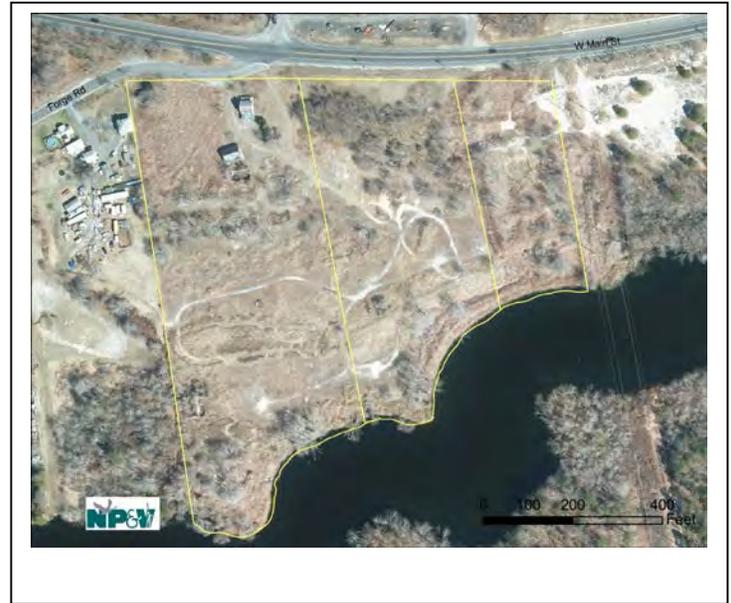
Evidence of contamination (Observations)

No records of previous contamination reported.

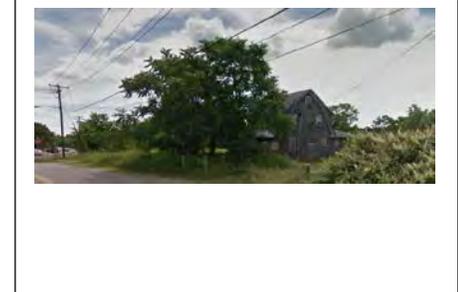
See Alternative Scenario ID: W3

Property Inventory Form

Project Name:	Riverhead BOA Step II Nomination
Identification No.	Strategic Site 3
Street Address:	1501-1595 and 1581 West Main Street, Riverhead
Tax Map Number(s):	600 – 119 – 2 – 56, 57, & 58
PROPERTY INFORMATION	
Owner:	Alison Ho
Property Size (SF):	704,093 sf
Property Size (ac):	16.16 acres
Existing Land Use:	Former duck farm, vacant land
Zoning:	Riverfront Corridor (RFC)
Parking:	The site does not contain any paved parking areas.
Public Water Available:	Yes
Size of Water Main:	12"



Notes:	This site is highly visible site on West Main Street is now overgrown and contains an abandoned deteriorating building visible from the roadway. The site is over 16 acres and thus provides an opportunity for redevelopment. However, the WSRR designation (Recreational) limits the use of the property to residential, or potentially lodging related to river recreation and river related retail. A portion of the site is located within regulated freshwater wetlands.
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BUILDING DESCRIPTION	
Historic District:	N/A
Building Size:	Three buildings totaling: 3,425 SF in coverage
# of Stories:	Main building is 2-story
Condition:	Poor
Building Description:	There are a total of three buildings remaining on the property and several foundations. Largest building is a 2 story residential style building with a footprint of 1,400 SF and is boarded up.
Accessory Building:	Two other buildings set back from road from prior duck farm operations.

ADJACENT LAND USES:	
North:	Vacant, commercial
South:	Study boundary, Peconic River
East:	Utilities
West:	Residential and mobile home park on Forge Road

TRANSPORTATION ENVIRONMENT:	
Walk Score:	28 – Car Dependent *See www.walkscore.com for more information
Bus Stop within ¼ mile?	Yes
Sidewalks:	Yes

Past Land Use (note sources):	The site was previously used as a duck farm and is currently vacant. The Bridge View Duck Farm operated on this site between 1966 and 2001.
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ENVIRONMENTAL RESOURCES:

	YES	NO
Special Flood Hazard Area	<input checked="" type="checkbox"/>	
Central Suffolk SGPA		<input checked="" type="checkbox"/>
Area of Potential Archaeological Sensitivity	<input checked="" type="checkbox"/>	
Within 300' of Tidal Wetlands		<input checked="" type="checkbox"/>
Within 300' of Freshwater Wetlands	<input checked="" type="checkbox"/>	
WSRR (Recreation)	<input checked="" type="checkbox"/>	

FEMA Flood Zone: **The site is adjacent to and slightly overlapping Flood Zone A.**

Groundwater Management Zone: **III**

Soil Type: **Plymouth loamy sand 0-3% slopes (PIA), Carver and Plymouth sands 3-15% slopes (CpC), Berryland mucky sand (Bd), Cut and fill land gently sloping (CuB), Plymouth loamy sand 3-8% slopes (PIB)**

Depth to Groundwater: **Most of the site is within the 0-2 feet range except for the northern portion of the site which reaches above 10 feet.**

Groundwater Contributing Area (travel time in surface water): **0-2 years**

HISTORY OF ENVIRONMENTAL CONTAMINATION:

	YES	NO
CERCLA (Superfund) Site		x
RCRA Generator		x
Hazardous Materials Storage Site		x
BCP Site		x
VCP Site		x
Previous Spill Site		x
If Yes, was the spill closed?	-	-

Local Contamination (based upon available info from EPA or NYSDEC)

Include links to any documentation of prior environmental contamination.

Evidence of contamination (Observations)

No records of environmental contamination on site based upon database search.

It is noted that residual waste products from the prior duck farm use (consisting of buried remains, duck sludge) could remain on the site and if present would need to be removed prior to redevelopment. Another benefit that can be achieved through the redevelopment of this site is the removal of invasive species (namely *phragmites australis*) and revegetation of the shoreline with native vegetation that can provide habitat and food sources for local wildlife.

See Alternative Scenario ID: W5

Property Inventory Form

Project Name:	Riverhead BOA Step II Nomination
Identification No.	Strategic Site 4
Street Address:	1141, 1153-1159, 1161, 1165, 1167, 1175, 1191, 1197, 1199, and 1205 West Main Street, Riverhead
Tax Map Number(s):	600 – 125 – 2 – 23, 25.1, 25.2, 26.2, 27.2, 27.3, 27.5 & 28 600 – 119 – 2 – 21 & 22



PROPERTY INFORMATION	
Owners:	Matthew A. Alfaro, David Osman, Roy Osman, David Lee Fulton, ZBA Holdings Inc., Dev 2074 Inc., Sally Osman, Bertha Pfliger
Property Size (SF):	259,442 SF for all parcels
Property Size (ac):	5.96 acres for all parcels
Existing Land Use:	Commercial (Alfaro Motors, Buoy One Seafood Market, D&T Irrigation Center) and residential
Zoning:	Riverfront Corridor (RFC)
Parking:	Many of the parcels contain parking areas.
Public Water Available:	Yes
Size of Water Main:	8" - 12"

Notes: (redevelopment potential, whether it could be a strategic site, access issues, noise/air issues).	Some of the existing uses located at this site are preexisting nonconforming uses because of the WSRR Recreational designation. This site was identified by the community as a priority for redevelopment. The property is very visible due to its location on the curve on Main Street. The property is also considered a gateway to the downtown which provides an opportunity for the site to be redeveloped into the Peconic Overlook Concept, which would improve aesthetics and community character, add tourism based features, improve water quality, remove automotive uses, and incorporate stormwater management and sewage treatment.
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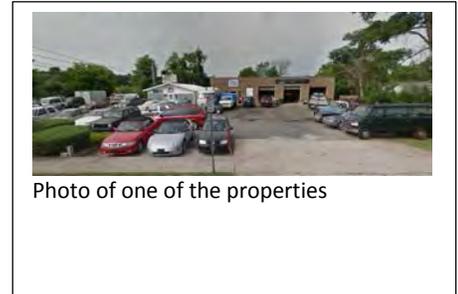


Photo of one of the properties

BUILDING DESCRIPTION	
Historic District:	None
Building Size:	27,622 SF of coverage for 17 buildings and accessory structures
# of Stories:	The site contains a variety of one and two story buildings.
Condition:	Fair and poor condition
Building Description:	The site contains many buildings of what appears to be residential and commercial uses.
Accessory Building:	Accessory buildings located far from the road.

ADJACENT LAND USES:	
North:	Commercial, residential, utilities, institutional
South:	Study boundary, Peconic River
East:	Commercial, utilities, residential
West:	Commercial

TRANSPORTATION ENVIRONMENT:	
Walk Score:	28 – Car Dependent *See www.walkscore.com for more information
Bus Stop within ¼ mile?	Yes
Sidewalks:	Yes
Past Land Use (note sources):	

ENVIRONMENTAL RESOURCES:

	YES	NO
Special Flood Hazard Area	<input checked="" type="checkbox"/>	
Central Suffolk SGPA		<input checked="" type="checkbox"/>
Area of Potential Archaeological Sensitivity	<input checked="" type="checkbox"/>	
Within 300' of Tidal Wetlands		<input checked="" type="checkbox"/>
Within 300' of Freshwater Wetlands	<input checked="" type="checkbox"/>	
WSRR (Recreation)	<input checked="" type="checkbox"/>	

FEMA Flood Zone: **A**

Groundwater Management Zone: **III**

Soil Type: **Deerfield sand (De), Carver and Plymouth sands 3-15% slopes (CpC)**

Depth to Groundwater: **4-10 ft**

Groundwater Contributing Area (travel time in surface water): **0-2 years**

HISTORY OF ENVIRONMENTAL CONTAMINATION:

	YES	NO
CERCLA (Superfund) Site		X
RCRA Generator		X
Hazardous Materials Storage Site		X
BCP Site		X
VCP Site		X
Previous Spill Site		X
If Yes, was the spill closed?	-	-

Local Contamination (based upon available info from EPA or NYSDEC)

Include links to any documentation of prior environmental contamination.

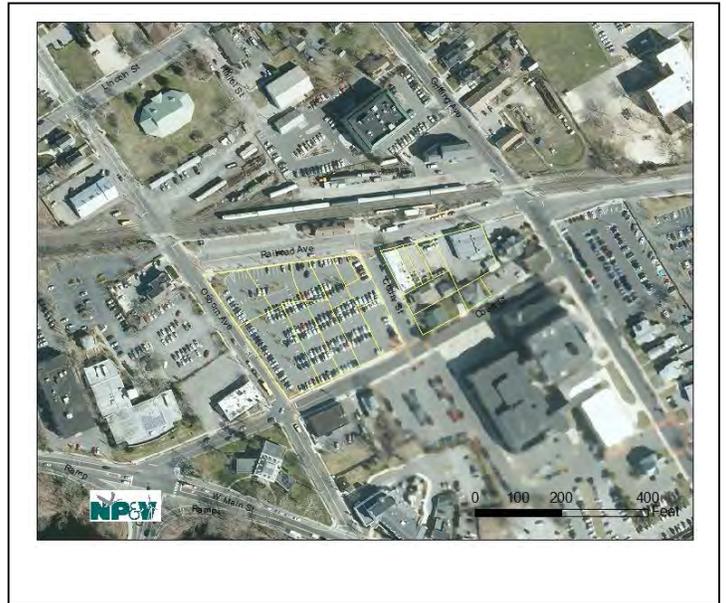
Evidence of contamination (Observations)

See Alternative Scenario ID: C1

No records of previous contamination reported on the properties.

Property Inventory Form

Project Name:	Riverhead BOA Step II Nomination
Identification No.	Strategic Site 5
Street Address:	Train Station Block, located along Railroad Avenue between Griffing Avenue and Osborn Avenue
Tax Map Number(s):	Train Station Parking (numerous parcels) and 600 – 128 – 3 – 12.1, 12.2, 12.3, 13, 14, 15, 17.1, & 18

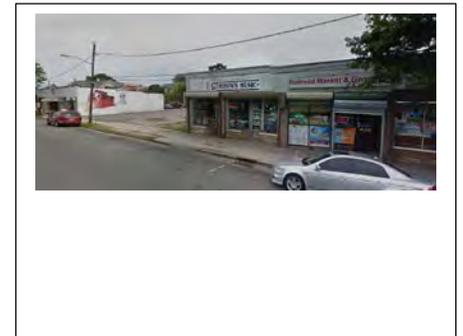


PROPERTY INFORMATION	
Owner:	161-163 Railroad St LLC., Madeline Rosen, Maxman Management LLC., Oscar Viera, Ramon Jiminez, Richard Israel, Janusz Koziol, Brandy Corp, 120 Court St Corp, Town of Riverhead (parking)
Property Size (SF):	132,330 SF for all parcels
Property Size (ac):	3.04 acres for all parcels
Existing Land Use:	Parking, residential, multiuse, commercial
Zoning:	Office (DC-3)
Parking:	Site contains large parking lot and some smaller parking areas including driveways for private residences.
Public Water Available:	Yes
Size of Water Main:	6"

Notes: (redevelopment potential, whether it could be a strategic site, access issues, noise/air issues).	The site includes train station parking and a nearby mixed use block. The area is an optimal location for mixed use development, especially multifamily, because of the close proximity to transit, Downtown Riverhead, and employment opportunities. Additionally, the area would benefit from the addition of a parking garage on this site to free up surface parking for other uses.
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BUILDING DESCRIPTION	
Historic District:	Town Historic District
Building Size:	18,746 SF of coverage for all buildings on site.
# of Stories:	1 and 2 story buildings
Condition:	Fair to Poor
Building Description:	This site contains numerous 1 and 2 story buildings comprised of commercial and residential uses as well as a large parking lot.
Accessory Building:	N/A

ADJACENT LAND USES:	
North:	Train Station, study boundary, LIRR train tracks
South:	Institutional, residential, commercial
East:	Commercial
West:	Institutional, vacant, commercial, multiuse



TRANSPORTATION ENVIRONMENT:	
Walk Score:	70 – Very Walkable *See www.walkscore.com for more information
Bus Stop within ¼ mile?	Yes
Sidewalks:	Yes
Past Land Use (note sources):	Mix of commercial and parking

ENVIRONMENTAL RESOURCES:

	YES	NO
Special Flood Hazard Area		<input checked="" type="checkbox"/>
Central Suffolk SGPA		<input checked="" type="checkbox"/>
Area of Potential Archaeological Sensitivity	<input checked="" type="checkbox"/>	
Within 300' of Tidal Wetlands		<input checked="" type="checkbox"/>
Within 300' of Freshwater Wetlands		<input checked="" type="checkbox"/>
WSRR		<input checked="" type="checkbox"/>

FEMA Flood Zone: **N/A**

Groundwater Management Zone: **III**

Soil Type: **Urban land (Ur), Cut and fill land gently sloping (CuB)**

Depth to Groundwater: **Over 10 ft**

Groundwater Contributing Area (travel time in surface water): **0-2 years**

HISTORY OF ENVIRONMENTAL CONTAMINATION:

	YES	NO
CERCLA (Superfund) Site		X
RCRA Generator		X
Hazardous Materials Storage Site		X
BCP Site		X
VCP Site		X
Previous Spill Site		X
If Yes, was the spill closed?	-	-

Local Contamination (based upon available info from EPA or NYSDEC)

Include links to any documentation of prior environmental contamination.

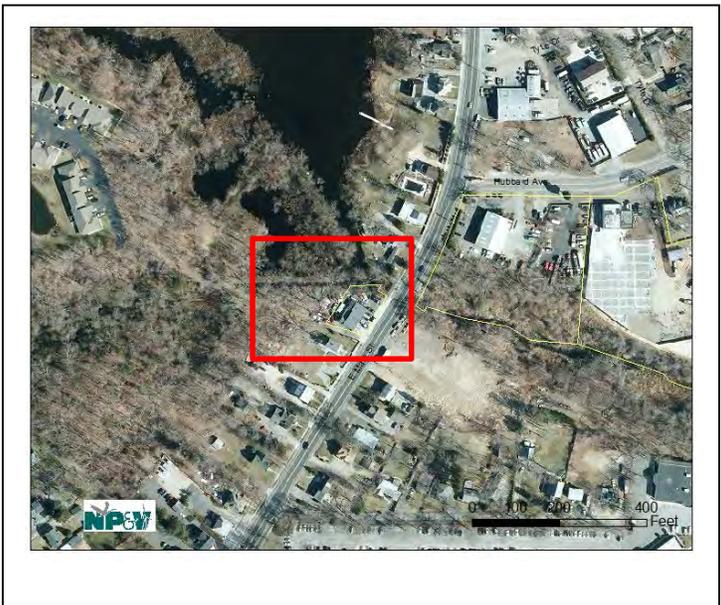
Evidence of contamination (Observations)

See Alternative Scenario ID: D1

There are no records of previous contamination reported on the site, however, individual properties would require additional investigation into the historic land uses, potential for USTs, and other contamination sources.

Property Inventory Form

Project Name:	Riverhead BOA Step II Nomination
Identification No.	Strategic Site 6
Street Address:	944 East Main Street, Riverhead
Tax Map Number(s):	600 – 109 – 2 – 13



PROPERTY INFORMATION	
Owner:	Sap Realty Inc.
Property Size (SF):	9,779.56 SF
Property Size (ac):	0.22 acres
Existing Land Use:	SAP Enterprises (automotive repair)
Zoning:	Residence A-40 (RA40)
Parking:	Site is almost entirely paved for parking and use as auto repair.
Public Water Available:	Yes
Size of Water Main:	6-8"

Notes: (redevelopment potential, whether it could be a strategic site, access issues, noise/air issues).	This site is located along the gateway to the east end of Riverhead Downtown. Additionally, the site is near a freshwater pond that is a tributary to the Sawmill Creek and Peconic Estuary. The site currently contains an automotive repair facility which has the potential to impact the water quality of surface waters. The property is within an area that has little access to parks and redevelopment of the site into a park would provide recreational and community benefits as well as decrease the risk of contamination to adjacent creek.
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BUILDING DESCRIPTION	
Historic District:	None
Building Size:	2,318 SF in coverage
# of Stories:	1 story
Condition:	Fair
Building Description:	The building has a small office/shop section and a large garage with 3 doors with high ceilings.
Accessory Building:	None

ADJACENT LAND USES:	
North:	Study area boundary, Open space
South:	Office, residential
East:	Commercial, industrial
West:	Residential

TRANSPORTATION ENVIRONMENT:	
Walk Score:	31 – Car Dependent *See www.walkscore.com for more information
Bus Stop within ¼ mile?	Yes
Sidewalks:	Yes
Past Land Use (note sources):	Same as current



ENVIRONMENTAL RESOURCES:

	YES	NO
Special Flood Hazard Area	<input checked="" type="checkbox"/>	
Central Suffolk SGPA		<input checked="" type="checkbox"/>
Area of Potential Archaeological Sensitivity		<input checked="" type="checkbox"/>
Within 300' of Tidal Wetlands		<input checked="" type="checkbox"/>
Within 300' of Freshwater Wetlands	<input checked="" type="checkbox"/>	
WSRR		<input checked="" type="checkbox"/>

FEMA Flood Zone: **AE, 7**

Groundwater Management Zone: **IV**

Soil Type: **Cut and fill land gently sloping (CuB)**

Depth to Groundwater: **2ft to over 8ft**

Groundwater Contributing Area (travel time in surface water): **5-10 years**

HISTORY OF ENVIRONMENTAL CONTAMINATION:

	YES	NO
CERCLA (Superfund) Site		X
RCRA Generator	X	
Hazardous Materials Storage Site		X
BCP Site		X
VCP Site		X
Previous Spill Site		X
If Yes, was the spill closed?	-	-

Local Contamination (based upon available info from EPA or NYSDEC)

Include links to any documentation of prior environmental contamination.

Evidence of contamination (Observations)

See Alternative Scenario ID: E2

This site is a PBS Facility and RCRA Generator of slight concern. According to the Toxics Targeting Report, the site is a PBS Facility but there is no detailed information about the tanks. The possibility of tanks located on the property cannot be ruled out. Additionally, there is a small quantity generator but it does not appear to present a major issue.

Property Inventory Form

Project Name:	Riverhead BOA Step II Nomination
Identification No.	Strategic Site 7
Street Address:	965 East Main Street, Riverhead
Tax Map Number(s):	600 – 131 – 1 – 1.1



PROPERTY INFORMATION	
Owner:	STA Holdings LLC
Property Size (SF):	101,394.48 SF
Property Size (ac):	2.33 acres
Existing Land Use:	Jet Vehicle Repair and Towing
Zoning:	Commercial/Residential Campus (CRC)
Parking:	Parking area surrounding the building.
Public Water Available:	Yes
Size of Water Main:	8"

Notes: (redevelopment potential, whether it could be a strategic site, access issues, noise/air issues).	Concerns about this site are related to its past and current auto related land use. On its own, the site is not a high priority however since it is adjacent to Strategic Site 8, it provides an opportunity for creating a more appropriate transitional use, such as multifamily housing.
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BUILDING DESCRIPTION	
Historic District:	None
Building Size:	5,208 SF in coverage
# of Stories:	1 story
Condition:	Good
Building Description:	One story building with few windows and two garage doors for use as vehicle repair and towing.
Accessory Building:	None

ADJACENT LAND USES:	
North:	Study boundary, Outside of study area is a mix of residential and commercial uses.
South:	Office, residential
East:	Industrial, Strategic Site 8
West:	Residential, commercial

TRANSPORTATION ENVIRONMENT:	
Walk Score:	33 – Car Dependent *See www.walkscore.com for more information
Bus Stop within ¼ mile?	Yes
Sidewalks:	Yes
Past Land Use (note sources):	Auto uses

ENVIRONMENTAL RESOURCES:

	YES	NO
Special Flood Hazard Area	<input checked="" type="checkbox"/>	
Central Suffolk SGPA		<input checked="" type="checkbox"/>
Area of Potential Archaeological Sensitivity		<input checked="" type="checkbox"/>
Within 300' of Tidal Wetlands		<input checked="" type="checkbox"/>
Within 300' of Freshwater Wetlands	<input checked="" type="checkbox"/>	
WSRR		<input checked="" type="checkbox"/>

FEMA Flood Zone: **AE, 7**

Groundwater Management Zone: **IV**

Soil Type: **Cut and fill land gently sloping (CuB), Swansea muck 0-1% slopes coastal lowland (Mu)**

Depth to Groundwater: **Site contains a range from 0 feet to over 10 feet**

Groundwater Contributing Area (travel time in surface water): **2-10 years**

HISTORY OF ENVIRONMENTAL CONTAMINATION:

	YES	NO
CERCLA (Superfund) Site		X
RCRA Generator	X	
Hazardous Materials Storage Site		X
BCP Site		X
VCP Site		X
Previous Spill Site		X
If Yes, was the spill closed?	-	-

Local Contamination (based upon available info from EPA or NYSDEC)

Include links to any documentation of prior environmental contamination.

Evidence of contamination (Observations)

See Alternative Scenario ID: E3

This site is a PBS Facility and RCRA Generator of slight concern. The Toxics Targeting Report concluded that there is one underground tank located on the site. No additional information was provided regarding the RCRA Generator.

Property Inventory Form

Project Name:	Riverhead BOA Step II Nomination
Identification No.	Strategic Site 8
Street Address:	27 Hubbard Avenue, Riverhead
Tax Map Number(s):	600 – 131 – 1 – 2.2



PROPERTY INFORMATION

Owner:	27 Hubbard Ave Assoc LLC
Property Size (SF):	157,308.15 SF
Property Size (ac):	3.61 acres
Existing Land Use:	Gershow Recycling
Zoning:	Commercial/Residential Campus (CRC)
Parking:	Lot has large gravel and paved areas for parking and use as recycling center.
Public Water Available:	Yes
Size of Water Main:	8"

Notes: (redevelopment potential, whether it could be a strategic site, access issues, noise/air issues).	The site currently is used as an auto salvage yard that is located near residential neighborhoods. The current use is a source of complaints related to noise, odors, and fugitive light. The site is a high priority because of its potential impact on groundwater in a Peconic Estuary contributing area and the incompatible land use. This property, along with the adjacent Strategic Site 7, would be suitable for multifamily housing.
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BUILDING DESCRIPTION

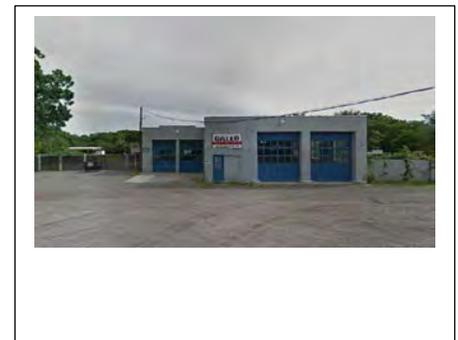
Historic District:	None
Building Size:	3,540 SF of coverage
# of Stories:	2 stories
Condition:	Poor
Building Description:	Large structure used as Gershow Recycling.
Accessory Building:	Accessory building of 1,637 SF located behind main building and away from the road. It is difficult to tell if the structure still exists.

ADJACENT LAND USES:

North:	Study boundary, outside of study area is a mix of commercial and residential uses.
South:	Residential, Commercial
East:	Residential, multi-family – mobile homes
West:	Strategic Site 7 - Industrial

TRANSPORTATION ENVIRONMENT:

Walk Score:	27 – Car Dependent *See www.walkscore.com for more information
Bus Stop within ¼ mile?	Yes
Sidewalks:	No
Past Land Use (note sources):	Same as current use.



ENVIRONMENTAL RESOURCES:

	YES	NO
Special Flood Hazard Area	<input checked="" type="checkbox"/>	
Central Suffolk SGPA		<input checked="" type="checkbox"/>
Area of Potential Archaeological Sensitivity		<input checked="" type="checkbox"/>
Within 300' of Tidal Wetlands		<input checked="" type="checkbox"/>
Within 300' of Freshwater Wetlands	<input checked="" type="checkbox"/>	
WSRR		<input checked="" type="checkbox"/>

FEMA Flood Zone: **AE, 7**

Groundwater Management Zone: **IV**

Soil Type: **Cut and fill land gently sloping (CuB), Muck 0-1% slopes coastal lowland (Mu)**

Depth to Groundwater: **Site contains a range from 0 feet to over 10 feet**

Groundwater Contributing Area (travel time in surface water): **2-5 years**

HISTORY OF ENVIRONMENTAL CONTAMINATION:

	YES	NO
CERCLA (Superfund) Site		X
RCRA Generator		X
Hazardous Materials Storage Site		X
BCP Site		X
VCP Site		X
Previous Spill Site		X
If Yes, was the spill closed?	-	-

Local Contamination (based upon available info from EPA or NYSDEC)

Include links to any documentation of prior environmental contamination.

Evidence of contamination (Observations)

See Alternative Scenario ID: E3

No records of previous contamination reported on the site, however, due to the property's history and current use as auto salvage, environmental testing would likely be necessary prior to redevelopment.



APPENDIX F

SONIR MODEL USER GUIDE AND MODEL RESULTS

SONIR MODEL USER'S GUIDE

Simulation of Nitrogen in Recharge (SONIR) Nelson, Pope & Voorhis, LLC Microcomputer Model

INTRODUCTION

SONIR is a microcomputer model developed by Charles Voorhis for use by Nelson, Pope & Voorhis, LLC in order to simulate the hydrologic water budget of a site and determine total nitrogen and nitrogen present in recharge in connection with land use projects. The model was developed on the Microsoft Excel Spreadsheet (trademark of Microsoft Products) for IBM (trademark of International Business Machines, Inc.) or compatible Personal Computers capable of running Excel.

Nitrogen has been identified as a source of contamination primarily from sanitary discharge and lawn fertilization. Nitrogen is of concern as a drinking water contaminant, and there is an established health limit of 10 milligrams per liter (mg/l) in drinking water. Nitrogen is also of concern in surface water, as it is a nutrient that when present in high concentrations can cause algal blooms, resulting in biological oxygen demand as algae is biologically decomposed. Depleted oxygen in surface waters causes conditions unfavorable to fish species and can result in extremely undesirable aesthetic impacts, primarily related to odors. Accordingly, it is necessary to understand the concentration of nitrogen recharge as related to a proposed site development.

Utilizing a mass-balance concept, and applying known hydrologic facts and basic assumptions, it is possible to predict the concentration of nitrogen in recharge to the shallow aquifer underlying a given site. This prediction can in turn be used to determine impacts and significance of impacts in consideration of hydrogeologic factors. Similar techniques have been used to simulate nitrogen in recharge as published by the New York State Water Resources Institute, Center for Environmental Research at Cornell University, Ithaca, New York (**Hughes and Pacenka, 1985**). SONIR is intended to provide a more versatile model based upon the BURBS Mass-Balance concept. SONIR allows for use of the model to predict nitrogen impact from many sources including sewage treatment plants, and further allows for determination of a wider variety site recharge components under the hydrologic water budget section. SONIR has more versatility in the input of information, and also provides a printout of each step performed by the model, in order for regulatory agencies and review entities to understand how values are derived.

This text describes in detail the definition of terms, supported by referenced information regarding input of data for the simulation. The concept of determining the concentration of nitrogen in recharge involves a predication of the weight of nitrogen introduced to the site, as compared to the quantity of recharge resulting from precipitation and wastewater water discharge. Losses due to evapotranspiration and runoff must be accounted for in the simulation. The values and relationship associated with these parameters determines the quantity of recharge which enters the site. The prediction is generally annualized due to the availability of average

annual hydrologic data; however, data input can be determined on a seasonal basis if information is available.

The model includes four (4) data sheets identified as follows:

- * Data Input Field - Sheet 1
- * Site Recharge Computations - Sheet 2
- * Site Nitrogen Budget - Sheet 3
- * Nitrogen in Recharge Output Field - Sheet 4

All information required by the model is input in Sheet 1 - Data Input Field. Sheets 2 and 3 utilize data from Sheet 1 to compute the Site Recharge and the Site Nitrogen Budget. Sheet 4 utilizes the total values from Sheets 2 and 3 to perform the final Nitrogen in Recharge computations. Sheet 4 also includes tabulations of all conversion factors utilized in the model.

It should be noted that the simulation is only as accurate as the data which is input into the model. An understanding of hydrologic principles is necessary to determine and justify much of the data inputs used for water budget parameters. Further principles of environmental science and engineering are applied in determining nitrogen sources, application and discharge rates, degradation and losses, and final recharge. Users must apply caution in arriving at assumptions in order to ensure justifiable results.

SITE RECHARGE COMPUTATIONS

Overview

SONIR utilizes the basic hydrologic equation for determining the quantity of recharge anticipated by subtracting recharge losses from total precipitation. The quantity of recharge resulting from a given site is determined using the hydrologic budget equation (**Koszalka, 1984; p. 19**):

$$R = P - (E + Q)$$

where:

R = recharge

P = precipitation

E = evapotranspiration

Q = overland runoff

The quantity of recharge must be determined for each type of land use existing on a site, in order to determine the resultant site recharge. Surfaces commonly considered include: impervious surfaces; turfed areas; and natural areas; however, SONIR allows for a variety of land cover types to be considered in the model. In addition, site recharge occurs as a result of irrigation and wastewater discharge. In cases where water is imported to a site via a public water system, this quantity of recharge must be considered as additional water recharged on site. SONIR allows for

all of these recharge components to be included in the simulation. Many sites have fresh surface water in the form of lakes and ponds. Precipitation falls upon these surfaces; however, such features generally act as a mechanism for water loss as a result of evaporation. SONIR includes a Water Area Loss component in determining the site Hydrologic Water Budget and in computing recharge nitrogen.

Data Input - Sheet 1

The following provides a discussion of data sources and assumptions associated with the hydrologic water budget, corresponding to the Data Input Field in Sheet 1 of SONIR:

1. *Area of Site* - The total area of the site (in acres) which is capable of recharging precipitation is entered in this data cell. For sites which include tidal wetlands, the area which is inundated by tidal waters should be excluded, as recharge from these areas should not be considered in the context of nitrogen simulation. For sites which include surface water, the area can be included, provided evaporative water loss from surface water is considered by entering the acreage of surface water in Data Cell 15 noted below.
2. *Precipitation Rate* - Precipitation in the form of rainfall and snowmelt is determined using long term recorded values from local weather stations. Cornell University maintains the Northeast Regional Climate Center, from which long term precipitation data for Long Island weather stations is available. Monthly precipitation averages are published for the period 1951-1980 in Thornthwaite and Mather's Climatic Water Budget Method (**Snowden and Pacenka, 1985**). A tabulation of monthly and annual precipitation averages excerpted from this reference is included in the table cited for Evapotranspiration values. Data entry is in inches.
3. *Acreage of Lawn* - The total area of lawn (in acres) is entered in this Data Cell. This area includes all lawn area whether it is irrigated, fertilized or unmaintained. If there is no lawn area, a value of zero (0) is entered.
4. *Fraction of Land in Lawn* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land in Lawn by dividing the lawn area by total area.
5. *Evapotranspiration from Lawn* - Evapotranspiration is the natural water loss attributed to evaporation and plant utilization. Rainwater which is evaporated and transpired by plants is returned to the atmosphere as vapor. There are various methods for determining evapotranspiration, including direct measure and calculation. A commonly recognized method is the Thornthwaite and Mather Climatic Water Budget Method. Evapotranspiration rates for various locations on Long Island have been determined by the U.S. Geological Survey as documented in Ground-Water-Recharge Rates in Nassau and Suffolk Counties, New York (**Peterson, 1987; p. 10**). The following general rates as a percent of total precipitation are excerpted from that reference:

<u>Location</u>	<u>Soil Type</u>	<u>Vegetation</u>	<u>ET(in)</u>	<u>ET(%)</u>
Bridgehampton	sandy loam	shallow root	21.2	46.6
	silt loam	shallow root	21.4	47.2
LaGuardia	sand	shallow root	24.2	52.9
	clay loam	shallow root	25.4	55.5
	sandy loam	moderate root	26.2	57.2
JFK Airport	sand	shallow root	22.5	53.8
	clay loam	shallow root	23.9	57.3
	sandy loam	moderate root	25.0	60.0
Mineola	sand	shallow root	22.4	47.8
	sand-silt	shallow root	23.8	51.0
	sandy loam	moderate root	25.1	53.7
	sandy loam	orchards	25.5	54.5
Patchogue	fine sand	mature forest	25.5	53.5
Riverhead	sandy loam	shallow root	22.4	49.3
		orchards	24.8	54.7
Setauket	sandy loam	mature forest	26.8	57.9
Upton	silt loam	deep root	23.9	48.4
	sandy loam	moderate root	23.0	46.5

6. *Runoff from Lawn* - Runoff is the quantity of water which travels overland during a precipitation event. Soil infiltration capacity is the critical factor in determining runoff; however, factors such as slope and vegetation also determine runoff characteristics to a lesser extent on Long Island because of soil conditions. Less urbanized areas of Long Island with characteristically dry soils with groundcover will have a low runoff percentage as a function of total precipitation, as compared to the more urbanized portions of western Long Island. Peterson (1984; p. 14) estimates runoff as a percent of total precipitation for Nassau County (2.1 percent); Suffolk County (0.7 percent), and Long Island in general (1.0 percent). If an average precipitation rate of 45 inches per year is assumed, runoff will vary from 0.31 to 0.94 inches. Lawn areas would be expected to be in the lower end of the range. Judgements of higher and lower runoff can be made on a site specific basis depending upon slope and groundcover types.

7. *Acreage of Impervious* - The total area of impervious surface (in acres) is entered in this Data Cell. This area includes paved driveways, parking areas, roofs, roads, etc. If there are no impervious surfaces, a value of zero (0) is entered.

8. *Fraction of Land Impervious* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land in Impervious by dividing the impervious area by total area.

9. *Evaporation from Impervious* - Impervious surfaces will allow water to evaporate, particularly during summer months. There is no vegetation, therefore there is no transpiration by plants. Evaporation from Impervious is estimated to be approximately 10 percent of total precipitation (Hughes and Porter, 1983; p. 10). This value accounts

for evaporation from parking lots and other surfaces during summer months, averaged over the entire year. This indicates that recharge/runoff would comprise the remaining 90 percent of precipitation. This assumption coincides with most drainage computations required by Code Subdivision Regulations for determined leaching pool capacity.

10. *Runoff from Impervious* - The approximation of Evaporation from Impervious would indicate that recharge/runoff would comprise the remaining 90 percent of precipitation as there are no other losses from impervious surfaces. In consideration of paved areas, runoff is not transported off the site or to surface water as a loss. Runoff is diverted to leaching pools and allowed to re-enter the hydrologic system beneath a given site. Therefore, in terms of site recharge computations, the value for Runoff from Impervious is zero (0).
11. *Acreage of Unvegetated* - The total acreage of unvegetated area is entered in this Data Cell. This area includes sand, barren soils, and porous drives and trails. If there is no unvegetated area, a value of zero (0) is used.
12. *Fraction of Land Unvegetated* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land Unvegetated by dividing the unvegetated area by total area.
13. *Evapotranspiration from Unvegetated* - Evapotranspiration from Unvegetated areas is determined in the same manner as described for Data Cell 5 above.
14. *Runoff from Unvegetated* - The runoff coefficients noted in the discussion for Data Cell 6 above, are applied to unvegetated areas on a site specific basis. Runoff in the middle to higher end of the range (0.7 to 2.1 percent of precipitation) are expected due to lack of groundcover vegetation.
15. *Acreage of Water* - SONIR considers evaporation from surface water in the computation of site recharge. Surface water, particularly groundwater fed lakes and ponds are a source of water loss in the water budget. The quantity of fresh surface water (in acres) is entered in this Data Cell.
16. *Fraction of Land in Water* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Water on the site by dividing the water area by total area.
17. *Evaporation from Water* - Surface water features will cause evaporation of water in excess of normal evapotranspiration as documented by **Warren et al, 1968**, Hydrology of Brookhaven National Laboratory and Vicinity Suffolk County, New York. It is estimated that the upper limit of evaporation from a large free-water surface is approximately 30.00 inches per year (**Warren et al, 1968; p. 26**). This value is entered in Data Cell 17 as the most accurate approximation.
18. *Makeup Water* - SONIR allows for consideration of the impact of man-made lakes on site recharge. Lakes are generally lined with an impermeable material. Evaporation occurs

from the surface of the lake at a rate of 30.00 inches per year. In order to maintain a constant water level, an on-site well is generally installed to provide make-up water to the lake or pond. The quantity of make-up water is equivalent to the quantity of evaporation, given the fact that the function of the well is to replace water which is evaporated. Therefore, for cases where make-up water is used to maintain a constant water level, a value of 30.00 inches per year is entered in Data Cell 18.

19. *Acreage of Natural* - The total quantity of natural area (in acres) is entered in this Data Cell. This area includes naturally vegetated areas such as woodland, meadow, etc. If there is no natural area, a value of zero (0) is entered.
20. *Fraction of Land Natural* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land Natural by dividing the natural area by total area.
21. *Evapotranspiration from Natural* - Evapotranspiration from Natural areas is determined in the same manner as described for Data Cell 5 above.
22. *Runoff from Natural* - The runoff coefficients noted in the discussion for Data Cell 6 above, are applied to natural areas on a site specific basis. Generally lower values in the range of 0.7 percent of precipitation are expected due to groundcover and canopy vegetation.
23. *Acreage of Other Area* - This is a general category which can be used to include additional groundcover types in the simulation. Acreage of Other Area is entered (in acres). This Data Cell can be used to include site recharge considerations from a portion of the site which has different hydrologic properties, such as a moist hardwood forest or vegetated freshwater wetland, where evapotranspiration would be high and runoff would be extremely low.
24. *Fraction of Land in Other Area* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land in Other Area by dividing the land in other area by total area.
25. *Evapotranspiration from Other Area* - Evapotranspiration from Other areas is determined in the same manner as described for Data Cell 5 above. Value can be varied depending upon the hydrologic properties of the groundcover type.
26. *Runoff from Other Area* - The runoff coefficients noted in the discussion for Data Cell 6 above, are applied to Other Areas on a site specific basis. Value can be varied depending upon the hydrologic properties of the groundcover type.
27. *Acreage of Land Irrigated* - Imported water for irrigation purposes is an additional site recharge component not considered in any of the Data Cells above. The quantity of land irrigated on a given site is entered in this Data Cell (in acres).

28. *Fraction of Land Irrigated* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land Irrigated by dividing the land irrigated area by total area.
29. *Irrigation Rate* - The rate of irrigation must be entered in this Data Cell (in inches). Hughes and Porter (1983; p. 19) have indicated that lawn irrigation is estimated to be about 5.5 inches per year. This value is entered in Data Cell 29 as the most accurate approximation.
30. *Number of Dwellings* - The number of dwellings is entered in this Data Cell in order to allow for computation of wastewater disposal from residential use. Wastewater imported to a site, or even withdrawn from on site wells and recharged through sanitary effluent is an additional recharge component which must be considered. If the project is for a commercial use or utilizes a denitrification system, the number of dwellings should not be entered in the Data Entry Field, as the wastewater flow will include recharge and nitrogen components.
31. *Water Use per Dwelling* - The water use should correspond to the total site non-irrigation water use, divided by the number of units.
32. *Wastewater Design Flow* - No entry need be made in this Data Cell. SONIR will compute the Wastewater Design Flow by multiplying the Number of Dwellings by the Water Use per Dwelling.
33. *Commercial/STP Design Flow* - SONIR permits the consideration of recharge from commercial projects, denitrification systems and sewage treatment plants. The Commercial/STP Design Flow is entered in this Data Cell as per County Health Department or engineering design standards.

Site Recharge Computations - Sheet 2

Once data entry is complete for Site Recharge Parameters, SONIR will complete a series of detailed Water Budget computations for the overall site. The following describes the computations which are performed by the model:

- A. *Lawn Area Recharge* - Lawn Area Recharge is determined by use of the basic Hydrologic Budget Equation [$R = P - (E + Q)$] as defined previously. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Lawn Area to determine the component of Lawn Area Recharge in overall site recharge.
- B. *Impervious Area Recharge* - Impervious area recharge is also determined using the Hydrologic Budget Equation; however, the value for runoff is zero (0) due to the fact that runoff is controlled by conveyance to on site leaching facilities or is allowed to runoff into depressions where runoff is recharged on site.
- C. *Unvegetated Area Recharge* - Unvegetated Area Recharge is determined by use of the basic Hydrologic Budget Equation. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Unvegetated Area to determine the component of Unvegetated Area Recharge in overall site recharge.
- D. *Water Area Loss* - The Hydrologic Budget Equation is modified to consider Water Area Loss. This is particularly useful in water quantity stressed areas of Long Island. If runoff (Q) is considered be zero (0), then lake storage/recharge without make-up water would be Precipitation minus Evaporation ($P - E$). The resultant quantity of lake storage/recharge is then reduced by the amount of make-up water (M). The final quantity of loss is then multiplied by that portion of the site occupied by water to determine the component of water loss as related to the overall site water budget.
- E. *Natural Area Recharge* - Natural Area Recharge is determined by use of the basic Hydrologic Budget Equation. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Natural Area to determine the component of Natural Area Recharge in overall site recharge.
- F. *Other Area Recharge* - Other Area Recharge is determined by use of the basic Hydrologic Budget Equation. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Other Area to determine the component of Other Area Recharge in overall site recharge.
- G. *Irrigation Recharge* - Irrigation recharge is an additional recharge component artificially added on sites where irrigation occurs. This quantity is determined in the same manner as the Hydrologic Water Budget except that the irrigation rate (in inches) is substituted for precipitation. The resultant recharge is multiplied by the area of the site which is irrigated in order to determine the Irrigation Recharge in overall site recharge.

- H. *Wastewater Recharge* - Wastewater is also a recharge component artificially added to a site. SONIR annualizes the wastewater design flow and assumes it is applied over the entire by multiplying Wastewater Design Flow by the Area of the Site, resulting in a per foot measure of wastewater over the site. This is converted to inches to be included in overall site recharge.

Once the eight (8) series of Site Recharge Computations are complete, SONIR totals each individual component to determine Total Site Recharge. The sum of these recharge contributions, is that quantity of water which is expected to enter the site on an annual basis due to precipitation, after the development is completed. This value is important in determining the concentration of nitrogen in recharge, and is important as a means of determining hydrologic impacts of a project in terms of changes to site recharge.

SITE NITROGEN BUDGET

Overview

The total nitrogen released on a given site must be determined in order to provide a means of simulating nitrogen in recharge. Nitrogen sources include: sanitary nitrogen; fertilizer nitrogen; pet waste nitrogen; precipitation nitrogen; and water supply nitrogen (wastewater and irrigation). The total of these quantities represents total site nitrogen.

Data Input - Sheet 1

The following provides a discussion of data sources and assumptions associated with the nitrogen budget, corresponding to the Data Input Field in Sheet 1 of SONIR:

1. *Persons per Dwelling* - The number of persons per dwelling is a demographic multiplier used in the determination of human population of a site. Based on multipliers listed in “The New Practitioner’s Guide to Fiscal Impact Analysis”, (**Rutgers, 1985**), the average number of residents is calculated at 0.00/unit (Existing Conditions), and will be 4.1/unit (Proposed Conditions).
2. *Nitrogen per Person per Year* - Annual nitrogen per person is a function of nitrogen bearing waste in wastewater. For residential land use the population of the development is determined and the nitrogen generated is assumed to be 10 pounds per capita per year (**Hughes and Porter, 1983; p. 8**).
3. *Sanitary Nitrogen Leaching Rate* - For normal residential systems, Porter and Hughes report that 50 percent of the nitrogen entering the system is converted to gaseous nitrogen and the remainder leaches into the soil (**Porter and Hughes, 1983; p. 14**).

4. *Area of Land Fertilized 1* - The area of land fertilized is input in Data Cell 4. This value may correspond to the Acreage of Lawn and/or the Acreage of Land Irrigated, but is not necessarily the same value. This entry should be determined on a site-specific basis.
5. *Fertilizer Application Rate 1* - Fertilizer nitrogen is determined by a fertilizer application rate over a specified area of the site. The fertilizer application rates vary depending upon the type of use. The following table indicates the rate of fertilization as a function of use as excerpted from the Nonpoint Source Management Handbook (**Koppelman, 1984; Chapter 5, p.6**):

Residential (contract)	1.5 lbs/1000 sq ft
Residential (unmanaged)	2.3 lbs/1000 sq ft
Commercial	3.5 lbs/1000 sq ft
Golf Course	3.5 lbs/1000 sq ft
Sod Farms	4.0 lbs/1000 sq ft
Recreational Lands	0.2 lbs/1000 sq ft

A commercial landscaping firm has been interviewed to determine trends in commercial fertilizer application. Various fertilizer formulations are used including 10-6-4, 16-4-8 and 20-10-5 (nitrogen-phosphate-potash) depending upon season. Heavier nitrogen application rates are generally used in the spring. Fertilizer used is 50 percent organic nitrogen. This is applied in a dry form approximately 2-3 times per year, and a 50 pound bag is applied over approximately 16,000 square feet. Based on this rate if 20- 10-5 nitrogen were applied in the spring, and 16-4-8 were applied during summer and fall, this would result in an application rate of 1.5-2.1 pounds per 1000 square feet. The high of this range is a conservative value based on three applications of relatively high nitrogen fertilizer, which will be used for nitrogen in recharge simulation.

In addition, it is noted that the Nonpoint Source Management Handbook indicates that application rates as low as 1.0 lb/1000 sq ft can be achieved with proper fertilizer management control.

6. *Fertilizer Nitrogen Leaching Rate 1* - Nitrogen applied as fertilizer is subject to plant uptake (20 to 80%; 50% on average) and storage in thatch and soils (36 to 47%), thereby reducing the total amount of nitrogen leached. The percentage of plant uptake and storage are based on studies cited in the LIRPB's Special Groundwater Protection Area Plan. Based on those studies, a conservative nitrogen leaching rate of 14% has been applied in the model.
7. *Area of Land Fertilized 2* - More than one fertilizer nitrogen input is provided in order allow consideration of mixed use and/or golf course projects where land is fertilized at different rates.
8. *Fertilizer Application Rate 2* - Fertilizer Application Rates for this entry can be determined based upon Data Cell 5 above.

9. *Fertilizer Nitrogen Leaching Rate 2* - Fertilizer Nitrogen Leaching Rates can be determined based upon Data Cell 6 above.
10. *Pet Waste Application Rate* - Pet Waste Nitrogen results from the excretion of domestic pets in the outside environment. There is relatively little definitive information concerning this nitrogen source; however, several references were located and are analyzed herein. The 208 Study provides a table of nitrogen concentration in manure for various animals, not including dogs or cats. Total nitrogen values in the range of 0.30-0.43 lbs/day/1000 lbs live weight are reported for cattle, sheep and horses (**Koppelman, 1978; Animal Waste report p. 3**). It is assumed that dogs constitute the major source of animal waste which would be present in the yards of residential developments. Cat waste would be significantly less due to the lesser live weight of cats and the fact that many cat owners dispose of cat waste in solid waste by using an indoor litter box. If an average of 0.35 lbs of nitrogen is assumed for dogs, and an average of 25 pounds live weight is assumed per dog, then the total annual nitrogen per pet would be 3.19 lbs/year. The only other reference located which approximates nitrogen in pet waste is Land Use and Ground-Water Quality in the Pine Barrens of Southampton (**Hughes and Porter, 1983; p. 10**). This reference assumed an application rate of 6.5 lbs/acre of nitrogen. Pet waste was assumed to be deposited evenly over all turf. This assumption was not correlated to population density or pet density, but only to turfed acreage. In comparison of the two values, the per pet value corresponds to approximately 2 turfed acres. For the purpose of this model, the value of 3.19 lbs/pet/year is considered to be the most justifiable value for pet waste and is entered in this Data Cell.
11. *Pet Waste Nitrogen Leaching Rate* - Pet waste is also subject to a leaching rate factor whereby, 50 percent of the nitrogen applied to the ground is removed as a gas.
12. *Area of Land Irrigated* - No entry need be made in this Data Cell. This value is the same as Data Cell 27 of the Site Recharge Parameters and SONIR will transfer the data entry to this Cell.
13. *Irrigation Rate* - No entry need be made in this Data Cell. This value is the same as Data Cell 29 of the Site Recharge Parameters and SONIR will transfer the data entry to this Cell.
14. *Irrigation Nitrogen Leaching Rate* - Hughes and Porter (**1983; p. 10**) indicate that "plant uptake and gaseous losses are assumed to remove 85% of the nitrogen entering in precipitation". Irrigation nitrogen would be expected to be subject to the same losses, therefore, a leaching rate of 15% is entered in this Data Cell.
15. *Nitrogen in Precipitation* - Groundwater nitrogen is partially derived from rainwater. Nitrate-nitrogen concentrations in precipitation have been reported to be on the order of 1-2 mg/l in Nassau and Suffolk Counties (**SCDHS, 1987; p. 6-4**).

16. *Precipitation Nitrogen Leaching Rate* - As indicated above, a nitrogen leaching rate of 15% is applied to precipitation nitrogen.
17. *Nitrogen in Water Supply* - The concentration of Nitrogen in Water Supply determines the quantity of nitrogen which enters the site as a result of irrigation nitrogen and wastewater flow. Local water supply data should be utilized if available, otherwise a value of between 1 and 2 mg/l could be utilized.
18. *Nitrogen in Commercial/STP Flow* - This data entry allows SONIR to compute the quantity of nitrogen resulting from commercial discharge, denitrification systems and/or sewage treatment plants. Total nitrogen in community wastewater is identified as having a total nitrogen concentration of 20 mg/l in weak effluent; 40 mg/l in medium strength effluent, and 85 mg/l in strong effluent (**Metcalf & Eddy, Inc, 1991**). It is recommended that a value of 40 mg/l be used for total nitrogen concentration in commercial sanitary systems. Properly functioning denitrification systems and sewage treatment plants are capable of reducing total nitrogen to less than 10 mg/l in accordance with discharge limitations. A value of 10 mg/l can be entered in this data cell for such systems. The SONIR model computes the number of pounds of nitrogen in sanitary discharge as a function of concentration. The absolute nitrogen is utilized in the model; however, it must be recognized that from the discharge point, nitrogen is nitrified through conversion of ammonia to nitrate in the leaching area beneath the discharge point. Further natural transformation in the form of denitrification occurs as a result of bacteria. This causes release of nitrogen gas and may account for further reduction of 50 percent or more subsequent to discharge (**Canter and Knox, 1979; pp. 77-78; Hughes and Porter, 1983; p. 14**). As a result SONIR is conservative in predicting the concentration of nitrogen in recharge, and when natural denitrification of sanitary effluent is considered, actual concentration would be less.

Site Nitrogen Budget - Sheet 2

Once data entry is complete for Nitrogen Budget Parameters, SONIR will complete a series of detailed computations to determine the individual component of nitrogen from each source and the total nitrogen for the overall site and use. The following describes the computations which are performed by the model:

- A. *Sanitary Nitrogen - Residential* - SONIR establishes the site population using the number of units on the site, and the demographic multiplier. The nitrogen load factor is then applied and reduced by the leaching rate, resulting in the total residential nitrogen component. If the project is for a commercial use or utilizes a denitrification system, the number of dwellings should not be entered in the Data Entry Field, in which case the total nitrogen from this source will be zero (0).
- B. *Pet Waste Nitrogen* - The pet waste nitrogen was determined on a per pet basis; however, the number of pets for a given residential project must be determined. In

order to correlate the number of pets to human population, a ratio was determined using information contained in the 208 Study, wherein it was estimated that there is 1 dog per 5 residents in suburban areas and 1 dog per 7 residents in urban areas (**Koppelman, 1978; Animal Waste Report, pp. 6**). This results in an average number of dogs based upon of 17 percent of the human population. Accordingly, this multiplier is used based upon the population of a land use project in order to estimate the nitrogen waste from pets. The pet waste nitrogen is subject to reduction as a function of the leaching rate, leading to the total pet waste nitrogen in pounds.

- C. *Sanitary Nitrogen (Commercial/STP)* - SONIR utilizes the Commercial/STP Flow which is converted to liters and multiplied by the nitrogen concentration in waste. This provides a weight of nitrogen in milligrams which is converted to pounds for the total nitrogen from this component.
- D. *Water Supply Nitrogen* - SONIR utilizes the residential wastewater design flow to compute the weight of nitrogen contributed from the water supply. The method of calculation is the same as Sanitary Nitrogen (Commercial/STP). For commercial projects, this value is accounted for in the Commercial/STP Flow.
- E. *Fertilizer Nitrogen 1* - This calculation utilizes data entry from the Area of Land Fertilized 1, in the Data Input Field, to determine the weight of fertilizer nitrogen applied to the area. The area is multiplied by the application rate and reduced by the leaching rate documented previously to arrive at total weight.
- F. *Fertilizer Nitrogen 2* - If fertilization rates vary, the Area of Land Fertilized 2, is utilized to determine nitrogen from this source.
- G. *Precipitation Nitrogen* - Nitrogen in precipitation is considered by determining the liters of Natural Recharge entering the site, multiplied by the concentration of nitrogen in precipitation. SONIR uses the sum of natural recharge components from the Site Recharge Computations to establish the natural recharge. A precipitation nitrogen leaching rate of 15% is utilized as referenced above.
- H. *Irrigation Nitrogen* - Although a very small component, the Irrigation Nitrogen is determined using the Irrigation Recharge R(irr) computed in the Site Recharge Computations, over the irrigated area of the site to produce a volume of irrigation recharge. The Irrigation Recharge value is used in order to account for reduction of recharge due to evapotranspiration, since this component is only intended to determine nitrogen leaching into soil as a result of irrigation nitrogen in the water supply. This value is converted to liters and multiplied by the concentration of nitrogen in irrigation water supply. The Irrigation Nitrogen Leaching Rate (expected to be the same as for precipitation), is applied to the weight to determine the total nitrogen from this source.

Once the eight (8) series of Site Nitrogen Budget computations are complete, SONIR totals each individual component to determine the Total Site Nitrogen. This value is used in determining the weight per volume ratio of nitrogen in recharge as computed in Sheet 4 of the SONIR model.

FINAL COMPUTATIONS AND SUMMARY

SONIR utilizes data generated in Sheets 2 and 3 of the model to compute a mass/volume ratio for nitrogen in recharge. Nitrogen in recharge is converted from pounds to milligrams in order to provide units compatible for mass/volume concentration. Likewise, the quantity of site recharge is applied over the site in order to determine an overall volume number for site recharge. This is then converted to liters. The final computation divides the total weight of nitrogen in milligrams, by the total volume of recharge in liters, to arrive at the Nitrogen in Recharge ratio in milligrams per liter (mg/l). This concentration represents the Final Concentration of Nitrogen in Recharge which is highlighted on Sheet 4.

Sheet 4 also provides a site recharge summary in order to compare recharge between natural conditions, a proposed project and/or alternatives. Total Site Recharge is presented in both inches, and as a volume in cubic feet/year, gallons/year and million gallons/year (MGY).

The final field summarizes the Conversions Used in SONIR. Conversions are standard conversion multipliers as found in standard engineering references.

SONIR is a valuable tool allowing for versatile determination of site recharge as determined from many components of site recharge. SONIR determines the weight of nitrogen applied to a site from a variety of sources as well. SONIR is a fully referenced model utilizing basic hydrologic and engineering principals, in a simulation of nitrogen in recharge. Input data should be carefully justified in order to achieve best results. SONIR can be used effectively in comparing land use alternatives and relative impact upon groundwater due to nitrogen. By running the model for Existing Conditions, Proposed Project conditions and/or alternative land uses comparison of impacts can be made for consideration in land use decision-making. Questions, comments or suggestions concerning this model should be addressed to Nelson, Pope & Voorhis, LLC, 572 Walt Whitman Road, Melville, New York 11747.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

REFERENCES

- Bowen, Robert, 1986, Groundwater, Second Edition, Elsevier Applied Science Publishers, London and New York.
- Burchell, Robert W. and David L. Listokin, William R. Dolphin, 1986, The New Practitioner's Guide to Fiscal Impact Analysis, Rutgers, The State University of New Jersey.
- Canter, Larry W. and Robert C. Knox, 1985, Septic Tank System Effects on Ground Water Quality, Lewis Publishers, Inc. Chelsea, Michigan.
- Cohen, Philip, O. L. Franke, and B. L. Foxworthy, 1968, An Atlas of Long Island Water Resources, New York Water Resources Commission Bulletin 62, USGS in cooperation with the New York State Water Resources Commission, Published by the State of New York.
- Franke, O.L. and P. Cohen, 1972, Regional Rates of Groundwater Movement on Long Island, New York, United States Geological Survey Professional Paper 800-C, U.S. Government Printing Office, Washington, D.C.
- Freeze, Allan R.; Cherry, John A., 1979, Groundwater, Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- Hughes, Henry B.F.; Pike, James; Porter, Keith S., April 1984, Assessment of Ground-Water Contamination by Nitrogen and Synthetic Organics in Two Water Districts in Nassau County, N.Y., Cornell University, Water Resources Program Center for Environmental Research, Ithaca, New York.
- Hughes, Henry B.F.; and Porter, K., 1983, Land Use and Groundwater Quality in the Pine Barrens of Southampton, Cornell University, Water Resources Program, Center for Environmental Research, Ithaca, New York.
- Hughes, Henry B.F.; Pacenka, Steve; Snowdon, Elizabeth, 1985, Thorntwaite and Mather's Climatic Water Budget Method: An Implementation using the Lotus 1-2-3 (TM) Spreadsheet Program, Draft Software Model, April 1985, Cornell University, Center for Environmental Research, Ithaca, New York.
- Koppelman, Lee., 1978, 208 Areawide Waste Treatment Management Handbook, Hauppauge, New York: Nassau-Suffolk Regional Planning Board.

- Koszalka, E.J., 1983, Geohydrology of the Northern Part of the Town of Brookhaven, Suffolk County, New York: U.S. Geologic Survey Water-Resources Investigations Report 83-4042.
- Long Island Business News, 1991, 1991 Long Island Almanac, Twenty Forth Edition, Ronkonkoma, New York.
- Long Island Lighting Company (LILCO), June 1991, Population Survey 1991 - Current Population Estimates for Nassau and Suffolk Counties, Hicksville, New York: LILCO.
- Long Island Regional Planning Board (LIRPB), 1983, Non Point Source Management Handbook, Hauppauge, New York: LIRPB.
- Mather, John R., 1979, The Influence of Land-Use Change on Water Resources, Newark, Delaware: Water Resources Center, University of Delaware.
- Metcalf & Eddy, Inc., 1991, Wastewater Engineering, Treatment, Disposal and Reuse, Third Edition, McGraw-Hill, Inc., New York.
- McClymonds, N.E. and Franke, O.L., 1972, Water Transmitting Properties of Aquifers on Long Island, Washington, D.C.: U.S. Geological Survey, Professional Paper 627-E., U.S. Government Printing Office.
- NYSDEC, Undated, Water Quality Regulations - Surface Water and Groundwater Classifications and Standards, New York State Codes, Rules and Regulations, Title 6, Chapter X, Parts 700-705, Section 703.5 Classes and Quality Standards for Groundwater, NYSDEC, Albany, New York.
- Peterson, David S., 1987, Ground-water-recharge Rates in Nassau and Suffolk Counties, New York, Syosset, New York: U.S. Geological Survey, WRI Report 86-4181.
- Reynolds, Royal; Robert Forgione and Keith Porter, 1983, Pilot Plant Study Nitrogen Removal in a Modified Residential Subsurface Sewage Disposal System Phase 2 - Additional Investigations, William F. Cosulich Associates, P.C., Woodbury, New York and Suffolk County Department of Health Services, Hauppauge, New York.
- Snowden, Elizabeth; and Steven Pacenka, 1985, Thornthwaite and Mather's Climatic Water Bidget Method: An Implementation using the Lotus 1-2-3 (TM) Spreadsheet Program, Draft Software Manual, April 1985, Cornell University, Center for Environmental Research, Ithaca, New York.
- SCDHS, 1984, Standards for Subsurface Sewage Disposal Systems for Other Than Single-Family Residences, Revised March 5, 1984, Established pursuant to Article VB, Section 2c of the Suffolk County Sanitary Code, Division of Environmental Quality, Hauppauge, New York.

SCDHS, 1987, Suffolk County Comprehensive Water Resources Management Plan Volume 1, Hauppauge, New York.

Warner, J.W., W.E. Hanna, R.J. Landry, J.P. Wulforst, J.A. Neeley, R.L. Holmes, C.E. Rice., 1975, Soil Survey of Suffolk County, New York, Washington, D.C.: U.S. Department of Agriculture, Soil Conservation Service, in cooperation with Cornell Agriculture Experiment Station, U.S. Government Printing Office.

Warren, M.A., DeLaguna, Wallace, and Luszczynski, N.J., 1968. Hydrology of Brookhaven National Laboratory and Vicinity, Suffolk County, New York: U.S. Geological Survey Bulletin 1156-Cm 127 p., 41 figs., 10 pl.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

Forge Road Trailer Park

DATA INPUT FIELD

Existing Conditions

SHEET 1

<i>A</i>	<i>Site Recharge Parameters</i>	<i>Value</i>	<i>Units</i>
1	Area of Site	7.32	acres
2	Precipitation Rate	42.82	inches
3	Acreage of Lawn	0.44	acres
4	Fraction of Land in Lawn	0.060	fraction
5	Evapotranspiration from Lawn	24.20	inches
6	Runoff from Lawn	0.30	inches
7	Acreage of Impervious	1.65	acres
8	Fraction of Land Impervious	0.225	fraction
9	Evaporation from Impervious	4.28	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	0.00	acres
12	Fraction of Land Unvegetated	0.000	fraction
13	Evapotrans. from Unvegetated	24.20	inches
14	Runoff from Unvegetated	0.30	inches
15	Acreage of Water	0.00	acres
16	Fraction of Site in Water	0.000	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	1.54	acres
20	Fraction of Land Natural	0.210	fraction
21	Evapotrans. from Natural Area	24.20	inches
22	Runoff from Natural Area	0.30	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	0.00	inches
26	Runoff from Other Area	0.30	inches
27	Acreage of Land Irrigated	0.45	acres
28	Fraction of Land Irrigated	0.061	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	32	units
31	Water Use per Dwelling	225	gal/day
32	Wastewater Design Flow	7,200	gal/day
33	Commercial /STP Design Flow	0	gal/day

<i>B</i>	<i>Nitrogen Budget Parameters</i>	<i>Value</i>	<i>Units</i>
1	Persons per Dwelling	0.00	persons
2	Nitrogen per Person per Year	10.0	lbs
3	a. Sanitary Nitrogen Leaching Rate	75%	percent
3	b. Sanitary Nitrogen Leaching Rate	50%	percent
4	Area of Land Fertilized 1	4.65	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14%	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	0.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	0%	percent
10	Pet Waste Application Rate	3.19	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50%	percent
12	Area of Land Irrigated	4.65	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15%	percent
15	Nitrogen in Precipitation	1.00	mg/l
16	Precipitation Nitrogen Leaching Rate	15%	percent
17	Nitrogen in Water Supply	1.00	mg/l
18	Nitrogen in Commercial/STP Flow	50.00	mg/l

<i>C</i>	<i>Comments</i>
1)	Please refer to user manual for data input instructions.
2)	Sanitary Nitrogen Leaching Rate 3.a.) is for residential wastewater and 3.b.) is for commercial or STP which varies from 50 percent for conventional systems to 10 percent for STP effluent discharge.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS

Existing Conditions

SHEET 2

A	Lawn Area Recharge	Value	Units	B	Impervious Area Recharge	Value	Units
1	A = Fraction of Land in Lawn	0.060	fraction	1	A = Fraction of Land in Impervious	0.225	fraction
2	P = Precipitation Rate	42.82	inches	2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches	3	E = Evapotranspiration Rate	4.28	inches
4	Q = Runoff Rate	0.30	inches	4	Q = Runoff Rate	0.00	inches
5	$R(l) = P - (E + Q)$	18.32	inches	5	$R(i) = P - (E + Q)$	38.54	inches
6	$R(L) = R(l) \times A$	1.10	inches	6	$R(I) = R(i) \times A$	8.69	inches

C	Unvegetated Area Recharge	Value	Units	D	Water Area Loss	Value	Units
1	A = Fraction of Land Unveg.	0.000	fraction	1	A = Fraction of Site in Water	0.000	fraction
2	P = Precipitation Rate	42.82	inches	2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	0.30	inches	3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches	4	Q = Runoff Rate	0.00	inches
5	$R(u) = P - (E + Q)$	42.52	inches	5	M = Makeup Water	0.00	inches
6	$R(U) = R(u) \times A$	0.00	inches	6	$R(w) = \{P - (E+Q)\} - M$	12.82	inches
				7	$R(W) = R(w) \times A$	0.00	inches

E	Natural Area Recharge	Value	Units	F	Other Area Recharge	Value	Units
1	A = Fraction of Land in Natural	0.210	fraction	1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	42.82	inches	2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches	3	E = Evapotranspiration Rate	0.00	inches
4	Q = Runoff Rate	0.30	inches	4	Q = Runoff Rate	0.30	inches
5	$R(n) = P - (E + Q)$	18.32	inches	5	$R(o) = P - (E + Q)$	42.52	inches
6	$R(N) = R(n) \times A$	3.85	inches	6	$R(O) = R(o) \times A$	0.00	inches

G	Irrigation Recharge	Value	Units	H	Wastewater Recharge	Value	Units
1	A = Fraction of Land Irrigated	0.061	fraction	1	WDF = Wastewater Design Flow	7,200	gal/day
2	I = Irrigation Rate	5.50	inches	2	WDF = Wastewater Design Flow	351,364	cu ft/yr
3	E = Evaptranspiration Rate	3.11	inches	3	A = Area of Site	318,859	sq ft
4	Q = Runoff Rate	0.30	inches	4	$R(ww) = WDF/A$	1.10	feet
5	$R(irr) = I - (E + Q)$	2.09	inches	5	$R(WW) = Wastewater Recharge$	13.22	inches
6	$R(IRR) = R(irr) \times A$	0.13	inches				

Total Site Recharge		
R(T) =	$R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)$	
R(T) =	26.99	inches

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET

Existing Conditions

SHEET 3

A	Sanitary Nitrogen-Residential	Value	Units	B	Pet Waste Nitrogen	Value	Units
1	Number of Dwellings	32	units	1	AR = Application Rate	3.19	lbs/pet
2	Persons per Dwelling	0.00	capita	2	Human Population	0	capita
3	P = Population	0.00	capita	3	Pets = 17 percent of capita	0	pets
4	N = Nitrogen per person	10	lbs	4	N(p) = AR x pets	0.00	lbs
5	LR = Leaching Rate	75%	percent	5	LR = Leaching Rate	50%	percent
6	N(S) = P x N x LR	0.00	lbs	6	N(P) = N(p) x LR	0.00	lbs
7	N(S) = Sanitary Nitrogen	0.00	lbs	7	N(P) = Pet Waste Nitrogen	0.00	lbs
C Sanitary Nitrogen (Commercial/STP)				D Water Supply Nitrogen (other than wastewater, if applicable)			
1	CF = Commercial/STP Flow	7,200	gal/day	1	WDF = Wastewater Design Flow	7,200	gal/day
2	CF = Commercial/STP Flow	9,946,980	liters/yr	2	WDF = Wastewater Design Flow	9,946,980	liters/yr
3	N = Nitrogen in Commercial	50.00	mg/l	3	N = Nitrogen in Water Supply	1.00	mg/l
4	LR = Leaching Rate	75%	percent	4	N(WW) = WDF x N	9,946,980	milligrams
5	N(S) = CF x N x LR	373,011,750	milligrams	5	N(WW) = Wastewater Nitrogen	21.93	lbs
6	N(S) = Sanitary Nitrogen	822.49	lbs	F Fertilizer Nitrogen 2			
E Fertilizer Nitrogen 1				1	A = Area of Land Fertilized 2	0	sq ft
1	A = Area of Land Fertilized 1	202,554	sq ft	2	AR = Application Rate	0.00	lbs/1000 sf
2	AR = Application Rate	2.30	lbs/1000 sf	3	LR = Leaching Rate	0%	percent
3	LR = Leaching Rate	14%	percent	4	N(F2) = A x AR x LR	0.00	lbs
4	N(F1) = A x AR x LR	65.22	lbs	5	N(F2) = Fertilizer Nitrogen	0.00	lbs
5	N(F1) = Fertilizer Nitrogen	65.22	lbs	H Irrigation Nitrogen			
G Precipitation Nitrogen				1	R = Irrigation Recharge (inches)	2.09	inches
1	R(n) = Natural Recharge (feet)	1.14	feet	2	R = Irrigation Rate (feet)	0.17	feet
2	A = Area of Site (sq ft)	318,859	sq ft	3	A = Area of Land Irrigated	202,554	sq ft
3	R(N) = R(n) x A	362,510	cu ft	4	R(I) = R(irr) x A	35,310	cu ft
4	R(N) = Natural Recharge (liters)	10,266,294	liters	5	R(I) = Site Precipitation (liters)	999,985	liters
5	N = Nitrogen in Precipitation	1.00	mg/l	6	N = Nitrogen in Water Supply	1.00	mg/l
6	LR = Leaching Rate	15%	percent	7	LR = Leaching Rate	15%	percent
7	N(ppt) = R(N) x N x LR	102,663	milligrams	8	N(irr) = R(I) x N x LR	149,998	milligrams
8	N(ppt) = Precipitation Nitrogen	0.23	lbs	9	N(irr) = Irrigation Nitrogen	0.33	lbs
Total Site Nitrogen							
N=		N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)					
N=		910.20 lbs					

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

Forge Road Trailer Park

DATA INPUT FIELD

Existing Conditions

SHEET 1

A	Site Recharge Parameters	Value	Units
1	Area of Site	7.32	acres
2	Precipitation Rate	42.82	inches
3	Acreage of Lawn	0.44	acres
4	Fraction of Land in Lawn	0.060	fraction
5	Evapotranspiration from Lawn	24.20	inches
6	Runoff from Lawn	0.30	inches
7	Acreage of Impervious	1.65	acres
8	Fraction of Land Impervious	0.225	fraction
9	Evaporation from Impervious	4.28	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	0.00	acres
12	Fraction of Land Unvegetated	0.000	fraction
13	Evapotrans. from Unvegetated	24.20	inches
14	Runoff from Unvegetated	0.30	inches
15	Acreage of Water	0.00	acres
16	Fraction of Site in Water	0.000	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	1.54	acres
20	Fraction of Land Natural	0.210	fraction
21	Evapotrans. from Natural Area	24.20	inches
22	Runoff from Natural Area	0.30	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	0.00	inches
26	Runoff from Other Area	0.30	inches
27	Acreage of Land Irrigated	0.45	acres
28	Fraction of Land Irrigated	0.061	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	32	units
31	Water Use per Dwelling	225	gal/day
32	Wastewater Design Flow	7,200	gal/day
33	Commercial /STP Design Flow	0	gal/day

B	Nitrogen Budget Parameters	Value	Units
1	Persons per Dwelling	0.00	persons
2	Nitrogen per Person per Year	10.0	lbs
3	a. Sanitary Nitrogen Leaching Rate	90%	percent
3	b. Sanitary Nitrogen Leaching Rate	50%	percent
4	Area of Land Fertilized 1	4.65	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14%	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	0.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	0%	percent
10	Pet Waste Application Rate	3.19	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50%	percent
12	Area of Land Irrigated	4.65	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15%	percent
15	Nitrogen in Precipitation	1.00	mg/l
16	Precipitation Nitrogen Leaching Rate	15%	percent
17	Nitrogen in Water Supply	1.00	mg/l
18	Nitrogen in Commercial/STP Flow	10.00	mg/l

C	Comments
1)	Please refer to user manual for data input instructions.
2)	Sanitary Nitrogen Leaching Rate 3.a.) is for residential wastewater and 3.b.) is for commercial or STP which varies from 50 percent for conventional systems to 10 percent for STP effluent discharge.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS

Existing Conditions

SHEET 2

A	Lawn Area Recharge	Value	Units	B	Impervious Area Recharge	Value	Units
1	A = Fraction of Land in Lawn	0.060	fraction	1	A = Fraction of Land in Impervious	0.225	fraction
2	P = Precipitation Rate	42.82	inches	2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches	3	E = Evapotranspiration Rate	4.28	inches
4	Q = Runoff Rate	0.30	inches	4	Q = Runoff Rate	0.00	inches
5	$R(l) = P - (E + Q)$	18.32	inches	5	$R(i) = P - (E + Q)$	38.54	inches
6	$R(L) = R(l) \times A$	1.10	inches	6	$R(I) = R(i) \times A$	8.69	inches

C	Unvegetated Area Recharge	Value	Units
1	A = Fraction of Land Unveg.	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	0.30	inches
4	Q = Runoff Rate	0.00	inches
5	$R(u) = P - (E + Q)$	42.52	inches
6	$R(U) = R(u) \times A$	0.00	inches

D	Water Area Loss	Value	Units
1	A = Fraction of Site in Water	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	$R(w) = \{P - (E+Q)\} - M$	12.82	inches
7	$R(W) = R(w) \times A$	0.00	inches

E	Natural Area Recharge	Value	Units
1	A = Fraction of Land in Natural	0.210	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.30	inches
5	$R(n) = P - (E + Q)$	18.32	inches
6	$R(N) = R(n) \times A$	3.85	inches

F	Other Area Recharge	Value	Units
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	0.00	inches
4	Q = Runoff Rate	0.30	inches
5	$R(o) = P - (E + Q)$	42.52	inches
6	$R(O) = R(o) \times A$	0.00	inches

G	Irrigation Recharge	Value	Units
1	A = Fraction of Land Irrigated	0.061	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evapotranspiration Rate	3.11	inches
4	Q = Runoff Rate	0.30	inches
5	$R(irr) = I - (E + Q)$	2.09	inches
6	$R(IRR) = R(irr) \times A$	0.13	inches

H	Wastewater Recharge	Value	Units
1	WDF = Wastewater Design Flow	7,200	gal/day
2	WDF = Wastewater Design Flow	351,364	cu ft/yr
3	A = Area of Site	318,859	sq ft
4	$R(ww) = WDF/A$	1.10	feet
5	$R(WW) = Wastewater\ Recharge$	13.22	inches

Total Site Recharge		
R(T) =	$R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)$	
R(T) =	26.99	inches

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET

Existing Conditions

SHEET 3

A Sanitary Nitrogen-Residential			<i>Value</i>	<i>Units</i>	B Pet Waste Nitrogen			<i>Value</i>	<i>Units</i>
1	Number of Dwellings	32		units	1	AR = Application Rate	3.19		lbs/pet
2	Persons per Dwelling	0.00		capita	2	Human Population	0		capita
3	P = Population	0.00		capita	3	Pets = 17 percent of capita	0		pets
4	N = Nitrogen per person	10		lbs	4	N(p) = AR x pets	0.00		lbs
5	LR = Leaching Rate	90%		percent	5	LR = Leaching Rate	50%		percent
6	N(S) = P x N x LR	0.00		lbs	6	N(P) = N(p) x LR	0.00		lbs
7	N(S) = Sanitary Nitrogen	0.00		lbs	7	N(P) = Pet Waste Nitrogen	0.00		lbs

C Sanitary Nitrogen (Commercial/STP)			D Water Supply Nitrogen (other than wastewater, if applicable)						
1	CF = Commercial/STP Flow	7,200		gal/day	1	WDF = Wastewater Design Flow	7,200		gal/day
2	CF = Commercial/STP Flow	9,946,980		liters/yr	2	WDF = Wastewater Design Flow	9,946,980		liters/yr
3	N = Nitrogen in Commercial	10.00		mg/l	3	N = Nitrogen in Water Supply	1.00		mg/l
4	LR = Leaching Rate	90%		percent	4	N(WW) = WDF x N	9,946,980		milligrams
5	N(S) = CF x N x LR	89,522,820		milligrams	5	N(WW) = Wastewater Nitrogen	21.93		lbs
6	N(S) = Sanitary Nitrogen	197.40		lbs					

E Fertilizer Nitrogen 1			F Fertilizer Nitrogen 2						
1	A = Area of Land Fertilized 1	202,554		sq ft	1	A = Area of Land Fertilized 2	0		sq ft
2	AR = Application Rate	2.30		lbs/1000 sf	2	AR = Application Rate	0.00		lbs/1000 sf
3	LR = Leaching Rate	14%		percent	3	LR = Leaching Rate	0%		percent
4	N(F1) = A x AR x LR	65.22		lbs	4	N(F2) = A x AR x LR	0.00		lbs
5	N(F1) = Fertilizer Nitrogen	65.22		lbs	5	N(F2) = Fertilizer Nitrogen	0.00		lbs

G Precipitation Nitrogen			H Irrigation Nitrogen						
1	R(n) = Natural Recharge (feet)	1.14		feet	1	R = Irrigation Recharge (inches)	2.09		inches
2	A = Area of Site (sq ft)	318,859		sq ft	2	R = Irrigation Rate (feet)	0.17		feet
3	R(N) = R(n) x A	362,510		cu ft	3	A = Area of Land Irrigated	202,554		sq ft
4	R(N) = Natural Recharge (liters)	10,266,294		liters	4	R(I) = R(irr) x A	35,310		cu ft
5	N = Nitrogen in Precipitation	1.00		mg/l	5	R(I) = Site Precipitation (liters)	999,985		liters
6	LR = Leaching Rate	15%		percent	6	N = Nitrogen in Water Supply	1.00		mg/l
7	N(ppt) = R(N) x N x LR	102,663		milligrams	7	LR = Leaching Rate	15%		percent
8	N(ppt) = Precipitation Nitrogen	0.23		lbs	8	N(irr) = R(I) x N x LR	149,998		milligrams
					9	N(irr) = Irrigation Nitrogen	0.33		lbs

Total Site Nitrogen		
N=	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	285.11	lbs



APPENDIX G

Natural Heritage Program Response