Branchville

Transit Oriented Development Plan
Existing Conditions Summary

12/1/15

FITZGERALD & HALLIDAY, INC.
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BRANCHVILLE Transit Oriented Development Study

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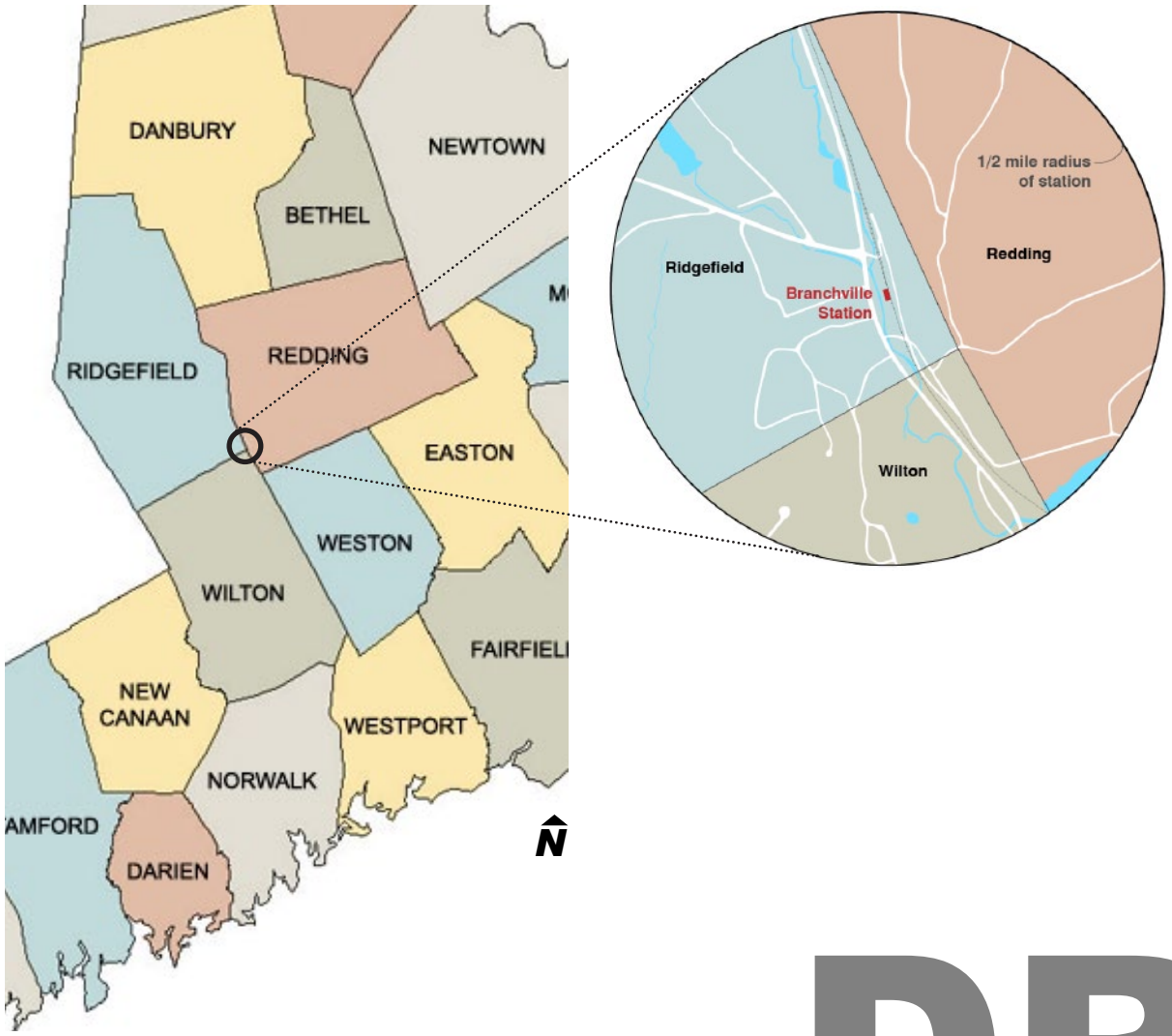
The Branchville Study Area

Branchville is located in the southeast corner or Ridgefield adjacent to the Towns of Redding and Wilton. The study area for this plan is within a half-mile radius of Branchville Station, with most of the efforts being focused within Ridgefield and areas in close proximity of the station. The half-mile station radius represents a typical study area for Transit Oriented Development (TOD) plans, as this represents the area that is typically accessible within walking distance of a station. Given the local topography and limited roadway network, the potential development area for Branchville is closer in proximity to the station that the half-mile extent.



Comprehensive Review of Existing Conditions

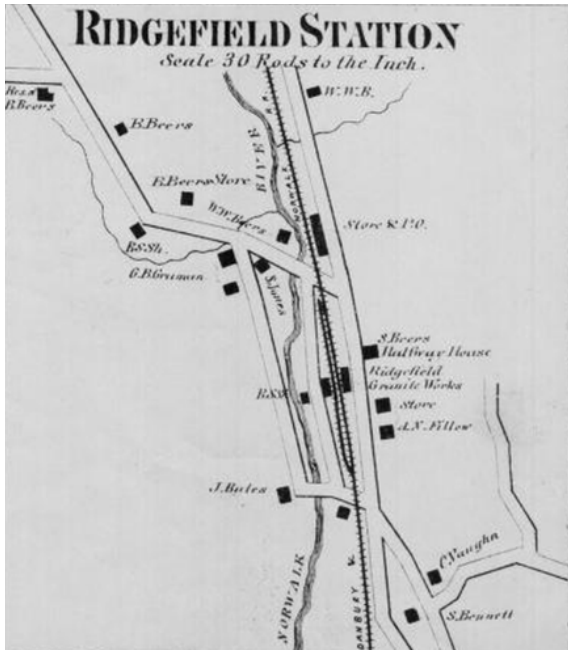
This existing conditions report documents multiple characteristics of the study area that are relevant to the planning for Transit Oriented Development in Branchville. These topic areas include:

- Historic Resources
- Land Use
- Topography & Wetland Soils
- Flood Zones
- Hazardous Materials
- Threatened & Endangered Species
- Zoning
- Parcel Analysis
- Wastewater infrastructure
- Transportation System
- Market Analysis

Historic Resources

History of Branchville

In the early 19th century, the southwest corner of Ridgefield, the area now known as Branchville, was largely rural. The Old Sugar Hollow Turnpike, a main highway that stretched from near the Danbury line south into Wilton, ran through the area connecting it with communities to the north and south; a segment of this alignment survives in the center of Branchville as West Branchville Road. In 1852, new access was provided to the area with the arrival of the Danbury and Norwalk Railroad. The new rail line paralleled the turnpike to the west as it traveled through Branchville. A passenger waiting room and ticket office were established in the home of Sherman Beers proximate to the tracks and the newly established station stop was termed Ridgefield Station. Residents who lived elsewhere in Ridgefield traveled to and from the new station by horse and buggy.



A.H. Beers, Map of Ridgefield Station, 1867
Source: Redding Historical Society

With the arrival of the railroad at mid-century, the character of the quiet community changed. Through the course of the second half of the 19th century, a small bustling town grew up in Branchville. Industry included a machinery factory and a quarry, the Ridgefield Granite Works. Both raw materials and finished goods could be shipped along the railroad to the port in Norwalk where they were loaded on ships to New York City. In addition, Branchville resident Abijiha Fillow established a mica mine which attracted geologists and mining companies to the area. As industry grew in Branchville, so too did services to support the workers and their families. An 1867 map shows the Branchville Granite Works, three stores, a halfway house, a post office and a collection of residences.

In 1870, the Danbury and Norwalk Railroad built a branch line from Branchville to the village of Ridgefield. At this time, the name of the station in Branchville was changed from the Ridgefield Station to the Branchville Station, reflecting its location at the end of the branch line. Passenger service to Ridgefield ran until 1925, while freight service on the branch line continued until 1964.

In the 1920s, Route 7 (Ethan Allen Highway) replaced the Old Sugar Hollow Turnpike as the primary vehicular thoroughfare. Commercial development sprung up along the new roadway, including Ancona's Grocery. Joseph Ancona emigrated from Sicily in 1912 with his father and brothers. They worked in the Gilbert & Bennett wire factory to the south of Branchville during World War I. Ancona opened his general store in 1920 with a soda fountain, dry goods, groceries, and a small gas pump, living in an apartment above the commercial space. He then expanded his business to include a liquor store, and in 1949 constructed a brick building to house a hardware store to the north of the grocery store at 51 Ethan Allen Highway. In the first half of the twentieth century, residential buildings were constructed along the side streets off of Ethan Allen Highway, such as Park Lane and Florida Road.

Several commercial establishments were constructed on the west side of Ethan Allen Highway south of Wilridge Road in the latter half of the twentieth century, thereby extending the commercial development beyond the Ancona block. When the hardware store wasn't successful, Ancona's Grocery moved from their original location north to the hardware store building at 51 Ethan Allen Highway. While the Ancona Grocery has closed, and the liquor store has moved to a parcel off of Branchville Road, the buildings that originally housed Ancona's Grocery and the Hardware Store remain and continue to serve commercial functions.

Buildings within the Project Focus Area

Research was undertaken at the Connecticut State Historic Preservation Office in September 2015 to identify properties within the project's focus area that may be listed in the State or National Registers of Historic Places. One property within the focus area was identified as listed in the National Register. The Branchville Railroad Tenement is located at 14 West Branchville Road, south of the railroad station, near the intersection of West Branchville Road and Portland Avenue. The two-story, three bay wooden structure was constructed in the in 1850s as a boarding house for immigrants brought in to construct the Danbury-Norwalk Railroad. It is the only known building of this type in the town of Ridgefield and one of Branchville's few remaining Victorian Vernacular commercial structures. In the 1880s, the building's owner, Abijah Fillow, expanded the building to the north, added a two-story Victorian veranda on the building's west side, and renovated the interior in order to convert the property to a hotel. In 1905, the tenement was purchased by Italian Immigrant Pasquale DeBinigno who added a wing to the south and converted the structure to a three-family house with a saloon and grocery store on the ground level. The tenement was listed in the National Register in 1982. No additional properties within the focus area are listed in the State or National Registers. The J. Alden Weir Farm, also listed in the National Register,

is located to the west of the center of Branchville, within the project's larger study area but outside the bounds of the focus area.

Of the approximately 50 additional buildings that lie within the project's focus area, 80 percent are greater than 50 years old. The earliest buildings within the focus area lie along West Branchville Road and Portland Avenue on the hill east of the train tracks. These buildings date from the 18th, 19th and 20th centuries and display Second Empire, Federal, Shingle, Greek Revival, Colonial Revival, and Italianate architectural forms. Some of these buildings retain the majority of their original architectural features while others have been substantially altered over time. One of the most prominent buildings on West Branchville Road is the Second Empire-style house at 28 West Branchville Road. Constructed in 1876, the house is characterized by a steep mansard roof and delicate roof brackets. The adjacent barn, which dates to c. 1900, is three stories high with a gambrel roof. Although the distinctive features of these buildings are largely intact, both properties are in a deteriorated state. More modest residential buildings on West Branchville Road include the late 19th century vernacular farmhouse at 48 West Branchville Road, dating to c. 1890, and the Colonial Revival-style residence at 42 West Branchville Road. Like the Branchville Railroad Tenement, these properties were constructed when this segment of West Branchville Road was part of the Old Sugar Hollow Turnpike, prior to the construction of Route 7 in the 1920s.

The Branchville Railroad station which lies on the west side of the tracks opposite the properties on West Branchville Road is another distinctive form within Branchville's architectural landscape. Constructed in 1920 as a way station on the Lenox-Pittsfield line of the New Haven & Hartford Railroad, this small building is characterized by symmetrical window and door spacing, and a deeply projecting hipped roof supported by brackets. The deep overhang of the roof shows the influence of the Shingle and Stick styles.

West of the train station, in the blocks between Wilridge Road and Branchville Road on Route 7, several buildings are illustrative of the commercial development of Branchville in the first half of the 20th century. The vernacular buildings at 39-49 Ethan Allen Highway originally housed Ancona's Grocery and Liquor Store on the ground floor with living space above. Although these buildings have undergone substantial changes over time, including alterations to rooflines and windows, their basic floorplan and overall massing remains intact. To the north, the two-story Colonial Revival-style brick building was constructed to house Ancona's Hardware in 1949. The building's original form and decorative details, including a dentiled cornice and semi-circular window in the building's gable end, remain largely unchanged.

Potential Historic Properties Near Station

Implications for Development

Federal, state and local regulations may guide changes to or the demolition of historic properties within the Branchville TOD focus area. Section 106 of the National Historic Preservation Act requires federal agencies consider effects to properties listed in, or eligible for listing in, the National Register of Historic Places when planning for their projects. In the event that federal funds are used for the implementation of the Branchville TOD Study, consultation would be required with the Connecticut State Historic Preservation Office to determine if there are adverse effects to historic properties. This would include effects to the National Register-listed Branchville Railroad Tenement, as well as other properties that could be determined eligible for the National Register. In addition, federally-funded transportation improvements, such as the replacement of the Portland Avenue or Branchville Road Bridges, would require an evaluation of the use of historic properties in accordance with Section 4(f) of the U.S. Department of Transportation Act.

In addition to federal historic preservation regulations, the municipalities each have their own regulations that pertain to the treatment of historic properties. There are no local historic districts within the project focus area and thus alterations to buildings within this area are not restricted, however there are specific procedures which guide demolition. In the Town of Ridgefield, the Building Department requires that applicants for demolition permits for all buildings send a certified letter to the Ridgefield Historical Society and the Ridgefield Historic District Commission notifying them of the demolition. The Town of Wilton has a 90-day demolition delay which the Wilton Historic District and Historic Property Commission may impose on the demolition of a property they determine has historic significance. Similarly, the Town of Redding has a 180-day demolition delay for properties the Demolition Delay Committee determines have historic value. Compliance with these regulations would be required for any demolition resulting from the implementation of the Branchville TOD Study. It is possible to halt demolition of a property listed in, or under consideration for, listing in the National Register through a provision under the Connecticut Environmental Policy Act.

Historic Postcard of Branchville Railroad Station
Source: Redding Historical Society

Branchville Railroad Station
Source: FHI

Branchville Railroad Tenement (DeBenigno's Store),1905
Source: Redding Historical Society

Branchville Railroad Tenement, 14 West Branchville Road
Source: FHI 2015

Ancona's Grocery, 41-49 Ethan Allen Highway
Source: Ridgefield Historical Society

39, 41-49, and 51 Ethan Allen Highway
Source: FHI 2015

Land Use

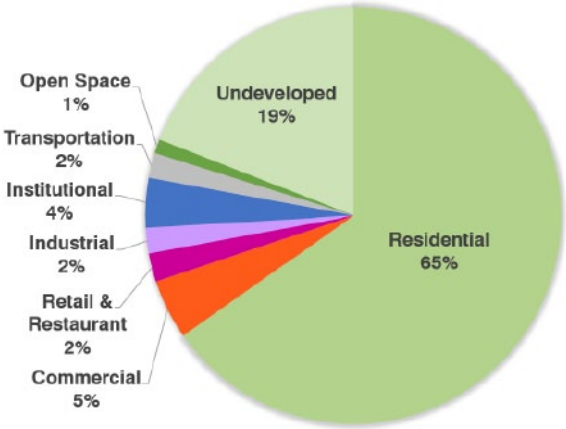
The Branchville study area is largely comprised of low density residential development and undeveloped land in Ridgefield, Redding and Wilton. These areas are generally southwest of Route 7 and Branchville Road and east of West Branchville Road and Portland Avenue.

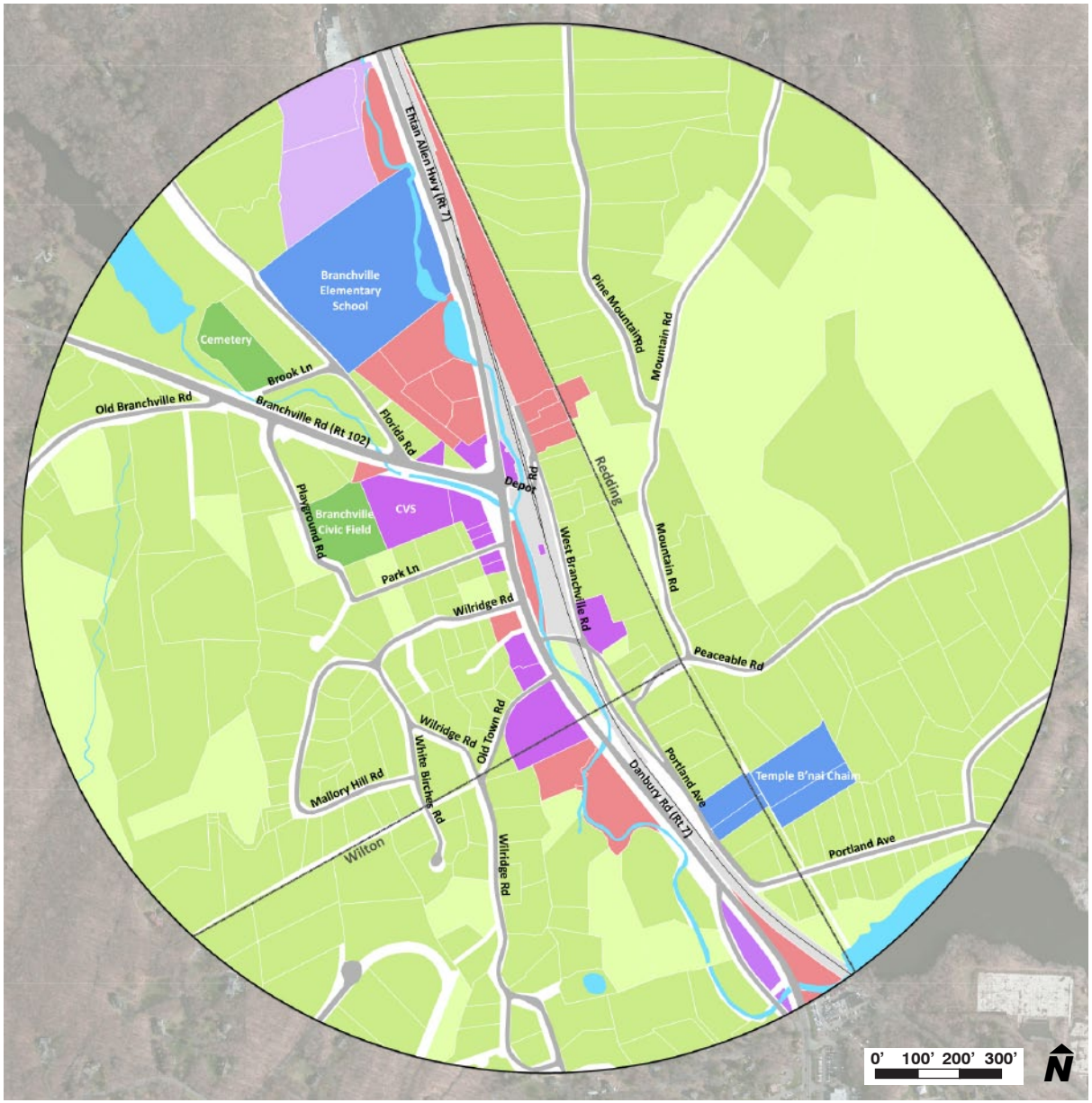
Commercial, retail and restaurant uses are primarily located along Route 7 and Branchville Road and at the northern end of West Branchville Road.

Institutional land uses in the area include Branchville Elementary School on Florida Road and Temple B'nai Chaim on Portland Avenue.

There are two open space parcels in the study area, a cemetery located on Brook Lane and a privately owned little league baseball field (Branchville Civic Field) located on Playground Road.

Industrial land uses are located on two sites north of Branchville Elementary School.





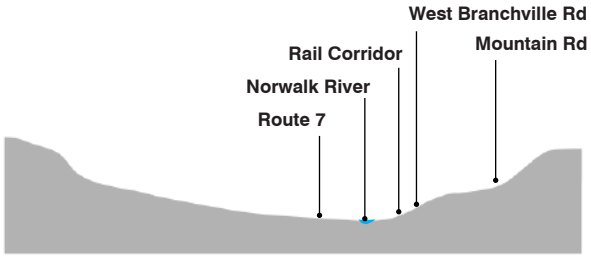
Legend

- Commercial
- Industrial
- Institutional
- OpenSpace
- Residential
- Retail/Restaurant
- Transportation
- Undeveloped

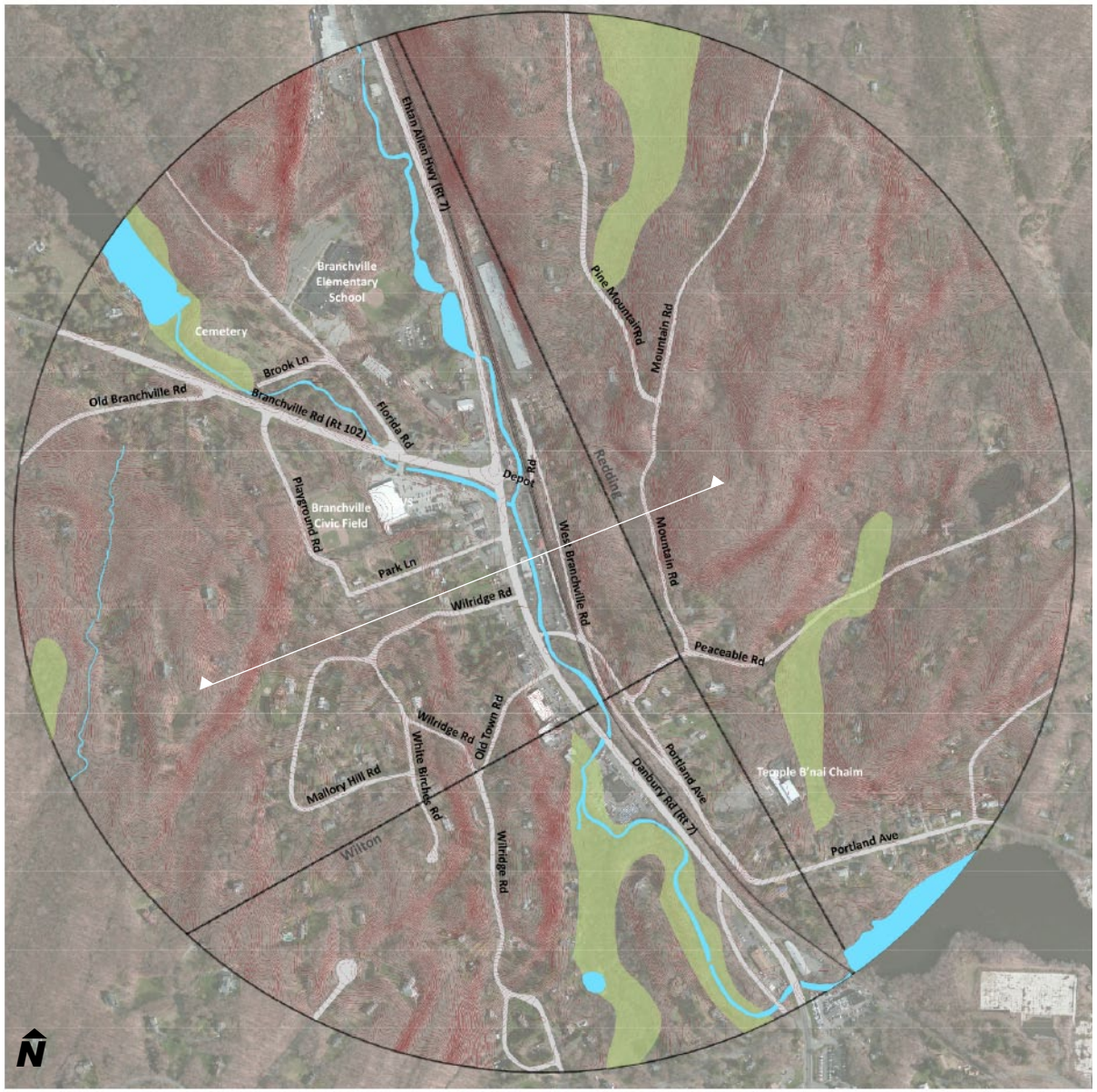
Topography & Wetland Soils

Branchville Station and the surrounding commercial area occupy a narrow valley along the Norwalk River. The topography to the east and west of the station is relatively steep and has consequently limited the density of development in those areas.

Inland wetland soils are present in the Branchville area, with the greatest share of those areas located in Redding and Wilton. In Ridgefield, wetland soils are located west of Florida Road and at the western edge of the study area. In Redding, wetland soils are present near Pine Mountain Road and Peaceable Road. In Wilton, wetland soils are located along the Housatonic River and east of Wilridge Road. These locations are based on state level soils mapping and have not been delineated in the field. As such, these areas may not contain wetland soils and there may be wetland soils within the study area that are not identified by this map.



Section view of Branchville's topography
2x vertical exaggeration



Legend

- Inland Wetland Soils
- 2' Contours

Flood Zones

Much of the Route 7 and Branchville Road corridor in Branchville rests in the floodplain and/or floodway.

The floodway is comprised of the channel of the Norwalk River and Cooper Pond Brook and the parts of the floodplain adjoining those channels that are reasonably required to efficiently carry and discharge the flood water or flood flow of a river or stream. There are a number of buildings and businesses, such as Precision Brake Works, in Branchville that are located within, or in close proximity to the floodway. Future development within this area will be highly restricted.

Zone AE is the flood insurance rate zone that corresponds to the 100 year floodplain (1% chance of annual flooding). The train station and platform and much of the development on the west side of Route 7 is within this zone. Development within zone AE is possible, but floodplain building codes and insurance requirements restrict the type of development that is feasible in these areas.

Branchville also has areas that are within the 500 year floodplain (0.2% chance of annual flooding). The 500 year floodplain is the least restrictive flood zone. Businesses within the zone include the Little Pub and adjacent businesses.

Recent flooding on Norwalk River near Train Station
Photo courtesy of Ralph Baskin

Legend

- Floodway
- Zone AE (100 Year Floodplain)
- 0.2% Flood Chance (500 Year Floodplain)

Hazardous Materials

Background

The findings of this preliminary hazardous materials screening and evaluation are not intended to substitute for more detailed studies, such as an American Society for Testing and Materials (ASTM)-compliant Phase I Environmental Site Assessment or subsurface soil and groundwater investigations. This screening is meant to identify low, medium, and/or high risk properties as a guide for identifying potential contamination in the study area. Further technical and more detailed investigations may be required to determine the existence of oil and hazardous materials (OHMs) prior to property acquisitions, utility relocations, and construction of project elements. The identification of a site in this report does not conclusively confirm that the property has hazardous waste/material contamination, but rather that it has the potential to contain OHMs. There may be additional sites with contamination issues that have not been identified in this screening due to noncompliance with regulations or incomplete regulatory/historical information.

The United States Environmental Protection Agency (USEPA) and the Connecticut Department of Energy and Environmental Protection (CT DEEP) regulate the handling, storage, generation and use of OHMs. USEPA and CT DEEP maintain records of known hazardous materials release sites and enforce specific guidelines for the treatment and removal of OHMs at these sites.

Methodology

A records review of various federal and state environmental listing databases was conducted for the study area in August 2015. Environmental Record Search (ERS) produced a database report detailing hazardous material release sites identified within the study area boundaries. The environmental databases reviewed include, but are not limited to:

- National Priority List (NPL);
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS);
- No Further Remedial Action Plan (NFRAP);
- Resource Conservation and Recovery Act (RCRA);
- Federal Brownfield;
- Emergency Response Notification System (ERNS);
- State Sites-Open and -Closed;
- State/Tribal Solid Waste Landfills (SWL);
- State/Tribal Leaking Underground Storage Tanks (LUST);
- State/Tribal Underground Storage Tanks/ Aboveground Storage Tanks (UST/AST);
- State/Tribal Brownfields; and
- Facility Registry Index (FINDS).

The ERS report is described below.

A visual inspection of the study area was conducted on August 20, 2015 to identify potential sources of hazardous waste/materials. The inspection was conducted from the street and none of the subject properties were accessed. No on-site testing or assessment was conducted as part of this inspection.

File reviews at the Town of Ridgefield and Town of Wilton were conducted August 20, 2015 on the hazardous material sites ranked as high risk (described below). The file reviews were conducted at the Building Department, Health Department and Fire Marshal for both Ridgefield and Wilton.

Each release site was assigned a high-medium-low risk ranking relative to the possibility of encountering OHMs. The high-medium-low risk site designations are based upon review of the various federal and state environmental listing databases contained in the ERS database report that identifies hazardous material release sites within the study area. Based upon the release database and details of the reported release, the risk assignment was made. High risk sites included sites that have current or historical use as auto repair/dealerships, are listed as LUST (which have documented evidence of contamination), and/or have current or historical use as drycleaners. Low risk sites have releases with closed cases, small quantities of released hazardous materials, store or transport hazardous materials, or have activities that do not contribute to soil/groundwater contamination.

Existing Conditions

The review of state and federal environmental database records revealed evidence of numerous recognized environmental conditions (RECs), which are potential sources of OHMs. These RECs require further investigation in the form of soil and/or groundwater sampling and analysis, to determine if the properties identified may impact the study area.

The ERS report identified 29 hazardous material sites in the study area. The hazardous material sites are scattered throughout the study area, however, the majority are located in the vicinity of Ethan Allen Highway. The release sites located within the "Focus Area" – the most likely area for potential Transit Oriented Development surrounding the Branchville train station, have been identified and explained in Table 1 and shown in Figure X. The ERS report identified 15 hazardous material sites in the Focus Area.

The visual inspection did not reveal additional properties with potential sources of OHMs in the study area. Based on the visual inspection, one of the properties listed in the ERS report was removed from the list of sites, as the location was incorrectly mapped in the report. Town of Ridgefield water pollution facility (Site ID 9) is located at 901 Ethan Allen Highway, which is outside of the study area.

Based upon the environmental database review and visual inspection, each release site was assigned a risk ranking (low, medium, or high) relative to the possibility of encountering OHMs. See Table 1 for these rankings.

The file reviews of the high risk sites conducted at the Town of Ridgefield and Town of Wilton revealed the following:

- Precision Brakeworks/Getty Petroleum at 32 Ethan Allen Highway, Ridgefield: No files at the Building, Health or Fire Departments relative to hazardous materials.
- My cleaners: No files at the Building, Health or Fire Departments relative to hazardous materials.
- Keans Autoworks, LLC/Branchville Service and Oil Company: No files at the Building, Health or Fire Departments relative to hazardous materials.
- Wilton Maintenance Garage/Georgetown Jeep Eagle: No files at the Building, Health or Fire Departments. Conversations with Peter Berstein, Georgetown Deputy Fire Marshal, revealed that the Fire Department only has records from 2011. Marshal Berstein stated that there have been several interested buyers for the Georgetown Jeep Eagle property, but all were not interested in purchasing based upon the extensive hazardous material issues at the property. He also said that this site has had multiple hazardous material releases throughout the years. Additional environmental issues have also occurred, including the filling of a perennial watercourse at the rear of the property. Conversations with Wilton town employees revealed that this site is well known as having many hazardous material issues throughout the years.

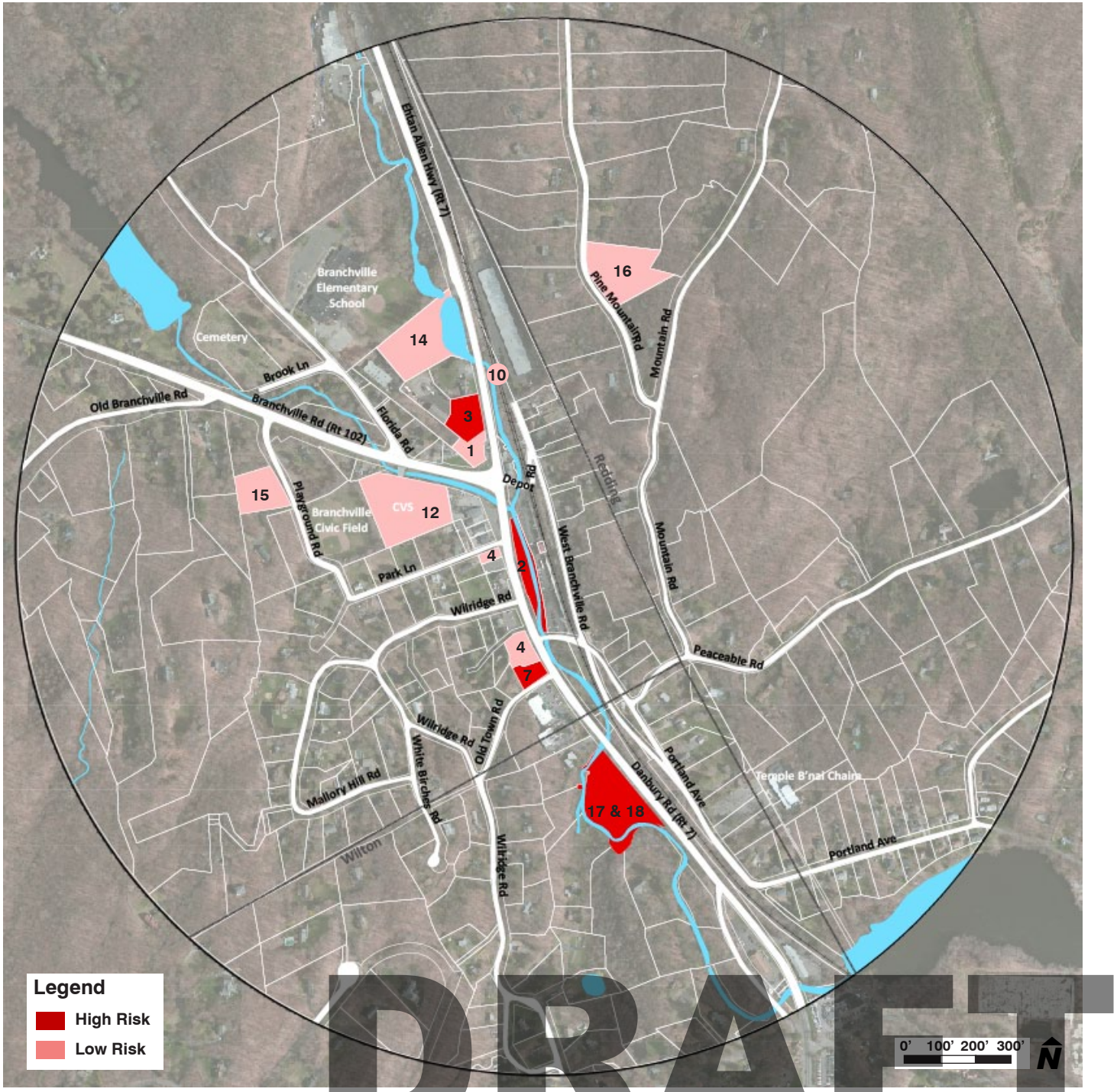
Potential Impacts

Potential impacts from hazardous waste/materials were evaluated based on the type of release, materials released and the proximity of the release site to the Focus Area. Table 1 identifies the number of high, medium, and low risk sites within the Focus Area.

Site	Site Name	Address	Database	Description of Release(s)	Risk
1	37 Ethan Allen Highway	38 Ethan Allen Highway, Ridgefield, CT	SDWIS-US	Coliform in public water system	Low
2	Precision Brakeworks/Getty Petroleum	32 Ethan Allen Highway, Ridgefield, CT	CPCS-CT, Dealers-Repairers-CT, FRS-US (2), LUST-Closed-CT, Manifest2-RI, Manifest-CT (3), RCRA-SQG-US, Sites-Closed-CT, UST-CT	Haz mat transporter and generator, Petroleum contamination to soil - case closed (USTs & LUSTs - 4 USTs removed), #2 fuel oil spill (unknown quantity), Auto dealer/repair, Coliform and nitrate in public water system	High
3	59 Ethan Allen Highway	59 Ethan Allen Highway, Ridgefield, CT	SDWIS-US	Coliform, nitrite and nitrate in public water system	Low
4	Computrol, Inc.	15 Ethan Allen Highway, Ridgefield, CT	Manifest-CT, RCRA-NON-US, Prop-Trans-CT, Hist-SDAD-CT, FRS-US	Haz mat transporter, Solvent storage	Low
5	Branchville Oil Company/CT Bulk Transport/	61 Ethan Allen Highway, Ridgefield, CT	Sites-Closed-CT (2), FRS-US	40 gallons #2 fuel oil spilled - case closed, 20 gallons #2 fuel oil spilled - case closed	Low
6 & 8	Branchville Mica Mine	No address	MRDS-US (2)	N/A	Low
7	My cleaners	9 Ethan Allen Highway, Ridgefield, CT	Hist-Cleaners	Possible solvent contamination	High
10	Norwalk River	In front of 71 Ethan Allen Highway, Ridgefield, CT	ERNS-US	Release in river from vehicle in water, no further details	Low
11	Keans Autoworks, LLC/Branchville Service and Oil Company	63 Ethan Allen Highway, Ridgefield, CT	FRS-US, Dealers-Repairers-CT, UST-CT	Auto dealer/repair, Possible petroleum contamination (5 USTs removed)	High
12	Anconas Market/Anconas Wine and Liquors	720 Branchville Road, Ridgefield, CT	SDWIS-US (2)	Tetrachloroethylene, 1,1-Dichloroethylene, nitrates, nitrites, coliform in public water system	Low
13	Emergency Response	79 Ethan Allen Highway, Ridgefield, CT	Manifest-CT	Haz mat transporter	Low
14	Brandstrom Instruments, Inc./Brandstrom Industries/Connecticut Light & Power	85 Ethan Allen Highway, Ridgefield, CT	FRS-US, ERNS-US, Sites-Closed-CT (2), Hist-SDAD-CT	20 gallons of oil from pole transformer, Waste oil in dumpster (unknown quantity) - case closed,	Low
15	SAA	19 Playground Road, Ridgefield, CT	Sites-Closed-CT	50 gallons of #2 fuel oil leaked from truck - case closed	Low
16	No name	14 Pine Mountain Road, Redding, CT	Sites-Closed-CT, ERNS-US	10 gallons of transformer oil released - case closed	Low
17 & 18	Wilton Maintenance Garage/Georgetown Jeep Eagle	1039 Danbury Road, Wilton, CT	UST-CT, Manifest-CT, FRS-US, Sites-Closed-CT, Hist-Auto Dealers (3), RCRA-NON-US,	2 USTs with no removal information, Haz mat transporter and generator, 6 gallons of hydraulic oil released - case closed, Auto dealer/repair	High

Table 1: Sites with Potential Contamination

Sites with Potential Contamination



Further Investigation Required

Additional investigations for the presence of OHMs would be required to determine if mitigation would be necessary under the proposed alternatives.

For release sites that are ranked as low risk for potential impact, an updated review of agency files, environmental databases and public records should be revisited to determine if changes have occurred since the report was prepared. Further investigation, beginning with site-specific ASTM-compliant Phase I Environmental Site Assessments (ESAs) should be conducted at all high risk rated properties prior to the installation or construction of the project elements. Phase 1 ESAs should be completed for any properties that will be acquired as part of the project. If RECs are confirmed at these properties, further investigation in the form of subsurface soil and groundwater investigations and laboratory testing may be recommended. Any mitigation requirements would depend upon the extent and nature of the hazardous waste/materials found, the construction activity proposed and the intended uses of the site.

Site 2: Precision Brake Works, 32 Ethan Allen Highway

Site 11: Keans Autoworks, 63 Ethan Allen Highway

Site 7: My Cleaners, 9 Ethan Allen Highway

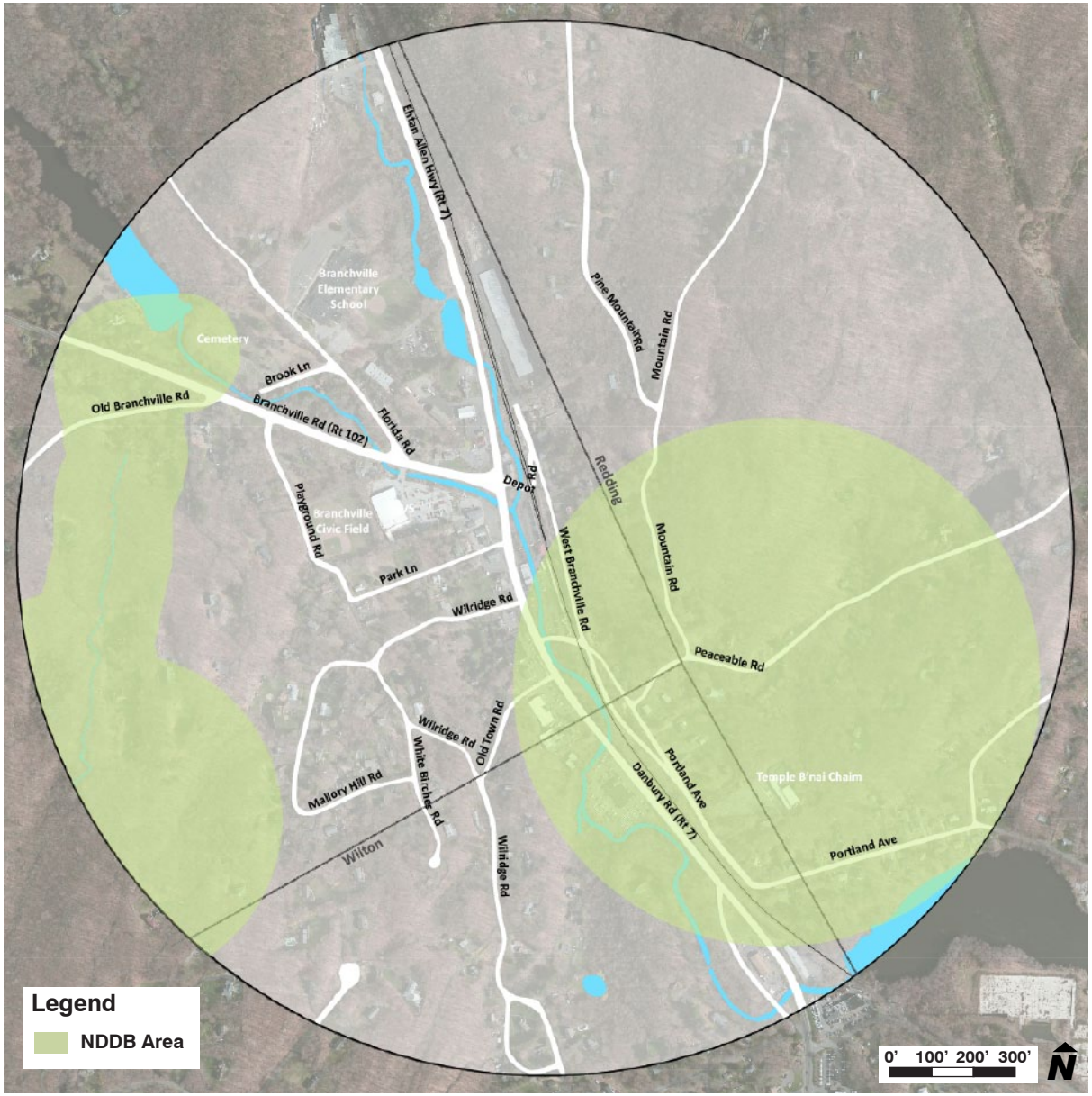
Site 17&18: 1039 Danbury Road, Wilton

Threatened and Endangered Species

Threatened and endangered species are mapped and regulated through the Connecticut Department of Energy and Environmental Protection (CT DEEP). Mapped Natural Diversity Database (NDDB) areas are locations where a state listed plant or animal species has been confirmed, or where these species' habitats have been observed. There are two mapped NDDB areas located in the study area: in the southeast portion and west-southwest portion.

Properties located within the mapped NDDB areas have the potential to impact the state's rare plants, animals or significant natural communities.

Before starting construction on or acquiring properties within mapped NDDB areas, a Request for NDDB State Listed Species Review must be completed. This NDDB review is required as part of many of CT DEEP's permits, including inland wetlands and waterways, stormwater and flood management. The CT DEEP review response will detail which species may be impacted, and may include requirements such as time of year restrictions on construction, or avoidance of sensitive habitat areas.



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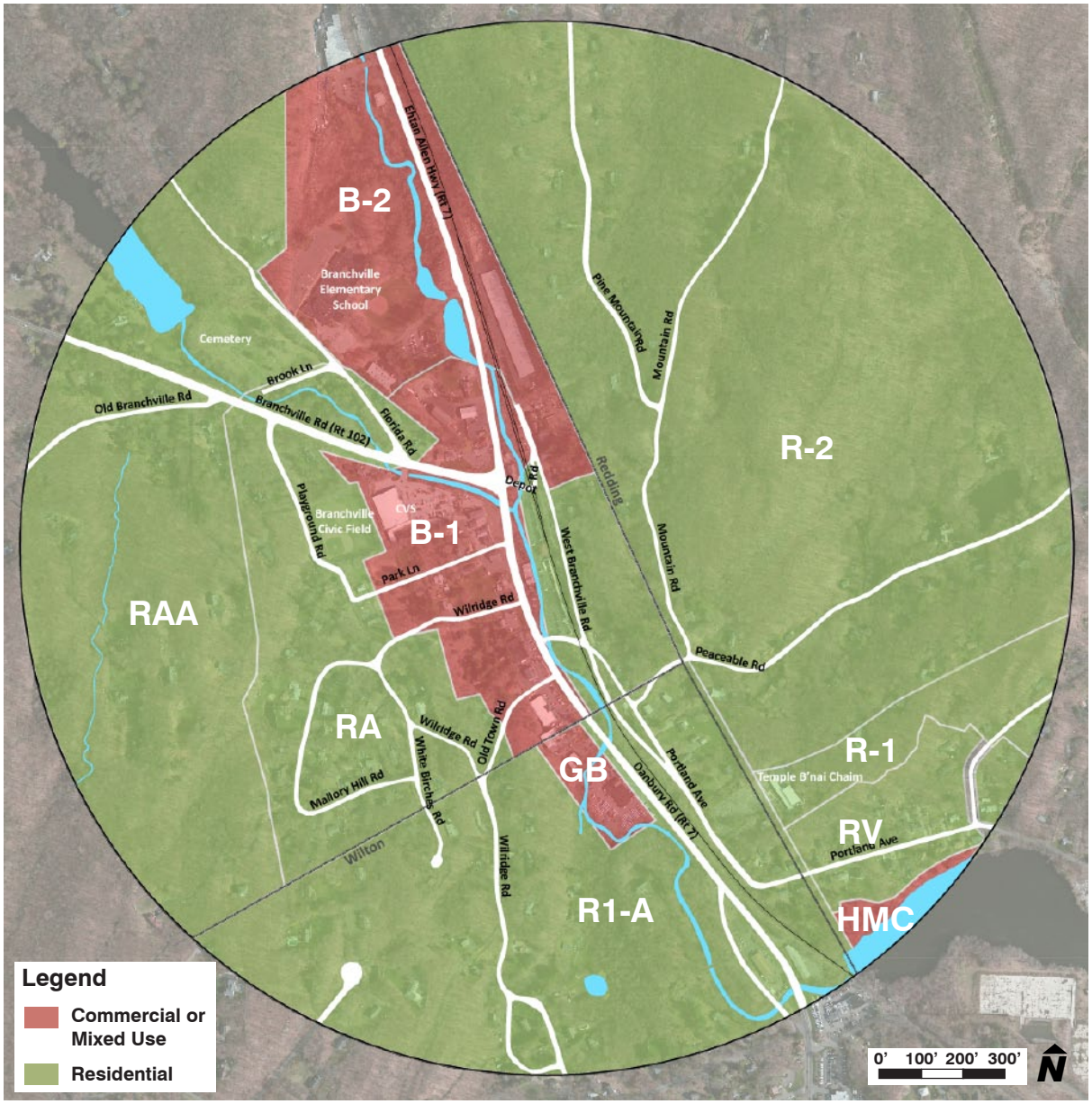
Zoning

The specifics of what is permitted or not in each of the zones that now govern land use in Branchville is important to understand for this study. As those standards are administered, they can, in their current language, either facilitate or constrain TOD from forming. An overview of existing zoning conditions in Branchville is provided here. The following map shows the zoning districts that encompass the study area in Branchville, while Table 2 provides details on what these zoning districts allow and how they regulate development.

Critical elements of zoning that impact the opportunity for TOD include:

- Mixed-use potential – Mix of residential and non-residential uses on the same lot
- Density potential - Density at 8 or more dwelling units per acre and/or potential for substantial area of a lot to be dedicated to building space
- Site design to promote walking – Requirements for sidewalks – use of street frontage for sidewalks, and pedestrian path connections to adjacent land uses
- Parking requirements – Flexibility in the location, volume, and design of required parking
- Multimodal access – Requirements for connections to transit, pedestrian ways, as well as by bicycle

The zoning map indicates that the zoning adjacent to Route 7 is primarily for business or commercial uses while the areas east and west of the Route 7 corridor are predominantly intended for single-family residential uses. These zones generally do not permit a mix of residential and non-residential uses on the same lot. Yet, the B-1 zone which covers the core of Branchville where Route 7 meets Branchville Road offers the most flexibility for development to meet other essential TOD features among the zoning districts in the study area.



Today's residential zones in Branchville call primarily for low density development of single family homes on one acre or more. Home occupations are permitted as a special use. Not only must single residences sit on one acre or more, but they must be situated such that 90 percent of the lot is set aside for the yard and no more than 10 percent for the footprint of the home. Greater area can sometimes be dedicated to the building footprint by Special Permit. Residences can be up to 2.5 stories in height. Consequently, the RA and RAA residential zones that encompass the existing areas of homes east and west of the core of Branchville have the effect today of keeping the character as it currently exists with single low-profile homes and do not support a transition towards TOD. A notable exception to this is the language in the regulations that encourages adaptive reuse of historic structures.

The commercial B-1 and B-2 zones offer more flexibility for land use than that of the RA and RAA zones. That is, they are intended for a variety of retail, office, dining, and service uses. Lots can be as small as 10,000 square feet, or ¼ of an acre, allowing different uses on adjacent lots to be nestled close to one another. In the B-1 zone, buildings can cover up to 90 percent of a lot. These provisions create an opportunity for high density on a single lot and/or among a collection of adjacent parcels. Still, the B-1 and B-2 zone regulations do not permit mixing of different uses on the same lot or mixing residential uses with non-residential uses such as apartments on the second floor of a building with retail on the first floor. They do support some other features of TOD in addition to high density including flexibility in parking requirements, requirements for sidewalks, and limits on drive-thrus. Businesses which employ a drive-thru are auto-oriented and tend to discourage walking or use of transit by patrons.

Overall, the existing zoning in Branchville provides only limited support for TOD. Additionally, there are very limited specific site design requirements that could regulate the overall form of development; drive the how the character of individual sites form. As such, the existing zoning district language for Branchville is not configured to promote strengthening of the sense of place that is desired for the village.

Zones	RAA	RA	B-1	B-2
Allowed Uses	Conservation; Agriculture; SF residences; Group home; Equestrian	Conservation; Agriculture; SF residences; Group home; Equestrian	Retail store, Shopping center on a minimum of two (2) acres; Service establishment or personal service establishment; business, professional, or medical office; bank; Sit-down restaurant; food retail / serving establishment (such as a bakery, delicatessen, ice cream parlor, or coffee shop) with seating for fewer than fifteen (15) customers; pre-existing single family detached dwelling that conforms to the area and bulk requirements of the R-20 Zone; accessory uses to uses located on the same lot; Seasonal farmers' market; fitness center / exercise facility / dance studio / facility for education in the arts	Service or personal service establishment; Business, professional, or medical office; Bank; Sit-down restaurant; Offices for executive, administrative and data processing activities; A pre-existing single family detached dwelling that conforms to the area and bulk requirement of the R-20 Zone; Accessory uses when located on the same lot; Seasonal Farmers' Market; Ancillary retail sales of goods directly related and clearly incidental to the principal commercial use
Accessory Uses	Home based business; parking, Day Care; w-site plan approval, dwelling unit (affordable/senior); Home occupation	Home based business; parking, Day Care; w-site plan approval, dwelling unit (affordable/senior); Home occupation	Same as above	Same as above
Special Permit Uses	Accessory dwelling unit; Adaptive reuse of historic dwelling; government; B&B, education; Day Care	Accessory dwelling unit; Adaptive reuse of historic dwelling; government; B&B, education; Day Care	Added floor area; government uses; public parking and recreation facilities; drive-through's; Food retail / serving establishment (such as a bakery, delicatessen, ice cream parlor, or coffee shop) with seating for more than fifteen (15) customers; automobile-related/gas stations; Bowling alley/similar; Group day care; nonprofit/ education/religious/philanthropic uses; funeral home; commercial kennel/veterinary; Indoor theater; Hotel/Motel/Inn	Added floor area; government uses; public parking and recreation facilities; R&D facilities; Manufacture of optical goods and similar; Contractor yards; Warehouse storage; drive-through's; Group Day Care/day care center; Bowling alley/similar; Group day care; nonprofit/ education/religious/philanthropic uses; funeral home; commercial kennel/veterinary; Indoor theater; Hotel/Motel/Inn; pre-existing motor-vehicle related uses
Residential Density Permitted	1 unit per 2 acres	1 unit per acre	NA	NA
Minimum Lot Size	2 acres/1.4 ac non-wetland; note – regularity factor	1 ac./0.8 ac. non-wetland; note – regularity factor	10,000 SF	10,000 SF
Lot Coverage	7% (SP – 140% of lot coverage on lot < 1 acre/not to exceed FAR)	10% (SP – 140% of lot coverage on lot < 1 acre/not to exceed FAR)	90%	25%
FAR	5,850 to 2 acres plus 6% of over 2 acres (accessory structures and gov. uses excluded)	4,200 SF to 1 acre plus 6% of over 1 acre (accessory structures and gov. uses excluded)	NA	75%
Lot Frontage	200 ft.	100 ft.	50 ft.	50 FT
Setbacks	35 all sides	25 all sides	None – but 3 ft. if provided	None – but 3 ft. if provided
Max. Height (except cupola, spire, belfry)	45 ft./2.5 stories	40 ft./2.5 stories	Maximum Average – 40 ft.	Maximum Average – 40 ft
Parking	2 spaces per dwelling unit	2 Spaces per dwelling unit	Shared use reduction; off-site parking on adjoining lot allowed by SP; deferred spaces allowed; fee-in-lieu of parking with SP	Shared use reduction; off-site parking on adjoining lot allowed by SP; deferred spaces allowed; fee-in-lieu of parking with SP
Landscaping	Any SP use; Requires Landscape Architect; Landscape buffer along property line	Any SP use; Requires Landscape Architect; Landscape buffer along property line	Required; Requires Landscape Architect unless waived; Includes parking; buffer where meets residential; depth of the landscape buffer and the density of plant materials shall be determined by the Commission	Required; Requires Landscape Architect unless waived; Includes parking; buffer where meets residential; depth of the landscape buffer and the density of plant materials shall be determined by the Commission
TOD Factors present	• Mixed Use - limited • Parking reductions - none • Density potential - none • Connectivity requirements: walk paths may be required	• Mixed Use - limited • Parking reductions - none • Density potential - none • Connectivity requirements: walk paths may be required	• Mixed Use - none • Parking reductions - yes • Density potential - limited • Connectivity requirements: sidewalk required on street frontage	• Mixed Use - none • Parking reductions - yes • Density potential - limited • Connectivity requirements: Sidewalks may be required
Other Notes			Architectural review required: sidewalks required on frontages	Architectural review required;

Table 2: Ridgefield Zoning Districts in Branchville

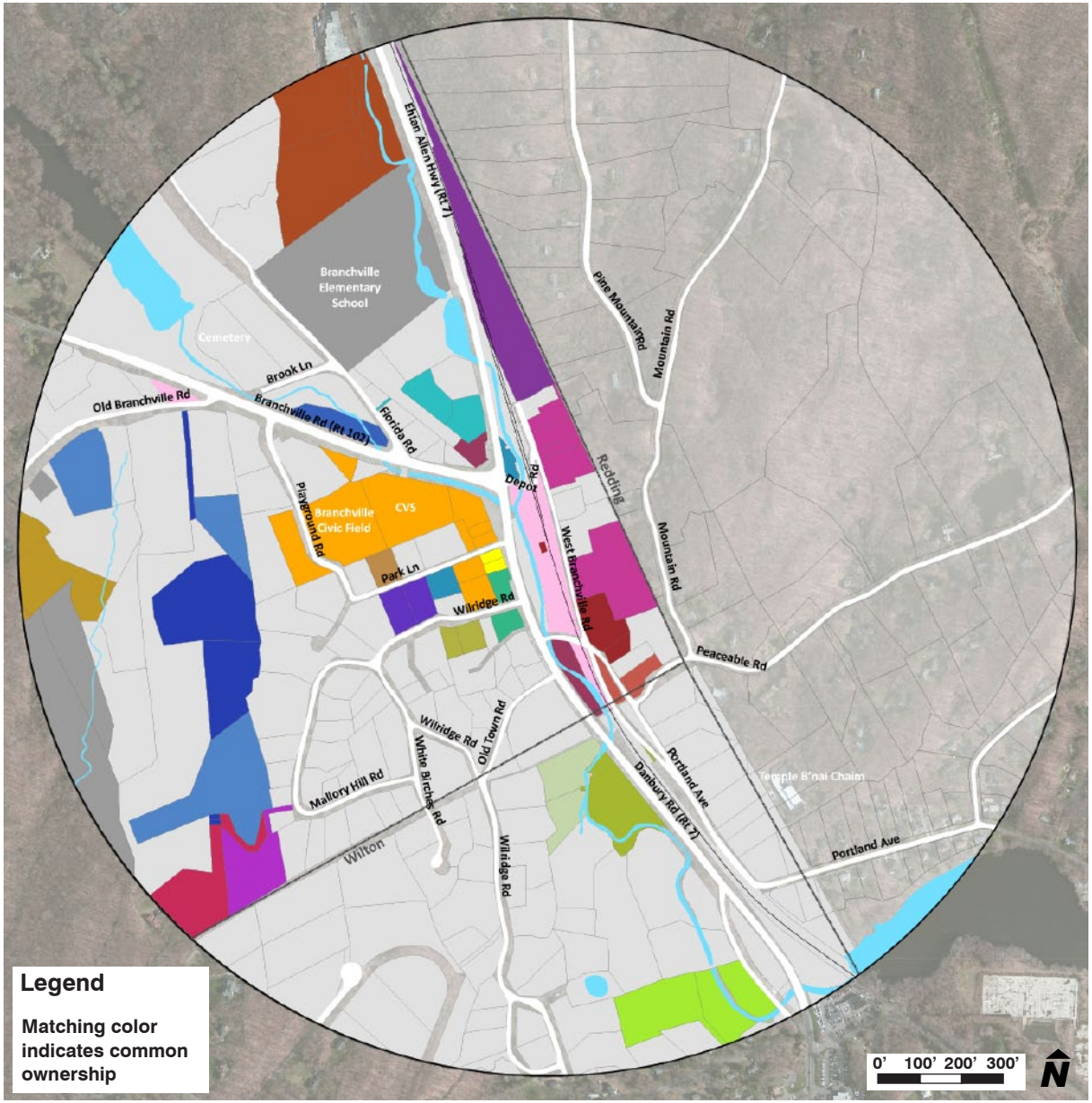
Parcel Analysis

An analysis of property ownership in the study area indicates that a number of properties are held by a small number of owners with more than twenty property owners holding more than one property in the station area.

These ownership patterns suggest the potential for property assemblage that could facilitate development in the study area. Furthermore, the parcel ownership patterns can be used in producing development scenarios for the study area, with potential development extents and connections between developments reflecting parcel ownership.

Key parcel ownership patterns include the Ancona's Liquors and CVS plaza, adjacent Route 7 fronting retail, and the Branchville Little League field on Playground Road. To the east of the station, a number of parcels along West Branchville Road have common ownership suggesting the potential for coordinated development on this side of the station.

Parcel ownership was not analyzed for Redding due to a focus of the TOD district towards Ridgefield and Wilton. A cursory review of Redding properties indicates mostly single family properties that are individually owned.



Wastewater Infrastructure

There are three existing wastewater treatment plants in the Branchville area:

1. South Street Wastewater Treatment Facility
2. Route 7 Wastewater Treatment Facility
3. Georgetown Wastewater Treatment Facility

The three wastewater treatment plants each have positive and negative aspects associated with them.

1. South Street

The South Street WWTP is located on South Street, east of the downtown business district. The treatment plant provides service to Sewer District No. 1, which includes downtown Ridgefield and the residential areas surrounding the downtown area. The Town is currently undergoing preparation of a Wastewater Facilities Plan for this facility, which includes the design and construction of an eventual upgrade of the plant. Therefore, it is feasible to assume that capacity for the Branchville area would be available at this plant when the treatment facility is upgraded.

There are two potential routes to connect the Branchville area to this plant. The first is to extend south from the existing sanitary sewer mains on Sunset Lane, and then follow the Ridgefield Rail Trail to Route 102, and then southeasterly along Route 102 to the Branchville area.

The second option is to extend south from the existing sanitary sewer mains in Prospect Ridge Ridge Road, and then continue along Route 102 southeasterly to the Branchville area. Connection to the South Street plant would require the construction of 2.8 to 3 miles of sanitary sewer force main, at an estimated cost of $4.4 million to $6.3 million. The Sewer District would also need to be expanded to incorporate the Branchville area.

2. Route 7 Treatment Plant

The Town of Ridgefield owns and operates a second treatment plant located on Ethan Allen Highway (U.S. Route 7) behind the medical office building. This plant treats sewage generated by Sewer District No. 2, which includes a majority of the businesses along U.S. Route 7 north of Great Pond Road. Treatment capacity at this plant is fully allocated, and the facility cannot accept any new flows unless the plant is expanded or existing flow capacity reallocated to the Branchville area. Service could be extended to the Branchville area by construction of a force main from the plant 3.4 miles southward along U.S. Route 7. Estimated cost of this extension is $7.2 million. The Sewer District would need to be expanded to incorporate the Branchville area.

3. Georgetown Wastewater Treatment Plant

The Georgetown WWTP is located slightly over a mile from the Branchville area, and offers by far, the shortest connection length. The connection would be extended north from the Georgetown WWTP, up along North Main Street to Church Street, and then northerly along U.S. Route 7. The cost of this connection is estimated to be $2.5 million.

Treatment capacity at this plant is also fully allocated, and the facility cannot accept any new flows unless the plant is expanded or existing flow capacity reallocated to the Branchville area. Additionally, since the plant is located in Redding, an intermunicipal agreement with the Town of Redding would be required.

Potential System Alternatives

A potential system could be the Amphidrome system which is on CTDEEP's approved list of alternative sewage treatment systems. The Amphidrome system is a biological nutrient removal (BNR) process utilizing a submerged attached growth bioreactor operating in a batch mode. The deep, bed sand filter is designed for the simultaneous removal of soluble organic matter, nitrogen and suspended solids, within a single reactor.

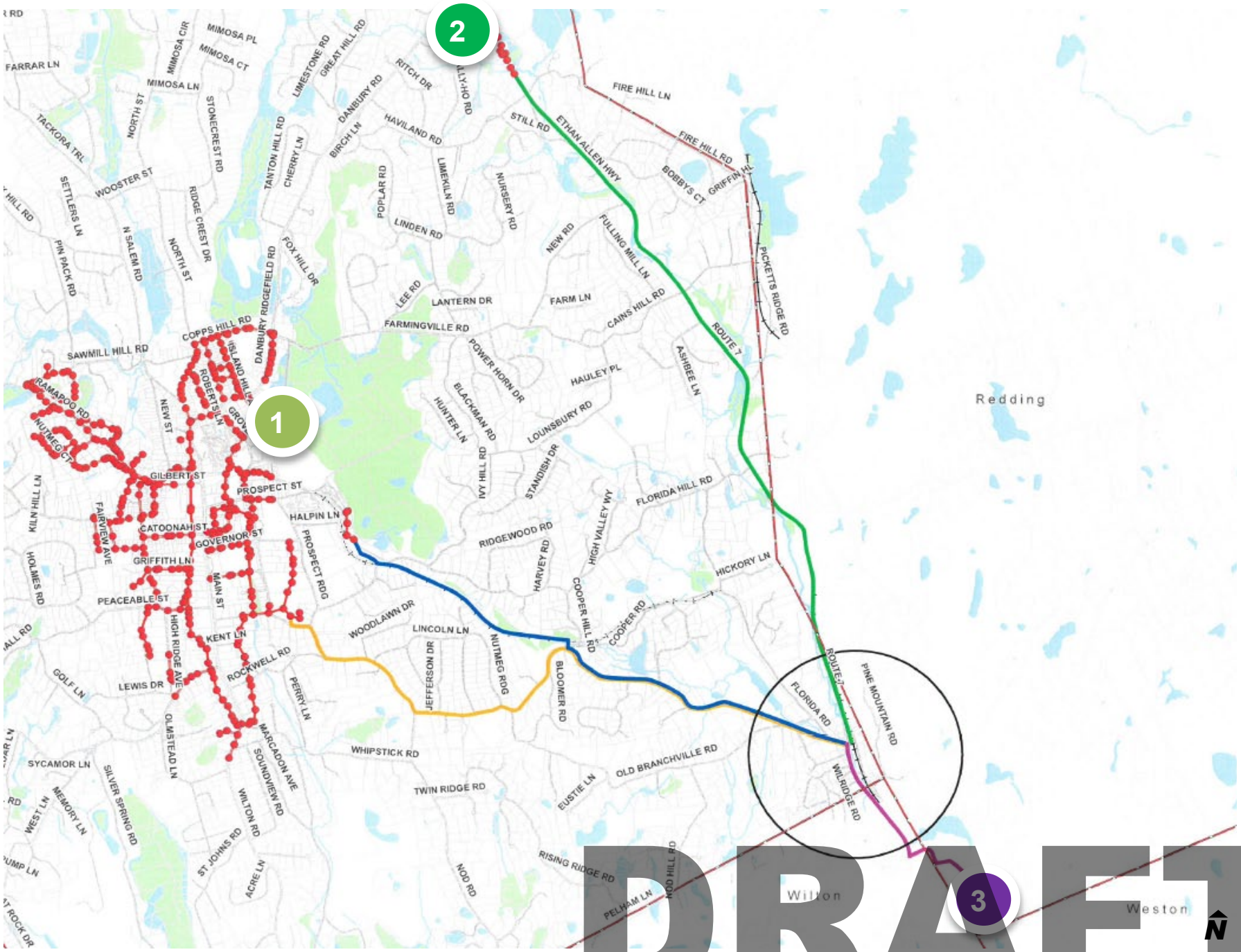
To achieve simultaneous oxidation of soluble material, nitrification, and denitrification in a single reactor, the process must provide aerobic and anoxic environments for the two different populations of microorganisms. The Amphidrome system utilizes two tanks and one submerged attached growth bioreactor, subsequently called Amphidrome reactor. The first tank, the anoxic/equalization tank, is where the raw wastewater enters the system. The tank has an equalization section, a settling zone, and a sludge storage section. It serves as a primary clarifier before the Amphidrome reactor.

This Amphidrome reactor consists of the following three items: underdrain, support gravel, and filter media. The underdrain, constructed of stainless steel, is located at the bottom of the reactor. It provides support for the media and even distribution of air and water into the reactor. The underdrain has a manifold and laterals to distribute the air evenly over the entire filter bottom. The design allows for both the air and water to be delivered simultaneously, or separately, via individual pathways, to the bottom of the reactor. As the air flows up through the media the bubbles are sheared by the sand; producing finer bubbles as they rise through the filter. On top of the underdrain is 18", (five layers), of four different sizes of gravel. Above the gravel is a deep bed of coarse, round, silica sand media. The media functions as a filter; significantly reducing suspended solids, and provides the surface area for which an attached growth biomass can be maintained.

The following is a partial list of approved and installed Amphidrome Wastewater Systems in Connecticut:

- District 17 Middle School, Killingworth, CT
- The Mews Condominiums, Madison, CT
- Daniel Hand High School, Madison, CT

Sewer Connection Options



Transportation System

As a small village in a narrow river valley, Branchville's transportation infrastructure is relatively limited. The Ethan Allen Highway (Route 7) provides a north/south connection to Danbury to the north and Wilton and Norwalk to the south. Branchville Road (Route 102) provides an east/west connection between Branchville and Ridgefield Center. The rail corridor also provides a regional connection from north to south and parallels Route 7 along much of its route between Danbury and Norwalk.

Transit

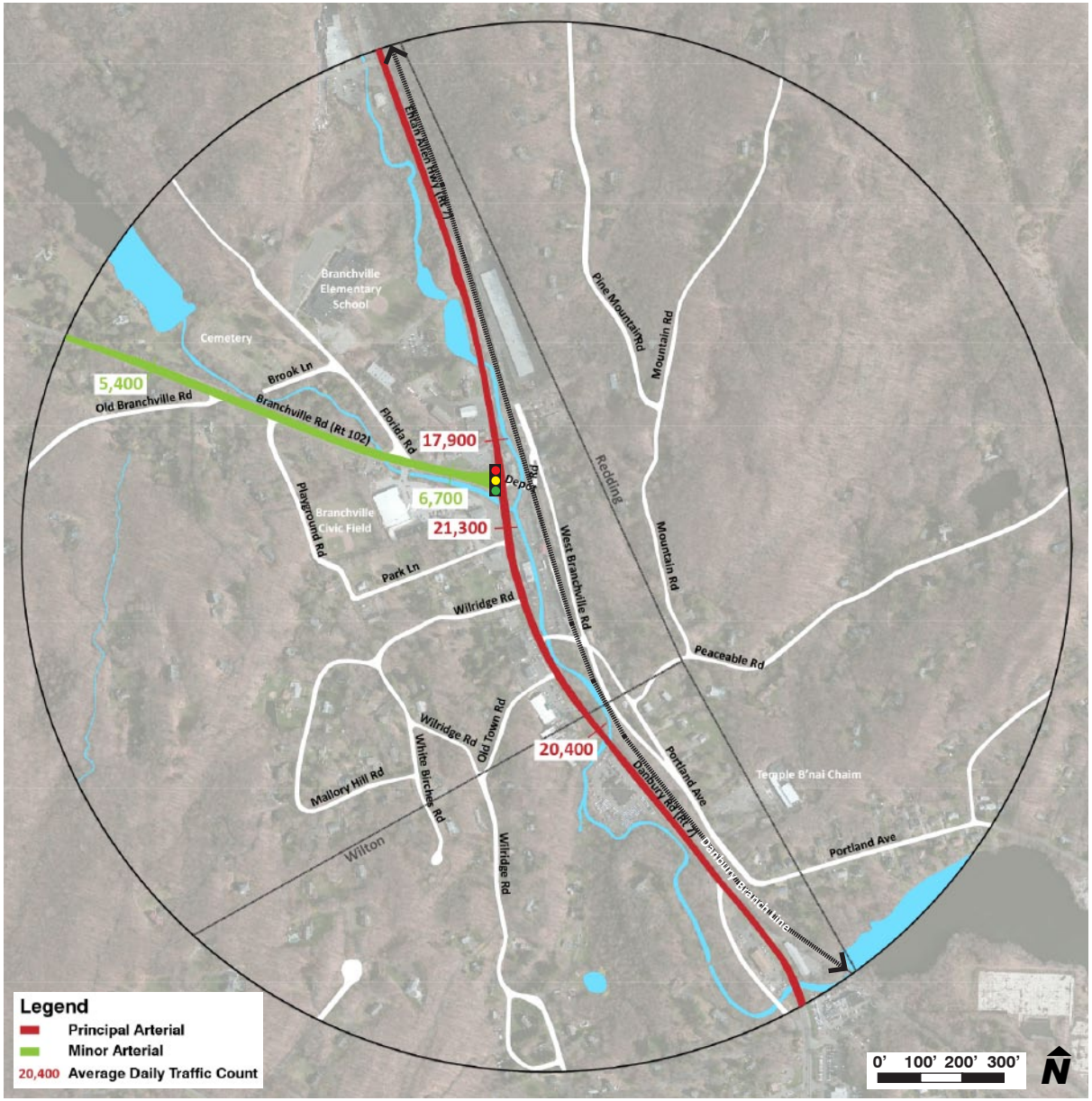
Branchville's rail corridor, which is serviced by the MetroNorth's Danbury Branch Line, extends north/south through the study area. The branch line has approximately 28 departing trains per weekday and provides service from Danbury to South Norwalk with connecting service to New York City.

Branchville is also serviced by the Housatonic Area Regional Transit (HART) 7 Link route. The bus route provides eight weekday trips in each direction on Route 7 between Danbury and Norwalk and has a stop on Route 7 near Branchville Station.

Roadways

Route 7, a state route and principal arterial, is the "Main Street" of Branchville, carrying an average of 17,900 to 21,300 vehicles per day. Route 102, also a state route and minor arterial, meets Route 7 in Branchville at Depot Road. Route 102 carries an average of 5,400 to 6,700 vehicles per day and connects Branchville to Ridgefield Center.

Local roads in Branchville are generally narrow, steep, and winding. Florida Road provides a connection to Branchville Elementary School, while Depot Road and Portland Avenue provide connections to the train station.



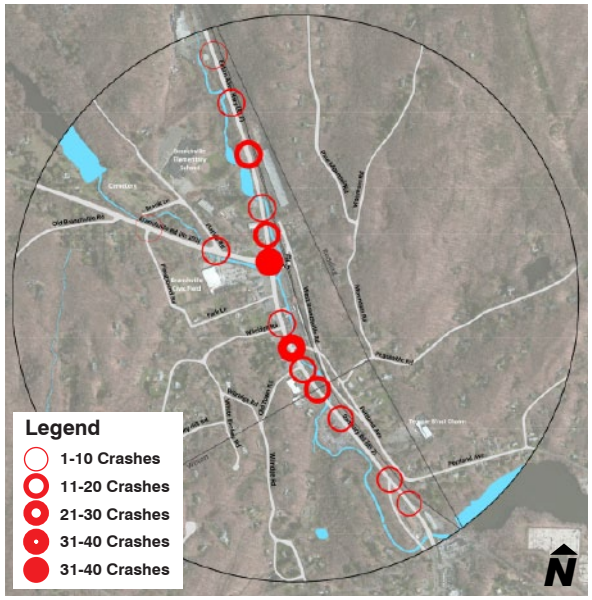
Crash History

Auto crashes in the study area are concentrated on Route 7 with the Route 102 and Portland Avenue intersection having the greatest frequency of crashes.

A total of 153 crashes were recorded in the study area over a four year period between 2010 and 2013. Of those crashes, 33 resulted in injuries with no fatal crashes reported. Of the 33 injury crashes, 21 occurred at the Route 7/102 intersection.

Most crashes were rear-end crashes, with "following too closely" being the primary contributing factor. This crash type is typical of areas that experience traffic congestion and long traffic queues at intersections. Injury crashes were most often turning movement crashes attributed to failure to grant right of way.

No bicycle or pedestrian crashes were reported over the four-year period.



Auto Crashes 2010-2013
Source: CT Crash Data Repository

Infrastructure Deficiencies

The Branchville area experiences significant peak hour traffic congestion at the Route 7/102 intersection. Much of this congestion is related to the lack of southbound queuing lanes for turning traffic and issues related to station access at Depot Road.

The Depot Road Bridge is a narrow, ageing structure, which does not allow for concurrent operation of traffic in both directions. The Connecticut DOT has considered closing this bridge to automobile traffic if improvements can be made to the Portland Avenue station entrance.

As a whole, the most significant transportation infrastructure deficiency in the study area is the lack of pedestrian facilities. With a few exceptions, there are almost no sidewalks in the study area. Additionally, marked crosswalks across Route 7 and Route 102 are limited and lack basic infrastructure such as curb ramps, pedestrian phases, and pedestrian signal head.

Depot Road Bridge
Narrow bridge, lacks sidewalks and is insufficiently wide to carry traffic in both directions at the same time

Sidewalk at Subway/My Cleaners
One of the few sidewalks in the Branchville study area

Crosswalk at Route 7 and 102
Pedestrian crossings at Route 7 are limited, in this example the crossing lacks curb ramps and does not have a dedicated pedestrian phase or pedestrian signal heads.

Station Access and Peak Hour Traffic

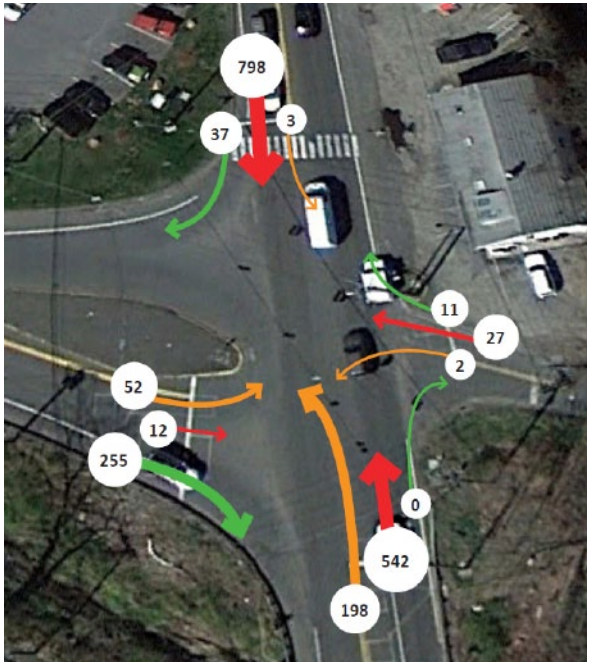
Branchville Station is accessed from the west at two locations: Depot Road and Portland Avenue. The Depot Road entrance meets Route 7 at the Route 102 intersection. This is the only signalized access to the station area. Portland Avenue meets Route 7 about 1/4 mile south of the Route 102 intersection and is an unsignalized intersection.

Peak hour traffic at both intersections overwhelmingly favors through movements. The northbound approach to Route 102, however, experiences a strong left turn movement, with approximately 25% of traffic taking a left onto Route 102 in the AM peak hour. Most travel to the station at this intersection comes from eastbound Route 102 traffic. A small amount of southbound traffic (six vehicles in the peak hour) turns left onto Depot Road to access the station. These queuing vehicles often cause delay for southbound traffic. PM peak hour traffic exiting the station area via Depot Road is evenly split between right turning traffic onto Route 7 and through traffic to Route 102, a small number of vehicles turn left onto Route 7.

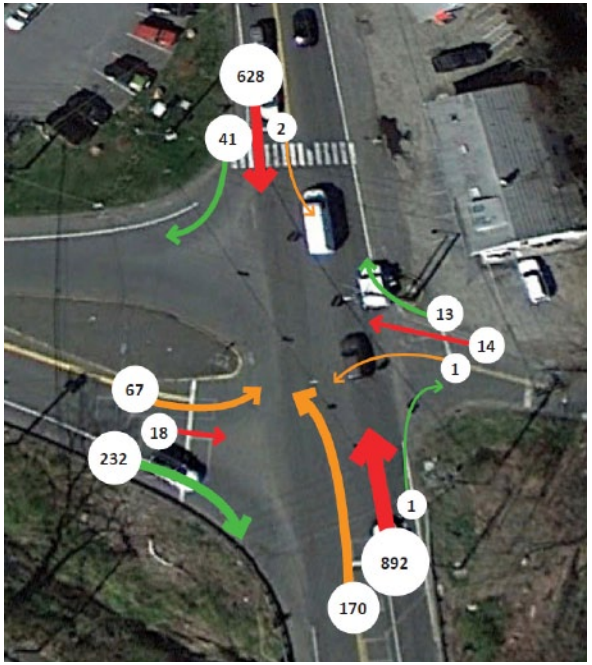
While the turning movements into Depot Road and Portland Avenue are relatively low during the peak hour, turning movements are potentially higher at off-peak hours such as earlier in the morning and later in the evening due to the schedule of departing and arriving trains.

The Portland Avenue intersection accommodates the most significant share of peak hour traffic to the station area during both the AM and PM peaks. This intersection also processes most of the exiting traffic from the station area during both peaks.

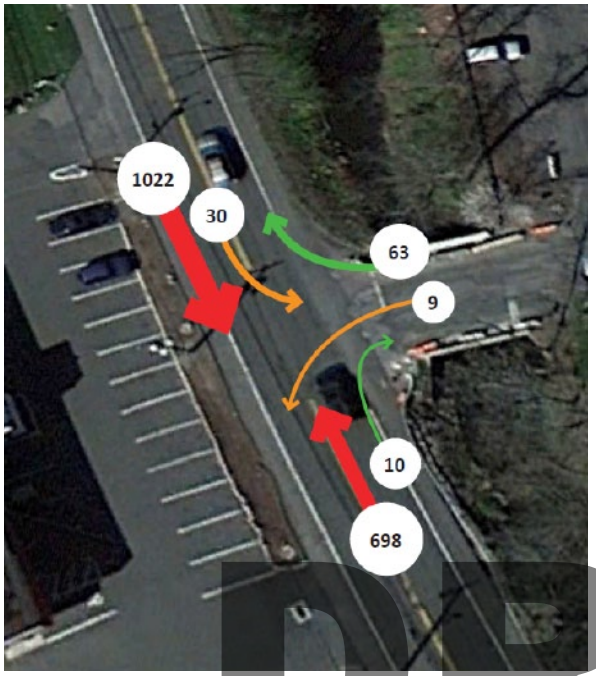
This peak hour turning movement data would suggest the potential for the enhancement of traffic operations and reduction of peak hour traffic congestion via improvements to, and modifications of, traffic flow at both intersections.



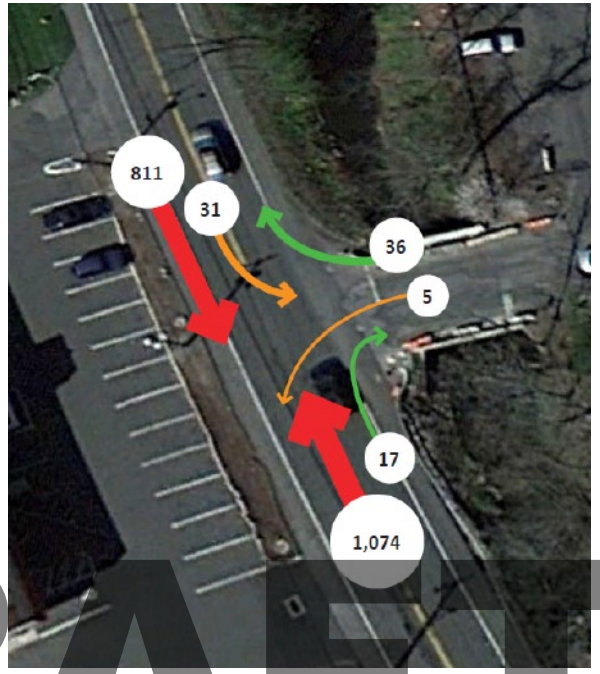
Route 7/102 Peak Hour AM (7:45-8:45 am)



Route 7/102 Peak Hour PM (5-6 pm)



Route 7/Portland Avenue Peak Hour AM (7:45-8:45 am)



Route 7/Portland Avenue Peak Hour PM (5-6 pm)

Parking Supply

Parking supply in Branchville is distributed along Route 7 and is comprised of approximately 30 separate lots. The largest parking areas in the study area include the Branchville Station lot, CVS/Ancona's Plaza lot, Branchville Elementary School, and the former Jeep Dealership in Wilton.

In total, there are approximately 1,100 parking spaces in these non-residential parking lots. All parking is specific to use, with no shared facilities or municipal lots other than the train station lot.

The station lot is managed by the Ridgefield Parking Authority and has 130 commuter spaces that are reserved for permit holders and 15 daily parking spaces. On average, the lot is only 80% utilized.

Weir Farm, to the west of the study area, utilizes the Branchville Elementary School lot for off-site parking on weekends. Weir Farm has limited parking and depends upon parking resources in Branchville to meet its needs.