

INCENTIVE HOUSING PLAN

**FOR THE TOWN OF
REDDING, CONNECTICUT**

JUNE 2011

Prepared by
City, Town & Regional Planning Associates
with the cooperation and assistance of the Redding Planning Commission

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INTRODUCTION AND BACKGROUND

A Watershed Town

Approximately ninety percent of the land which comprises the Town of Redding lies within the drainage basins of the Saugatuck, Aspetuck and Mill Rivers. These streams are the supply sources for several reservoirs which comprise the major potable water supply for the populous towns and cities of lower Fairfield County. Protection of this vital resource is the cornerstone land use policy of the State Policies Plan, regional plans of the area, and the Redding Town Plan. This planning study is an effort to address a significant need for local affordable housing by choosing locations which will complement, not compete with, preservation of this vital water supply watershed.

Redding's Need For Affordable Housing

In recent decades the cost of residential housing in Redding has been rising much more rapidly than population growth and median household income. At the same time the proportion of both homeowners and renters paying over 30 percent of their income for housing has continued to increase. Data released in October 2008 by the Housatonic Valley Council of Elected Officials (HVCEO) showed the following statistics for Redding during the years from 2000 through 2007:¹

- Median sale price for a single-family home increased from \$501,250 to \$690,000, an increase of 37.7%.
- Median household income over the same period rose from \$104,137 to \$117,207, an increase of 12.6%.
- By 2007 the income required to finance the purchase of the median price home in Redding, based on then prevailing tax, insurance and 30-year mortgage costs, had risen to \$174,011, a gap of nearly \$57,000 between median income in Redding and the median home purchase price.
- The HVCEO study estimated the proportion of owner-occupied housing stock in Redding (year 2007) which would be affordable for the median household income level (a purchase price of \$478,750) to be only 14.3% of homes. Only 5.5% of homes in Redding were estimated to be affordable for households with 80 percent of median income.

Recently released 2010 Federal Census data show that Redding's growth rate over the past decade, at 10.7%, exceeds the rate for all other towns in the Housatonic Valley

¹ HVCEO Bulletin 135, 10/2008, Greater Danbury, CT Housing Market Assessment, Tables 14, 19, 22 and 23. U.S. Census data 2000 used for median household income.

Region. New residential construction over the recent decade in Redding, while slowing in response to the national recession, has almost uniformly been of luxury-class expensive homes well beyond the economic reach of median and lower income families.

Yet Redding depends heavily on this segment of the local population to staff its emergency services such as fire, police and emergency medical personnel, to staff its schools and public offices, and to provide the many services which enable the community to function effectively. It is clear that the economics of ever increasing land values and shortage of land suitable for development risk forcing persons and families of modest means, now residing in the community, to relocate elsewhere. Moreover, the high cost of housing in Redding is a major residential disincentive for its young families, some of whom were educated in Redding schools. It is also a severe obstacle for retired persons (“empty nesters”) anxious to remain as a vibrant part of the community but unable to find a less spacious dwelling adapted to their diminished life-style needs.

Recent census updates have revealed the two sides of Redding’s economic profile. While the town as a whole had a 2008 median income of \$128,870, 19 percent of Redding’s households had an annual income of less than \$50,000 and for eight percent of the town’s households annual income was less than \$25,000¹. The stark reality is that approximately one in five Redding households is facing a future inability to remain in the community unless means can be found to make housing available which its less affluent residents can afford.

The moral imperative of meeting this need is addressed in the current Town Plan of Conservation and Development, adopted in 2008, which recommends that the Town itself should proactively “Provide Town-Initiated Affordable Housing using Incentive Housing Zones” (page 130) as the keystone of a program for greater diversity and affordability for its residents.

State Law and Mandates

The Connecticut Statutes which govern municipal plans of conservation and development (Sec. 8-23) require among other directives that the plan “...make provision for the development of housing opportunities, including opportunities for multifamily dwellings, consistent with soil types, terrain and infrastructure capacity, for all residents of the municipality and the planning region...”. The same law requires the town plan to “...promote housing choice and economic diversity in housing, including housing for both low and moderate income households...” and to consider “...the need for affordable housing and the protection of existing and potential public surface and ground drinking water supplies...”. Similarly, the Statutes governing municipal zoning (Sec. 8-2) direct that regulations “...encourage the development of housing opportunities...” and “...shall also promote housing choice and economic diversity in housing...”.

¹ Connecticut Economics Resource Center, Inc., Redding Connecticut, Town Profile, 2008

Section 8-30g of the Statutes, the Affordable Housing Land Use Appeals Act, imposes on municipalities an appeals procedure by which a municipal denial of an affordable housing application may be reversed by the courts if the municipality has failed to prove its objections do not transcend the State's need for affordable housing. Proactive action by the Town to establish Incentive Housing Zones would not only be an important contribution toward meeting a local need but a positive demonstration of Redding's "good faith" effort to comply with the directives of State law.

Overview of Several IHZ Studies in Connecticut

At the inception of this study data was collected from several other Connecticut towns which were already in the process of identifying suitable incentive housing sites and preparation of the requisite applications for technical assistance, or IHZ designation, to the Connecticut Office of Policy and Management. While none of the referenced communities are closely comparable to Redding, or to each other, each presents a textbook case in various means of addressing IHZ requirements which will be seen applicable to Redding.

Simsbury, Connecticut is an exurban community about eight miles from downtown Hartford. An analysis of the IHZ potential for 13 sites in Simsbury, all located in or in close proximity to the town center, considered 16 separate criteria for site suitability. These criteria were separated into broad groups based on conformity with the eligibility requirements of the HOME Connecticut Act, with the statutory definitions of "developable land", with the State Plan of Conservation and Development, and with the goals of Simsbury's adopted Town Plan. A spread-sheet or matrix was prepared on which each of the potential sites was scored numerically for each criterion. A level of 5 was considered "best", 3 considered "moderate", and 1 considered "poor". As a result of this analysis, seven site areas totaling 88.1 acres with a potential for over 600 housing units were found favorable for IHZ designation.

Old Saybrook, Connecticut is a shoreline town, located on Interstate 95 at the mouth of the Connecticut River. A collaborative project between the Town and a private not-for-profit housing developer, Hope Partnership, Inc., has created a single IHZ site on part of a two-acre Town-owned tract at 45 Ferry Road. The easterly portion of the site, 0.98 acre, will be the development site for 16 rental units, all affordable, comprised of one-bedroom flats as well as two and three-bedroom townhouses around a central green. The adjacent acre (westerly portion of the site) will become a town park. Because the site is owned by the Town -- a surplus parcel acquired for nominal consideration from the State of Connecticut -- and Hope Partnership is a "501(c)3" organization, the housing development is permitted by IHZ rules to consist entirely -- 100% -- of affordable units. The Town has executed a 75-year lease with Hope Partnership, and construction is expected in 2011.

Wallingford, Connecticut is a large town (40 square miles, 43,000 population) located in south central Connecticut in the urbanizing corridor between New Haven and Hartford.

The town, which is bisected by the Wilbur Cross Parkway, by Interstate 91 and by the New Haven to Springfield rail corridor, has an old urban center once a manufacturing hub. Wallingford's IHZ designation application (November 2009) proposed a master plan and zoning regulations for redevelopment of an old mixed-use urban area of approximately 15 acres in the town center. Comprised of 13 parcels in several blocks surrounding the Wallingford train station, the plan envisions a mixed-use, pedestrian-friendly downtown area of retail, office and approximately 360 residential units. Twelve of the IHZ parcels would be zoned for a density of 26 dwelling units per acre and one parcel for 15 dwelling units per acre. Unlike the other towns described above, the Wallingford IHZ area is focused on intensive redevelopment of an obsolescent, compact town center already substantially developed in a variety of uses. Public water and sewer exist throughout the redevelopment area. The plan calls for private redevelopment efforts within the existing street grid and utility network but with new amenities and improved design.

Redding's Unique Limitations

The 32 square miles of terrain which comprise the Town of Redding are largely characterized by high ridges, steep hillsides, narrow valleys, numerous small streams and wetlands. Major natural limitations affect almost one third of Redding's remaining 3,200 acres of undeveloped land and these include wetlands and flood plains, (21.4%), excessively steep slopes and shallow soils over bedrock (10.7%).

Approximately 89.9% of Redding's land surface is comprised of land which drains to public water supply reservoirs and well fields of the Aquarion Water Company. Aquarion is the principal supplier of domestic water to more than 400,000 residents of the towns and cities of lower Fairfield County.

Protection of the safety of this vital public water supply is a strong policy mandate of the State of Connecticut which has placed this watershed land in an "AA" or "GAA" water quality classification, suitable for public drinking water supply. As noted earlier, the State Plan of Conservation and Development has designated these lands in Redding as "Conservation Area" vital for the protection of public water resources. The "Home Connecticut" Act requires that IHZ designations be consistent with the State Plan, which excludes the "Conservation" and "Preservation" lands from consideration for any form of intensive development.

Accordingly this study has focused on the portion of Redding, about 10% of its land area, which lies in the drainage basin of the Norwalk River. Within this valley, which Redding shares with Ridgefield and Wilton, is located the village of Georgetown, the small center at Branchville, the Metro North rail line, Route Seven, and Redding's only urbanized area with public water and sewer (located in Georgetown).

Selection of Study Areas

The basic principles governing the establishment of an incentive housing zone, summarized from the HOME Connecticut Act, are as follows:

- The zone shall be consistent with the State Plan of Conservation and Development. In Redding this excludes all “Preservation” and “Conservation” land areas, and limits potential IHZ locations to the Norwalk River Valley, shown as “Neighborhood Conservation” and “Rural Lands” areas on the State Plan.
- The zone shall be in an “eligible location”, which means one or more of the following attributes:
 - (a) near a transit station or other public transportation;
 - (b) within an area of concentrated development, such as a town center or other built-up area;
 - (c) located in an area suitable for IHZ densities because of existing or proposed infrastructure, transportation access or underutilized facilities.

Within Redding the only area which fully meets all of the above criteria is the village of Georgetown and its immediate environs.

- The zone shall contain land that is suitable for development into residential or mixed uses at densities and in accordance with standards for incentive housing projects. “Developable land” excludes wetlands and watercourses, parks and recreation land, dedicated open space, land committed to a public use or purpose, and land which has a contiguous area of one-half-acre or more unsuitable for development due to topographic features such as steep slopes or flood plains. The rugged topography, constrained soils and numerous wetlands within the portion of Redding eligible for IHZ consideration significantly limit the number of potential sites for incentive housing.

As provided in the HOME Connecticut Act, the regulations for an incentive housing zone may be overlaid over another zone but must allow “as of right” residential or mixed-use development at specified minimum densities. At least twenty percent (20%) of the dwelling units must be governed by a restriction which preserves them for thirty years as “affordable” units, for persons or families with income at or below eighty percent (80%) of the area’s median income and for which those persons or families pay thirty percent (30%) or less of their annual income.

The minimum residential densities specified in the HOME Connecticut Act vary by the type of building development authorized but must be at least twenty-five percent (25%) greater than the density allowed in the underlying (or former) zone. Single-family detached dwelling development must be at a density of six (6) or more dwelling units per

developable acre. Duplex or townhouse-style dwelling development must be at a density of ten (10) or more units per developable acre. Multi-family dwelling development requires a density of twenty (20) or more units per developable acre. Only in the Georgetown section of Redding, where there is existing and planned water supply and sanitary sewer infrastructure, might IHZ sites exceed a density of six dwelling units per acre.

Redding's unique character as a "greenbelt" community between nearby urban centers and its natural limitations of terrain and hydrology, as expressed in the Town Plan of 2008, impose additional considerations which are important in selecting sites appropriate for incentive housing. Among these are:

- Protection of the natural environment, especially avoidance of adverse impacts on ground and surface waters, on the ecology of forests, wetlands and endangered species;
- Compatibility with adjacent neighborhoods, especially in respect to nearby residential area;
- Cultural significance of the area, especially for sites of historical, archaeological or major scenic character;
- Adherence to guidelines and recommendations of the Redding Plan of Conservation and Development, and compatibility with regional and town plans of the adjacent area (such as Housatonic Valley Region, South Western Region, and Towns of Ridgefield, Weston and Wilton); and
- Potential availability, which means freedom from legal constraints such as restrictive covenants or ordinances tending to prevent incentive housing, and from patterns of current ownership which would make site assembly difficult or impossible to achieve.

In consideration of the many factors influencing the selection of favorable incentive housing sites in Redding, we have created an evaluation matrix or comparative scorecard on which the dozen or so site areas of interest have been ranked for relative favorability. A simple numerical scoring system is used to evaluate each potential site in terms of its favorability for twelve essential IHZ characteristics, assigning the following values:

- 4 -- highly favorable
- 3 -- moderately favorable, minor defects only
- 2 -- acceptable but with problems to be overcome
- 1 -- significantly problematic
- x -- unacceptable.

The evaluation matrix and description of site areas studied appears following page 20.

An intensive study of the western portion of Redding, generally incorporating the Norwalk River valley, the urbanized area of Georgetown and its main transportation corridors, was conducted to find locations with several or more of the selection criteria described above. Thirteen “Study Areas” have been identified which have varying degrees of potential for incentive housing consideration. These areas are listed in the Matrix chart which follows page 20, and each carries a letter-number designation (such as “A-2”) which identifies its Study Area (“A”) and particular site (“2”). As will be seen in the text for each of the Study Areas, and in the Housing Plan section, the West Redding Study Areas have been excluded from consideration due to their sensitive watershed location. Only those Study Areas which score in the top quarter of the evaluation range are qualified as “recommended” sites.

Because of the strong emphasis of the HOME Connecticut Act on transit-oriented development, special attention was directed to the area around West Redding Center, the location of Redding’s only existing commuter rail station. Three potential sites were evaluated there despite the area’s location on the Saugatuck River watershed, a State Plan “Conservation” area, so that proper consideration of transportation strategies in selecting IHZ sites would occur. Fortunately, a sufficient number of other sites with potential transit access have been identified so that the three West Redding Center sites could be safely excluded in conformity with the State Plan.

In summary, our evaluation of areas suitable for potential IHZ development has identified two highly favorable general locations: (1), the southerly perimeter of urban Georgetown, an area accessible to public water and sewer service and within walking distance of the projected future train station; and (2), the vicinity of Ethan Allen Highway (Route Seven) and the western extremity of Old Redding Road, an area once planned for a “Super Seven” interchange and partially acquired for that purpose by the State of Connecticut. An engineering report evaluating the suitability of this latter area for on-site water and sewage disposal is included as an appendix to this report.

Critical Issues

Each of the two major locations found suitable for future incentive housing zones presents a challenge which requires forthright Town action to resolve in order to realize its potential.

Study Area 1, Central Georgetown, has an estimated sewage treatment capacity of 245,000 gallons per day based on the engineered design of its newly reconstructed sewage treatment plant and State DEP permit. This enlarged capacity will accommodate the planned redevelopment of the former Gilbert & Bennett mill site, the Meadow Ridge life care community, and the Main Street/Old Mill Road business center, totaling in combination over 700 dwelling units, 7 restaurants and several dozen commercial establishments. Yet the actual daily demand when these projects reach full development in accordance with approved plans and extant zoning regulations has not been definitively established. It is essential that the safe limit of sewage treatment capacity be

determined as soon as possible, by engineering analysis and verification with the State DEP in terms of its water quality standards for the Norwalk River, in order to assure that sanitary sewers may serve the higher densities of proposed IHZ's.

The other challenge for Study Area 1 is the proposed train station and parking garage, proposed as part of the redevelopment plan for the G&B site, and approved by the State Department of Transportation, but yet to be built. This project must be brought to fruition in order to achieve the mass-transit accessibility which is a key component of smart-growth incentive housing.

Both of these projects will require proactive efforts by the Town in order to guarantee the feasibility of IHZ development in Central Georgetown.

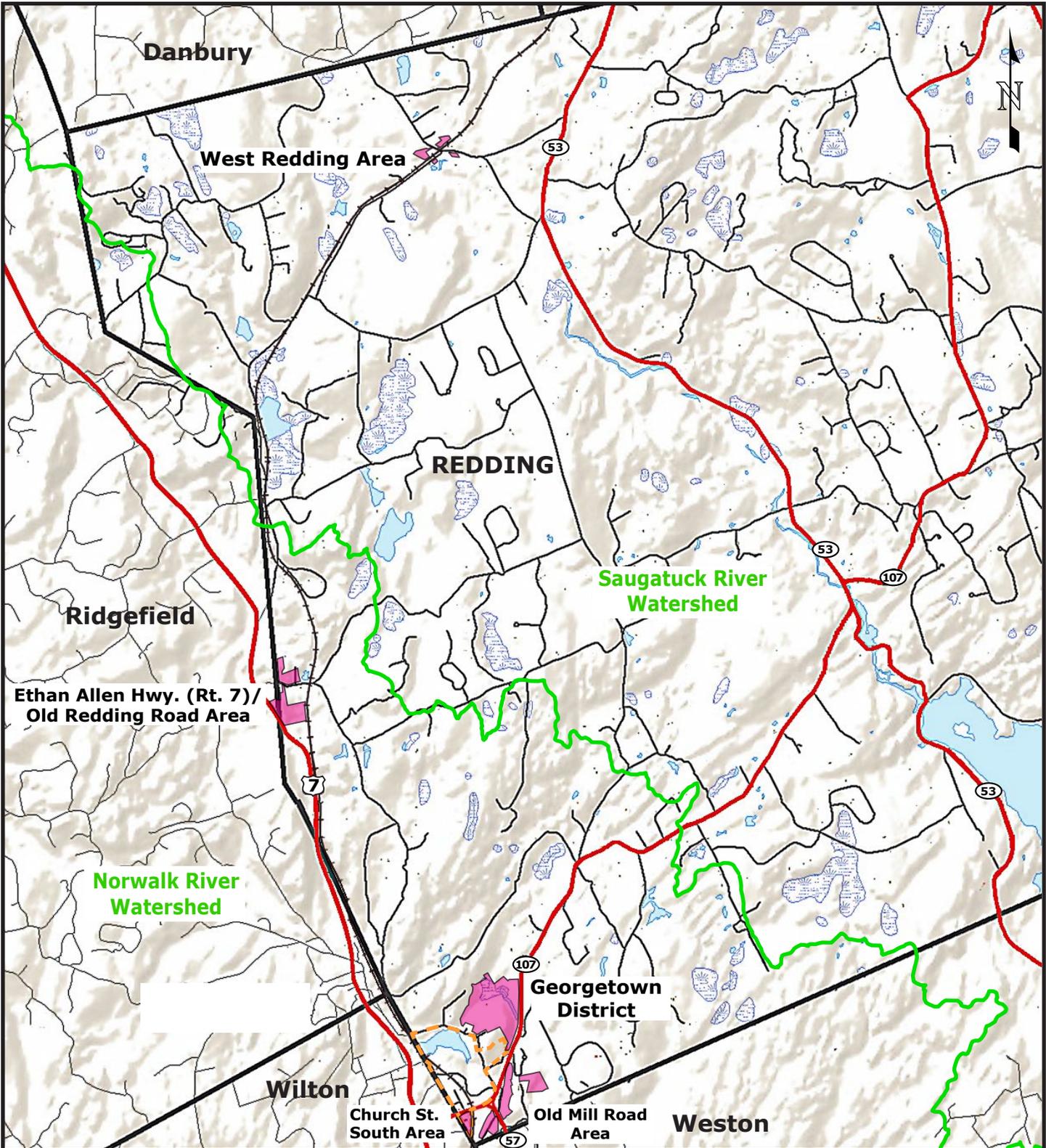
Study Area 2, the Ethan Allen Highway/Old Redding Road area, presents a different type of challenge. All of the ten properties comprising this area are presently held by the State of Connecticut, acquired decades ago in anticipation of construction of a Route Seven expressway and interchange. Now that this project has been permanently cancelled, these parcels are surplus land to which the Town has "first refusal" rights. An active planning study, supported by a Federal grant, is currently examining the feasibility of a regional "greenway", a recreational trail from Norwalk to Danbury utilizing many of the surplus State lands. At this location there would be ample acreage to accommodate both the greenway and an IHZ "village" in mutually compatible design. The possibility of a coordinated plan and joint petition to the State has been explored with the Greenway's Committee chairperson. A conference has also been held with the Planning and Zoning Commission of Ridgefield, in which town the western fringe of Area 2 lies. Both discussions achieved a sense of shared purpose.

The engineering study (see Appendix) which examined the feasibility of on-site water supply and sewage disposal for this site area has confirmed its capacity for up to six dwelling units per acre and prospective locations for deep water supply wells and septic leachfields. Transit service is presently provided (eight round trips per day) along Route Seven (the Ethan Allen Highway frontage) in a joint venture by the respective transit districts of Norwalk ("Wheels") and Danbury ("HART").

Overtures by speculative developers interested in land acquisition in this busy corridor may be anticipated as the regional economy rebounds from the recent recession. It is imperative that the Town of Redding, the Town of Ridgefield and the Greenways Committee act collaboratively, as swiftly as possible, to seek State release of these parcels so important for the housing and recreational needs of the area.

Introduction and Background: Maps

- Initial Study Areas: Overall map showing distribution of locations in the town
- Study Areas: Enlarged Maps of individual areas

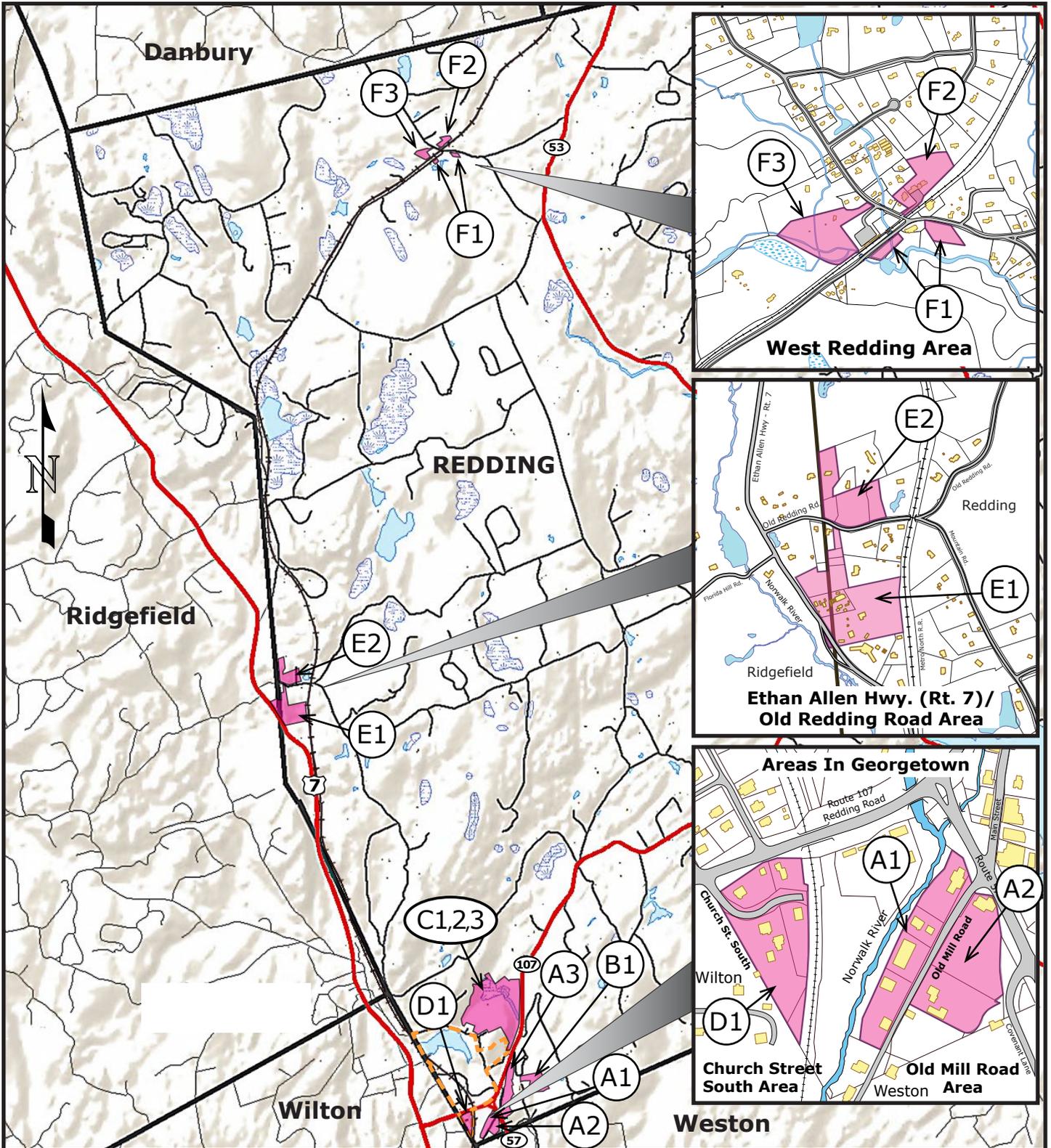


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**Initial Study Areas: West Redding,
 Route 7/Metro North Corridor &
 Georgetown District**
 Location: Western Portion, Redding, CT
 Source: Redding GIS, NRHP mapping

Date: 6/15/11
 Scale: Variable

**ALL STUDY
 AREAS**
 Sheet 1



Incentive Housing Study

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For The Redding Planning Commission
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Study Areas

(Circular Flags Refer to
 Study Area Matrix Chart)

Location: Western Portion, Redding, CT

Source: Redding GIS, NRHP mapping

Date: 6/15/11

Scale: Variable

**ALL STUDY
 AREAS**

Sheet 1

EVALUATION OF FEASIBLE SITES

Site Locations and Qualities

As shown on the SITE EVALUATION MATRIX (following page 20), and noted in the preceding text, this study has identified two general locations within which potential IHZ sites exist which meet the majority of criteria required for incentive housing. These locations are the Central Georgetown Area and the Ethan Allen Highway/Old Redding Road Area.

A five-point scoring system (see “Score” column of MATRIX) expresses the relative degree to which each prospective site meets criteria for IHZ suitability. A “perfect” score would be 48 (4 “highly favorable” points on each of 12 separate criteria). Recommended sites are those which score in the highest quarter of the range (37 or more “points”).

The Central Georgetown Area

Once a small town centered about the Gilbert and Bennett Manufacturing Company, the urban village which comprises Central Georgetown is undergoing a major revitalization. The 55 acre former factory site at its core has been approved for a planned community of diverse uses including 94 residential townhouses; 31 single-family dwellings, 260 residential apartments, offices, retail uses, a restaurant, a theater and a new train station with parking garage for 600 cars. Within the apartments’ 55 units are planned to be “affordable.”

This redevelopment project, owned and managed by Georgetown Land Development Company (GLDC), has made progress since zoning and master plan approvals were first obtained, in 2004, in remediation of sections of this brownfield site, in demolition of obsolescent buildings, in “daylighting” of the Norwalk River and in upgrade of the existing sewage treatment plant. While the project has essentially been stalled for the past three years due to the slump in the national and regional economy, plans are in place for construction as the economy recovers.

Nearby, the historic business center of the community along Main Street and Old Mill Road has also been the subject of revitalization efforts. A Town-sponsored streetscape enhancement project along Main Street is nearing completion and several new or rehabilitated buildings are planned at this location. The proposed train station, planned street improvements and redevelopment of Central Georgetown will create a vibrant and attractive urban village as a planned alternative to the urban sprawl which threatens the Norwalk-Danbury growth corridor.

Within the Central Georgetown Area eight sites have been studied, of which three -- sites A-1, A-2 and D-1 -- merit recommendation for IHZ designation.

- Site A-1, Old Mill Road West; score 46.

This group of four separately-owned lots along the westerly frontage of Old Mill Road totals 1.87 acres and contains six 1 to 2 story buildings, all in light commercial use. The site is presently zoned “Business Center” (BC). Public water and sewer are present in Old Mill Road. The rear portion of this site adjoins the hundred-year flood plain of the Norwalk River but the entire site is above the flood plain. A drainage and shared-access easement between #12 and #16 Old Mill Road is ideally situated to connect to a proposed pedestrian bridge over the Norwalk River which would directly link Old Mill Road to the planned future rail station less than 750 feet away.

Proposed IHZ standards: Mixed use comprised of ground-level light commercial, upper story residential apartments or townhouses @ 10 units per acre. Total potential: 18 dwelling units (4 affordable).

- Site A-2, Old Mill Road East; score 42.

Along the opposite (east) side of Old Mill Road are two separately-owned parcels totaling 2.28 acres in area, also zoned “Business Center” (BC), with public water and sewer service along the street frontage. The northerly and larger parcel (#4 Old Mill Rd., 1.37 acre) contains a 2-story frame commercial building and a parking lot recently approved as the site for a new office/commercial building. The southerly parcel (#25 Old Mill Rd., 0.91 acre) contains a frame dwelling which has been converted in part to office use. Both parcels have been created from a hillside which rises abruptly from the east side of Old Mill Road but the northerly parcel has been excavated to street level for a depth of approximately 100 feet from the street line, creating a level building site south of the existing building. Covenant Lane at the rear of A-2, may be able to provide access to upper level residence units. Future development of each parcel will require some adaptation of topography but Site A-2, as well as A-1, forms a good transition zone between the intensive business center to the north (Main Street) and the low-density residential area to the south. Sites A-2 and A-1 are ideally situated in easy walking distance to the future rail station and to the Georgetown center Main Street retail business center.

Proposed IHZ standards: Mixed use comprised of ground-level light commercial, and upper story residential apartments or townhouses @ 10 units per acre possibly accessed in part from Covenant Lane at the rear. Total potential: 20 dwelling units (4 affordable).

- Site D-1, Church Street South; score 43.

Immediately adjacent to the west side of the Metro North rail commuter line, and directly opposite the planned future train station, lies a small neighborhood comprised of five older dwellings on four parcels, plus a fragment of a fifth parcel and a 14,000 square-foot dead-end street right-of-way. The area, adjacent to the Wilton town line, totals 2.67 acres and is currently zoned “Residential” (R-1/2). Public water and sewer will be at the doorstep of Site D-1 on completion of the infrastructure for the nearby GLDC redevelopment project, either via direct connection to the train station complex or via Redding Road (Rt. 107) on which the site also abuts. The terrain is level to gently sloping. Access to the future train station would be via a pedestrian bridge over the railroad track or via a Redding Road sidewalk (640 feet). Site D-1 is also within easy walking distance of the planned commercial center in the GLDC redevelopment project (400 feet) and the nearby retail center in Wilton at Routes 107 and 7. Development of this site should be in clustered single-family dwellings toward the northerly portion of the site, with a buffer of greenspace along the town line of Wilton. Assembly of parcels and discontinuance of the public street is desirable for optimum development.

This site will require sensitive design because of the fact that each of the existing structures on Church Street South has been recognized by the Department of the Interior as contributing elements within the Georgetown National Register Historic District. These structures thus fall under the jurisdiction of state environmental law, and it has been the continuing policy of the Town of Redding to sustain policies that encourage preservation of such structures. Preservation of these vintage structures, and complementary design of new structures, will be important to the Georgetown National Register Historic District and will be required in any future IHZ regulations.

Proposed IHZ standards: Residential, single-family dwellings @ 6 units per acre.
Total potential: 15 dwelling units (3 affordable).

Five other Central Georgetown Area sites (scores between 16 and 27; see Evaluation Matrix) have not been recommended because of difficult terrain, lack of potential utilities or remoteness from transit service. A description of these sites follows, in order of declining suitability.

- Site A-3, Main Street East; score 27.

The six parcels which lie along the easterly side of Main Street within the historic business center of Georgetown total 23 acres. They include four which are intensely developed in commercial (restaurant and services) use and two with single-family dwellings. All of these parcels, zoned “Business Center” (BC), front directly on Main Street and are served by public water and sewer. With one exception all of the parcels extend rearward to a depth of approximately 250 feet

from the street line. Because the terrain here is a steep hillside rising abruptly from Main Street, virtually all of the existing buildings lie within 100 feet of the street frontage. A Town streetscape project is currently under construction along this frontage to provide organized curbside parking, new sidewalks and street lights, and street trees. The frontages of these parcels are within 1,080 to 1,730 feet of the future train station platform.

Due to the 20% to 30% slopes on these sites future IHZ development is not feasible and would not meet the “land suitable for development” criterion of the Incentive Housing Act. The mixed use character of existing development along the Main Street frontage, however, complements and supports the nearby A-1 and A-2 recommended sites.

- Site C-1, Portland Avenue North; score 20.

Comprised of two adjacent tracts (approx. 1.1 and 12.5 acres respectively), this site lies to the rear of Portland Avenue on a private accessway. Each parcel contains a single-family dwelling near the point where the accessway reaches the site. The terrain is hilly, with several areas of steep slope and a wetland of about three acres in its northernmost portion. Long and narrow in shape, the tract is bounded along its easterly side (approx. 1,400 feet) by an electric transmission line and on the south by the rear of Site C-2 (approx. 370 feet). The nearest public water and sanitary sewer are nearly 2,000 feet away, via Portland Avenue to Main Street. Walking distance to transit service at the future Georgetown train station would be well in excess of 3,000 feet. This site is disqualified for reasons of remoteness from transit and lack of sewer or septic capability.

- Sites C-2 and C-3, Redding Road West and East.

Site C-2, Redding Road West (3.11 acres, Score 17), and Site C-3, Redding Road East (0.31 acre, Score 16) lie nearly opposite one another on Redding Road (Route 107) at the north end of the Georgetown urbanized area, close to the access drive to the “Redding Woods” condo development. Each is vacant State-owned property (acquired during the widening of Route 107). Although public water service is practically at the doorstep of each site, sanitary sewer is not. Walking distance to potential transit at the proposed new train station exceeds 2,600 feet for each site. Both of these sites suffer from steep terrain and C-2 is bisected along its street frontage by a stream and wetland.

- Site B-1, Highland Avenue Extension; score 16.

Located off Highland Avenue at the end of a private road, this site includes a 1.00 acre lot with a single-family dwelling and an adjacent vacant lot of 5.25 acres. Intermittent steep slopes exist throughout the site. Public water and

sanitary sewer are approximately 1,800 feet distant. Walking distance to the future train station would be approximately 2,900 feet. The site is flanked on the west by a neighborhood of single family homes, on the north by “Redding Woods” (a residential condominium), and on the east by the “Meadow Ridge” life-care community. Present zoning of the site is “Residential R-1” (single-family, one acre minimum lot). Difficult terrain and remoteness from public water, sewer and transit service, however, render the site not suitable for an incentive housing development.

Central Georgetown Area: Maps

- COMMON LEGEND FOR MAPS

- Existing Conditions: Study Area A
 - Area A/Sheet 1: Transportation, Structures, Topo, FEMA Flood Data
 - Area A/Sheet 2: Existing Zoning
 - Area A/Sheet 3: Environmental Factors, Aquifer
 - Area A/Sheet 4: OPM Policies Map data, Historical Factors
 - Area A/Sheet 5: Aerial View with IHZ Study Area

- Existing Conditions: Study Area D
 - Area D/Sheet 1: Transportation, Structures, Topo, FEMA Flood Data
 - Area D/Sheet 2: Existing Zoning
 - Area D/Sheet 3: Environmental Factors, Aquifer
 - Area D/Sheet 4: OPM Policies Map data, Historical Factors
 - Area D/Sheet 5: Aerial View with IHZ Study Area

COMMON LEGEND



Town Boundary



DEP Nat. Diversity



Super 7 Corridor



Roads



Buildings



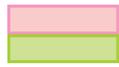
Greenway Concept



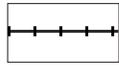
IHZ Boundary



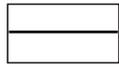
IHZ Shaded - variable fill color



DEP Wetland Soils



Rail Lines



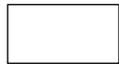
Parcels



Zoning - Open Space



Zoning - Commercial



Zoning - Residential - Vacant



Zoning - Residential



Zoning Multi-Family



Water Bodies



FEMA - Flood



FEMA - 100 yr. Flood



FEMA - 500 yr. Flood



Aquifer



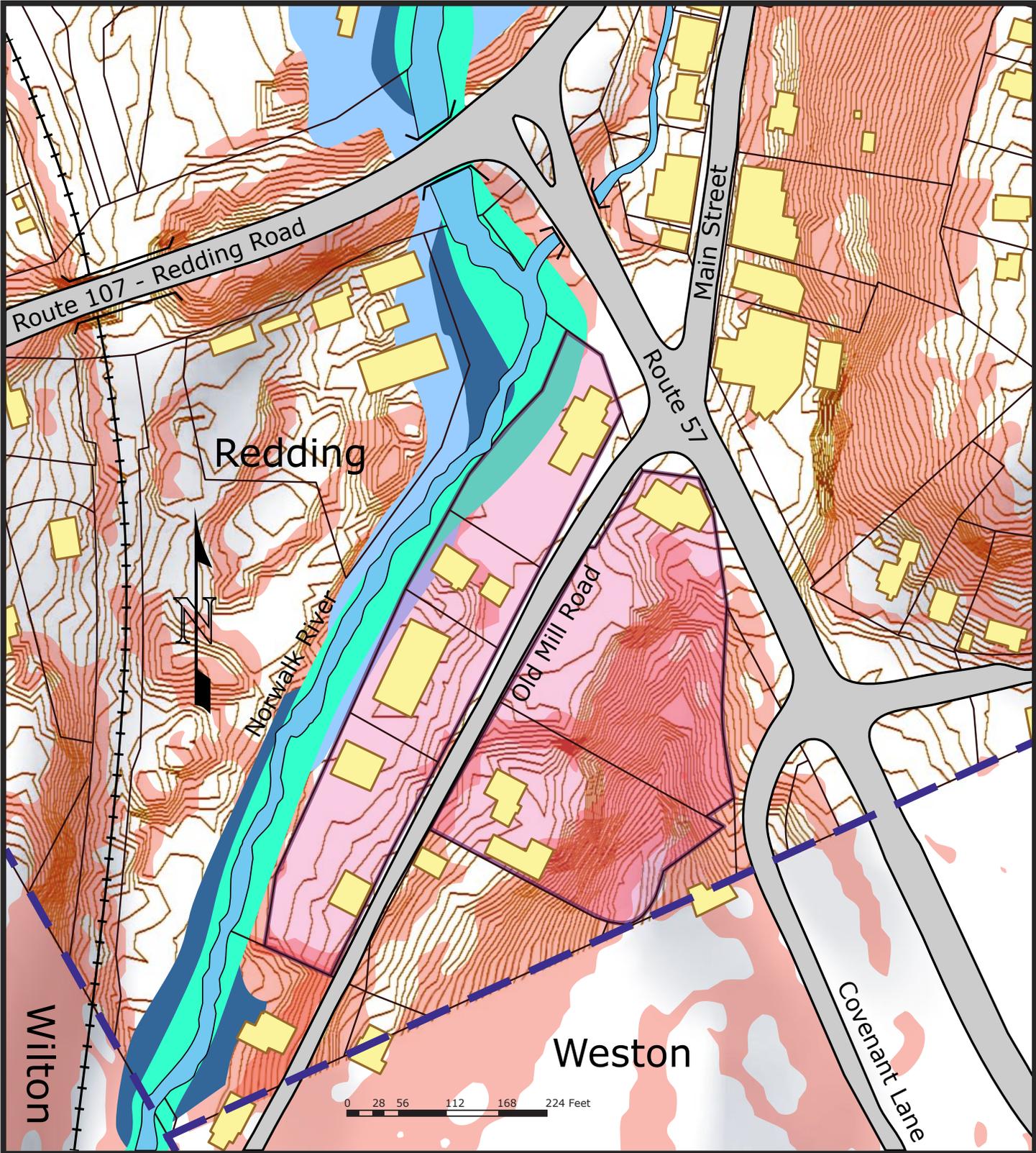
Steep Slopes >20%



Topo Contours



Historic District (NRHP)



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 Redding, Connecticut

Existing Conditions: Transportation, Structures, Topo, and FEMA Flood Map

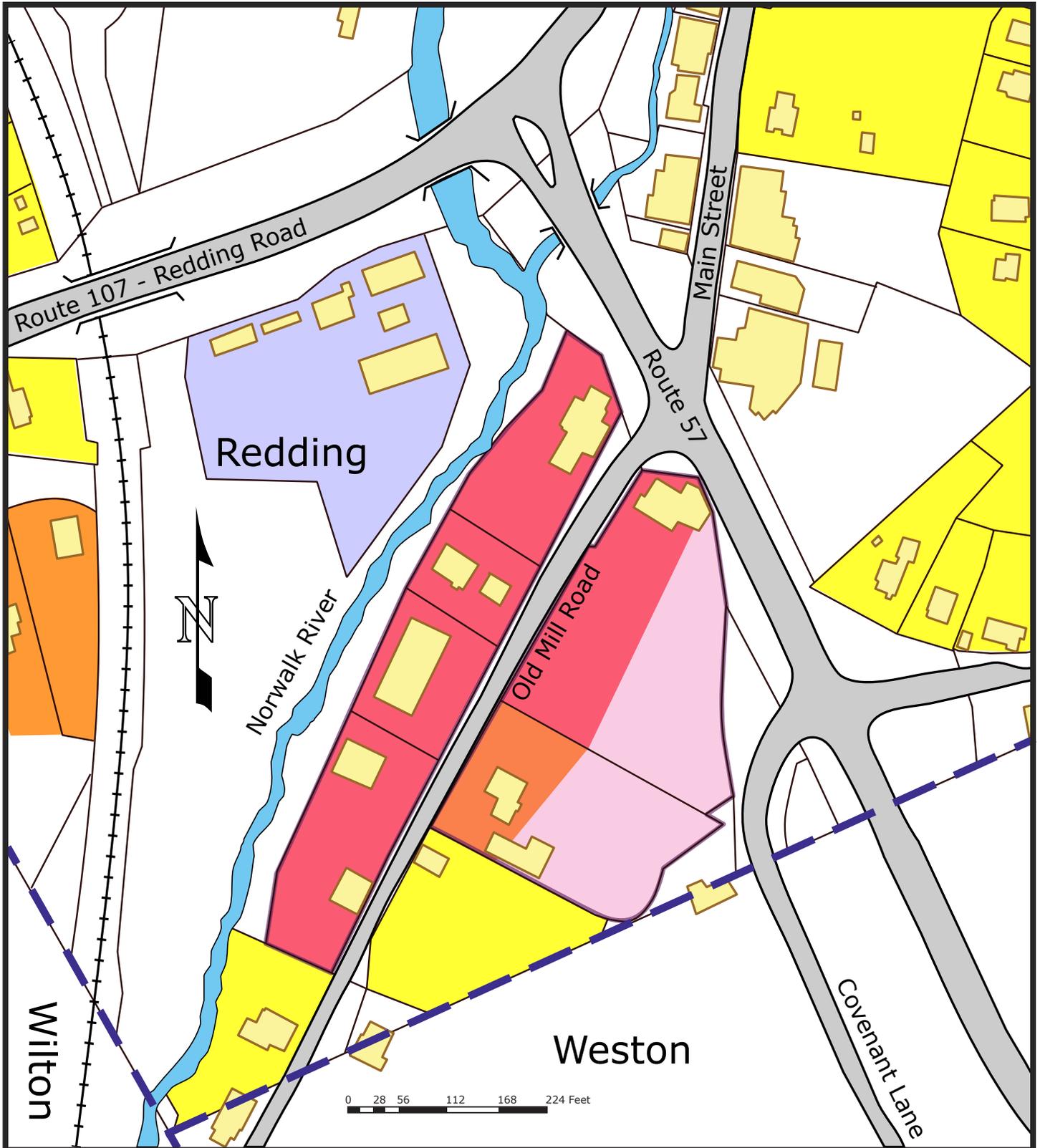
Location: Old Mill Road, Georgetown District
 Source: Redding GIS, State Data, FEMA

Date: 6/15/11
 Scale: 1"= 150'

STUDY AREA



Sheet 1



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 Redding, Connecticut

Existing Conditions: Zoning Map

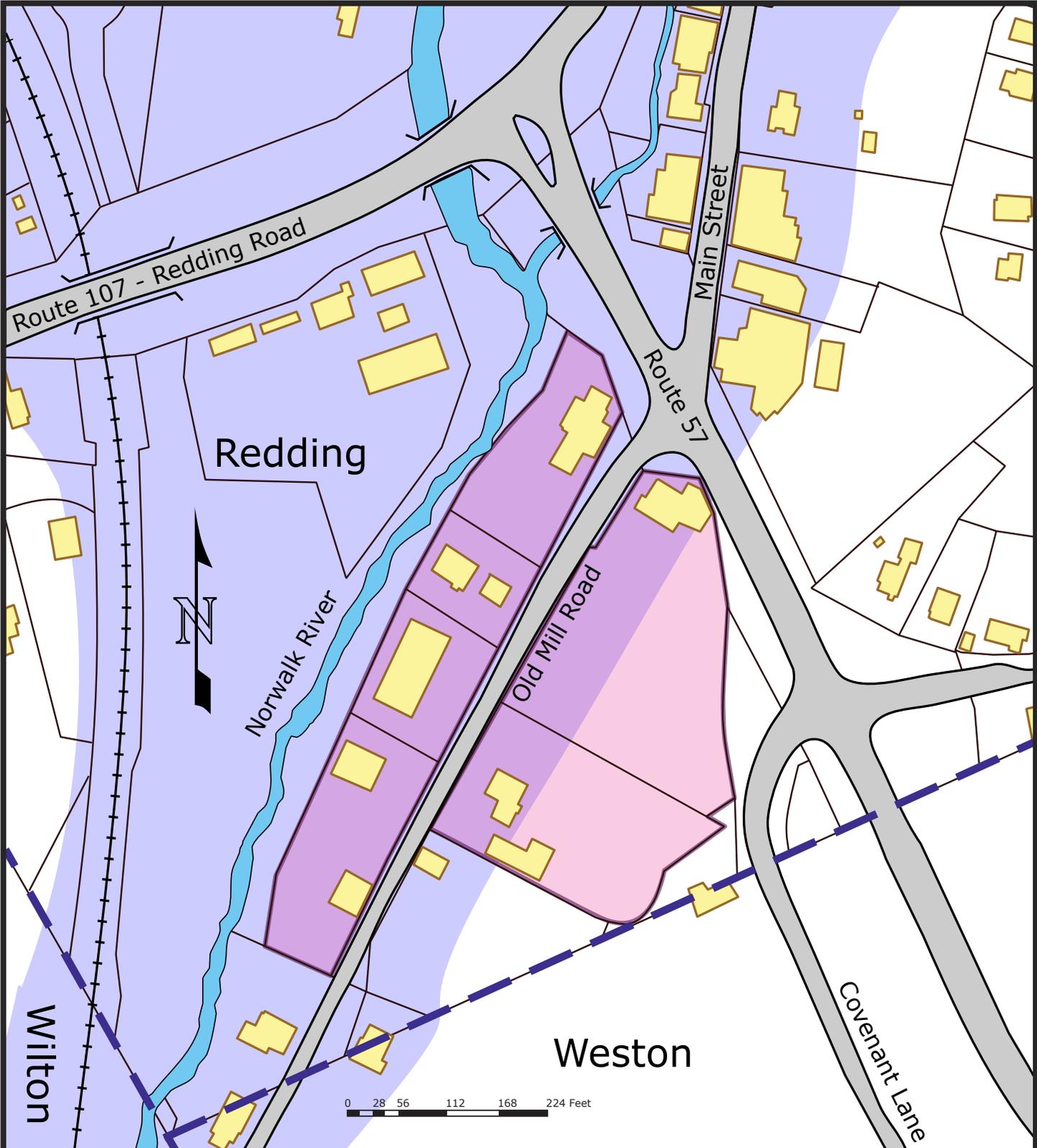
Location: Old Mill Road, Georgetown District
 Source: Redding GIS, State Data, FEMA

Date: 6/15/11
 Scale: 1" = 150'

STUDY AREA



Sheet 2

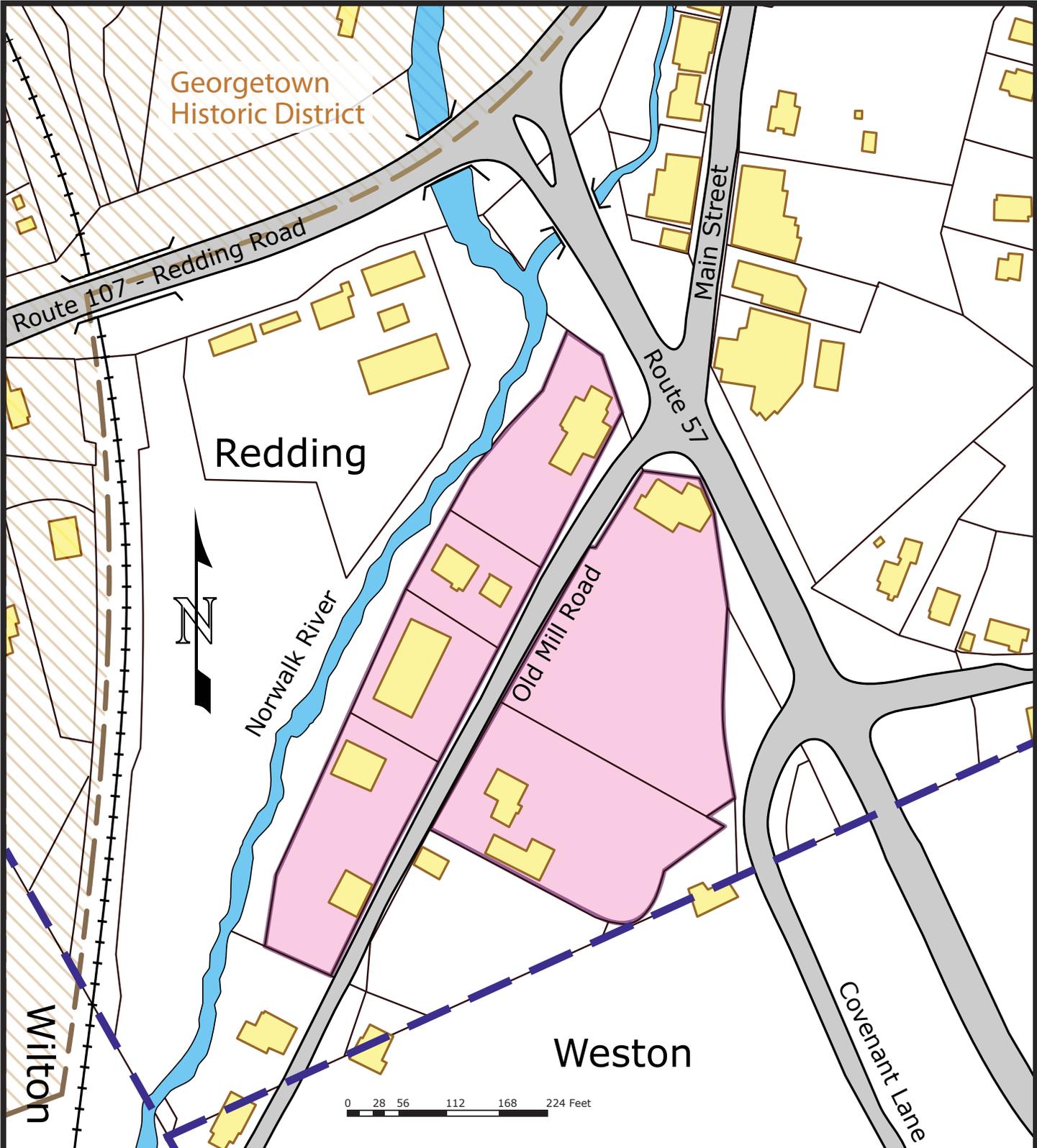


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Existing Conditions: Environmental Factors, Aquifer

Location: Old Mill Road, Georgetown District	Date: 6/15/11
Source: Redding GIS, State Data, FEMA	Scale: 1"= 150'

STUDY AREA
 A
 Sheet 3



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**Existing Conditions: OPM Policies Map,
 Historical Factors**

Location: Old Mill Road, Georgetown District
 Source: Redding GIS, State Data, NRHP

Date: 6/15/11
 Scale: 1" = 150'

**STUDY
 AREA**

A

Sheet 4



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 For The Redding Planning Commission
 Redding, Connecticut

**Existing Conditions: Aerial View
 With IHZ Study Area**

Location: Old Mill Road, Georgetown District
 Source: Redding GIS, State Data

Date: 6/15/11
 Scale: 1"= 150'

**STUDY
 AREA**

 Sheet 5



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 203-938-2380

For The Redding Planning Commission
 Redding, Connecticut

Existing Conditions: Transportation, Structures, Topo and FEMA Flood Map

Location: Church Street South, Georgetown Dist.

Source: Redding GIS, State Data, FEMA

Date: 6/15/11

Scale: 1" = 135'

STUDY AREA

D

Sheet 1



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For The Redding Planning Commission
 Redding, Connecticut

Existing Conditions: Zoning Map

Location: Church Street South, Georgetown Dist.

Source: Redding GIS, State Data, FEMA

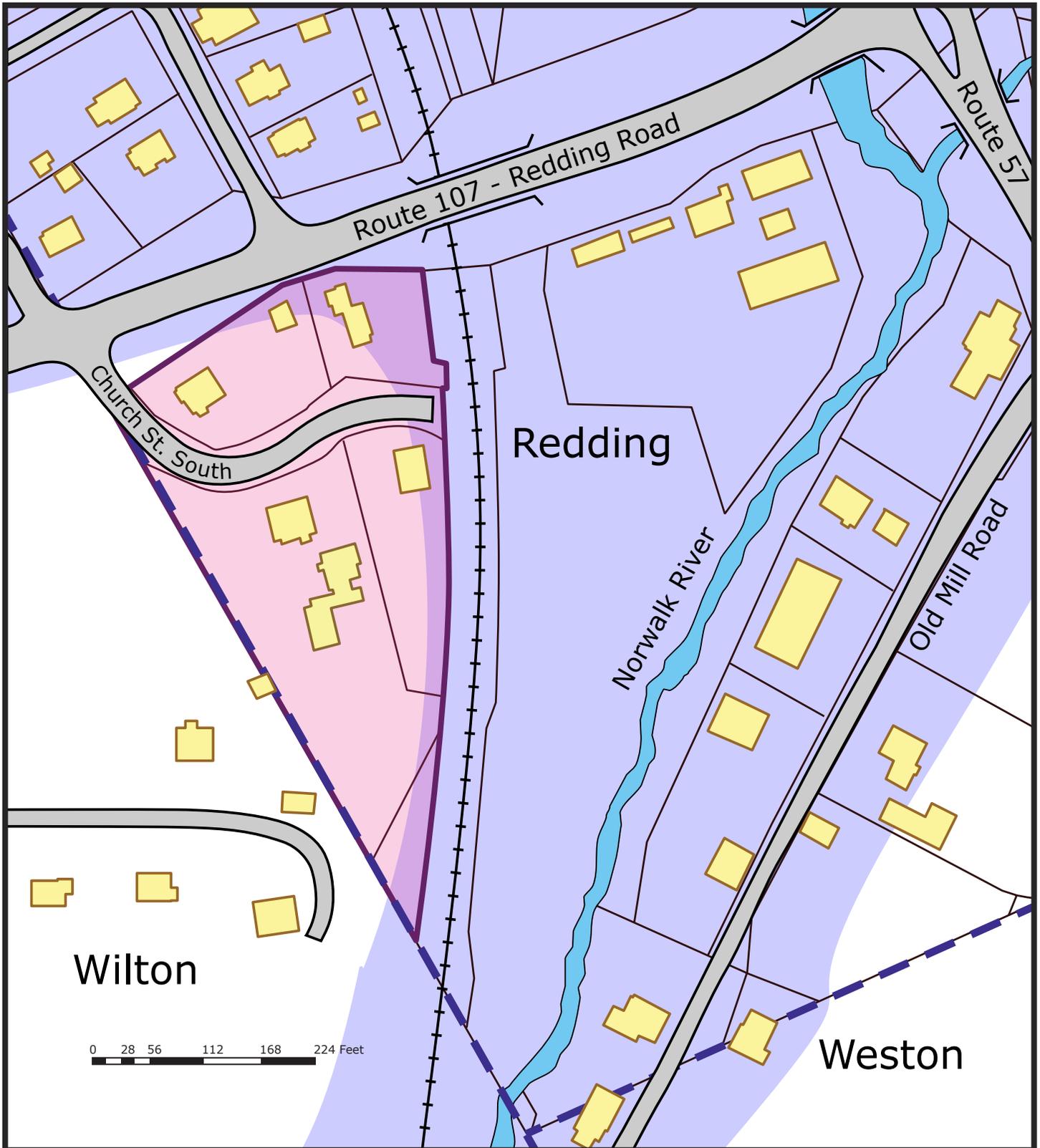
Date: 6/15/11

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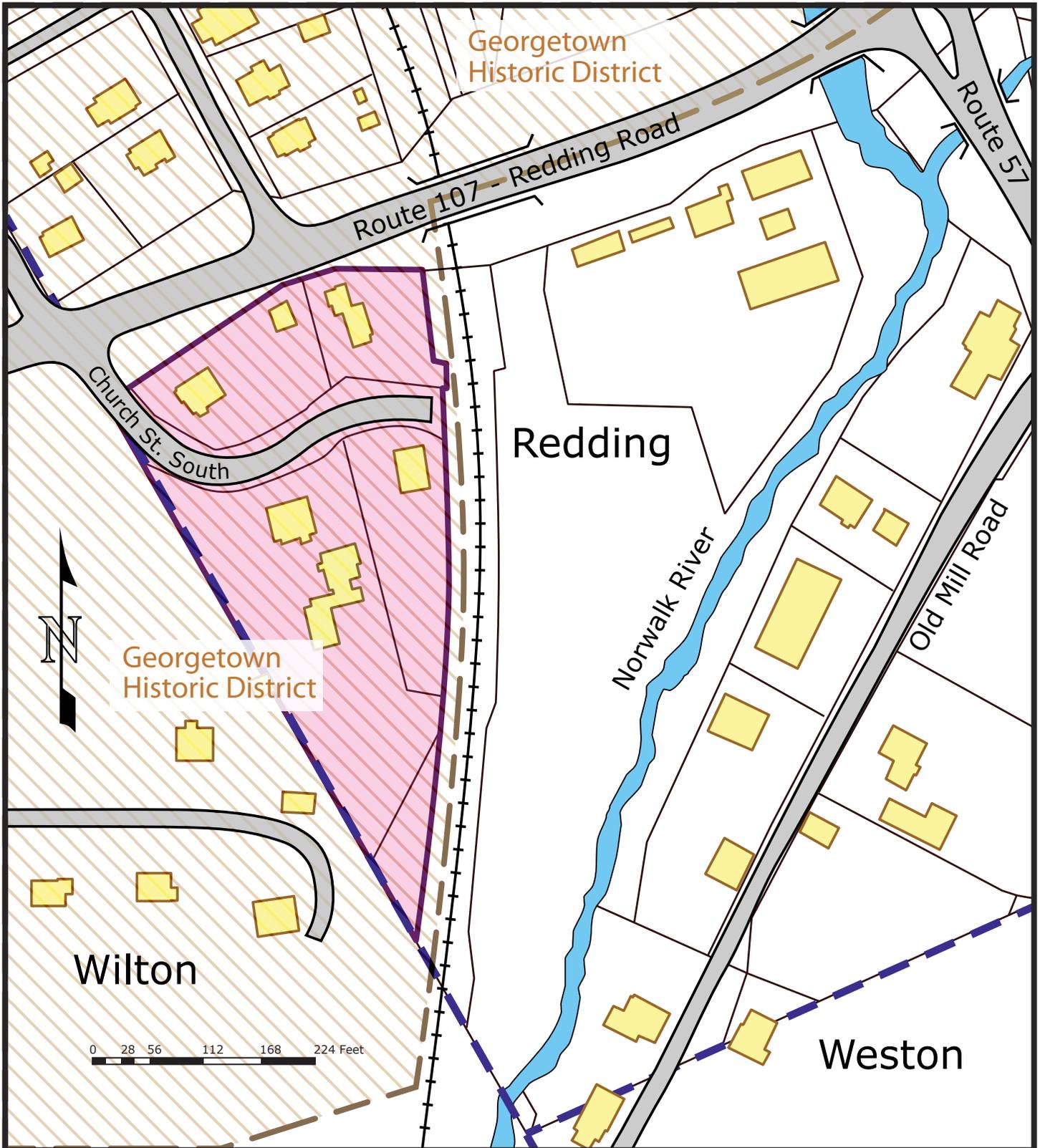
STUDY AREA

D

Sheet 2



<p>Incentive Housing Study</p> <p>City, Town & Regional Planning John Hayes, Consultant PO Box 1, Redding Ridge, CT 06876 203-938-2380</p> <p>For The Redding Planning Commission Redding, Connecticut</p>	<p>Existing Conditions: Environmental Factors, Aquifer</p>		<p>STUDY AREA</p> <p>D</p>
	<p>Location: Church Street South, Georgetown Dist.</p> <p>Source: Redding GIS, State Data</p>	<p>Date: 6/15/11</p> <p>Scale: 1"= 135'</p>	



Incentive Housing Study

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 Redding, Connecticut

**Existing Conditions: OPM Policies Map,
 Historical Factors**

Location: Church Street South, Georgetown Dist.

Source: Redding GIS, State Data, NRHP

Date: 6/15/11

Scale: 1" = 135'

**STUDY
 AREA**

D

Sheet 4



Incentive Housing Study City, Town & Regional Planning John Hayes, Consultant PO Box 1, Redding Ridge, CT 06876 203-938-2380 For The Redding Planning Commission Redding, Connecticut	Existing Conditions: Aerial View With IHZ Study Area		STUDY AREA D
	Location: Church Street South, Georgetown Dist. Source: Redding GIS, State Data	Date: 6/15/11 Scale: 1"= 135'	

The Ethan Allen Highway/Old Redding Road Area

This area of gently-contoured, well drained, mostly vacant land just north of the village of Branchville has excellent potential for an incentive housing community. Located mostly in Redding (17.9 acres) but partly in Ridgefield (2.5 acres), the ten parcels comprising Sites E-1 and E-2 consist entirely of land acquired several decades ago by the State of Connecticut for the now-cancelled Route Seven expressway and interchange. Most of these State-owned parcels, which range in size from 0.2 acre to about 7.2 acres, are the sites of former dwellings, now demolished, although the largest parcel is leased to a private lumberyard enterprise.

Because the entire site area is classified on the State of Connecticut Conservation and Development Policies Plan Locational Guide Map as “Rural Lands”, the consultant for this study met with the State Office of Policy and Management Community Director on September 9, 2010 to explore the compatibility of these sites with the Incentive Housing statute requirement for consistency with the State Plan. It was determined at that meeting that engineered verification of the sites’ capability for sustainable on-site water supply and sewage disposal, other factors being favorable, would not disqualify an IHZ site within “Rural Lands”. Consequently, a professional engineering study was commissioned to resolve this question and the engineer’s affirmative findings are attached to this report (see Appendix A).

Daily bus transit service (Norwalk-Danbury) exists nearby on Route Seven, within easy walking distance of site areas, (eight trips per day southward and eight northward) connecting to rail stations and major employment and shopping centers. The Area’s location along the planned regional greenway and near the Georgetown/Branchville centers is an additional asset.

Town acquisition of this surplus land will enable the creation of a planned community entirely composed of affordable dwellings in an attractive “exurban” residential setting. The engineering study which accompanies this report verifies the Area’s capability for on-site water supply and sewage disposal within IHZ density guidelines.

The two recommended sites can be internally linked by the planned greenway, affording a sense of community and a convenient pedestrian access to a transit shelter on Route Seven.

- Site E-1, Ethan Allen Highway East, score 39.

Comprised of three sizeable parcels fronting on Ethan Allen Hwy. which are bisected by the Ridgefield/Redding town line, and three very small parcels entirely in Redding, the aggregate size of this site is 11.92 acres of which 9.40 acres are in Redding. The southerly and largest parcel of the site, about seven acres in area, is currently leased to an active sawmill operation and there are several sheds on this tract as well as open lumber storage. The Redding portion of the two southernmost parcels is zoned “Service Business” (SB); the remainder four parcels as well as all adjacent land in Ridgefield is zoned “Residential” for

single family dwellings at two-acre minimum lot size. Except for the sawmill tract, all lots are vacant.

Of the Redding portion an estimated 8.63 acres form the recommended IHZ housing development site. The remainder 3.29 acres provide a desirable open space corridor for the regional greenway and a transit shelter alongside Route Seven. The supplemental engineering study by Milone & MacBroom Inc. has recommended two deep-driven water supply wells in the northwest quadrant of the site and a septic leachfield location generally in the southeast portion of the site. Site layout planning must be in coordination with the Town of Ridgefield within which the frontage of this site lies.

Proposed IHZ standards: Residential, single-family dwellings @ 6 units per acre. To be developed by the Town of Redding or by a not-for-profit entity chosen by the Town, in accordance with a plan prepared by the Town for single-family homes in a cluster “village” around a central green, with pedestrian amenities, all units to meet Section 8-30g. “affordability” criteria. Nominal potential, 48 units; with OPM density waiver for Town project, 40 affordable units.

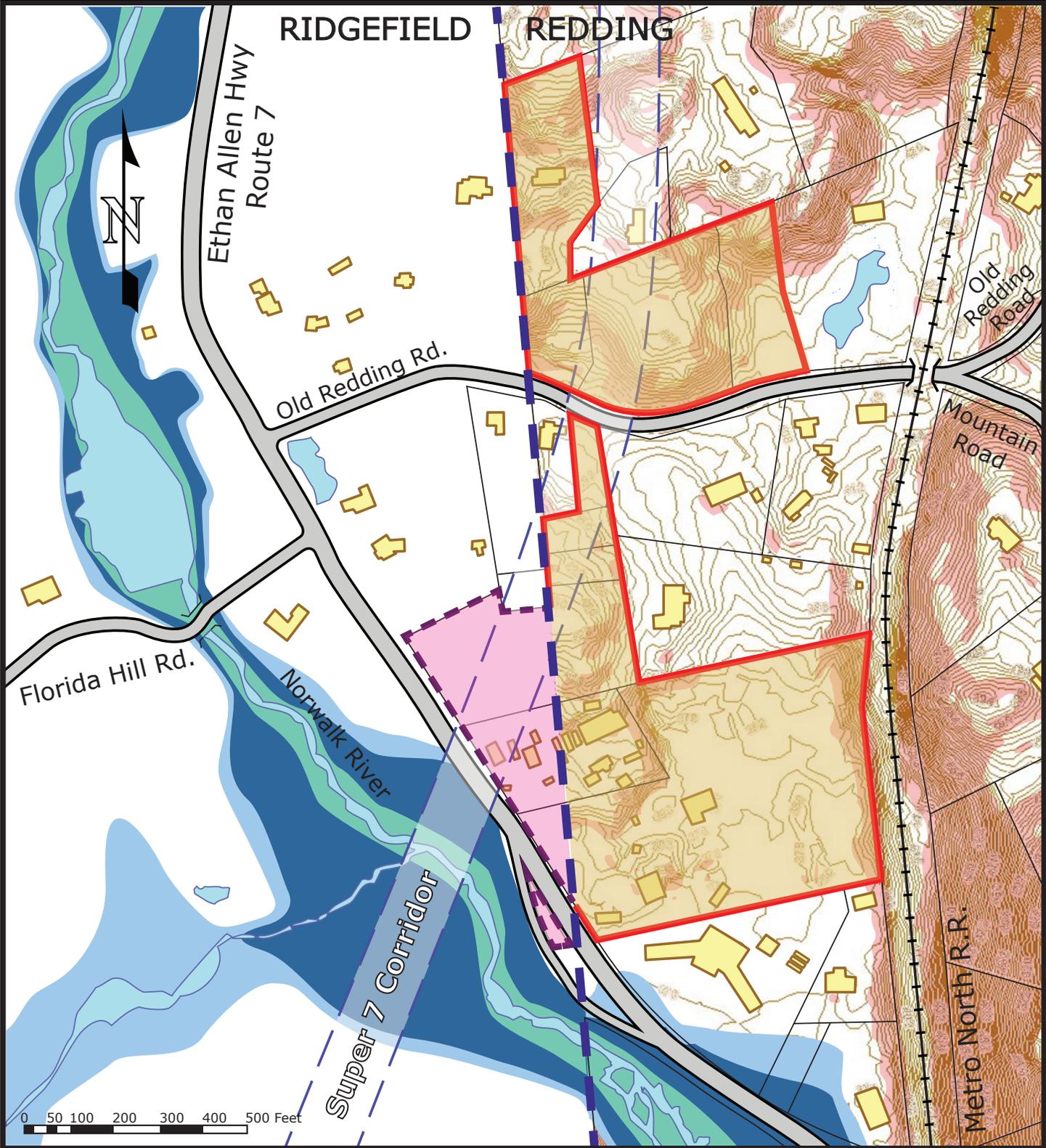
- Site E-2, Old Redding Road North; score 39.

This site is an integral part of the surplus State land to be acquired for a planned affordable residential community (and regional greenway) encompassing Sites E-1 and E-2. Located on the northerly side of Old Redding Road at the Ridgefield town line, the site is entirely within Redding and in Residential R-2 Zone. The aggregate site is comprised of four parcels, all vacant, totaling 6.04 acres. Site E-2 logically comprises the two easterly parcels, 3.31 acres in area. The two westerly parcels, 2.73 acres in total, form an appropriate segment of the planned regional greenway due to their narrow and lengthy configuration. Gently sloping and lightly wooded, well buffered east and west by a large adjacent wetland and the future greenway, this small IHZ site should fit comfortably into its semi-rural surroundings. Water supply and on-site septic capability have been verified by the Milone & MacBroom engineering study. The future greenway through the westerly portion of Site E-1 will connect this site to the transit stop on Route 7 in a distance of about 800 feet.

Proposed IHZ standards: Residential, single-family dwellings @ 6 units per acre. To be developed by the Town of Redding or by a not-for-profit entity chosen by the Town, in accordance with an overall plan for Sites E-1 and E-2 prepared by the Town as generally described for Site E-1. All units to be compliant with Section 8-30g. “affordability” criteria. Nominal potential, 18 units; with OPM density waiver for Town projects, 15 affordable units.

Route 7 / Old Redding Road Area: Maps

- Existing Conditions: Study Area E
 - Area E/Sheet 1: Transportation, Structures, Topo, FEMA Flood Data
 - Area E/Sheet 2: Existing Zoning, "Super 7" Highway Alignment
 - Area E/Sheet 3: Env Factors, Wetland Soils, Aquifers, Natural Diversity Areas
 - Area E/Sheet 4: OPM Policies Map data
 - Area E/Sheet 5: Aerial View with IHZ Study Area, "Super 7" Greenway



Incentive Housing Study

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For The Redding Planning Commission
 Redding, Connecticut

**Site Analysis: Transportation,
 Structures, Topo, and FEMA Flood Map**

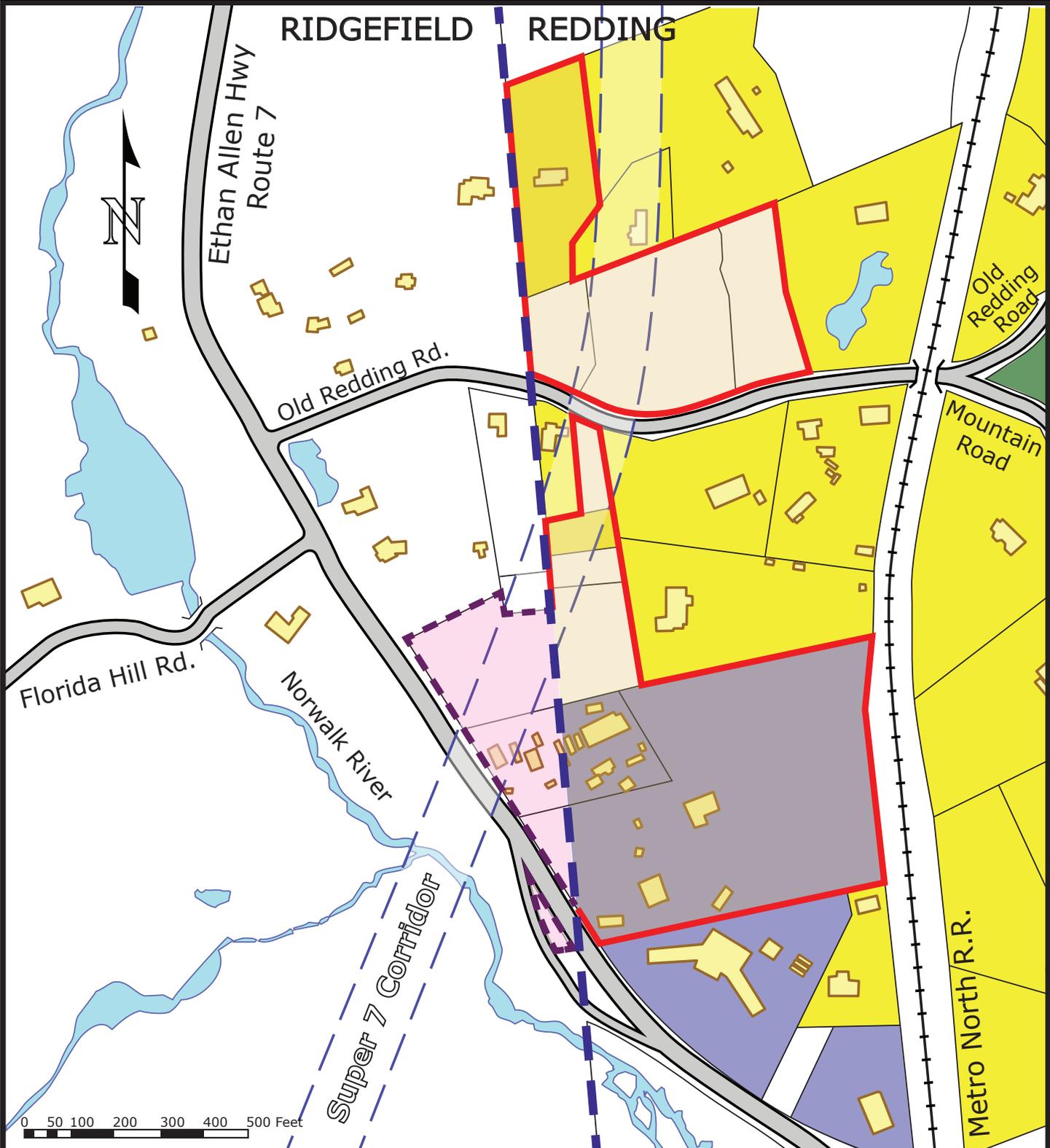
Location: Ethan Allen Hwy. / Old Redding Road
 Source: Redding GIS, State Data, FEMA

Date: 6/15/11
 Scale: 1" = 310'

**STUDY
 AREA**



Sheet 1



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 John Hayes, Consultant
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For The Redding Planning Commission
 Redding, Connecticut

Site Analysis: Zoning Map with Super 7 Corridor

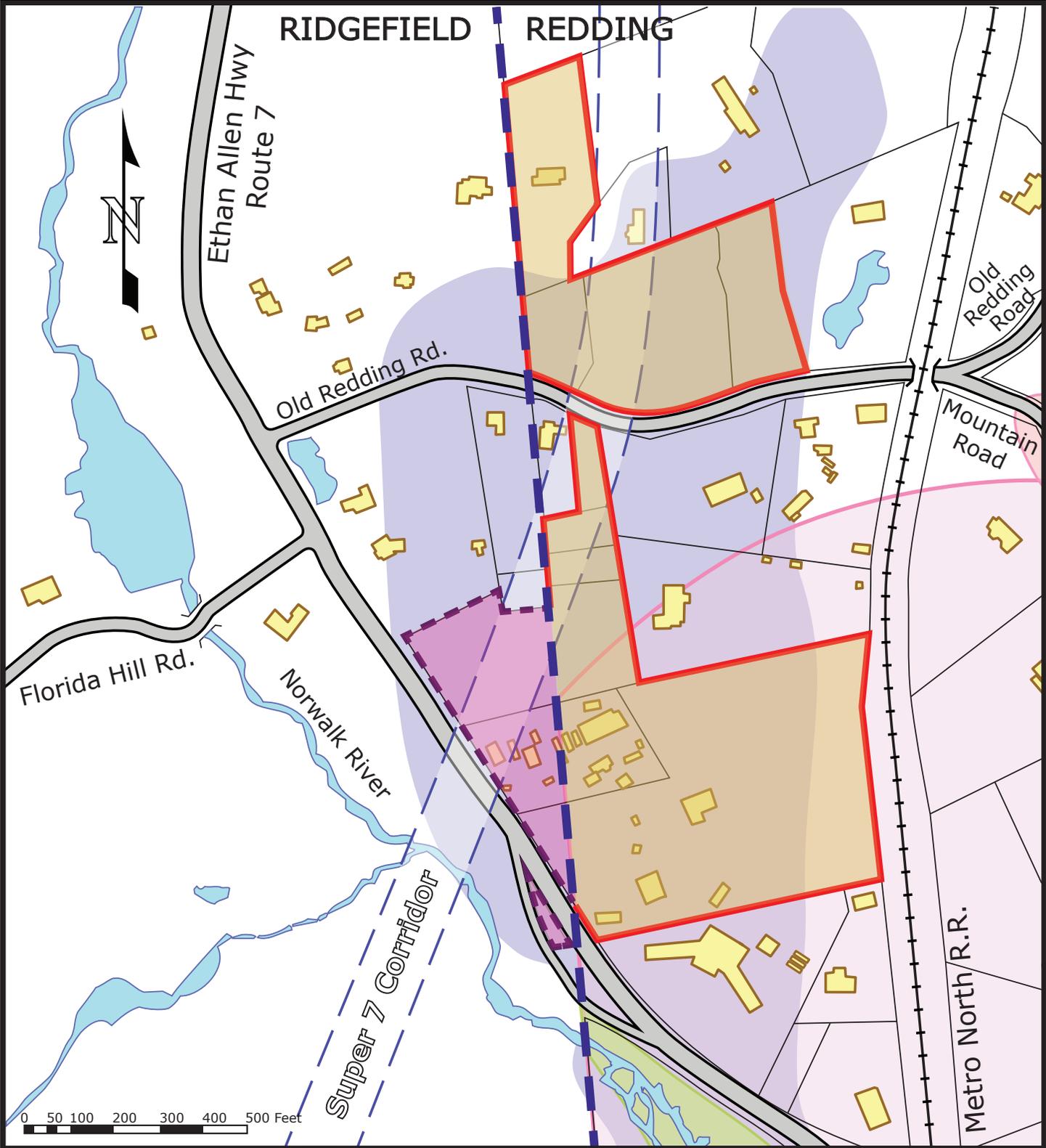
Location: Ethan Allen Hwy. / Old Redding Road
 Source: Redding GIS, State Data, FEMA

Date: 6/15/11
 Scale: 1" = 310'

STUDY AREA



Sheet 2



Incentive Housing Study

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For The Redding Planning Commission
 Redding, Connecticut

**Site Analysis: Environmental Factors
 Wetland Soils, Aquifers, Natural Diversity Areas**

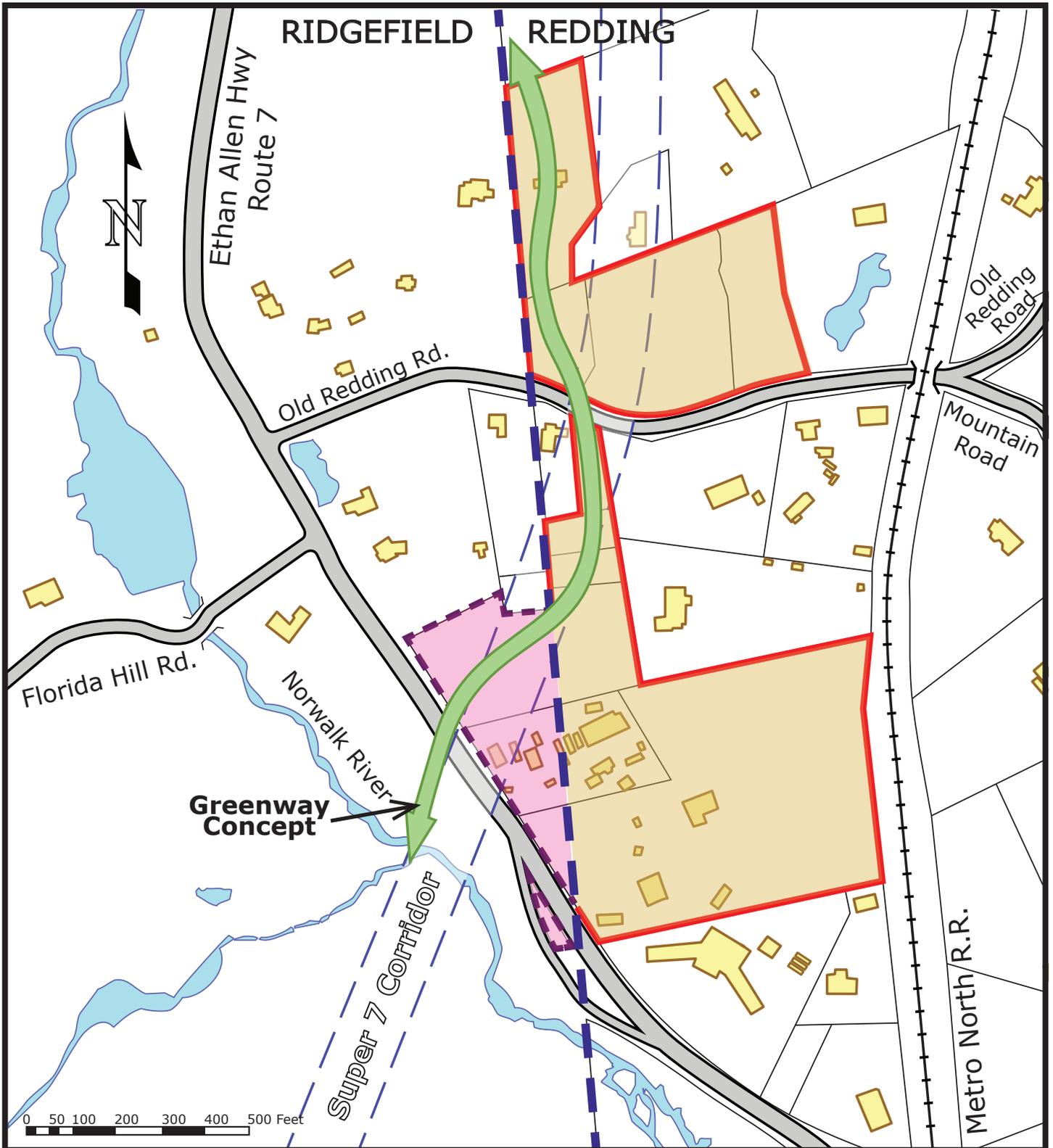
Location: Ethan Allen Hwy. / Old Redding Road
 Source: Redding GIS, State Data, FEMA

Date: 6/15/11
 Scale: 1"= 310'

**STUDY
 AREA**



Sheet 3



Incentive Housing Study

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For The Redding Planning Commission
 Redding, Connecticut

Site Analysis: OPM Policies Map

Location: Ethan Allen Hwy. / Old Redding Road

Source: Redding GIS, State Data

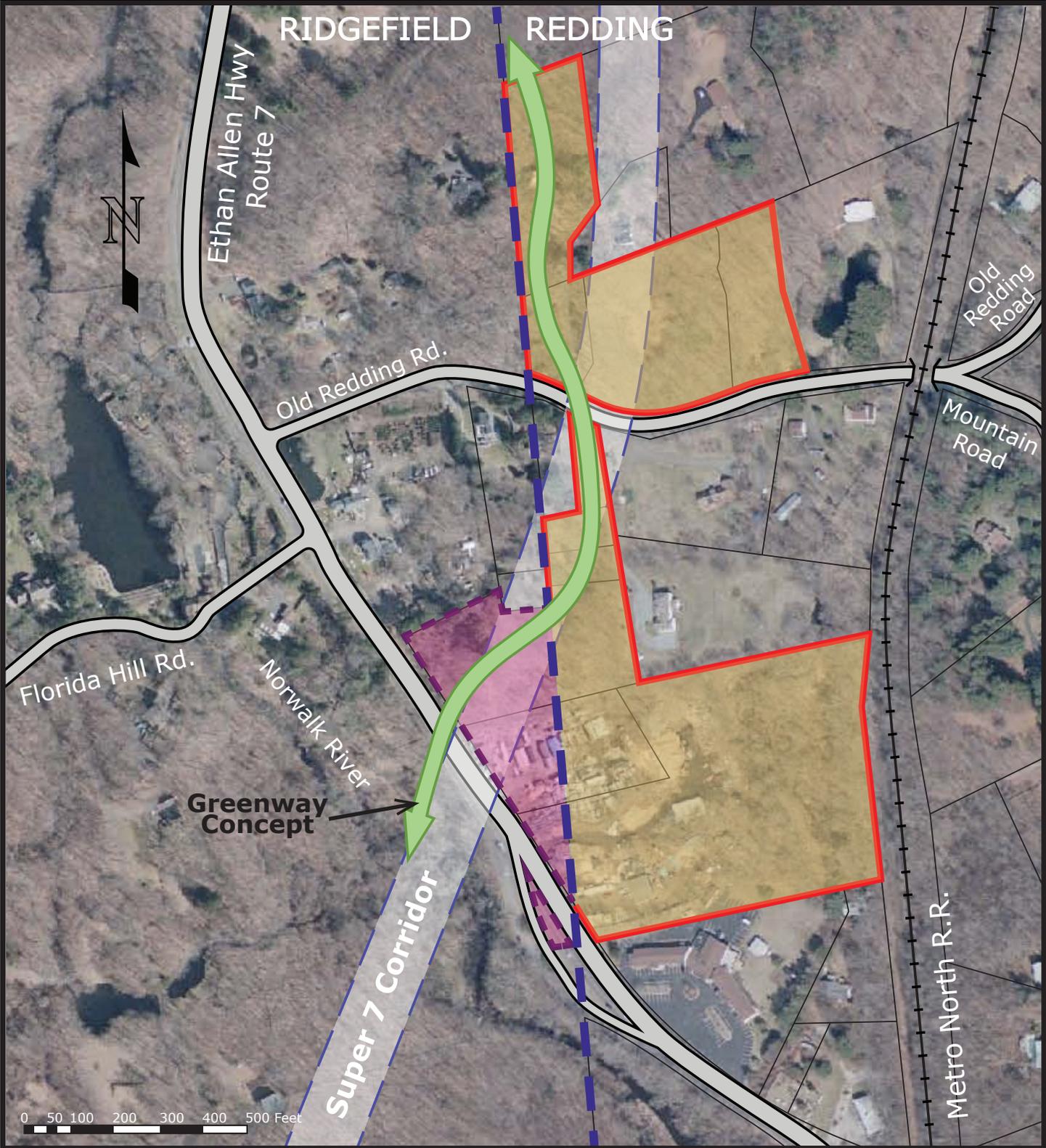
Date: 6/15/11

Scale: 1" = 310'

STUDY AREA



Sheet 4



Incentive Housing Study

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For The Redding Planning Commission
 Redding, Connecticut

**Site Analysis: Aerial View with IHZ Study Area
 Proposed Greenway & Super & Corridor**

Location: Ethan Allen Hwy. / Old Redding Road
 Source: Redding GIS, State Data, FEMA

Date: 6/15/11
 Scale: 1"= 310'

**STUDY
 AREA**



Sheet 5

The West Redding Center Area

West Redding Center is a rural hamlet surrounding an active commuter train station on the Danbury Branch of Metro North Railroad. This entire area lies deep within the Saugatuck River Class AA (public water supply) watershed, classified as “Conservation Area” on the State Policies Plan, and is therefore precluded from consideration for incentive housing development. As noted on page 7 of this report, and shown on the Site Evaluation Matrix, three site locations were investigated in this area should future State standards provide for very-low incentive housing densities in rural community center settings.

POTENTIAL IHZ SITE DEVELOPMENT

Proposed Site:	Study Area (acres)	IH Zone (acres)	Develop. Area (acres)	Potential Building Re-use	Potential Residential Units
A-1, Old Mill West (map, p. 14)	1.87	1.87	1.87 (100%)	Yes, one building	18 (10/acre)
A-2, Old Mill East (map, p. 14)	3.48	2.28	2.01 (88%)*	Yes, two buildings	20 (10/acre)
D-1, Church St. South (map, p. 14)	2.67	2.67	2.67 (100%)	Yes, five buildings	16 (16/acre)
E-1, Ethan Allen Hwy. (map, p. 17)	12.83	8.63	8.13 (84%)**	None	48 (6/acre)
E-2, Old Redding Rd. (map, p. 17)	6.04	3.31	3.06 (92%)**	None	18 (6/acre)

* Excludes steep slope

** Excludes area for proposed greenway and for transit station

SUMMARY:

Total area in proposed IH Zones: 18.76 acres (0.09% Town area)

Total developable area in IH Zones: 17.74 acres

Potential dwelling units: 120

Potential affordable units: 77

Table: Site Evaluation Matrix

- Chart summarizing characteristics of all study sites and listing numerical “score” for each site

STUDY AREA	STREET ADDRESS	Acres	EXISTING CONDITIONS					POTENTIAL					PLAN COMPATIBILITY		SCORE	SIGNIFICANT FACTORS
			Terrain Density & Services	Environmental Sensitivities	Neighborhood Context	Cultural Sensitivities	Availability	Water	Sewer	Transit Access	Vehicular Access	State & Regional Plans	Town POCD*			

CENTRAL GEORGETOWN AREA

Total **35**

48 would represent a perfect score

STUDY AREA 1	Parcel	Address	Acres	Terrain	Env	Neighborhood	Cultural	Availability	Water	Sewer	Transit	Vehicular	State/Regional	Town POCD	Score	Significant Factors	
	A-1	Old Mill Road West	12, 16, 18, & 20 Old Mill Road	1.87	4	4	4	4	3	4	4	3	4	4	4	46	Light commercial along frontage. Level terrain. Adjoins river, but is not flood prone. CB Zone
	A-2	Old Mill Road East	4 & 25 Old Mill Road	2.28	2	4	4	3	4	2	4	4	3	4	4	42	Existing commercial and residential uses along frontage. Steep slopes at rear. CB Zone
	A-3	Main Street East	2,6,8,12,18,12,18 & 22 Main Street	5.23	X	4	1	1	2	1	4	4	2	X	4	27	Existing commercial and residential frontage. Steep slope rises from street. CBZone
	B-1	Highland Avenue Ext.	40 & 42 Highland Avenue	6.25	1	X	1	2	2	1	1	X	X	1	4	16	Single family dwelling. Rugged with steep slopes. At end of private road (no public access)
	C-1	Portland Avenue North	50 & 52 Portland Avenue	13.6	2	1	2	2	2	2	2	X	X	1	4	20	Hilly terrain, single family dwelling. Adjoins electric transmission line (east) and 9 acre condo (west). Large wetland in northern portion.
	C-2	Redding Road West	29 Brookside Road / 107 Redding Road	3.11	X	1	X	2	1	3	3	1	X	2	3	17	State of CT ownership. Stream bisects along frontage. Severe Slopes.
	C-3	Redding Road East	94 Redding Road	0.31	X	X	1	1	1	3	3	1	X	X	4	16	State of CT ownership. On high bank, severe slopes.
	D-1	South Church Street	3,4.6 & 7 Church Street South	2.67	4	3	3	3	3	3	4	4	4	4	4	43	Directly adjacent to proposed train station, water and sewer lines, Route 107. Five parcels, three dwellings, R-1/2 Zone.

ETHAN ALLEN HWY/ OLD REDDING ROAD AREA

(Total acres includes Ridgefield) **15**

STUDY AREA 2	Parcel	Address	Acres	Terrain	Env	Neighborhood	Cultural	Availability	Water	Sewer	Transit	Vehicular	State/Regional	Town POCD	Score	Significant Factors	
	E-1	Ethan Allen Hwy. East (in Redding)	318, 322 & 324 Ethan Allen Hwy.	8.63	4	2	3	4	4	4	3	3	4	4	1	39	State of CT ownership. Light commercial use, lumberyard. 90% SB Zone.
		Ethan Allen Hwy. East (in Ridgefield)	318, 322 & 324 Ethan Allen Hwy.	2.57													Adjacent area in Ridgefield. State of CT ownership. Light commercial use, lumberyard. 90% SB Zone.
E-2	Old Redding Road North	13 & 15 Old Redding Road	3.31	4	1	4	4	3	4	3	3	4	4	1	37	State of CT Ownership. Vacant, gently sloping, adjacent to wetland.	

WEST REDDING CENTER AREA

Total **12**

STUDY AREA 3	Parcel	Address	Acres	Terrain	Env	Neighborhood	Cultural	Availability	Water	Sewer	Transit	Vehicular	State/Regional	Town POCD	Score	Significant Factors	
	F-1	Simpaug Turnpike East	262 Simpaug Turnpike & 6 Sidecut Road	1.8	X	2	X	2	1	3	2	X	3	4	X	19	Town of Redding ownership. Two non-contiguous parcels. Excluded by State Plan.
	F-2	Long Ridge Road East	2 Long Ridge Road	3.78	3	2	1	3	3	2	2	1	4	4	X	27	Light commercial use, NB Zone, Excluded by State Plan.
F-3	Long Ridge Road West	7 Long Ridge Road	6.69	2	1	2	2	1	2	2	X	4	3	X	20	Single family dwelling on high ground, extensive wetland and riverplain. Excluded by State Plan.	

4 = Highly favorable
 3 = Moderately favorable, minor defects only
 2 = Acceptable, but problems to overcome
 1 = Significantly problematic
 X = Unacceptable (disqualifying factor)

*POCD = Redding Plan of Conservation and Development

HOUSING PLAN

The supporting rationale and particular features of the Housing Plan for each site are summarized in this section.

Central Georgetown Area

The old mill village of central Georgetown occupies about 300 acres in the southwest corner of Redding and comprises less than 1.5 percent of the town's area. Yet this compact built-up area, along with a similar area of dense development in the adjacent corners of Wilton and Ridgefield, is the only intensely developed urban "center" within the Town of Redding or within the Route Seven corridor between Norwalk and Danbury.

Central Georgetown's favorable attributes for incentive housing development, in summary, are:

- Designated on the State Policies Plan of Conservation and Development as a "Neighborhood Conservation" area, appropriate for moderate density "infill" development.
- Transit orientation: Route 7 bus service; on Danbury branch rail commuter line; train station proposed (CT DOT approved) in south Georgetown.
- Town support: Georgetown Land Development master plan for mill site redevelopment; Main Street rehabilitation.
- National Register Historic District helps preserve many historic residential and commercial buildings.
- Water and sewer infrastructure has recently been expanded and upgraded.

Site A-1 PLAN, Old Mill Road West

(Existing conditions: text. pp. 11, maps following p. 15, Study Area A, Sheets 1-5).
(PLAN: map following p. 24, Study Area A, Sheet 6).

- Projected construction will create new buildings for mixed use along the street frontage, with ground-level (street front) office/retail and second story office or residential uses. To the rear a two-level parking deck will create an open "plaza" providing access to a row of townhouses overlooking the Norwalk River, a "greenbelt" on the Town Plan.

-
- Potential build-out: 6,000-8,000 square feet of office/retail floor area, 18 dwelling units (4 affordable, 14 “market”) at a density of 10 units per acre.
 - Present zoning is Business Center (BC); no minimum lot area and no rear line or side line setbacks are presently required. Residential incentive will be created by doubling the presently allowable residential area from 30% of total floor area to 60% of site floor area.
 - Public water service, sanitary sewer and other utilities are present in the street frontage (Old Mill Road).
 - One historic structure (a 1½-story frame office building) exists at #16 Old Mill Road and will be preserved in the design plans.
 - A proposed pedestrian bridge over the Norwalk River (see PLAN) will provide direct access to the future train station and link together Sites A-1, A-2 and D-1.

Site A-2 PLAN, Old Mill Road East

(Existing conditions: text, p.11; maps following p. 15, Study Area A, Sheets 1-5).
(PLAN: map following p. 24, Study Area A, Sheet 6).

- Proposed development of this site will be at two levels due to topography. Ground-level office/retail uses are proposed for new and existing buildings along the Old Mill Road street frontage, with a second-level parking deck at the rear which will provide access and parking for second-story residential units in the frontage buildings and townhouses at the rear. Alternative access to townhouses may be provided from Weston Road or Covenant Lane at the rear of the site.
- Potential build-out: 5,000 - 6,000 square feet of office/retail floor area, 18 dwelling units (4 affordable) at a density of 10 units per acre.
- Present zoning is Business Center (BC) Zone. Proposed standards for development will be identical to Site A-1, including a 100% increase in allowable residential floor area.
- Public water, sewer and other utilities exist in Old Mill Road.
- Two historic buildings (each 2½-story frame) at north and south ends of Site A-Z will be preserved in design plans.

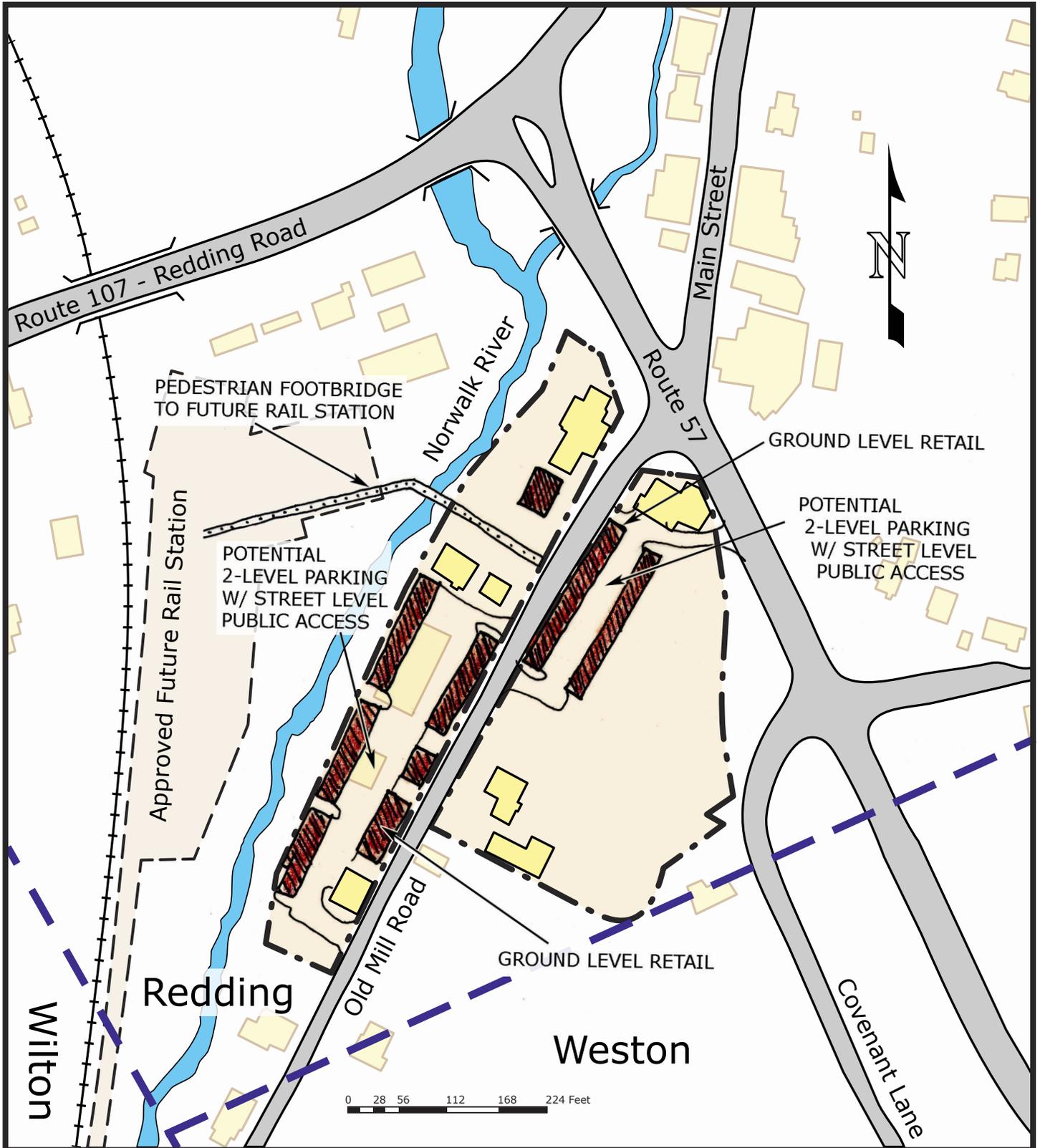
Site D-1 PLAN, Church Street South

(Existing conditions: text, pp. 12; maps following p. 15, Study Area D, Sheets 1-5).
(PLAN: map following p. 24, Study Area D, Sheet 6).

- This small neighborhood is directly opposite the site of the proposed Georgetown train station, and with a proposed pedestrian bridge over the rail line will link directly with the station and with Sites A-1 and A-2. Water service is available from Redding Road and a short force main would connect to the nearby sewage treatment plant.
- Because this site lies within the National Register Historic District and contains five modest, though vintage, dwellings it is planned as a clustered neighborhood of individual single-family dwellings, new structures interspersed among the old and designed in compatible architectural styles. Architectural design standards will be part of the IHZ regulations, which will also require faithful preservation of the vintage houses.
- Present zoning: Residential R-1/2 (one-half acre/dwelling).
- Proposed build-out: 15 dwellings (3 affordable), @ density of 6 dwelling units/acre.

Old Mill Road / Church Street South Areas: Plan Maps

- Site Analysis: Study Area A
Area A/Sheet 6 Potential IHZ Development
- Site Analysis: Study Area D
Area D/Sheet 6 Potential IHZ Development



Incentive Housing Study

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 Redding, Connecticut

Site Analysis: Potential IHZ Development

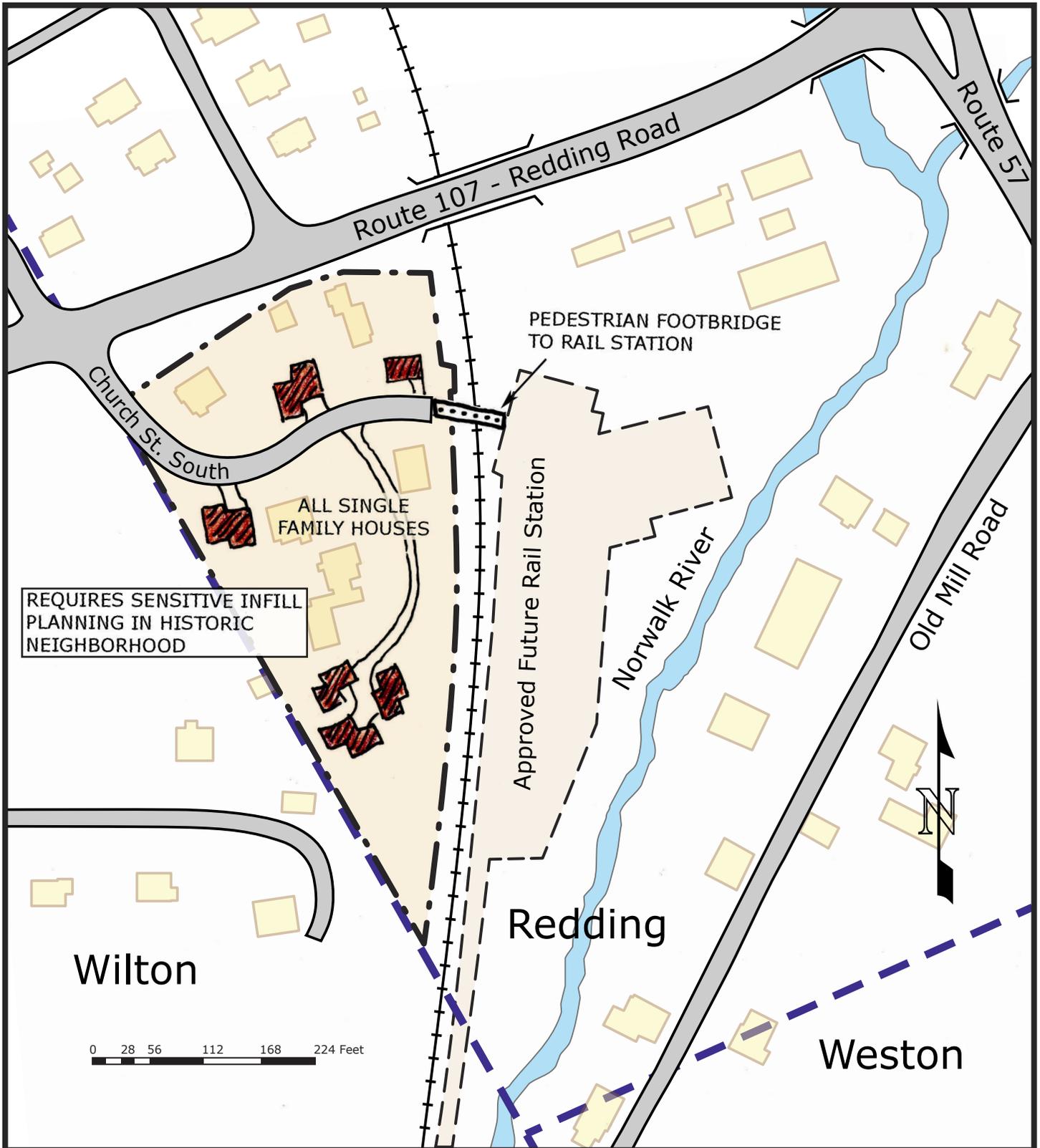
Location: Old Mill Road, Georgetown District
 Source: Redding GIS, State Data,

Date: 6/15/11
 Scale: 1"= 150'

STUDY AREA



Sheet 6



REQUIRES SENSITIVE INFILL PLANNING IN HISTORIC NEIGHBORHOOD

ALL SINGLE FAMILY HOUSES

PEDESTRIAN FOOTBRIDGE TO RAIL STATION

Approved Future Rail Station

Norwalk River

Old Mill Road

Wilton

Redding

Weston

0 28 56 112 168 224 Feet



Incentive Housing Study

City, Town & Regional Planning
 John Hayes, Consultant
 PO Box 1, Redding Ridge, CT 06876
 203-938-2380

For The Redding Planning Commission
 Redding, Connecticut

Site Analysis: Potential IHZ Development

Location: Church Street South, Georgetown Dist.

Source: Redding GIS, State Data, NRHP

Date: 6/15/11

Scale: 1" = 135'

STUDY AREA

D

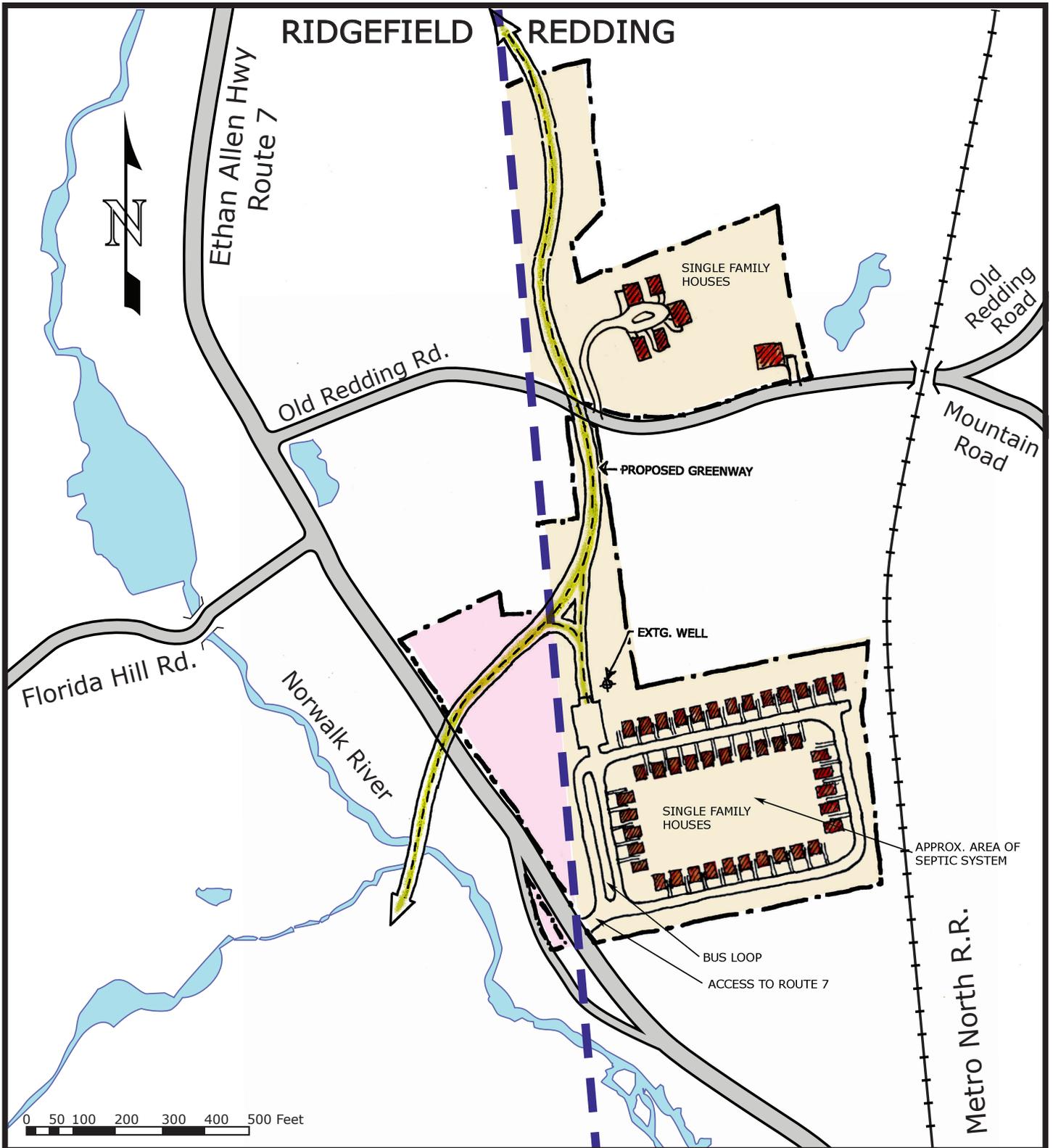
Sheet 6

**Ethan Allen Highway (Route 7) and Old Redding Road Area
Sites E-1 and E-2 PLAN, Ethan Allen Hwy./Old Redding Rd.**

- These two sites are linked by the planned regional greenway which will create a “Norwalk River Valley Trail” along the lands acquired several decades ago by the State of Connecticut for the proposed (now abandoned) Route 7 Expressway. The IHZ plans show the greenway in concept, along with a location for a bus transit station on existing Route 7, and two neighborhoods of individual houses.
- Refer to the Appendix for verification of on-site water supply and sewage disposal capacity for each site.
- These sites will share common IHZ development standards based on a density of 6 dwellings per developable acre, a coordinated site plan with common land ownership by the Town or quasi-public nonprofit entity under Town contract. Land is to be acquired by the Town from the State, and all plans will be coordinated with the own of Ridgefield.
- Projected build-out (2 sites): 55 residential units (all affordable).

Route 7 / Old Redding Road Area: Plan Maps

- Site Analysis: Study Area E
 - Area E/Sheet 6 Potential IHZ Development (single-family detached houses)
 - Area E/Sheet 7 Potential IHZ Development (multi-family townhouses)



Incentive Housing Study

City, Town & Regional Planning
 John Hayes, Consultant
 PO Box 1, Redding Ridge, CT 06876
 203-938-2380

For The Redding Planning Commission
 Redding, Connecticut

**Site Analysis: Potential IHZ Development
 Single Family Homes**

Location: Ethan Allen Hwy. / Old Redding Road

Source: Redding GIS, State Data, FEMA

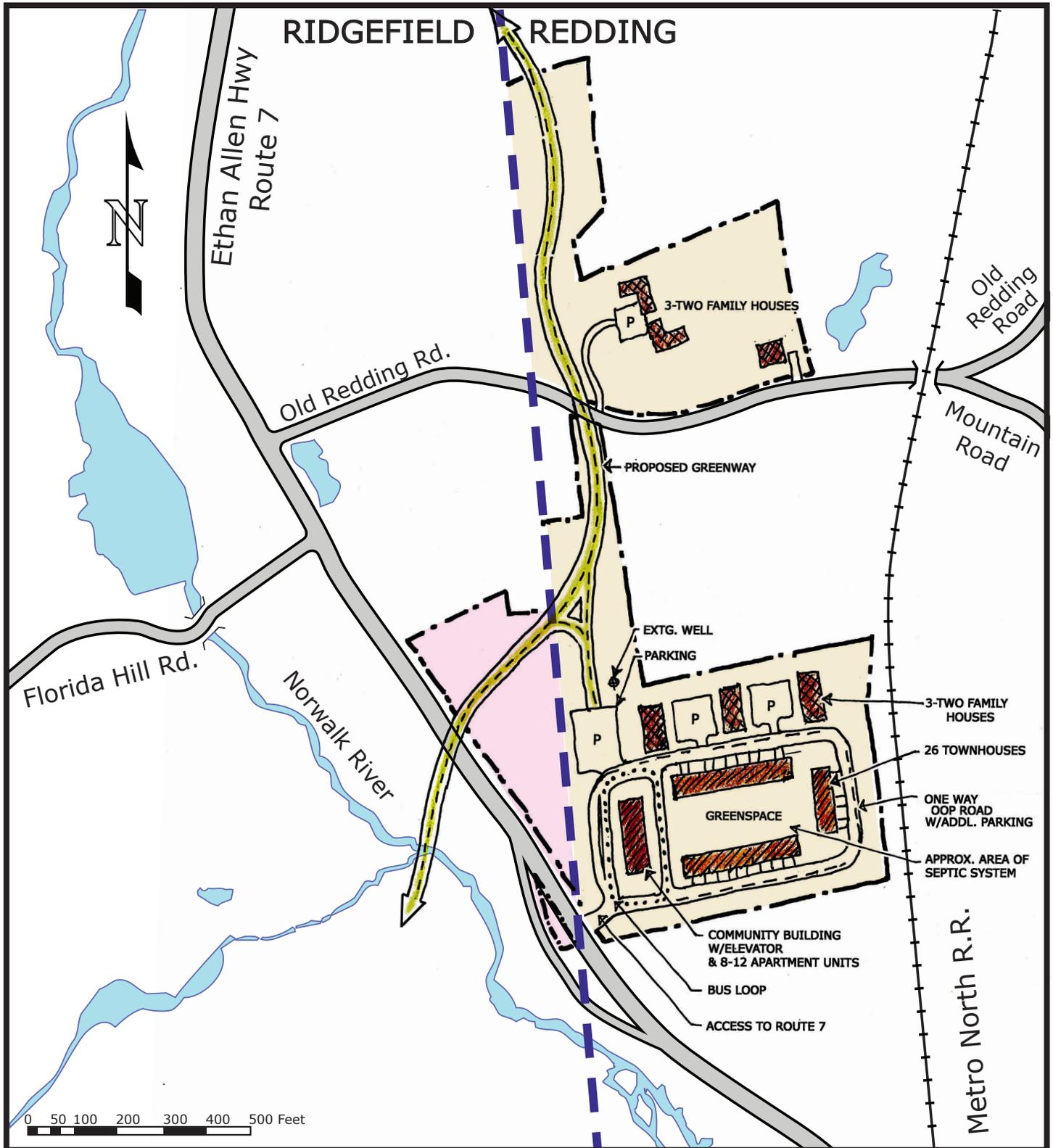
Date: 6/15/11

Scale: 1" = 310'

**STUDY
 AREA**



Sheet 6



Incentive Housing Study

City, Town & Regional Planning
 John Hayes, Consultant
 PO Box 1, Redding Ridge, CT 06876
 203-938-2380

For The Redding Planning Commission
 Redding, Connecticut

**Site Analysis: Potential IHZ Development
 Multi-Family Homes - Alternative Plan**

Location: Ethan Allen Hwy. / Old Redding Road

Source: Redding GIS, State Data, FEMA

Date: 6/15/11

Scale: 1" = 310'

**STUDY
 AREA**



Sheet 7

PROPOSED DEVELOPMENT STANDARDS

Overview

A fundamental requirement for every proposed Incentive Housing Zone is the preparation of draft zoning regulations and design standards to govern the permitted development within the zone. As specified in the Home Connecticut Act (General Statutes Sec. 8-13n.) the regulations shall permit, “as of right”, incentive housing development at the densities specified in the act:

- six units per acre for single-family detached housing;
- ten units per acre for duplex or townhouse housing; and
- twenty units per acre for multifamily housing.

However the municipality may request a waiver of the density requirements if it demonstrates in its application to the Office of Policy and Management that the land to be zoned for incentive housing use is owned or controlled by the municipality or by a nonprofit trust, agency or corporation, and that one hundred percent of the proposed residential units will be restricted to affordable occupancy. While the regulations may require a site plan or subdivision review to assure compliance with IHZ standards they may not require a special permit or special conditions of approval. Mixed uses are permissible. It is anticipated that Redding will seek a municipal density waiver for Sites E-1 and E-2 (Ethan Allen Highway and Old Redding Road) for an IHZ development at six units per gross acre which would allow incorporation of a transit terminal shelter, an open space greenway and flexible building designs (for duplex and townhouse) in the plans.

Design standards (Gen. Statutes 8-13o.) are typically required as part of an incentive housing zoning regulation to ensure that construction will be complementary to neighboring buildings and structures and consistent with an adopted housing plan. As an “overlay” zone, the IHZ design standards may modify the specific standards of the underlying zone and specify unique standards for scale and proportion of buildings, site coverage, street and sidewalk design, infrastructure, off-street parking, open spaces, protection of natural features, setbacks and buffering from adjacent properties. However the IHZ design standards and regulations for an overlay zone must provide for a density of development at least twenty-five percent greater than the density allowed in the underlying zone.

Proposed Incentive Housing Regulations

Detailed amendments to Redding's Zoning and Subdivision Regulations are required to implement the recommendations of this report, and will be prepared for public hearing (respectively) by the Zoning Commission and the Planning Commission, for endorsement by the legislative body and submission to the State OPM as required by statute.

In summary, the proposed amendments are:

- Zoning Regulations
 - Sec. 3.1 (add exception for IHZ overlay zones, as specified);
 - Sec. 4.1 (add IHZ, an overlay district, to list of Districts);
 - Sec. 4.2.8 (new section, Incentive Housing Zone, which defines the location and specific development standards for three overlay IHZ's, referenced to Zoning Map, as follows:
 - a. Ethan Allen/Old Redding Rd. Overlay Zone ((Single-family dwellings @ 6 units/acre: 100% of units affordable)),
 - b. Church Street South Overlay Zone ((Single-family dwellings @ 6 units/acre: 20% of units affordable)),
 - c. Old Mill Road Overlay Zone ((Duplex/townhouse/upper story dwellings and mixed use, @ 10 units/acre: 20% of units affordable));
 - Sec. 5.5.3 (add exception for IHZ in respect to special permit for land excavation, filling and clearing);
 - Sec. 5.6.2 (add exception for IHZ in respect to mixed use parking requirements).
- Subdivision Regulations
 - Sec. 4.1 (add general exception for lot layout standards in IHZ);
 - Sec. 4.3 (add general exception for road and driveway standards in IHZ);
 - Sec. 4.10 (add a discretionary waiver provision where Commission finds any specific design or mapping requirement would unreasonably increase development cost in an IHZ.).

RECOMMENDATIONS AND PROGRAM OF ACTION

Developing A Comprehensive Application

From review of relevant parts of the Home Connecticut act (Gen. Statutes 8-13 p.) and a sample OPM application form it is clear that the Town's application for IHZ approval ("determination of eligibility for financial incentive payments") must include at least the following basic items pertinent to each proposed IHZ.

- 1) Local approvals: Board of Selectmen resolution and Zoning Commission certification of intent to enact IHZ.
- 2) Project information:
 - Locator map(s) establishing that IHZ(s) are in an "eligible location", in relation to transit stations and/or bus routes, in an area of concentrated development, capable of public water and sewer.
 - Maps defining boundaries and area of each IHZ.
 - Description and calculation of developable land in each IHZ.
 - Consistency with State Conservation and Development Policies Plan described.
 - Description of existing and potential residential development, and potential for reuse of existing buildings, in each IHZ.
 - Calculation of potential residential units based on the minimum density for each IHZ.
- 3) Housing plan, including anticipated build-out of each IHZ, available and proposed infrastructure, compatibility with existing buildings and uses, and municipal efforts to support development of each IHZ.
- 4) Proposed IHZ regulations and design standards (draft).
- 5) Proposed incentive housing restrictions and plan for administration and enforcement of its requirements (draft).

Summary of Steps – A Time Line

- a) Participate, in collaboration with the Towns of Ridgefield and Wilton, in the Transit Oriented Development initiative recently announced by CT OPM – a program vital for Danbury Branch rail service expansion, the proposed Georgetown passenger station and pedestrian bridges: August 1 application and subsequent 18-24 month program.

Applications to State of CT OPM for IHZ approvals: September - October 2011 (complete application), January 2012 and thereafter (project implementation).

- b) Property acquisition from State of Connecticut, Sites E-1 and E-2: July-August 2011.
- c) Sewage Treatment Capacity, engineering study, Georgetown, Sites A-1, A-2, D-1: July-September 2011.
- d) Incentive Housing Zones, proposed regulations for discussion and public hearing, Areas A, D & E: September-December 2011.
- e) Parking Capacity Study, Georgetown, Sites A-1, A-2, A-3: October 2011.
- f) Financing and Development Strategy, including site plans, Sites E-1 and E-2: January-June 2012.
- g) Administration of Incentive Housing Zones and Town Projects (affordability covenants, Town oversight, general administration): January 2012 and thereafter.
-

APPENDIX

Incentive Housing Feasibility Study

a report by Milone & McBroom Inc.

March 28, 2011



MILONE & MACBROOM®

Engineering,
Landscape Architecture
and Environmental Science

March 28, 2011

Mr. John Hayes
Planning Consultant
Town of Redding
Old Town House, 23 Cross Highway
P.O. Box 1028
Redding, CT 06875

**RE: Report
Incentive Housing Study Feasibility Study
Redding, Connecticut
MMI #1190-00-70**

Dear Mr. Hayes:

Milone & MacBroom, Inc. (MMI) was retained by the Town of Redding to provide development feasibility evaluations in regard to well and septic needs of two sites in the town of Redding, Connecticut (Redding) that would be developed in close proximity to a proposed greenway that is planned to connect Danbury to the Fairfield County shoreline communities. The subject letter report provides MMI's feasibility analysis of the two sites in support of the development of Incentive Housing Zones (IHZ) within the town. For simplicity and explanatory purposes, the two sites within the study have been given the titles of "Site 1" and "Site 2" by MMI. These two sites consist of the following properties:

Site 1

6.53 acres in total with 2.47 acres available for water supply well placement

3 Old Redding Road	5 Old Redding Road	11 Old Redding Road
13 Old Redding Road	15 Old Redding Road	

Site 2

11.66 acres in total with 6.39 acres available for water supply well placement

4 Old Redding Road	6 Old Redding Road	8 Old Redding Road
324 Ethan Allen Highway	322 Ethan Allen Highway	
318 Ethan Allen Highway	3 Properties in the town of Ridgefield, Connecticut	

A location map showing both proposed sites with possible water supply well locations and potential septic system areas is attached as Figure 1. At the time of the feasibility study, site plans were not available. Therefore, the entire buildable areas were considered by MMI throughout the feasibility analysis. Plausible locations for water supply wells and septic areas were derived based

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Vincent C. McDermott, FASLA, AICP	William A. Root, M.E.S.
Stephen R. Dietzko, P.E.	Garret Harlow, L.A.
Jeanine Armstrong Gouin, P.E.	Paul F. Mills, P.E.
Robert A. Jackson, L.S.	Steven D. George, P.E.
John R. Gilmore, P.E.	Ryan R. Chmielewski, L.A.
Edward A. Hart, P.E.	John Hammer, L.A.
Thomas R. Sheil, L.A.	Scott G. Bristol, LEP
David W. Dickson, L.A.	William J. Nagle, Jr., L.S.
Thomas J. Daly, P.E.	John Mike Wilson, P.E.
W. Andrew Greene, P.E., LEED AP	Ryan McEvoy, P.E.
Darin L. Overton, P.E.	Nicholas M. Fomenko, P.E.
Anthony A. Ciriello, P.E.	Andrew T. Manning, P.E.
Nicolle Burnham, P.E.	George G. Caughman, P.E.
Mark Arigoni, L.A.	Michael G. Sherman, P.E.
Michael J. Joyce, P.E.	Michael T. Looney, AICP
Michael F. Mansfield, L.S.	Jarrod B. Edens, P.E.
David Murphy, P.E.	Glenn D. Jarvis, P.E.
Alan Wm. Mess, P.E.	Brian M. Cote, P.E.
Henry Ditman, P.E.	Nicholas Mansfield, P.L.S.
David Sullivan, P.E.	Daniel Kroeber, P.E.
Philip Michalowski, AICP	Kevin C. Fuselier, L.A.
Richard Harrall	Jason D. McCabe, P.E.
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Ted G. Crawford, P.E., LEED AP	Martin S. Overton, CEng, CEm.
Gary Fontanella, P.E.	

on the size of the sites and the Connecticut Incentive Housing Program design criteria as described on the next page.

Included in the feasibility study, MMI reviewed geologic reports and maps to determine the most favorable locations for development of a well from a hydrogeologic perspective. Secondly, nearby private and public wells were reviewed from Connecticut Department of Consumer Protection (DCP) records. Well logs for streets and sites within 150 feet of the outer limits of the properties of Sites 1 and 2 were reviewed. MMI consulted existing ground water classification of the two sites to look for any classification areas GB or lower, which would potentially prevent well development. Additionally, an environmental database review of state and federal records was conducted to identify historical and/or recent spills, releases, or storage tank failures that may impact ground water quality. Finally, MMI conducted an evaluation of sanitary issues that affect the siting of sanitary and stormwater infrastructure, locations of large Connecticut Department of Environmental Protection (DEP) or Connecticut Department of Public Health (DPH) -regulated septic systems, limits of floodplains, wetlands, stream channel encroachment lines, watercourses, and the ability to maintain a 150-foot radius of control around a well.

Estimation of Water and Subsurface Sewage Disposal Design Flows

Water supply and wastewater capacity needs with respect to the Incentive Housing Program are calculated in Tables 1 and 2. The Incentive Housing Program provides for development of "single family," "two-family," or "multifamily" units. The Department of Public Utility Control (DPUC) design criteria of 75 gpd/person for water supply was then applied to the assumed number of persons per unit (three). Needed water supply in gallons per minute (gpm) was then derived by applying an 18-hour day (per DPH regulations), and required gpm rates were obtained.

Table 1
Estimation of Potable Water Demand

Site	Area	Number of Units	Potable Water Demand (gpd)	Potable Water Demand (gpm)	Number of Wells Needed*
Density A 6 units/acre					
Site 1	6.53 ac.	39 units	8,816	8.2	2
Site 2	11.66 ac.	70 units	15,741	14.6	3
Density B 10 units/acre					
Site 1	6.53 ac.	65 units	14,693	13.6	3
Site 2	11.66 ac.	117 units	26,235	24.3	4
Density C 20 units/acre					
Site 1	6.53 ac.	131 units	29,385	27.2	4
Site 2	11.66 ac.	233 units	52,470	48.6	6

*The sum of all wells pumping must be able to supply the total demand with the loss of one well; therefore, two wells at 10 gpm must be developed to meet a demand of 8.2 gpm.

Based on the review of private well logs, it is likely that well yield rates of over 10 gallons per minute at either site cannot be expected. Furthermore, with the restriction of a 75-foot sanitary radius per DPH, well pumping rates cannot exceed 10 gpm. For new community water systems, source redundancy is necessary in case one well should fail. As a result, only densities A and B are likely feasible with the necessary number of wells per site.

Wastewater requirements are based on 150 gpd per bedroom per unit. Assuming that there will be two bedrooms per housing unit, densities B and C are likely impossible. For glacial till soils, several acres would need to be set aside for leachfields that could accept flows of 20,000 gpd and greater. Site 2 has an area mapped as sand and gravel and, therefore, has a greater probability of high wastewater acceptance rates, but the design flows for densities B and C are still prohibitive.

Table 2
Estimation of Subsurface Sewage Disposal Needs

Site	Area	Number of Units	Number of Bedrooms	Necessary Capacity (gpd)	Area Available?*
Density A 6 units/acre					
Site 1	6.53 ac.	39 units	78	11,700	Possible
Site 2	11.66 ac.	70 units	140	21,000	Possible
Density B 10 units/acre					
Site 1	6.53 ac.	65 units	130	19,500	Unlikely
Site 2	11.66 ac.	117 units	234	35,100	Unlikely
Density C 20 units/acre					
Site 1	6.53 ac.	131 units	262	39,300	Unlikely
Site 2	11.66 ac.	233 units	466	69,900	Unlikely

**All conclusions must be verified by soil testing and ground water level monitoring.*

It is important to note that this analysis does not account for soil testing and ground water level monitoring, which are mandatory when designing septic systems. Without soil testing, precise system capacities cannot be determined with confidence.

As a result of this analysis, it is likely that only the lowest density arrangement (six units per acre) is possible for the two sites.

Review of Geologic Reports and Maps

MMI reviewed geologic reports and maps to determine the most favorable locations for development of a well from a hydrogeologic perspective. GIS mapping was produced using layers provided by the DEP. Figure 2 shows the surficial geology of the two sites, while Figure 3 shows the bedrock geology. Almost all of Area 1 is underlain by till. The four northern parcels, portions

of four additional parcels to the south, and much of the northernmost parcel in Ridgefield are also underlain by till. Portions of the three Ridgefield properties and the two southernmost parcels in Redding are mapped as being underlain by gravel.

Review of the glacial sediment thickness GIS layer provided by the DEP shows both areas mapped as being underlain by 0 to 50 feet of glacial sediment thickness. A review of the USGS *Water Resources Inventory of Connecticut: Part 4, Southwestern Coastal River Basins* shows the stratified-drift aquifer beneath both sites as being mapped as having a stratified-drift aquifer thickness of 10 feet and its transmissibility mapped as "transmissibility undetermined" (USGS, 1970). This agrees with area private and public well logs, which are further described below.

Also included in the geologic reports and maps review by MMI was a review of the bedrock geology. All land area of the properties comprising Site 2, aside the easternmost portion of 318 Ethan Allen Highway, are underlain by Harrison gneiss according to DEP GIS data. The easternmost portion of the 318 Ethan Allen Highway property contains a fault that is aligned north-south, and Ordovician Granitic gneiss underlies the land to the east of the fault. Much of Site 1 is underlain by Ordovician Granitic gneiss, while a portion of three properties and all of 3 Old Redding Road is underlain by Harrison gneiss.

A geologic contact runs generally northeast to southwest through the middle portion of Site 1. The bedrock fault basically bisects 15 Old Redding Road, aligned in north-south fashion. Typically, the most productive bedrock yielding wells are located at the bisection of two bedrock features (e.g., the intersection of two bedrock faults). However, because it is likely that sanitary radii will constrain pumping rates to less than 10 gpm, high yielding well(s) are not absolutely necessary.

Review of Drillers' Logs

Nearby private and public wells were reviewed from Connecticut Department of Consumer Protection (DCP) records. Well logs for streets and sites within 150 feet of the outer limits of the properties of Sites 1 and 2 were reviewed. In addition, attached are the well logs for those properties within 150 feet of Sites 1 and 2 that were available through DPH review.

A tabulated summary of those properties within 150 feet of Sites 1 and 2 are included in Table 3, and a map showing the location of these wells is included as Figure 4.

Table 3
Applicable Drillers' Logs

Address	Well Depth (ft)	Water Level (ft)	Yield (gpm)	Yield Test Duration (hrs)	Formation Description
4 Old Redding Road	175	15	6	4	0-20 (Soil); 20-175 (Bedrock)
5 Old Redding Road	150	30	7	4	0-12 (Soil); 12-150 (Bedrock)
6 Old Redding Road	250	16	5	4	0-45 (Soil); 45-250 (Bedrock)
7 Old Redding Road	175	10	6	4	0-50 (Soil); 50-175 (Bedrock)
17 Old Redding Road	180	42	15	4.5	0-4 (Clay); 4-180 (Granite)
15 Simpaug Turnpike	275	6	2	4	0-1 (Soil); 1-275 (Bedrock)
Ethan Allen Highway*	130	6	20	--	0-24 (Gravel and Sand); 24-130 (Grey Granite)
Mountain Road*	350	Overflow	15+	10	0-4 (Overburden); 4-350 (Grey Rock)

* Address not given. Closest (in distance) well log available to the 150-foot buffer surrounding the two sites.

Reported yields ranged from 20 gpm west of Route 7 at the Ethan Allen Highway property to two gpm at the 15 Simpaug Turnpike property. As noted on well logs of properties within 150 feet of Sites 1 and 2, overburden sediments ranged from one to 50 feet in the area. As a result, a similar thin layer of overburden sediments followed by bedrock to an acceptable yield would be likely for wells located at Sites 1 and 2. Additionally, water levels will likely be between land surface elevation and 42 feet and a yield of between two and 20 gpm.

Review of Ground Water Quality and Contaminated Sites

MMI consulted existing ground water classification of the two sites to look for any classification areas GB or lower. DEP ground water classifications include GC, GB, GA, and GAA from presumed least quality to presumed highest quality. Only ground water classified as GA or GAA are suitable for drinking without treatment. According to the most recent DEP GIS Ground Water Quality Classifications dataset, the ground water below both sites is classified as GA. A map showing the ground water distinction is included as Figure 5. Being classified as GA ground water, to the DEP's best information, the ground water below both sites is believed to be suitable for drinking.

Additionally, an environmental database review of state and federal records was conducted to identify historical and/or recent spills, releases, or storage tank failures that may impact ground water quality. MMI consulted the Environmental Data Resources, Inc. (EDR) database for information on any spill, release, or storage tank failure within 150 feet of either site. Addresses were used for those Redding properties within 150 feet of the outer limits of either property. All properties within 150 feet of either site, in addition to pertinent information associated with each reported and listed spill event, are listed on the following page in Table 4.

Table 4
Reported Spill or Release Incidents

Address Number	Road	Listed (Y/N)	Report Date	Description	Comments
280	Ethan Allen Highway	N	--	--	--
296	Ethan Allen Highway	Y	11/16/1992	12 gallons of transformer oil (petroleum) non-PCB; drill rig hose; contained and terminated	Not listed as 296 Ethan Allen Highway but rather Ethan Allen Hwy./Florida Hill Road
322	Ethan Allen Highway	N	--	--	--
324	Ethan Allen Highway	N	--	--	--
135	Mountain Road	N	--	--	--
147	Mountain Road	N	--	--	--
155	Mountain Road	N	--	--	--
2	Old Redding Road	N	--	--	--
3	Old Redding Road	N	--	--	--
4	Old Redding Road	N	--	--	--
5	Old Redding Road	N	--	--	--
6	Old Redding Road	N	--	--	--
8	Old Redding Road	Y	3/12/1996	Ground tank failure; #2 Fuel Oil Spill; 275 lustr with contaminated soil; tank and soil removed; State of CT; Governmental	Likely 8 Redding Road due to polluter name: State of CT and class: "Governmental"
9	Old Redding Road	N	--	--	--
10	Old Redding Road	N	--	--	--
11	Old Redding Road	N	--	--	--
12	Old Redding Road	N	--	--	--
13	Old Redding Road	N	--	--	--
14	Old Redding Road	N	--	--	--
15	Old Redding Road	N	--	--	--
17	Old Redding Road	N	--	--	--
14	Simpaug Turnpike	N	--	--	--

Source: Environmental Data Resources Inc. Website (EDR On-Demand; March 2011)

A map showing the properties with reported incidents is included as Figure 6. It is in MMI's opinion that incidents listed in the EDR database do not limit and/or prohibit the potability of the ground water.

Although it is not listed in the EDR database, historical usage of the southerly portion of Site 2 may be problematic relative to siting water supply wells. The intensive use of the land and the nature of the activities raises a potential for contamination and, without rigorous testing to prove

otherwise, DPH may be adverse to permitting wells in this area. However, this portion of the site is mapped as sand and gravel and is likely well suited for the subsurface sewage disposal system.

Review of Sanitary Issues

MMI conducted an evaluation of sanitary issues that affect the siting of sanitary and stormwater infrastructure, locations of large DEP or DPH-regulated septic systems, limits of floodplains, wetlands, stream channel encroachment lines, watercourses, and the ability to maintain a 75-foot radius of control around a well.

Limits of the floodplains, wetlands, stream channel encroachment lines, and watercourses are included in Figure 7. It is likely that these factors would not be limiting toward the placement of bedrock wells and/or septic systems on both sites. The limiting factor would likely be the sanitary radius surrounding the wells. Although a 150-foot radius would allow pumping rates greater than 10 gpm, this radius would be problematic near property lines. The applicability of a 150-foot radius would preclude well development in all but the most central portions of the two sites. In turn, this would limit development of the housing units and siting of the septic systems. Therefore, 75 feet was selected as the radius of control.

In an attempt to logistically place both wells and septic systems on either site, a review of the topography is necessary. To do so, MMI reviewed USGS quadrangle mapping of the sites. Redding did not present MMI with a full site plan including grading and siting of infrastructure. As a result, MMI has pointed out the most favorable sites for two wells and two septic systems. It is instrumental in the proper function of both infrastructure types that the wells be placed upgradient of the septic systems. Furthermore, the septic system drainage need to be directed away from the production wells. This design concept is of the utmost importance when placing sand and gravel wells and septic systems on the same site. However, in this case, bedrock wells will likely pull from ground water veins some hundreds of feet deep into the earth surface. Also, it will take some time for the septic field to reach those veins as they would likely have to travel through approximately 20 to 30 feet of surficial material before hitting bedrock and then traveling through ground water veins along bedrock contours.

Conclusion

The lowest density per the Connecticut Incentive Housing Program is the most feasible arrangement given the sites' characteristics and constraints. Preliminary recommendations for water supply wells and subsurface sewage disposal systems are shown based on the above analysis. To reiterate, it is important to acknowledge that this analysis does not account for soil testing and ground water level monitoring, which are mandatory when designing septic systems. Without soil testing, precise system capacities cannot be determined with confidence. With the wells located away from the central portions of the sites, the maximum amount of space will be available for housing units.

Mr. John Hayes
March 28, 2011
Page 8

Please feel free to contact either of us at (203) 271-1773 if you have any questions regarding the information included in this report.

Very truly yours,

MILONE & MACBROOM, INC.



Shawn M. Goulet
Environmental Scientist



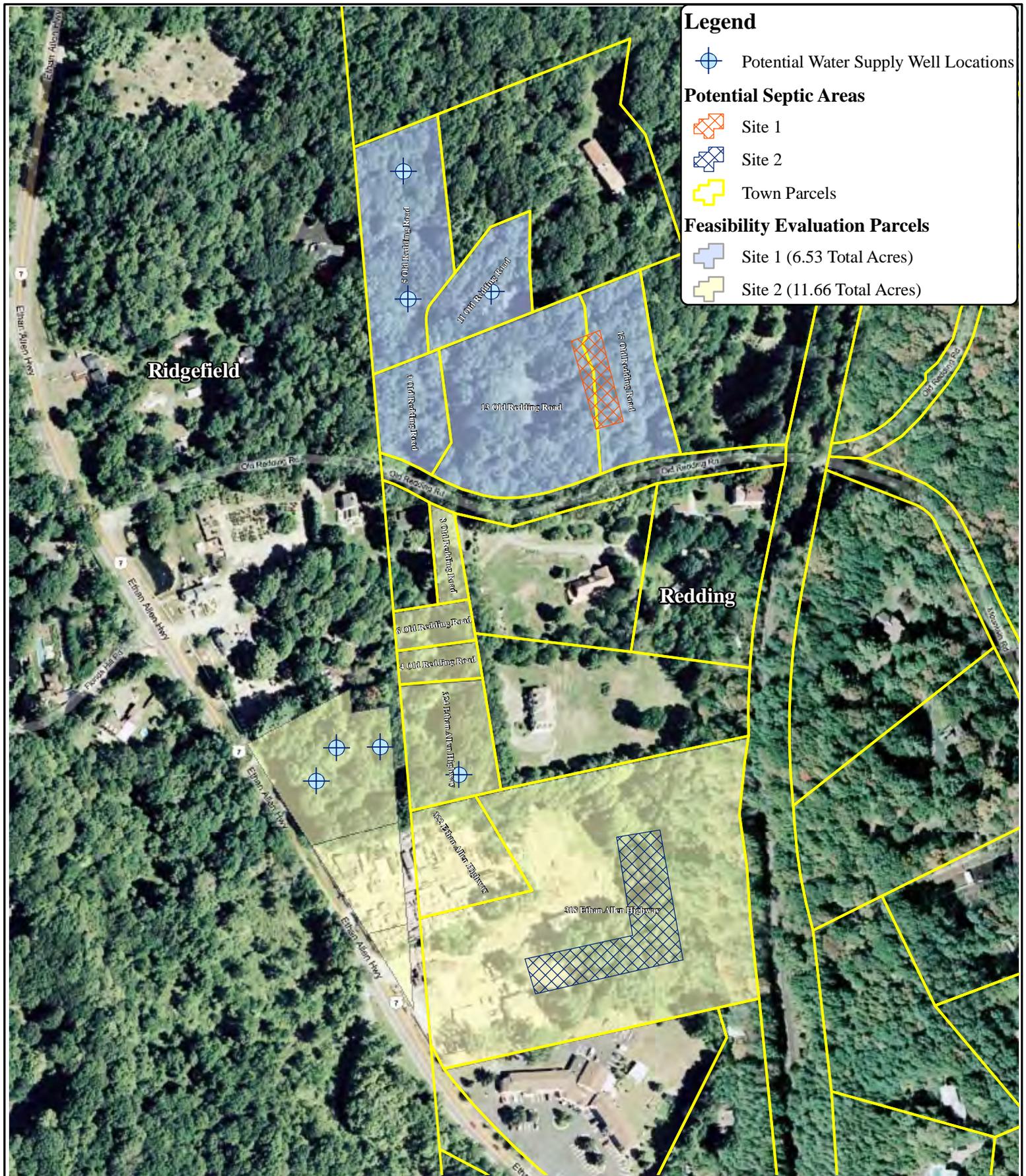
David Murphy, P.E.
Associate

Attachments

1190-00-70-mr2811-ltr.doc

ATTACHMENT A
Figures

Town of Redding
Old Town House, 23 Cross Highway, P.O. Box 1028
Redding, Connecticut



Legend

- Potential Water Supply Well Locations

Potential Septic Areas

- Site 1
- Site 2

Town Parcels

- Town Parcels

Feasibility Evaluation Parcels

- Site 1 (6.53 Total Acres)
- Site 2 (11.66 Total Acres)

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Location Map

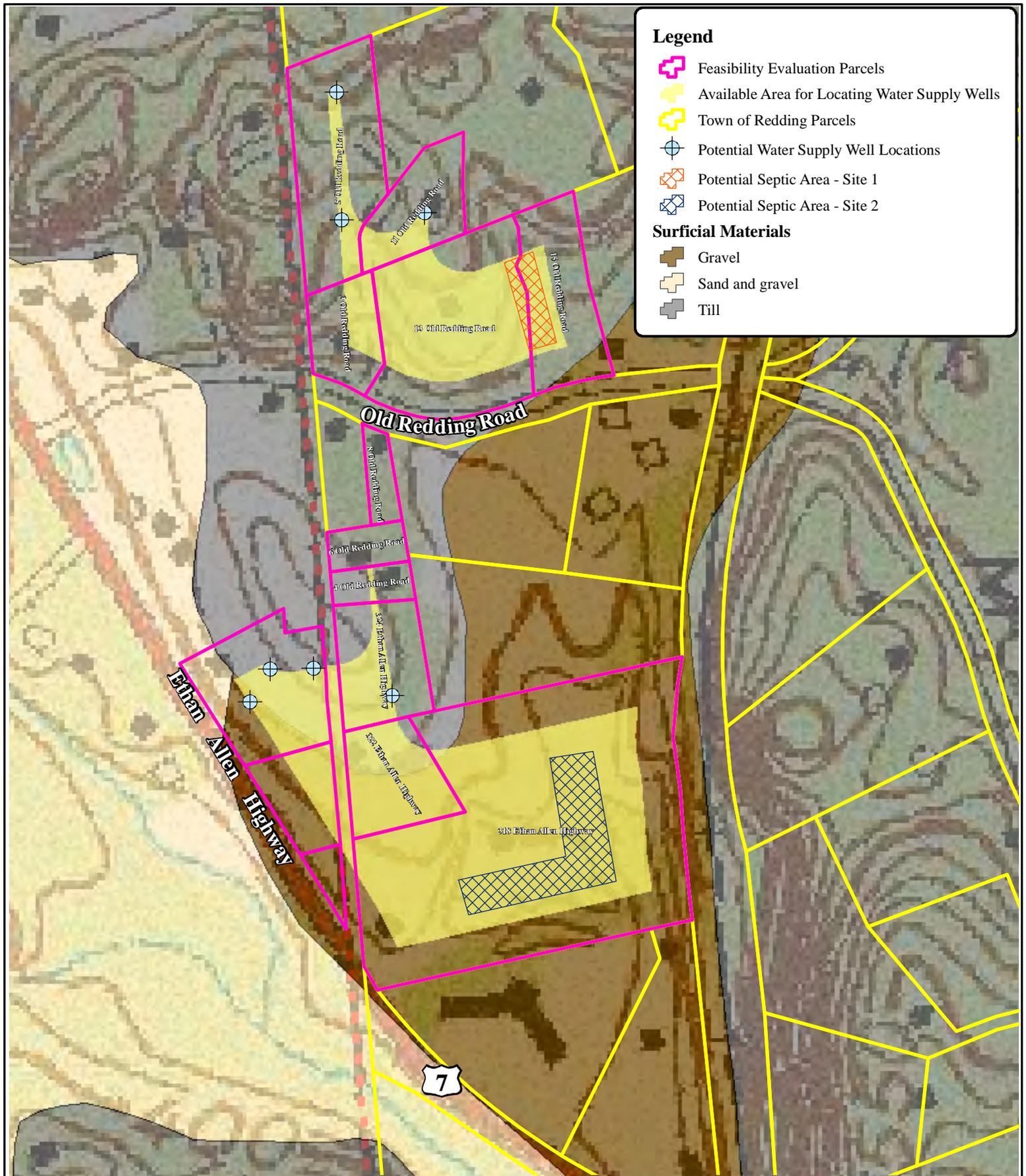
MMI#: 1190-00-70
MXD: H:\Location_Map.mxd
SOURCE: CT DEP, Microsoft
Virtual Earth, Redding

**Incentive Housing Study
Feasibility Evaluations**

LOCATION:
Redding, CT

Map By: SMG
Date: March 2011
Scale: 1" = 250'

SHEET:
Figure 1



Legend

- Feasibility Evaluation Parcels
- Available Area for Locating Water Supply Wells
- Town of Redding Parcels
- Potential Water Supply Well Locations
- Potential Septic Area - Site 1
- Potential Septic Area - Site 2

Surficial Materials

- Gravel
- Sand and gravel
- Till

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and Environmental Science

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Surficial Geology

MMI#: 1190-00-70
MXD: H:\Surficial_Geology.mxd
SOURCE: CT DEP, USGS,
Town of Redding

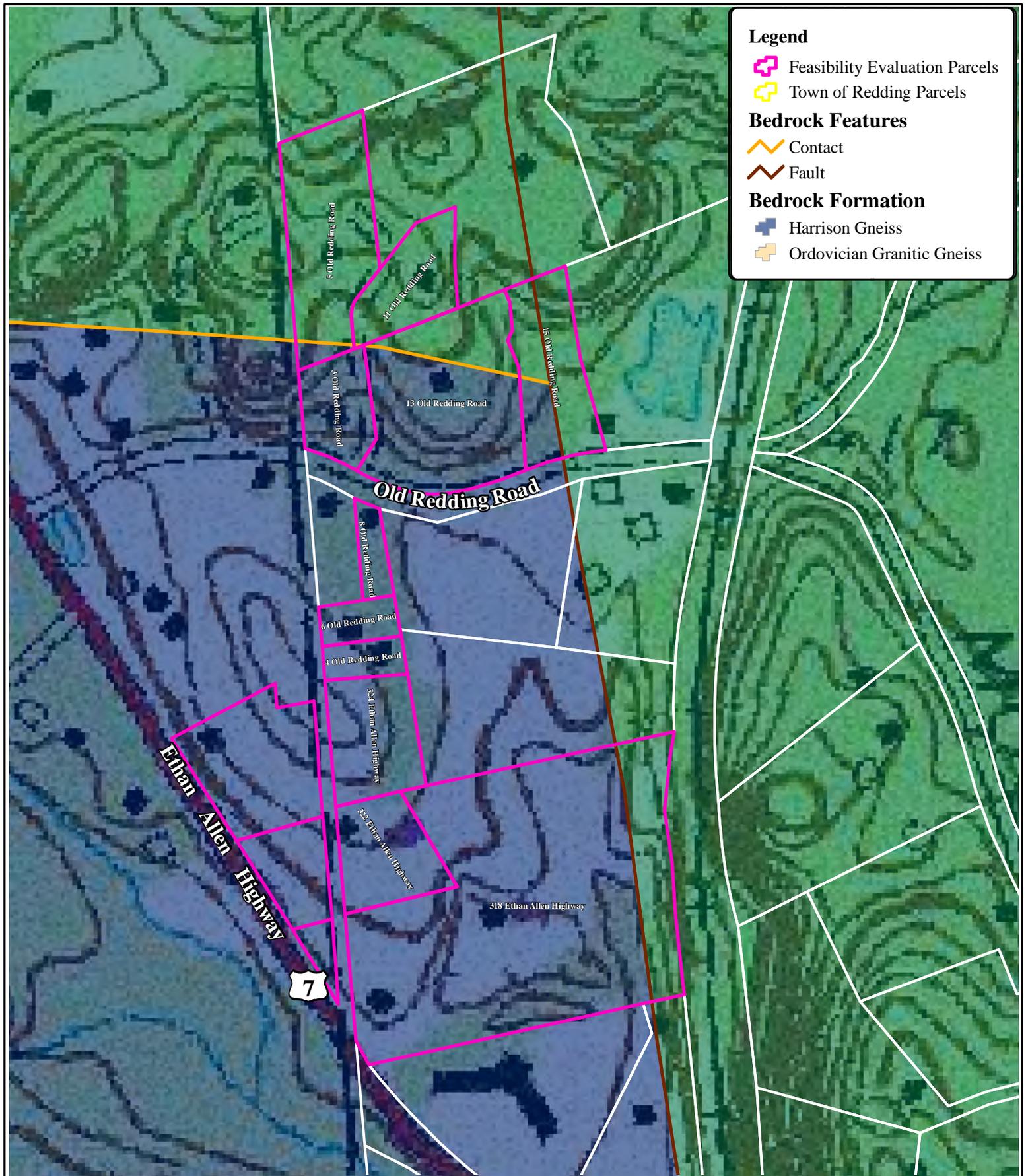
N

**Incentive Housing Study
Feasibility Evaluations**

LOCATION:
Redding, CT

Map By: SMG
Date: March 2011
Scale: 1" = 250'

SHEET:
Figure 2



Engineering,
Landscape Architecture
and Environmental Science



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Bedrock Geology

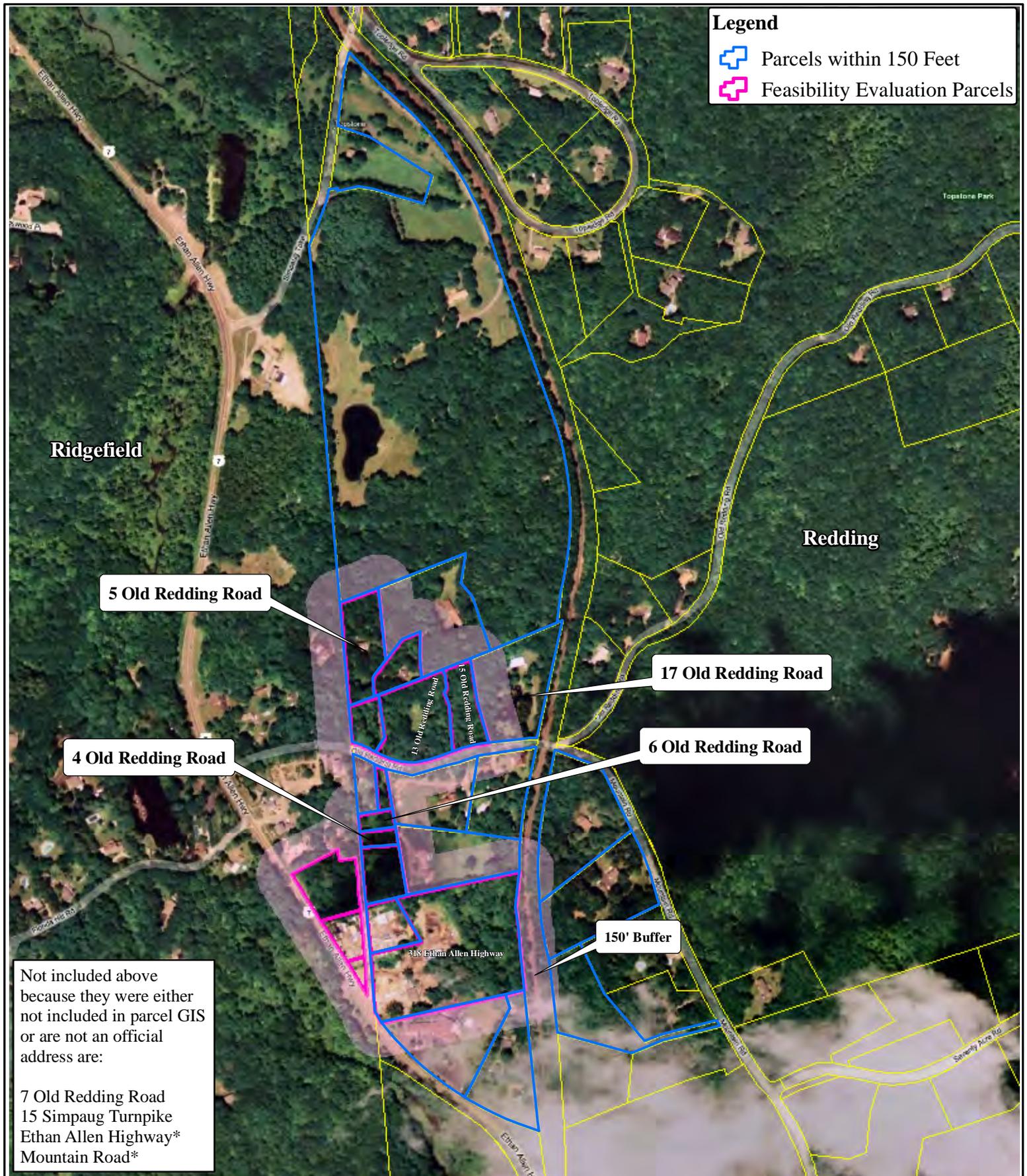
MMI#: 1190-00-70
MXD: H:\Bedrock_Geology.mxd
SOURCE: CT DEP, USGS,
Town of Redding

N
↑

**Incentive Housing Study
Feasibility Evaluations**

LOCATION:
Redding, CT

Map By: SMG	SHEET:
Date: March 2011	Figure 3
Scale: 1" = 250'	



Legend

- Parcels within 150 Feet
- Feasibility Evaluation Parcels

5 Old Redding Road

17 Old Redding Road

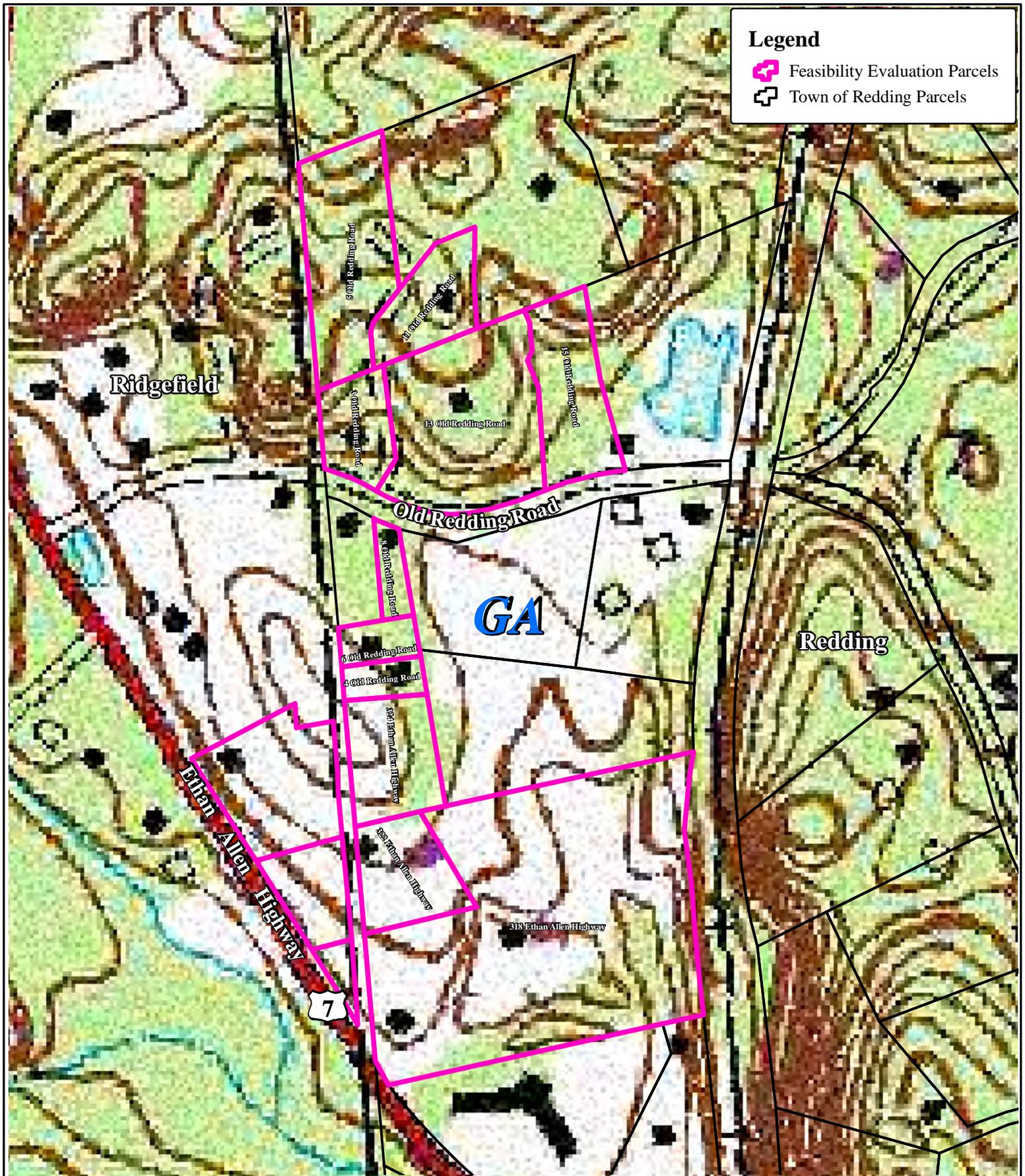
4 Old Redding Road

6 Old Redding Road

150' Buffer

Not included above because they were either not included in parcel GIS or are not an official address are:
 7 Old Redding Road
 15 Simpaug Turnpike
 Ethan Allen Highway*
 Mountain Road*

 <p>Engineering, Landscape Architecture and Environmental Science</p> <p>MILONE & MACBROOM®</p>	<p>Parcels within 150 Feet of Feasibility Analysis</p>	<p>LOCATION: Redding, CT</p>	
<p>99 Realty Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax: (203) 272-9733 www.miloneandmacbroom.com</p>	<p>MMI#: 1190-00-70 MXD: H:\150ftbuffer.mxd SOURCE: CT DEP, Microsoft Virtual Earth, Redding</p>	 <p>Incentive Housing Study Feasibility Evaluations</p>	<p>Map By: SMG Date: March 2011 Scale: 1" = 550'</p> <p>SHEET: Figure 4</p>



Legend

- ▭ Feasibility Evaluation Parcels
- Town of Redding Parcels

Engineering,
Landscape Architecture
and Environmental Science

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**Groundwater Quality Classification
on USGS Quad #91 (Bethel)**

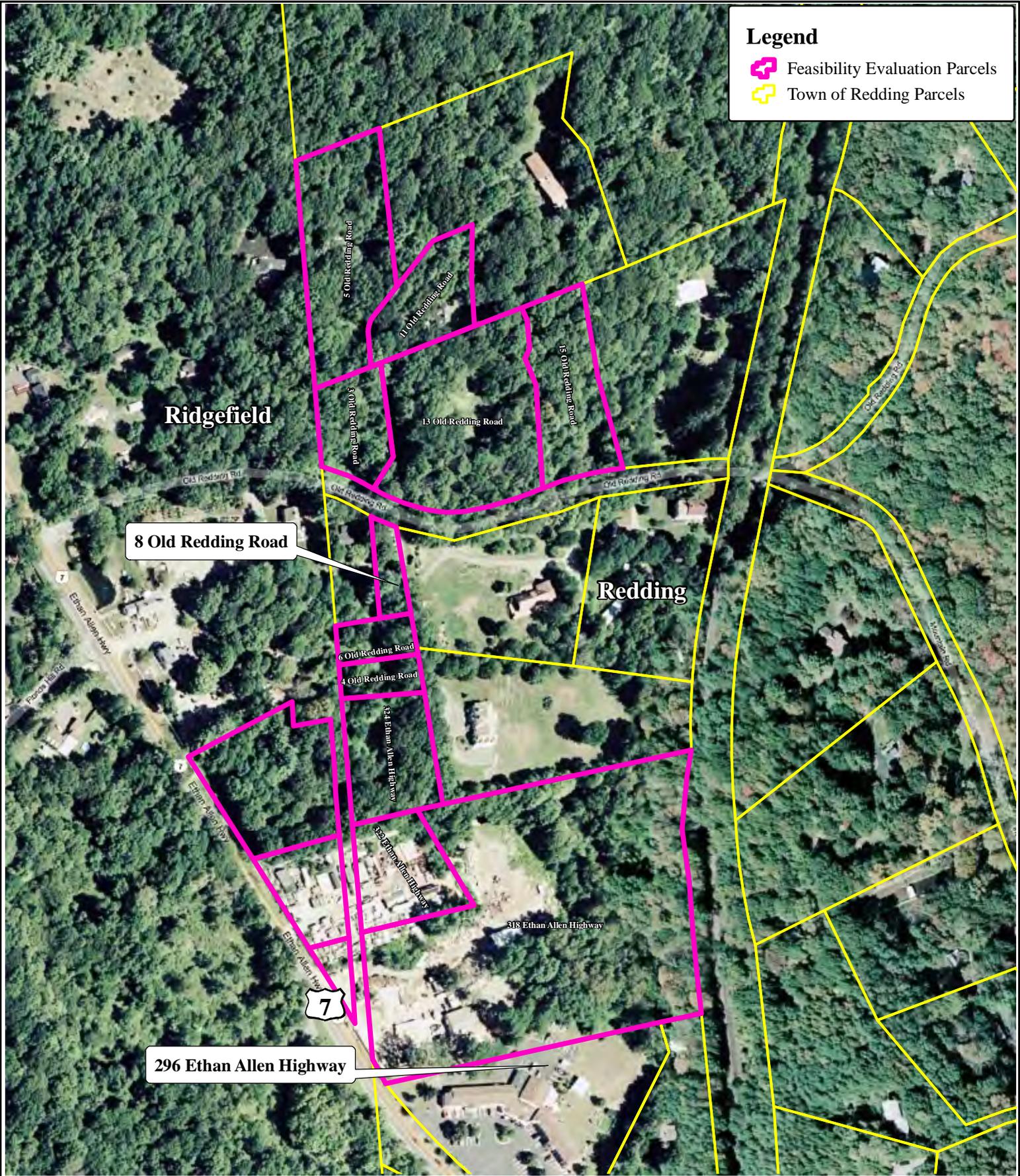
MMI#: 1190-00-70
MXD:H:\Groundwater_Class.mxd
SOURCE: CT DEP, USGS

N
↑

**Incentive Housing Study
Feasibility Evaluations**

LOCATION:
Redding, CT

Map By: SMG	SHEET:
Date: March 2011	Figure 5
Scale: 1" = 250'	



Legend

-  Feasibility Evaluation Parcels
-  Town of Redding Parcels

8 Old Redding Road

296 Ethan Allen Highway

Engineering,
Landscape Architecture
and Environmental Science



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**Properties with Reported
Spill Incidents**

MMI#: 1190-00-70
MXD:H:\Spills.mxd
SOURCE: CT DEP, Microsoft
Virtual Earth

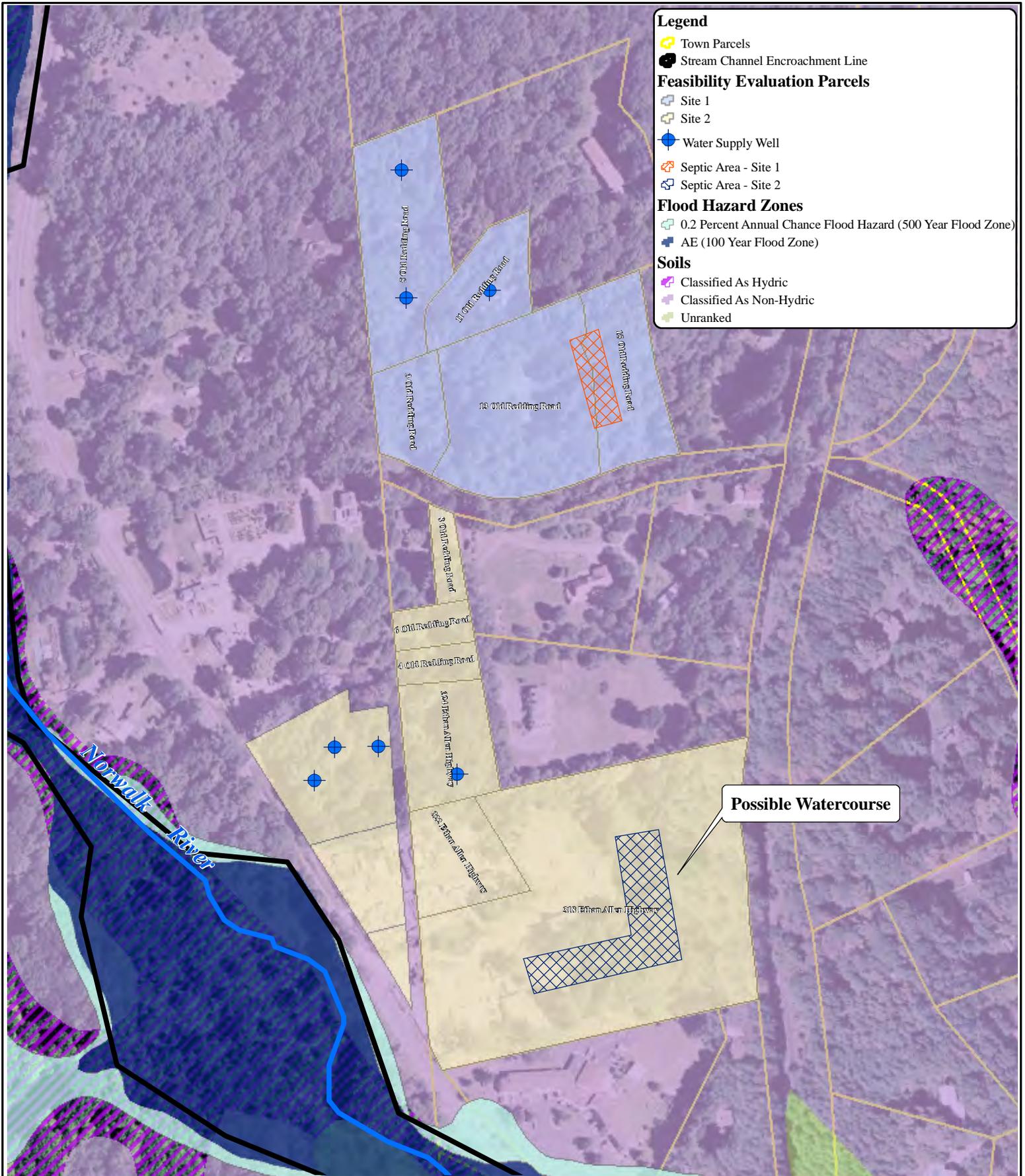
N
↑

**Incentive Housing Study
Feasibility Evaluations**

LOCATION:
Redding, CT

Map By: SMG
Date: March 2011
Scale: 1" = 250'

SHEET:
Figure 6



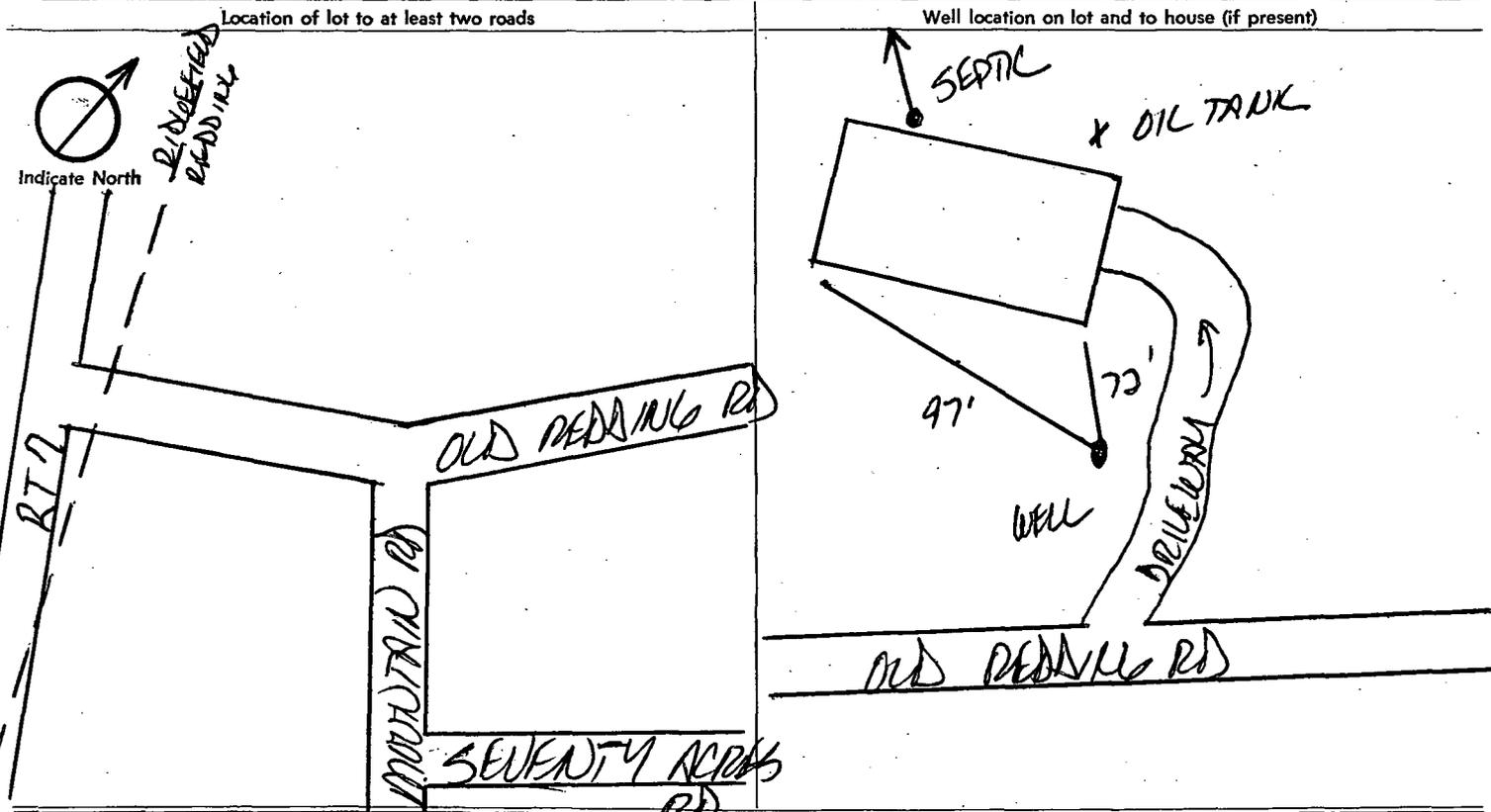
ATTACHMENT B
Drillers' Logs

Town of Redding
Old Town House, 23 Cross Highway, P.O. Box 1028
Redding, Connecticut

LOCATION OF WELL (Town) REDWING	(Street) OLD REDWING RD	(Lot Number) 5	DATE 12 OCT 1978
OWNER OF WELL <input type="checkbox"/> INDIVIDUAL <input checked="" type="checkbox"/> BUILDER <input type="checkbox"/> OTHER (Specify)			
OWNER'S ADDRESS NICK DINAROLI 662-B OSAGE LA ORONDAQUE VILLAGE, STRATFORD, CT			
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING
			<input type="checkbox"/> TEST WELL
			<input type="checkbox"/> OTHER (Specify)
			Est. No. of People being served.

SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot



Approximate number of feet from the well to nearest source of possible contamination:

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature) <i>[Signature]</i>	APPLICANT'S ADDRESS 13 GARDEN PLACE WILTON, CT	REGISTRATION NO. 39
<input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED	BY (Town Health Officer or Agent) <i>[Signature]</i>	DATE 10/12/78
REMARKS		

WELL COMPLETION REPORT

WDB-5 12-69 REV. 9-71

**STATE OF CONNECTICUT
WELL DRILLING BOARD**

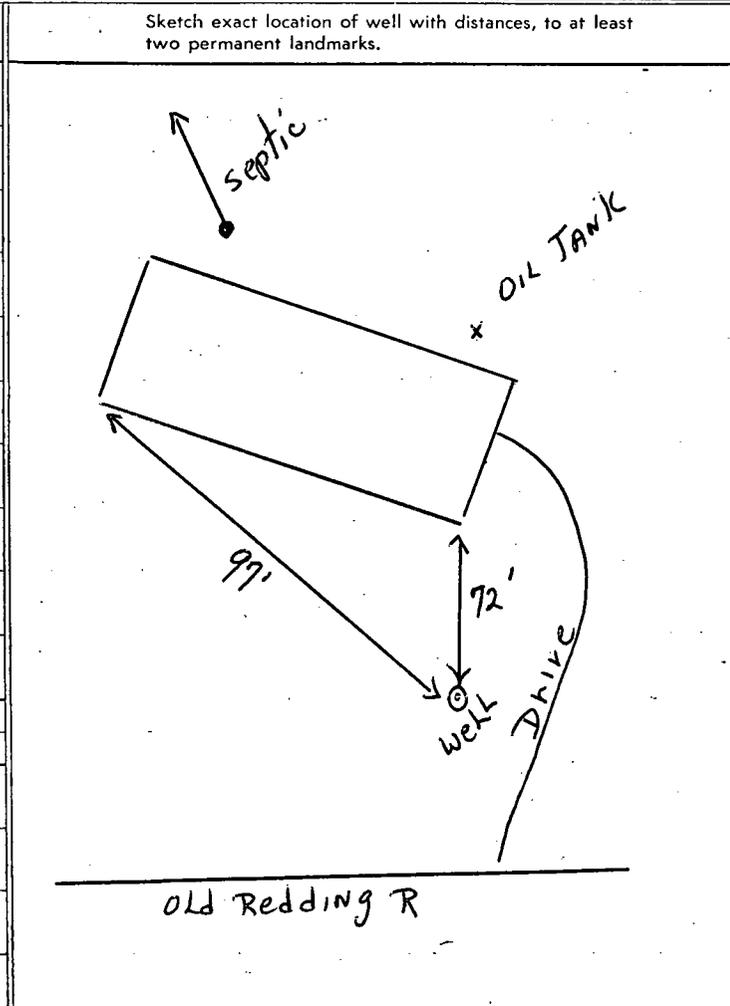
State Office Building
HARTFORD, CONNECTICUT 06115

Do NOT fill in
STATE WELL NO.
OTHER NO.

DINAPOLI Devel. Corp.

OWNER	NAME <i>NICK DINAPOLI</i>		ADDRESS <i>662-B Osage Lane - Oranogue Village</i>		TOWN <i>STRAFORD,</i>	
LOCATION OF WELL	(No. & Street) <i>Old Redding Rd</i>		(Town) <i>Redding</i>		(Lot Number) <i>5</i>	
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM	<input type="checkbox"/> TEST WELL		
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING	<input type="checkbox"/> OTHER (Specify)		
DRILLING EQUIPMENT	<input type="checkbox"/> ROTARY	<input checked="" type="checkbox"/> COMPRESSED AIR PERCUSSION	<input type="checkbox"/> CABLE PERCUSSION	<input type="checkbox"/> OTHER (Specify)		
CASING DETAILS	LENGTH (feet) <i>21</i>	DIAMETER (inches) <i>6</i>	WEIGHT PER FOOT <i>17</i>	<input checked="" type="checkbox"/> THREADED	<input type="checkbox"/> WELDED	DRIVE SHOE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
						WAS CASING GROUDED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
YIELD TEST	<input type="checkbox"/> BAILED	<input type="checkbox"/> PUMPED	<input checked="" type="checkbox"/> COMPRESSED AIR	HOURS <i>4</i>	YIELD (G.P.M.) <i>7</i>	
WATER LEVEL	MEASURE FROM LAND SURFACE—STATIC (Specify feet) <i>30</i>		DURING YIELD TEST (feet) <i>150</i>		Depth of Completed Well in feet below Land surface: <i>150</i>	
SCREEN DETAILS	MAKE			LENGTH OPEN TO AQUIFER (feet)		
	SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED:	Diameter of well including gravel pack (inches):	GRAVEL SIZE (inches)	FROM (feet) TO (feet)

DEPTH FROM LAND SURFACE FEET to FEET		FORMATION DESCRIPTION
<i>0</i>	<i>12</i>	<i>Soil</i>
<i>12</i>	<i>150</i>	<i>Bedrock</i>



If yield was tested at different depths during drilling, list below

FEET	GALLONS PER MINUTE

DATE WELL COMPLETED <i>10/24/78</i>	PERMIT NO. <i>50105</i>	REGISTRATION NO. <i>39</i>	DATE OF REPORT <i>10/25/78</i>	WELL DRILLER (Signature) <i>John Anderson</i>
--	----------------------------	-------------------------------	-----------------------------------	--

BOARD

LOCATION OF WELL (Town) REDDING (Street) OLD REDDING RD (Lot Number) 4 DATE 12 OCT 1978

OWNER OF WELL
 INDIVIDUAL BUILDER OTHER (Specify)

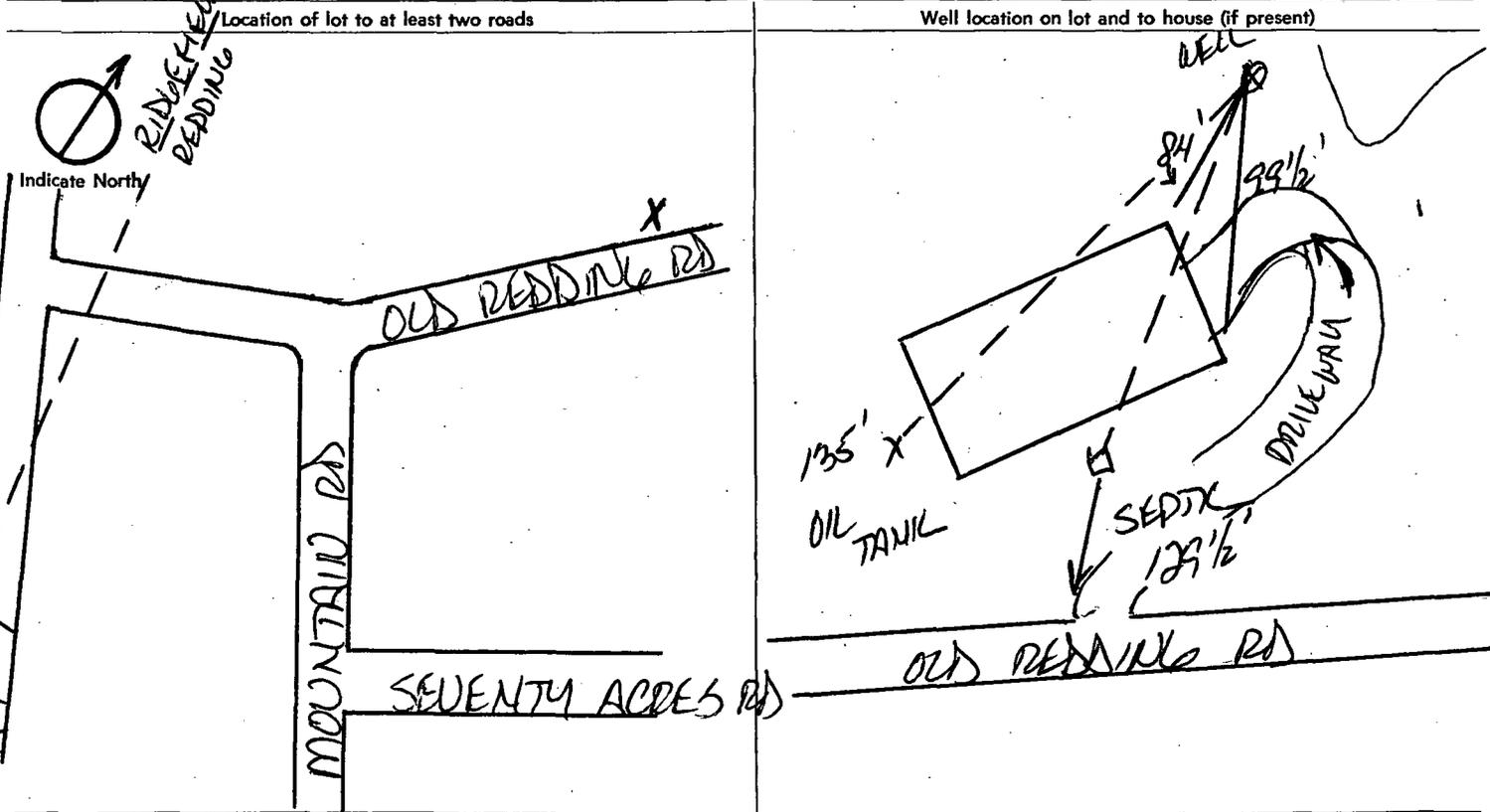
OWNER'S ADDRESS
NICK DINAPOLI 662-B OSAGE LA. ORANVOQUE VILLAGE STRATFORD, CT

PROPOSED USE OF WELL
 DOMESTIC BUSINESS ESTABLISHMENT FARM TEST WELL
 PUBLIC SUPPLY INDUSTRIAL AIR CONDITIONING OTHER (Specify)

Est. No. of People being served.

SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot



Approximate number of feet from well to nearest source of possible contamination: 129 1/2'

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature) Tom Furdak APPLICANT'S ADDRESS 13 GODFREY PLACE WILTON, CT REGISTRATION NO. 39
BY (Town Health Officer or Agent) Paul Wackerhausen DATE 10/12/78

APPROVED REJECTED

REMARKS

WELL COMPLETION REPORT

WDB-5 J2-69 REV. 9-71

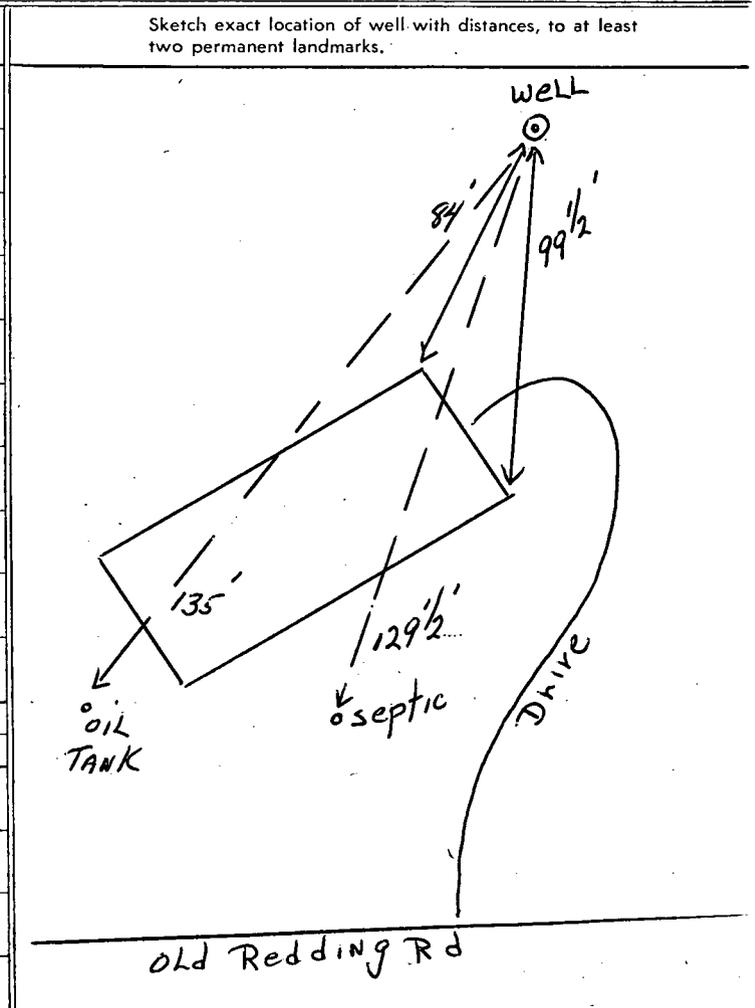
**STATE OF CONNECTICUT
WELL DRILLING BOARD**

State Office Building
HARTFORD, CONNECTICUT 06115

Do NOT fill in
STATE WELL NO.
OTHER NO.

OWNER	NAME DINAPOLI Devel Corp (Nick Dinapoli)		ADDRESS 662-B OSAGE LA. ORONOQUE VILLAGE - STAFFORD	
LOCATION OF WELL	(No. & Street) Old Redding Rd		(Town) Redding	(Lot Number) 4
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM	<input type="checkbox"/> TEST WELL
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING	<input type="checkbox"/> OTHER (Specify)
DRILLING EQUIPMENT	<input type="checkbox"/> ROTARY	<input checked="" type="checkbox"/> COMPRESSED AIR PERCUSSION	<input type="checkbox"/> CABLE PERCUSSION	<input type="checkbox"/> OTHER (Specify)
CASING DETAILS	LENGTH (feet) 30	DIAMETER (inches) 6	WEIGHT PER FOOT 17	<input checked="" type="checkbox"/> THREADED <input checked="" type="checkbox"/> WELDED
			DRIVE SHOE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	WAS CASING GROUTED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
YIELD TEST	<input type="checkbox"/> BAILED	<input type="checkbox"/> PUMPED	<input checked="" type="checkbox"/> COMPRESSED AIR	HOURS 4
				YIELD (G.P.M.) 6
WATER LEVEL	MEASURE FROM LAND SURFACE—STATIC (Specify feet) 15		DURING YIELD TEST (feet) 175	Depth of Completed Well in feet below Land surface: 175
SCREEN DETAILS	MAKE			LENGTH OPEN TO AQUIFER (feet)
	SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED:	Diameter of well including gravel pack (inches):
				GRAVEL SIZE (inches) FROM (feet) TO (feet)

DEPTH FROM LAND SURFACE FEET TO FEET		FORMATION DESCRIPTION
0	20	SOIL
20	175	Bedrock



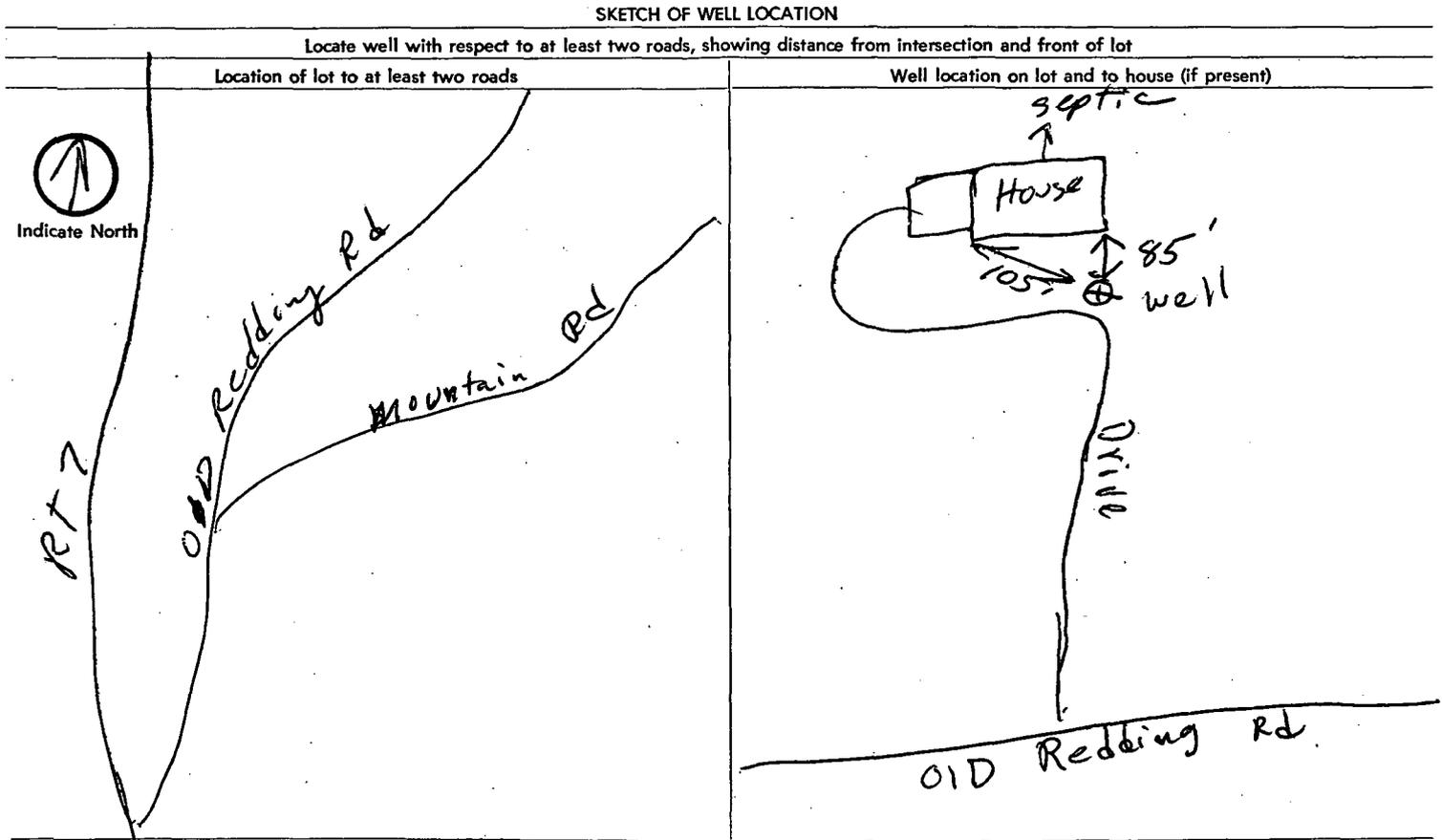
If yield was tested at different depths during drilling, list below

FEET	GALLONS PER MINUTE

DATE WELL COMPLETED 10/26/78	PERMIT NO. 50104	REGISTRATION NO. 39	DATE OF REPORT 10/27/78	WELL DRILLER (Signature) John Finnoch
--	----------------------------	-------------------------------	-----------------------------------	---

BOARD

LOCATION OF WELL (Town) <i>Redding</i>	(Street) <i>Old Redding Rd</i>	(Lot Number) <i>6</i>	DATE <i>4/26/78</i>
OWNER OF WELL			
<input type="checkbox"/> INDIVIDUAL	<input checked="" type="checkbox"/> BUILDER	<input type="checkbox"/> OTHER (Specify)	
OWNER'S ADDRESS <i>Dinapoli Delev Co, Rt 7 Ridgefield</i>			
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING
		<input type="checkbox"/> TEST WELL	<input type="checkbox"/> OTHER (Specify)
			Est. No. of People being served.



Approximate number of feet from well to nearest source of possible contamination: *100' +*

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

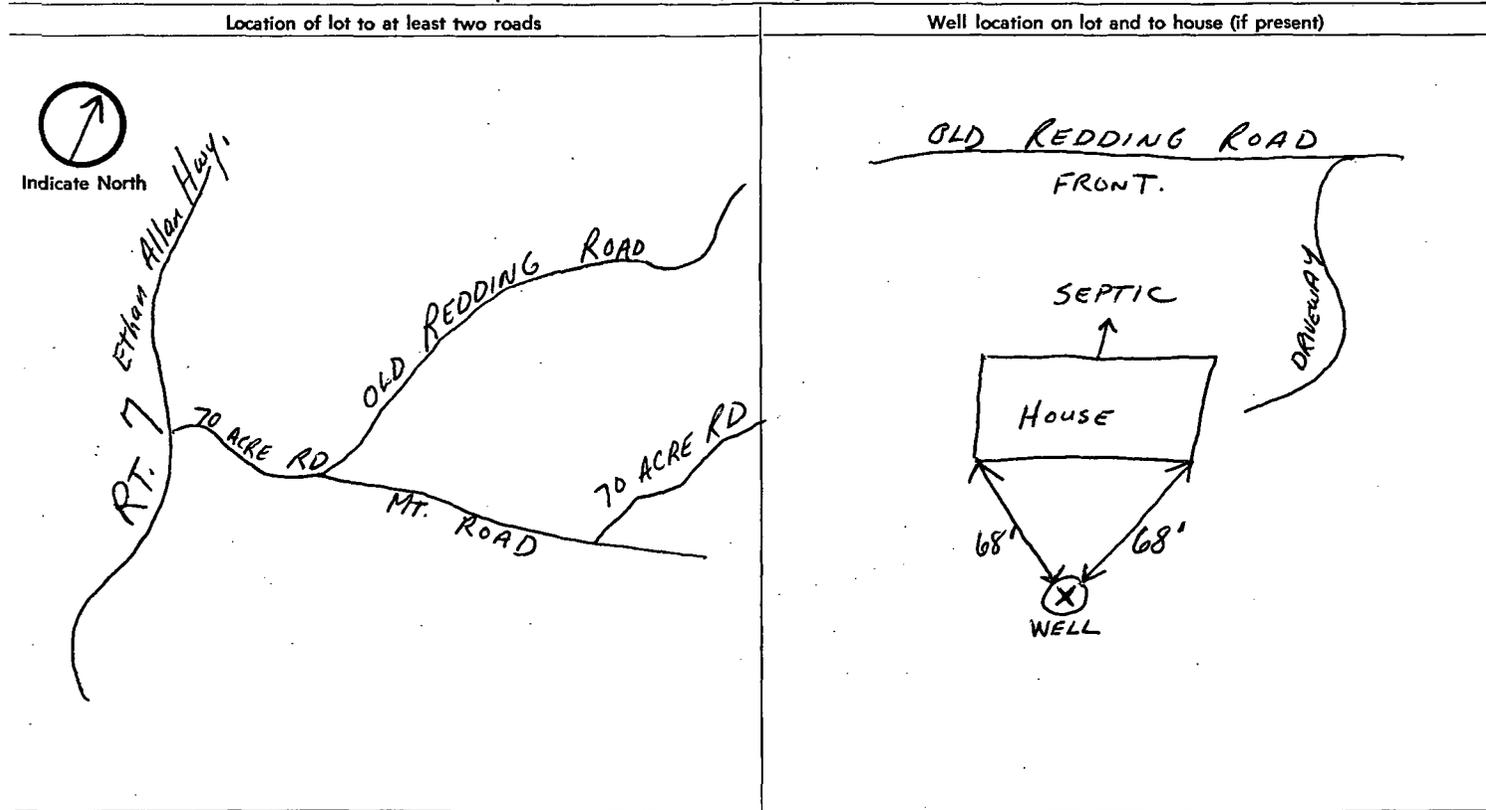
APPLICANT (Signature) <i>John Jandrak</i>	APPLICANT'S ADDRESS <i>13 Godfrey Pl Wilton</i>	REGISTRATION NO. <i>39</i>
<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> REJECTED	DATE <i>4/28/78</i>
REMARKS		
BY (Town Health Officer or Agent) <i>W. A. K. Kahanan</i>		

P

LOCATION OF WELL (Town) REDDING	(Street) OLD REDDING RD,	(Lot Number) 7	DATE 5-4-78
OWNER OF WELL			
<input type="checkbox"/> INDIVIDUAL	<input checked="" type="checkbox"/> BUILDER	<input type="checkbox"/> OTHER (Specify)	
OWNER'S ADDRESS D. Napoli, Dev. Co. Inc. 68 SUGAR HOLLOW RD. DANBURY CT.			
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING
			<input type="checkbox"/> TEST WELL
			<input type="checkbox"/> OTHER (Specify)
			Est. No. of People being served.

SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot



Approximate number of feet from well to nearest source of possible contamination: **85'**

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature) FINDORAK + SONS, INC.	APPLICANT'S ADDRESS 13 GODFREY PLACE WILTON, CT.	REGISTRATION NO. 39
<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> REJECTED	DATE 5/5/78
BY (Town Health Officer or Agent) <i>[Signature]</i>		

REMARKS

New Dwelling

WELL COMPLETION REPORT

WDB-5 12-69 REV. 9-71

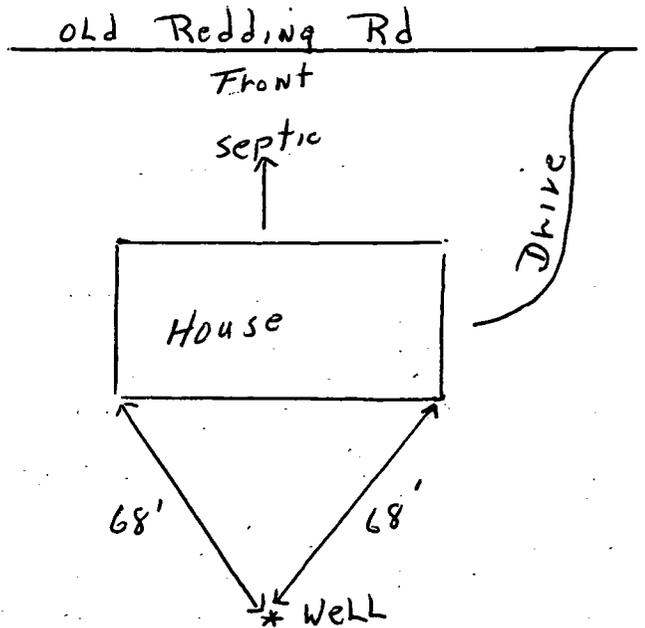
STATE OF CONNECTICUT
WELL DRILLING BOARD
 State Office Building
 HARTFORD, CONNECTICUT 06115

Do NOT fill in
STATE WELL NO.
OTHER NO.

OWNER	NAME <i>D. Napoli Dev. Co. Inc</i>		ADDRESS <i>68 Sugar Hollow Rd, Danbury</i>			
LOCATION OF WELL	(No. & Street) <i>Old Redding Rd</i>		(Town) <i>Redding</i>		(Lot Number) <i>7</i>	
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM	<input type="checkbox"/> TEST WELL		
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING	<input type="checkbox"/> OTHER (Specify)		
DRILLING EQUIPMENT	<input type="checkbox"/> ROTARY	<input checked="" type="checkbox"/> COMPRESSED AIR PERCUSSION	<input type="checkbox"/> CABLE PERCUSSION	<input type="checkbox"/> OTHER (Specify)		
CASING DETAILS	LENGTH (feet) <i>65</i>	DIAMETER (inches) <i>6</i>	WEIGHT PER FOOT <i>17</i>	<input checked="" type="checkbox"/> THREADED	<input type="checkbox"/> WELDED	DRIVE SHOE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
	MEASURE FROM LAND SURFACE—STATIC (Specify feet)		DURING YIELD TEST (feet)		Depth of Completed Well in feet below Land surface:	
YIELD TEST	<input type="checkbox"/> BAILED	<input type="checkbox"/> PUMPED	<input checked="" type="checkbox"/> COMPRESSED AIR	HOURS <i>4</i>	YIELD (G.P.M.) <i>6</i>	
WATER LEVEL	<i>10</i>	<i>175</i>			<i>175</i>	
SCREEN DETAILS	MAKE				LENGTH OPEN TO AQUIFER (feet)	
	SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED:	Diameter of well including gravel pack (inches):	GRAVEL SIZE (inches) FROM (feet)	TO (feet)

DEPTH FROM LAND SURFACE FEET to FEET		FORMATION DESCRIPTION
<i>0</i>	<i>50</i>	<i>Soil</i>
<i>50</i>	<i>175</i>	<i>Bedrock</i>

Sketch exact location of well with distances, to at least two permanent landmarks.



If yield was tested at different depths during drilling, list below

FEET	GALLONS PER MINUTE

DATE WELL COMPLETED <i>5/8/78</i>	PERMIT NO. <i>44770</i>	REGISTRATION NO. <i>39</i>	DATE OF REPORT <i>5/9/78</i>	WELL DRILLER (Signature) <i>John Hindock</i>
--------------------------------------	----------------------------	-------------------------------	---------------------------------	---

HuHemann
West Redding 17 Old Redding Rd. 2A
LOCATION OF WELL (Town) (Street) (Lot Number)

John Kelly DATE 6-23-87
OWNER OF WELL

INDIVIDUAL BUILDER OTHER (Specify)

17 Old Redding Rd. W. Redding Ct.
OWNER'S ADDRESS

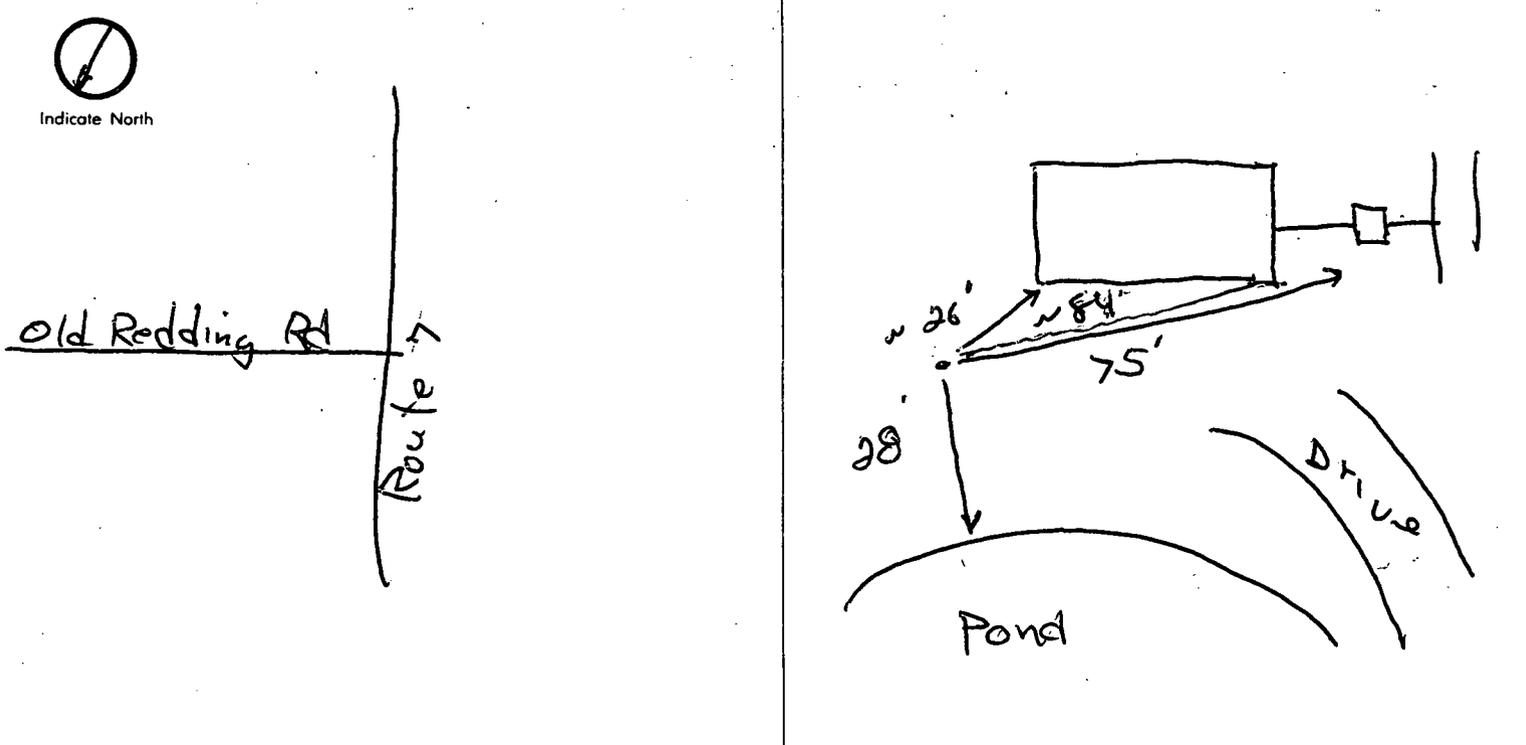
PROPOSED USE OF WELL: DOMESTIC BUSINESS ESTABLISHMENT FARM TEST WELL
 PUBLIC SUPPLY INDUSTRIAL AIR CONDITIONING OTHER (Specify)
Est. No. of People being served: 2

SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot

Location of lot to at least two roads

Well location on lot and to house (if present)



Approximate number of feet from well to nearest source of possible contamination: 75'

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature): [Signature] APPLICANT'S ADDRESS: BOYD ARTESIAN WELL CO INC, RT 52, CAHON NY 10512, 914-225-3196, 518-203-794-0394
BY (Town Health Officer or Agent): Roy C. Brooks, JR.
REGISTRATION NO.: 154
DATE: 7/28/87

APPROVED REJECTED

WELL COMPLETION REPORT

CPR-9 REV. 11-82

STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
WELL DRILLING BOARD

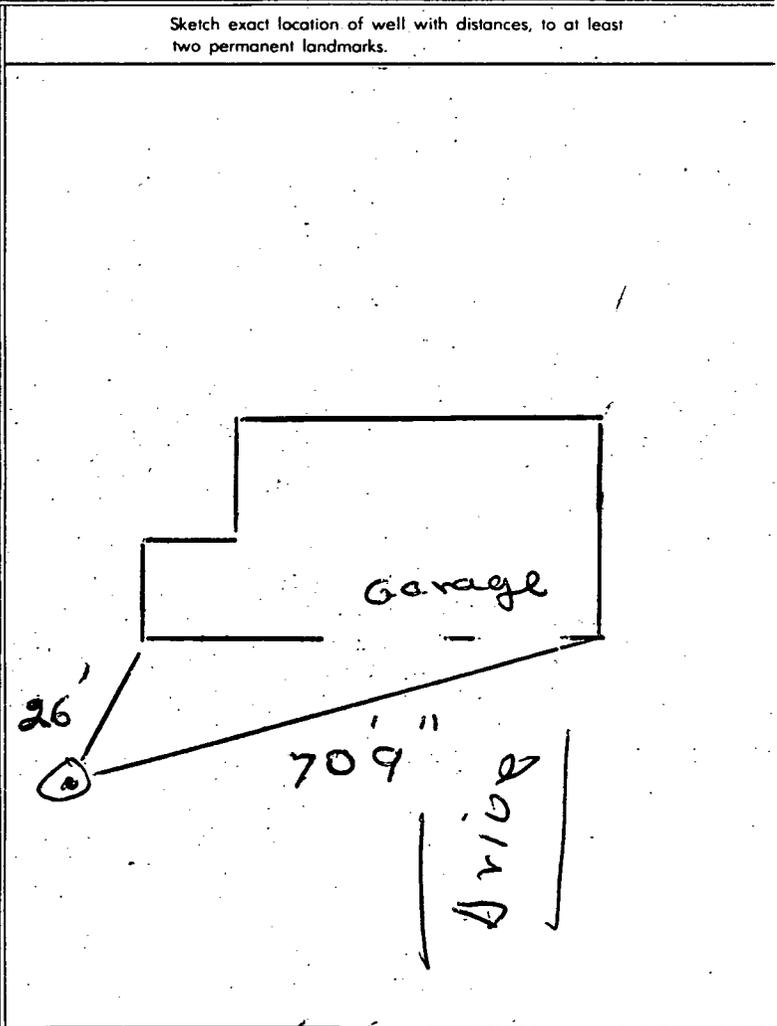
165 CAPITOL AVE.
HARTFORD, CONNECTICUT 06106

Do NOT fill in
STATE WELL NO.
OTHER NO.

Robert Huttemann

OWNER	NAME John Kelly		ADDRESS 17 Old Redding Rd. Redding	
LOCATION OF WELL	17 Old Redding Rd. (No. & Street)		Redding, (Town) 2A (Lot Number)	
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM	<input type="checkbox"/> TEST WELL
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING	<input type="checkbox"/> OTHER (Specify)
DRILLING EQUIPMENT	<input type="checkbox"/> ROTARY	<input checked="" type="checkbox"/> COMPRESSED AIR PERCUSSION	<input type="checkbox"/> CABLE PERCUSSION	<input type="checkbox"/> OTHER (Specify)
	CASING DETAILS		DRIVE SHOE	
LENGTH (feet) 21		DIAMETER (inches) 6	WEIGHT PER FOOT 19	WAS CASING GROUTED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
<input checked="" type="checkbox"/> THREADED <input type="checkbox"/> WELDED		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		YIELD (G.P.M.) 15
YIELD TEST	<input type="checkbox"/> BAILED	<input type="checkbox"/> PUMPED	<input checked="" type="checkbox"/> COMPRESSED AIR	HOURS 4 1/2
WATER LEVEL	MEASURE FROM LAND SURFACE—STATIC (Specify feet) 42		DURING YIELD TEST (feet) 175	Depth of Completed Well in feet below Land surface: 180
SCREEN DETAILS	MAKE			LENGTH OPEN TO AQUIFER (feet)
	SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED:	Diameter of well including gravel pack (inches):
		GRAVEL SIZE (inches)	FROM (feet)	TO (feet)

DEPTH FROM LAND SURFACE FEET TO FEET		FORMATION DESCRIPTION
0	4	Clay
4	180	Granite



If yield was tested at different depths during drilling, list below

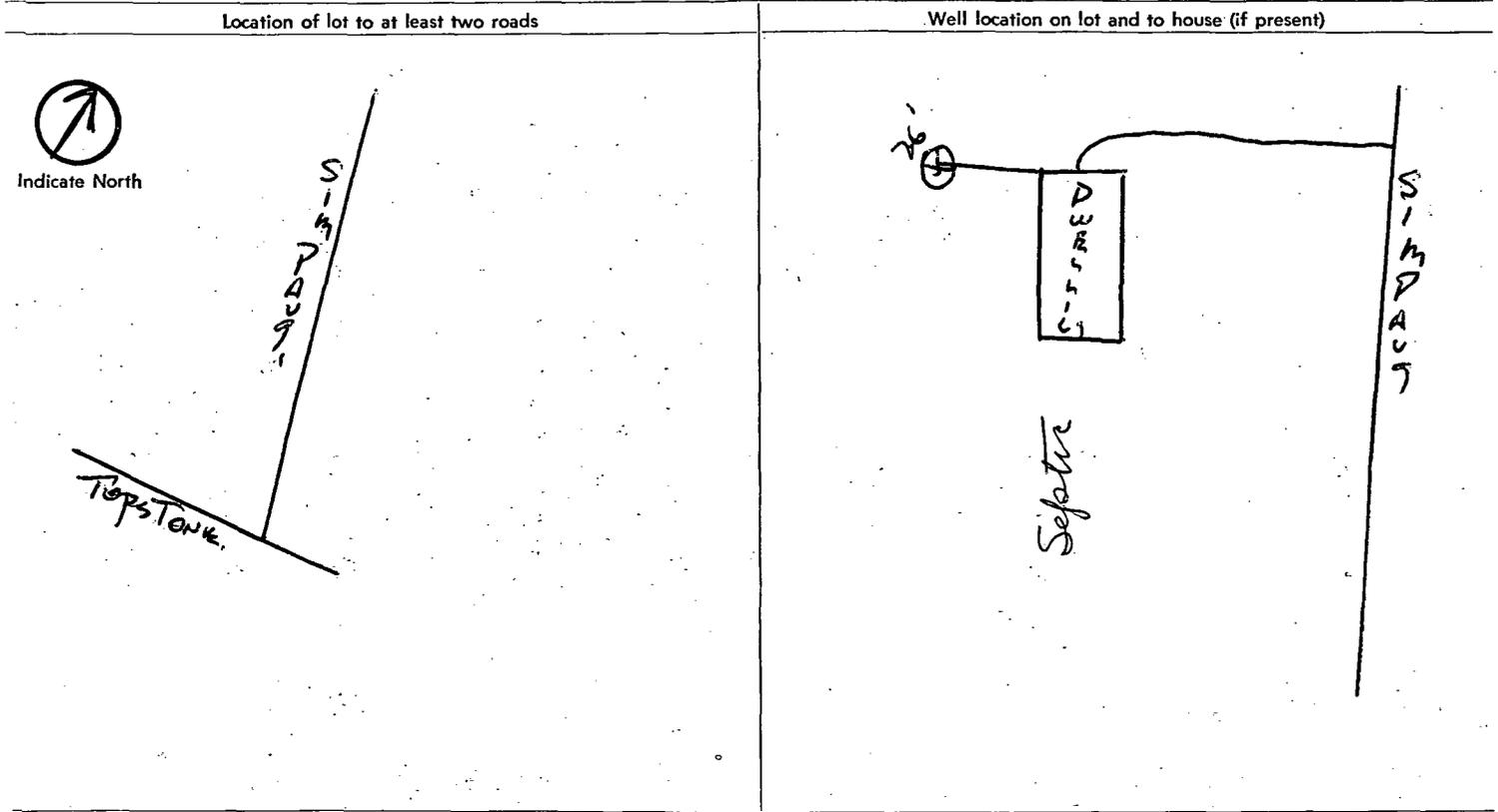
FEET	GALLONS PER MINUTE

DATE WELL COMPLETED 7-31-87	PERMIT NO. 122261	REGISTRATION NO. 154	DATE OF REPORT 8-3-87	WELL DRILLER (Signature) BOYD Artesian Well Co. Inc.
--------------------------------	----------------------	-------------------------	--------------------------	---

LOCATION OF WELL (Town) <i>Redding</i>	(Street) <i>Simpson's Turnpike</i>	(Lot Number) <i>15</i>	DATE <i>4-5-76</i>
OWNER OF WELL <input type="checkbox"/> INDIVIDUAL <input checked="" type="checkbox"/> BUILDER <input type="checkbox"/> OTHER (Specify)			
OWNER'S ADDRESS <i>M & L Builders</i> <i>Ridgefield Conn.</i>			
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING
			<input type="checkbox"/> TEST WELL
			<input type="checkbox"/> OTHER (Specify)
			Est. No. of People being served.

SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot



Approximate number of feet from well to nearest source of possible contamination: *25'*

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature) <i>FINDORAK & SONS INC</i>	APPLICANT'S ADDRESS <i>13 GODFREY PL. WILTON</i>	REGISTRATION NO. <i>39</i>
<input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED	BY (Town Health Officer or Agent) <i>Arthur Bachman</i>	DATE <i>4/5/76</i>
REMARKS		

WELL COMPLETION REPORT

WDB-5 12-69 REV. 9-71

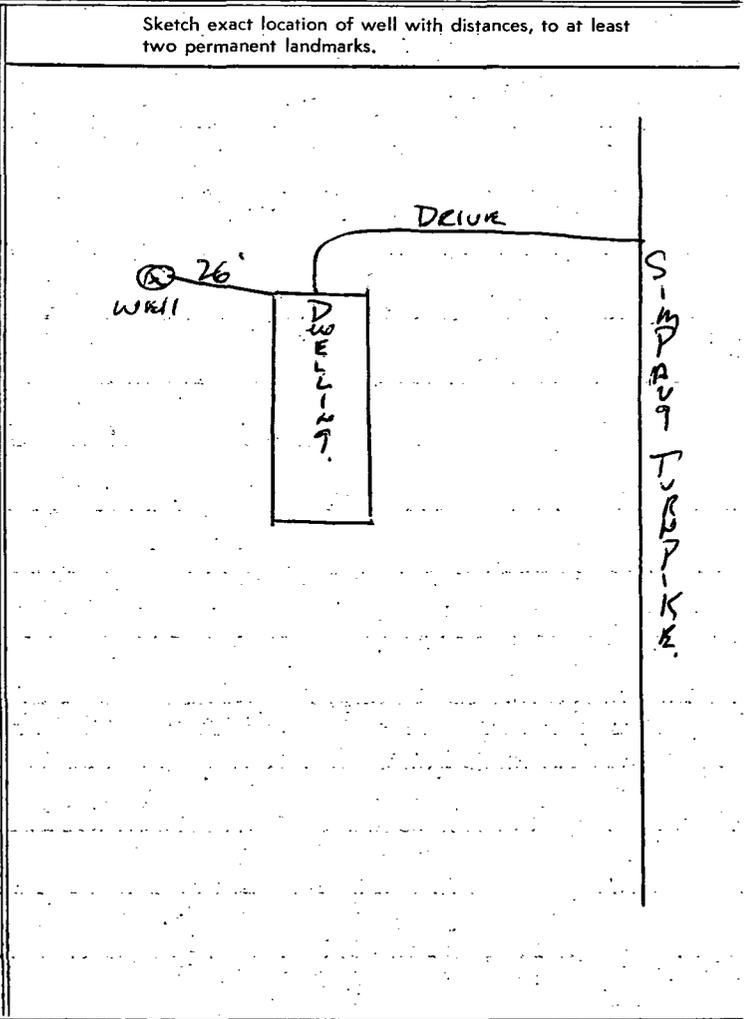
**STATE OF CONNECTICUT
WELL DRILLING BOARD**

State Office Building
HARTFORD, CONNECTICUT 06115

Do NOT fill in
STATE WELL NO.
OTHER NO.

OWNER	NAME <i>ERNO MARTIN</i>		ADDRESS <i>State Road 9 Florida Hill rd Ridgefield</i>	
LOCATION OF WELL	(No. & Street) <i>Simpaug Turnpike</i>		(Town) <i>Redding</i>	(Lot Number) <i>15</i>
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM	<input type="checkbox"/> TEST WELL
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING	<input type="checkbox"/> OTHER (Specify)
DRILLING EQUIPMENT	<input type="checkbox"/> ROTARY	<input checked="" type="checkbox"/> COMPRESSED AIR PERCUSSION	<input type="checkbox"/> CABLE PERCUSSION	<input type="checkbox"/> OTHER (Specify)
CASING DETAILS	LENGTH (feet) <i>20</i>	DIAMETER (inches) <i>6</i>	WEIGHT PER FOOT <i>17</i>	<input checked="" type="checkbox"/> THREADED <input type="checkbox"/> WELDED
				DRIVE SHOE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
YIELD TEST	<input type="checkbox"/> BAILED	<input type="checkbox"/> PUMPED	<input checked="" type="checkbox"/> COMPRESSED AIR	HOURS <i>4</i>
WATER LEVEL	MEASURE FROM LAND SURFACE—STATIC (Specify feet) <i>6</i>		DURING YIELD TEST (feet) <i>273</i>	
	MAKE		Depth of Completed Well in feet below Land surface: <i>275</i>	
SCREEN DETAILS	SLOT SIZE			DIAMETER (inches)
	IF GRAVEL PACKED:			Diameter of well including gravel pack (inches):
	GRAVEL SIZE (inches)		FROM (feet)	TO (feet)
				LENGTH OPEN TO AQUIFER (feet)

DEPTH FROM LAND SURFACE FEET to FEET	FORMATION DESCRIPTION
0 - 1	Soil
1 - 275	Bedrock



If yield was tested at different depths during drilling, list below

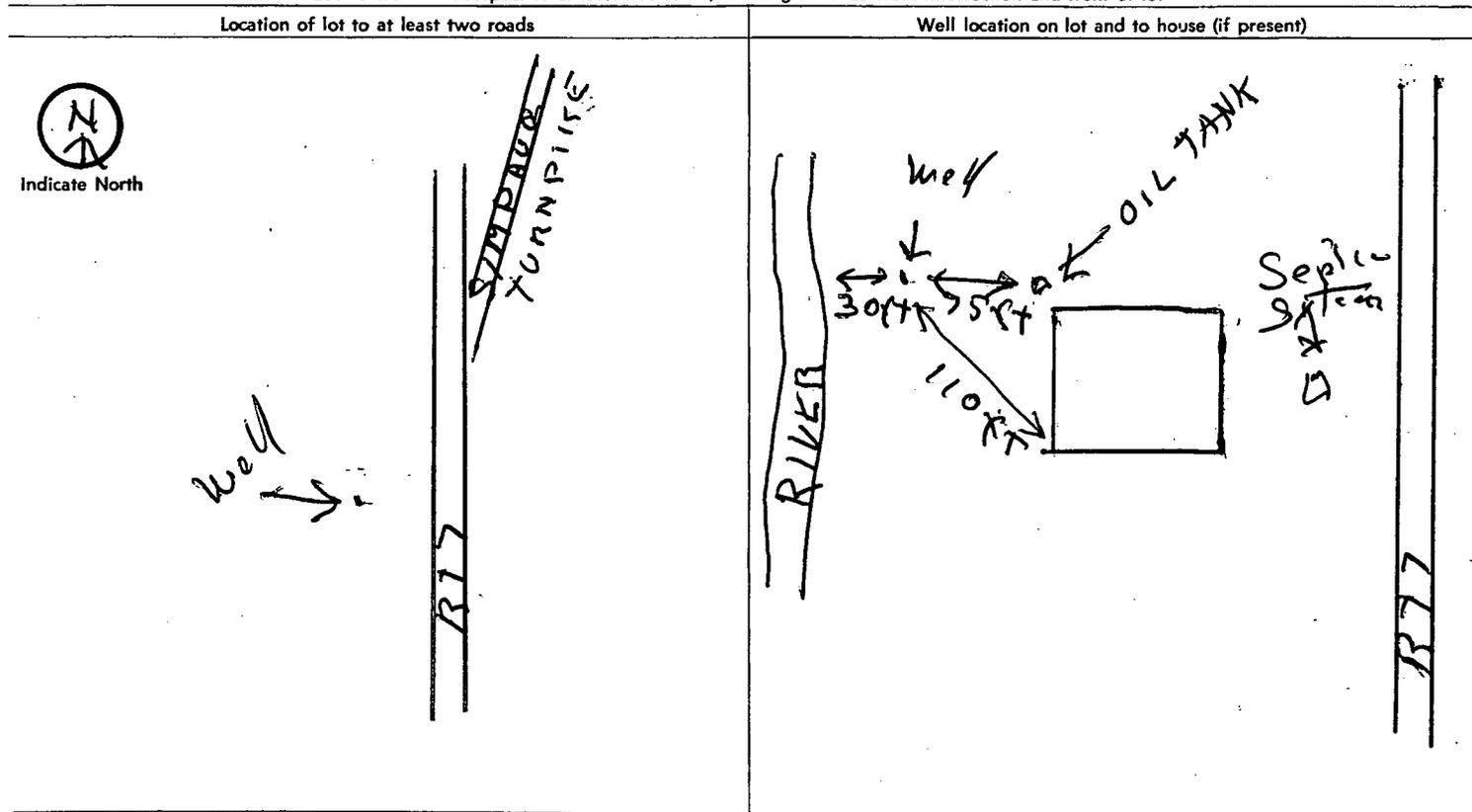
FEET	GALLONS PER MINUTE

DATE WELL COMPLETED <i>4/6/76</i>	PERMIT NO. <i>33114</i>	REGISTRATION NO. <i>39</i>	DATE OF REPORT <i>4/7/76</i>	WELL DRILLER (Signature) <i>JOHN FINDERAK</i>
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LOCATION OF WELL (Town)	(Street)	(Lot Number)	DATE
Redding	RT, 7	4-B	Dec 21, 1978
OWNER OF WELL			
<input checked="" type="checkbox"/> INDIVIDUAL	<input type="checkbox"/> BUILDER	<input type="checkbox"/> OTHER (Specify)	
OWNER'S ADDRESS			
New Milford Conn.			
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING
		<input type="checkbox"/> TEST WELL	<input type="checkbox"/> OTHER (Specify)
			Est. No. of People being served.

SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot



Approximate number of feet from well to nearest source of possible contamination: **75+**

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Board and the Water Resources Commission on the form provided by the Board. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature)	APPLICANT'S ADDRESS	REGISTRATION NO.
<i>Nancy Carlson</i>	<i>Portland Ave Georgetown Conn</i>	<i>104</i>
<input checked="" type="checkbox"/> APPROVED	BY (Town Health Officer or Agent)	DATE
<input type="checkbox"/> REJECTED	<i>W. Bachhausen</i>	<i>12/22/78</i>
REMARKS		

WELL COMPLETION REPORT

WDB-5 12-69 REV. 9-71

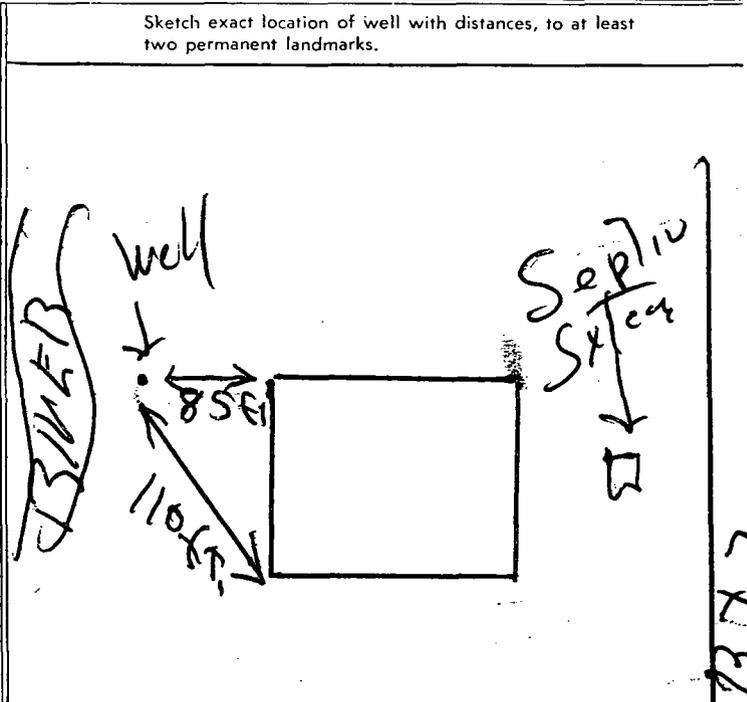
**STATE OF CONNECTICUT
WELL DRILLING BOARD**

State Office Building
HARTFORD, CONNECTICUT 06115

Do NOT fill in
STATE WELL NO.
OTHER NO.

OWNER	NAME: <i>Albert Dixie (Bary Reader)</i>		ADDRESS: <i>New Milford Conn.</i>		
LOCATION OF WELL	<i>RT 7</i> (No. & Street)		<i>Bedding</i> (Town) <i>4-B</i> (Lot Number)		
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM	<input type="checkbox"/> TEST WELL	
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING	<input type="checkbox"/> OTHER (Specify)	
DRILLING EQUIPMENT	<input type="checkbox"/> ROTARY	<input type="checkbox"/> COMPRESSED AIR PERCUSSION	<input checked="" type="checkbox"/> CABLE PERCUSSION	<input type="checkbox"/> OTHER (Specify)	
	CASING DETAILS	LENGTH (feet): <i>34</i>	DIAMETER (inches): <i>6</i>	WEIGHT PER FOOT: <i>17 lb</i>	DRIVE SHOE: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
YIELD TEST	<input checked="" type="checkbox"/> BAILED	<input type="checkbox"/> PUMPED	<input type="checkbox"/> COMPRESSED AIR	HOURS	WAS CASING GROUTED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
	WATER LEVEL	MEASURE FROM LAND SURFACE—STATIC (Specify feet): <i>6</i>	DURING YIELD TEST (feet)	Depth of Completed Well in feet below Land surface: <i>130</i>	YIELD (G.P.M.): <i>-20</i>
SCREEN DETAILS	MAKE			LENGTH OPEN TO AQUIFER (feet)	
	SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED:	Diameter of well including gravel pack (inches):	GRAVEL SIZE (inches) FROM (feet) TO (feet)

DEPTH FROM LAND SURFACE FEET to FEET		FORMATION DESCRIPTION
0	24	<i>gravel + sand</i>
24	130	<i>gray granite</i>



If yield was tested at different depths during drilling, list below

FEET	GALLONS PER MINUTE
<i>100</i>	<i>3</i>
<i>130</i>	<i>20</i>

DATE WELL COMPLETED: <i>Jan 2 1979</i>	PERMIT NO.: <i>57335</i>	REGISTRATION NO.: <i>104</i>	DATE OF REPORT: <i>Jan 17 1979</i>	WELL DRILLER (Signature): <i>Harry Carlson</i>
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STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
REAL ESTATE & PROFESSIONAL TRADES DIVISION

WELL DRILLING PERMIT

Capitol Avenue, Hartford, Connecticut 06106

RECEIVED
CONSUMER PROTECTION
DCC & PROF LICENSING

LOCATION OF WELL (Town) (Street) (Lot Number) DATE

REDDING CONN - b ACT 2000-300 7/31/05

OWNER OF WELL: INDIVIDUAL BUILDER OTHER (Specify) M.G. Builders

OWNER'S ADDRESS
292 Post Road Westport Conn

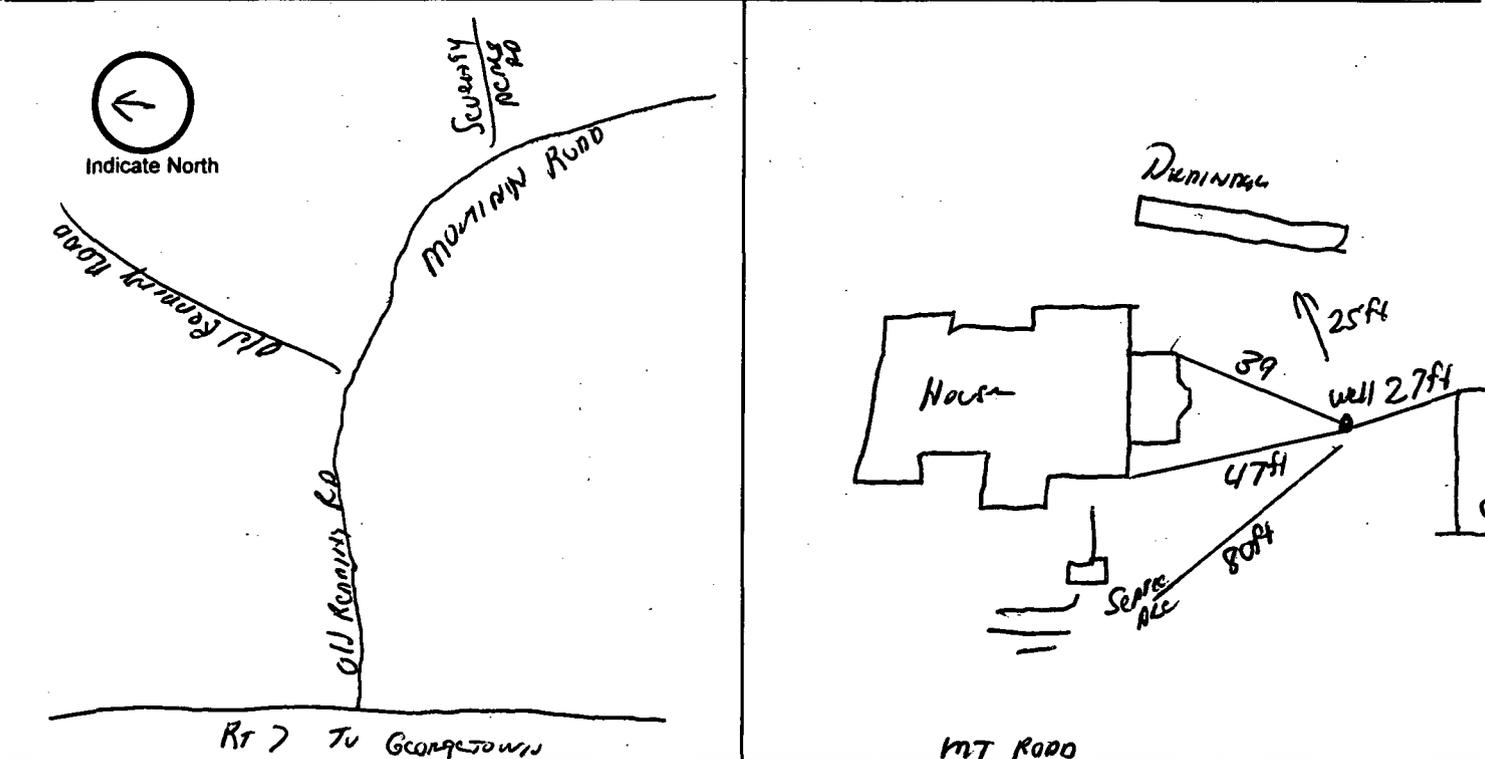
PROPOSED USE OF WELL: DOMESTIC BUSINESS ESTABLISHMENT FARM TEST WELL
 PUBLIC SUPPLY INDUSTRIAL AIR CONDITIONING OTHER (Specify)
Est. No. of People being served: 4

SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot

location of lot to at least two roads

Well location on to and to house (if present)



Approximate number of feet from well to nearest source of possible contamination: 80ft From Sewer System

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1969 Supplement to the General Statutes must be sent to the owner, the Department of Consumer Protection and the Water Resources Commission on the form provided by the agency. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature) APPLICANT'S ADDRESS REGISTRATION NO.
Mark W. J. Wilson 1 Spinnock Drive Bristol CT 06034 WD-15C

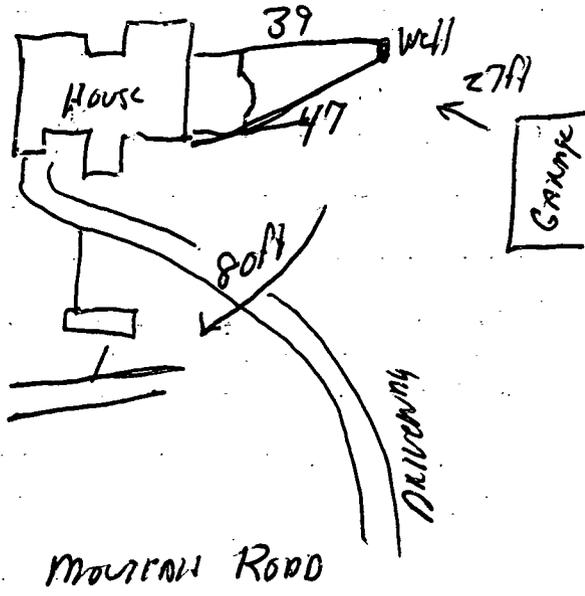
APPROVED REJECTED BY (Town Health Officer or Agent) DATE
W. J. Wilson 8/3/05

REMARKS
All cuttings must be contained by deep pit and silt fence in immediate area



**STATE OF CONNECTICUT
DEPARTMENT OF CONSUMER PROTECTION
REAL ESTATE & PROFESSIONAL TRADES DIVISION
WELL DRILLING COMPLETION REPORT
165 Capitol Avenue, Hartford, Connecticut 06106**

Do NOT fill in
STATE WELL NO.
OTHER NO.

OWNER	NAME <i>MG Builders</i>		ADDRESS <i>292 Post Rd Westport Conn</i>	
LOCATION OF WELL	(No. & Street) <i>Mountain Rd</i>		(Town) (Lot Number) <i>Renning Conn</i>	
PROPOSED USE OF WELL	<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> BUSINESS ESTABLISHMENT	<input type="checkbox"/> FARM	<input type="checkbox"/> TEST WELL
	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AIR CONDITIONING	<input type="checkbox"/> OTHER (Specify)
DRILLING EQUIPMENT	<input type="checkbox"/> ROTARY	<input type="checkbox"/> COMPRESSED AIR PERCUSSION	<input checked="" type="checkbox"/> CABLE PERCUSSION	<input type="checkbox"/> OTHER (Specify)
	CASING DETAILS		LENGTH (feet) <i>40</i>	DIAMETER (inches) <i>6</i>
YIELD TEST	WEIGHT PER FOOT <i>17</i>		<input checked="" type="checkbox"/> THREADED	<input type="checkbox"/> WELDED
	DRIVE SHOE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WAS CASING GROUTED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
WATER LEVEL	MEASURE FROM LAND SURFACE - STATIC (Specify feet) <i>Overflow</i>		DURING YIELD TEST (feet) <i>200</i>	
	YIELD TEST <input checked="" type="checkbox"/> BAILED <input checked="" type="checkbox"/> PUMPED <input type="checkbox"/> COMPRESSED AIR		HOURS <i>10</i>	YIELD (GPM) <i>15</i>
SCREEN DETAILS	MAKE			LENGTH OPEN TO AQUIFER (feet)
	SLOT SIZE	DIAMETER (inches)	IF GRAVEL PACKED:	Diameter of well including gravel pack (inches)
DEPTH FROM LAND TO SURFACE FEET TO FEET		FORMATION DESCRIPTION		Sketch exact location of well with distances, to at least two permanent landmarks 
<i>0</i>	<i>4</i>	<i>Overburden</i>		
<i>4</i>	<i>350</i>	<i>Gravel Rock</i>		
If yield was tested at different depths during drilling, list below				
FEET		GALLONS PER MINUTE		
<i>350</i>	<i>15</i>			
DATE WELL COMPLETED <i>9/5/05</i>	PERMIT NO. <i>229504</i>	REGISTRATION NO. <i>WN-152</i>	DATE OF REPORT <i>10/2/05</i>	WELL DRILLER (Signature) <i>Mad Wolf</i> <i>MARIE W. JOHNSON</i>