

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF NEW CINGULAR WIRELESS PCS,
LLC (AT&T) FOR A CERTIFICATE OF
ENVIRONMENTAL COMPATIBILITY AND PUBLIC
NEED FOR THE CONSTRUCTION, MAINTENANCE
AND OPERATION OF A TELECOMMUNICATIONS
TOWER FACILITY IN BRIDGEWATER,
CONNECTICUT

DOCKET NO. 437

May 23, 2013

RESPONSES OF NEW CINGULAR WIRELESS
TO CONNECTICUT SITING COUNCIL PRE-HEARING QUESTIONS

Q1. Provide a diagram showing the search ring for this site.

A1. *Please see diagram included as **Attachment 1**.*

Q2. Are the tower coordinates within Application Tab 3 correct? If not, please revise.

A2. *The correct coordinates are as follows:*

Latitude: 41°-33'-17.9" N

Longitude: 73°-22'-15.2" W

*Please see, FAA I-A survey included as **Attachment 2**.*

Q3. Were return receipts received for each abutting landowner identified behind Tab 9 of the Application? If not, list the abutters that did not receive notice and describe any additional Effort to serve notice. When was the abutter list compiled?

A3. *Confirmation of receipt was received for each abutting landowner. The original list was obtained in late 2010 and subsequently reviewed and updated in February 2013 prior to mailing the notice letter evidenced in the Application.*

Q4. What is the status of the DEEP filing described on Application page 15?

A4. *The Connecticut Department of Energy & Environmental Protection ("DEEP") Natural Diversity Data Base ("NDDB") responded that their records for this site indicated American kestrel (*Falco sparverius*), a State Threatened Species, and wood turtle (*Glyptemys insculpta*), a State Species of Special Concern are in the vicinity of the site. Please find a March 26, 2013 DEEP NDDB letter included as **Attachment 3**.*

An American kestrel nest survey will be performed to determine if nesting is occurring on or near the site. The results of the American kestrel nest survey will be provided to the DEEP upon completion, anticipated sometime in June, along with seasonal restriction recommendations if necessary.

A wood turtle protection plan, similar in scope to turtle protection plans previously developed by APT and approved by both DEEP and the Connecticut Siting Council, will be developed and submitted to DEEP for review and concurrence. The American kestrel nest survey results and detailed wood turtle protection plan along with subsequent correspondence from DEEP regarding their review of these two documents will be provided to the Connecticut Siting Council.

Q5. What is the existing signal strength in those areas AT&T is seeking to cover from this site? How is service affected by this level of coverage?

A5. *The existing signal strength in the areas that would be covered by SR1876 range from -82 dBm and down to less than -100 dBm but does not constitute reliable coverage.*

Q6. The coverage plots behind Application Tab 1 do not match the corresponding narrative. Please submit revised coverage plots with a larger scale that depict:

- a) Coverage from existing/recently approved sites;
- b) Coverage from the proposed site with existing/recently approved sites. Please use a different color code for coverage from existing and recently approved sites.
- c) Coverage from the proposed site at 130 feet with existing/recently approved sites. Please use a different color code for coverage from existing and recently approved sites.

A6. *Please see coverage plots included in **Attachment 4**. For purposes of clarity, in-building and in-vehicle coverage are depicted in separate plots rather than different colors. Please also note that for purposes of evaluating "Approved Coverage" the plots utilize coverage from the approved Candidate A site in Docket 428.*

Q7. What is the minimum antenna centerline height required to meet AT&T coverage objectives?

A7. *AT&T's minimum antenna centerline height to meet the coverage objective is 156' AGL.*

Q8. Would exterior flush-mounted antennas provide the required coverage? Would this configuration result in reduced coverage, hinder future technological upgrades and/or necessitate greater antenna height? Please explain.

A8. *A flush mount configuration would result in reduced coverage or necessitate greater antenna height while hindering future technological upgrades. "Flush" mounting to a tower generally refers to close contact attachment of antennas directly to the tower without use of a platform or T-arms to offset antennas from a tower for mounting. When used on a*

tower structure, flush mounting allows only three antennas to be installed at one level (i.e. same height AGL). A carrier must then mount sets of three antennas at multiple levels on a tower. To achieve reliable service without compromising capacity or performance the lowest level would be at the minimum height necessary with additional levels installed above that minimum level on the tower. For example, an installation of twelve antennas on a tower would require the mounting of antennas at four levels (3 antennas per level) beginning at the minimum required height required. By comparison, platforms or t-arms would entail mounting of antennas at one level.

In general, because flush mounting requires the use of multiple levels on a tower by a single carrier, it limits the ability for other carriers to co-locate on that tower. A flush mount configuration also limits the space available for any additional equipment such as remote radio head units (RRH's), surge arrestors and other associated equipment carriers typically install along with its antennas. Flush mounting limits the space available on a given tower and it is conceivable such limits could inhibit future technological upgrades. It should also be noted that in many instances flush mounting can inhibit the ability of a carrier to tilt and angle antennas to maximally optimize performance and achieve the best coverage at a given height and location.

Q9. How many hours of run time would the generator have based on its fuel tank capacity?

A9. *The estimated 48 hour runtime assuming full load and 200 gallons of fuel available.*

Q10. Does AT&T anticipate the use of the backup generator as a temporary power source until Permanent electrical service is provided?

A10. *No, AT&T does not anticipate the use of the backup generator as a temporary power source until permanent electrical service is provided.*

Q11. Would any blasting be required to develop the site?

A11. *The presence of ledge is not anticipated but will be confirmed upon completion of a geotechnical investigation. If ledge is encountered, removal by mechanical means is first attempted. If mechanical removal methods are unsuccessful, blasting would be utilized as required to remove the ledge.*

Q12. Would the proposed facility comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to Impact bird species? Please explain.

A12. *Yes. Please see Avian Resources Memorandum prepared by All Points Technology included as **Attachment 5**.*

Q13. Identify the safety standards and/or codes by which equipment, machinery, or technology Would be used or operated at the proposed facility.

A13. *OSHA and ET docket 93-62 and 47 CFR parts 1,2,15,42 and 97 as well as OET Bulletin 65, Edition 97-01.*

Q14. Pursuant to CGS §16-50o, provide a copy of the lease agreement for the site.

A14. *A copy of the lease has been provided to the Council under separate cover.*

CERTIFICATE OF SERVICE

I hereby certify that on this day, an original and fifteen copies of the foregoing were sent electronically and by overnight mail to the Connecticut Siting Council.

Dated: May 23, 2013

A handwritten signature in blue ink, appearing to read 'D. M. Laub', with a long horizontal flourish extending to the right.

Daniel M. Laub

Attachment 1

Diagram of AT&T Search Ring 1252



Google earth



Attachment 2



FAA 1-A SURVEY CERTIFICATION

Site Name: Bridgewater
Site Number: SR1252
Site Address: 111 Second Hill Rd
Bridgewater, CT 06752

Horizontal Datum: NAD 83 GPS survey Ground survey

Vertical Datum: NAVD 1988 (AMSL) GPS survey Ground survey

Structure Type: Proposed Tower Existing Tower Roof Top
 Water Tank Smoke Stack Other:

Latitude: 41°-33'-17.9" N

Longitude: 73°-22'-15.2" W

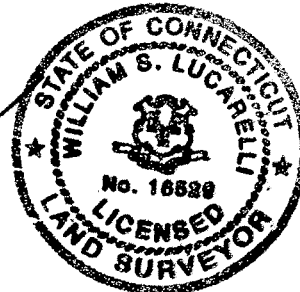
Average Ground Elevation: 908' AMSL Elevation (in feet)

Proposed Tower Height: 160' (AGL)

Certification: I certify that the latitude of 41°-33'-17.9"N and the longitude of 73°-22'-15.2"W are accurate to within +/- 20 feet horizontally, and that the site elevation of 908' AMSL is accurate to within +/- 3 feet vertically. The horizontal datum (coordinated) are in terms of the North American Datum of 1983 (NAD 83) and are expressed in degrees, minutes and seconds, to the nearest tenth of a second. The vertical datum is in terms of the North American Vertical Datum of 1988 (NAVD 88) and is determined to the nearest foot.

Company: Clough Harbour and Associates, LLP
Project number 18301-1071

Surveyor Signature/Seal: *William S. Lucarelli*
William S. Lucarelli
CT L.S. 16529



Date: December 13, 2010

Attachment 3



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

Bureau of Natural Resources
Wildlife Division
Natural History Survey – Natural Diversity Data Base

March 26, 2013

Mr. Dean Gustafson
All-Points Technology Corporation, P.C. (APT)
3 Saddlebrook Drive
Killingworth, CT 06419
dgustafson@allpointstech.com

Regarding: AT&T Bridgewater – Site No. SR1252, Bridgewater – construction of a 160-foot telecommunications tower facility - Natural Diversity Data Base 201300780

Dear Mr. Gustafson:

In response to your request for a Natural Diversity Data Base (NDDB) Review of State Listed Species for the project titled: AT&T Bridgewater – Site No. SR1252 in Bridgewater, our records for this site indicate the following extant populations of species on or within the vicinity of the site:

American kestrel (*Falco sparverius*) Protection Status: Threatened Species

American kestrels nest in late March/April in open areas like woodland edges, parks, and open field habitat. They are cavity nesters and seek out abandoned woodpecker or flicker holes to nest.

Recommendation: If American kestrels are nesting on or near this site, then work shall not be done near the nest during the nesting season (February - July) and a minimum of a 600' buffer zone shall be delineated around the nest to minimize disturbance. Silvicultural practices that maintain high densities of nesting and roosting cavities in trees with a minimum diameter of 30.5 cm will benefit this species.

Wood turtle (*Glyptemys insculpta*) Status: Species of Special Concern

Wood turtles require riparian habitats bordered by floodplain, woodland or meadows. They hibernate in the banks of the river in submerged tree roots. Their summer habitat includes pastures, old fields, woodlands, powerline cuts and railroad beds bordering or adjacent to streams and rivers. This species has been negatively impacted by the loss of suitable habitat.

Recommendation: If work is to be conducted during the summer or fall, the following guidelines should be met:

- ✚ Silt fencing should be installed around the work area prior to activity;
- ✚ After silt fencing is installed and prior to work being conducted, a sweep of the work area should be conducted to look for turtles;

- ✦ Workers should be apprised of the possible presence of turtles, and provided a description of the species (http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655);
- ✦ Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the fenced area, and position in the same direction that it was walking;
- ✦ Work conducted during early morning and evening hours should occur with special care not to harm basking or foraging individuals; and
- ✦ All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

The Natural Diversity Data Base includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. If the project is not implemented within 12 months, then another Natural Diversity Data Base review should be requested for up-to-date information.

Please be advised a more detailed review may be conducted as part of any subsequent environmental permit applications submitted to the Department of Energy and Environmental Protection for the proposed site. Should state involvement occur in some other manner, specific restrictions or conditions relating to the species discussed above may apply.




Thank you for consulting the Natural Diversity Data Base. If you have further questions, I can be reached by email at Elaine.hinsch@ct.gov or by phone at (860) 424-3011.

Sincerely,
/s/
Elaine Hinsch
Program Specialist II
Wildlife Division


Attachment 4

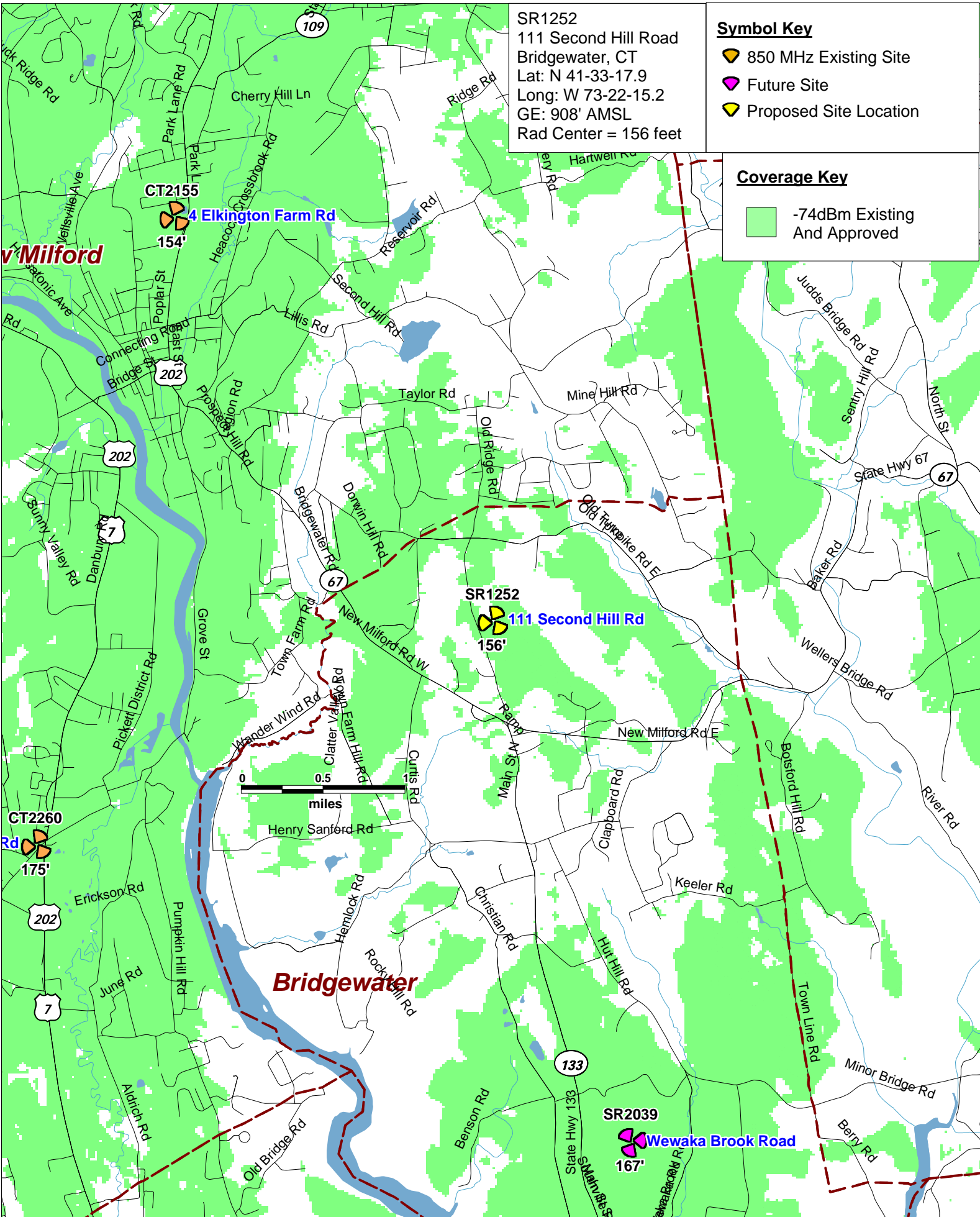
SR1252
 111 Second Hill Road
 Bridgewater, CT
 Lat: N 41-33-17.9
 Long: W 73-22-15.2
 GE: 908' AMSL
 Rad Center = 156 feet

Symbol Key

-  850 MHz Existing Site
-  Future Site
-  Proposed Site Location

Coverage Key

-  -74dBm Existing And Approved



Existing and Approved
 Coverage

111 Second Hill Rd
 Bridgewater, CT 06752






PREPARED ON
 DATE: 05/16/2013


REV
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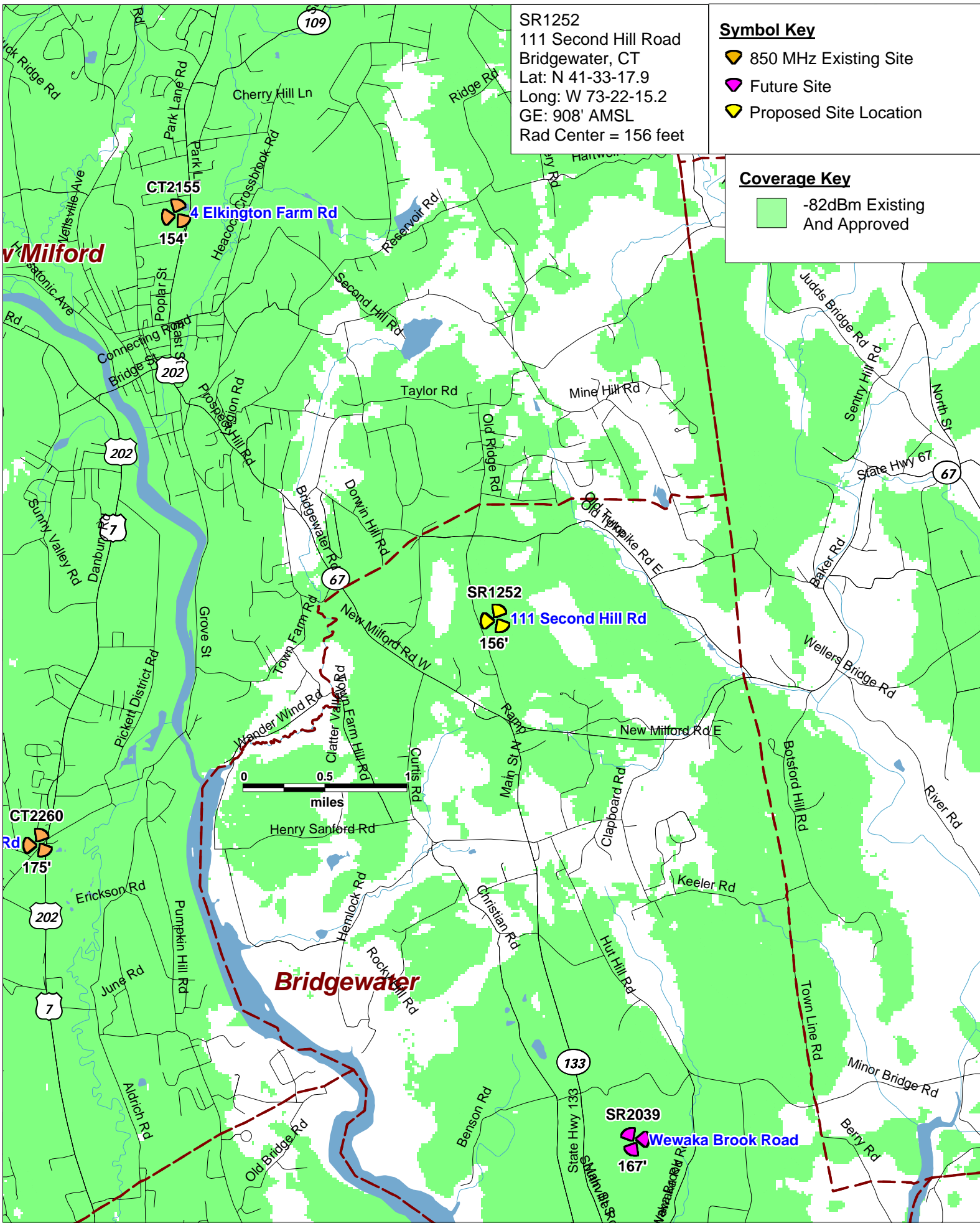
SR1252
 111 Second Hill Road
 Bridgewater, CT
 Lat: N 41-33-17.9
 Long: W 73-22-15.2
 GE: 908' AMSL
 Rad Center = 156 feet

Symbol Key

-  850 MHz Existing Site
-  Future Site
-  Proposed Site Location

Coverage Key

-  -82dBm Existing And Approved



Existing and Approved Coverage

111 Second Hill Rd
 Bridgewater, CT 06752






PREPARED ON
 DATE: 05/16/2013



REV 0

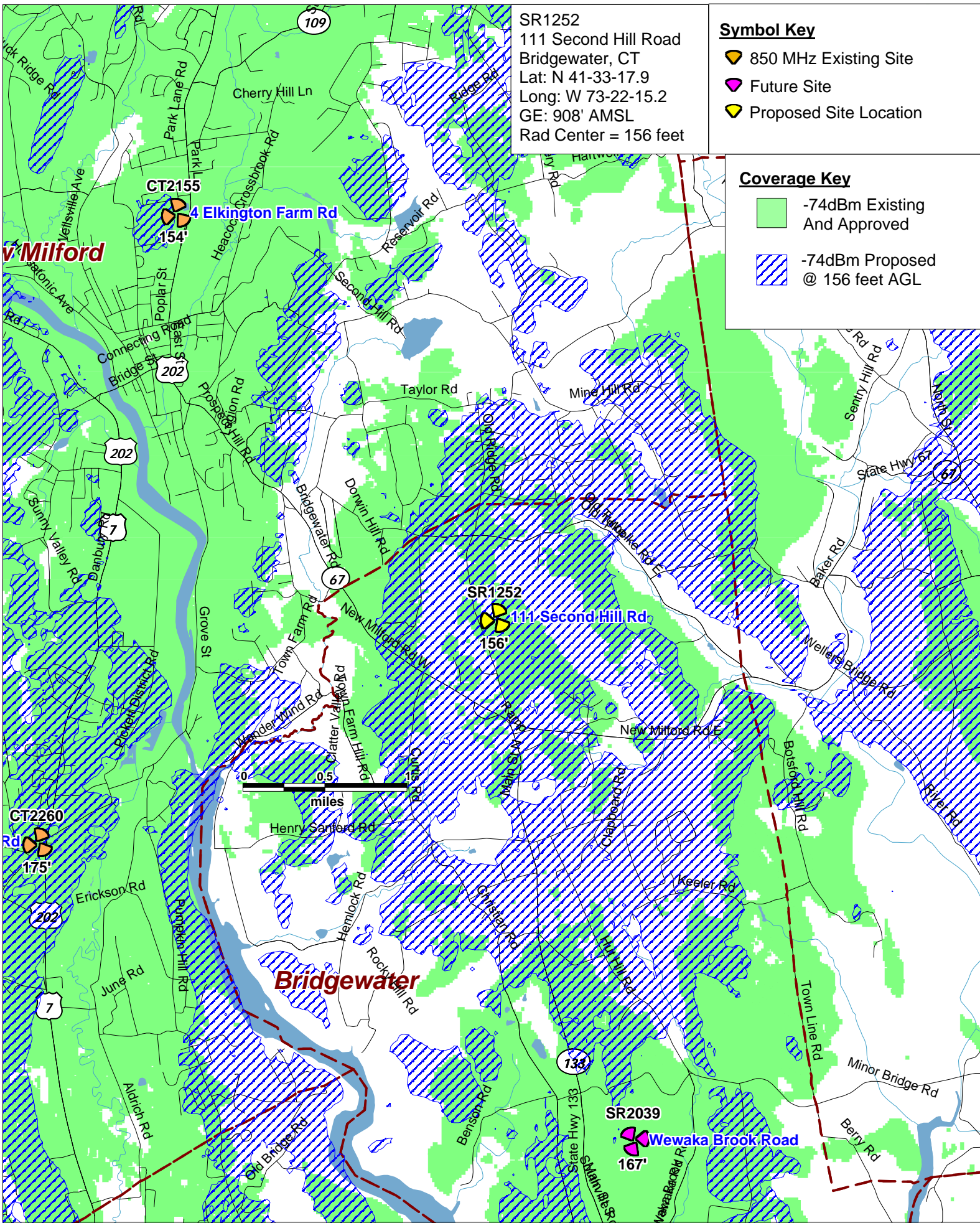
SR1252
 111 Second Hill Road
 Bridgewater, CT
 Lat: N 41-33-17.9
 Long: W 73-22-15.2
 GE: 908' AMSL
 Rad Center = 156 feet

Symbol Key

-  850 MHz Existing Site
-  Future Site
-  Proposed Site Location

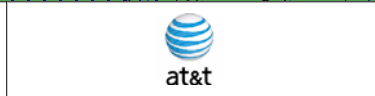
Coverage Key

-  -74dBm Existing And Approved
-  -74dBm Proposed @ 156 feet AGL



Existing, Approved and Proposed @ 156' AGL Coverage

**111 Second Hill Rd
 Bridgewater, CT 06752**






PREPARED ON
DATE: 05/16/2013



REV 0

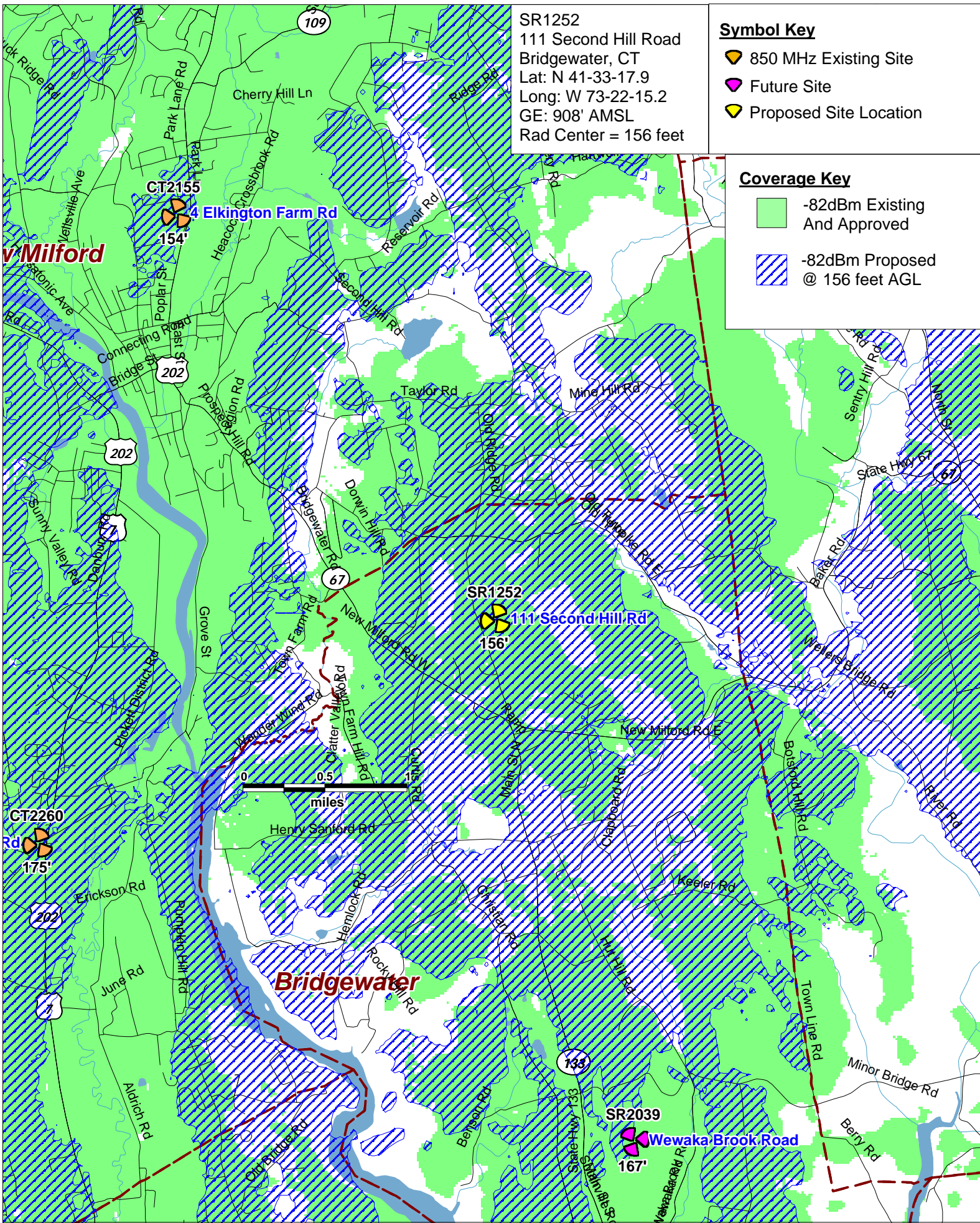
SR1252
 111 Second Hill Road
 Bridgewater, CT
 Lat: N 41-33-17.9
 Long: W 73-22-15.2
 GE: 908' AMSL
 Rad Center = 156 feet

Symbol Key

-  850 MHz Existing Site
-  Future Site
-  Proposed Site Location

Coverage Key

-  -82dBm Existing
And Approved
-  -82dBm Proposed
@ 156 feet AGL



Existing, Approved and
 Proposed @ 156' AGL
 Coverage




111 Second Hill Rd
Bridgewater, CT 06752





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DATE: 05/16/2013	

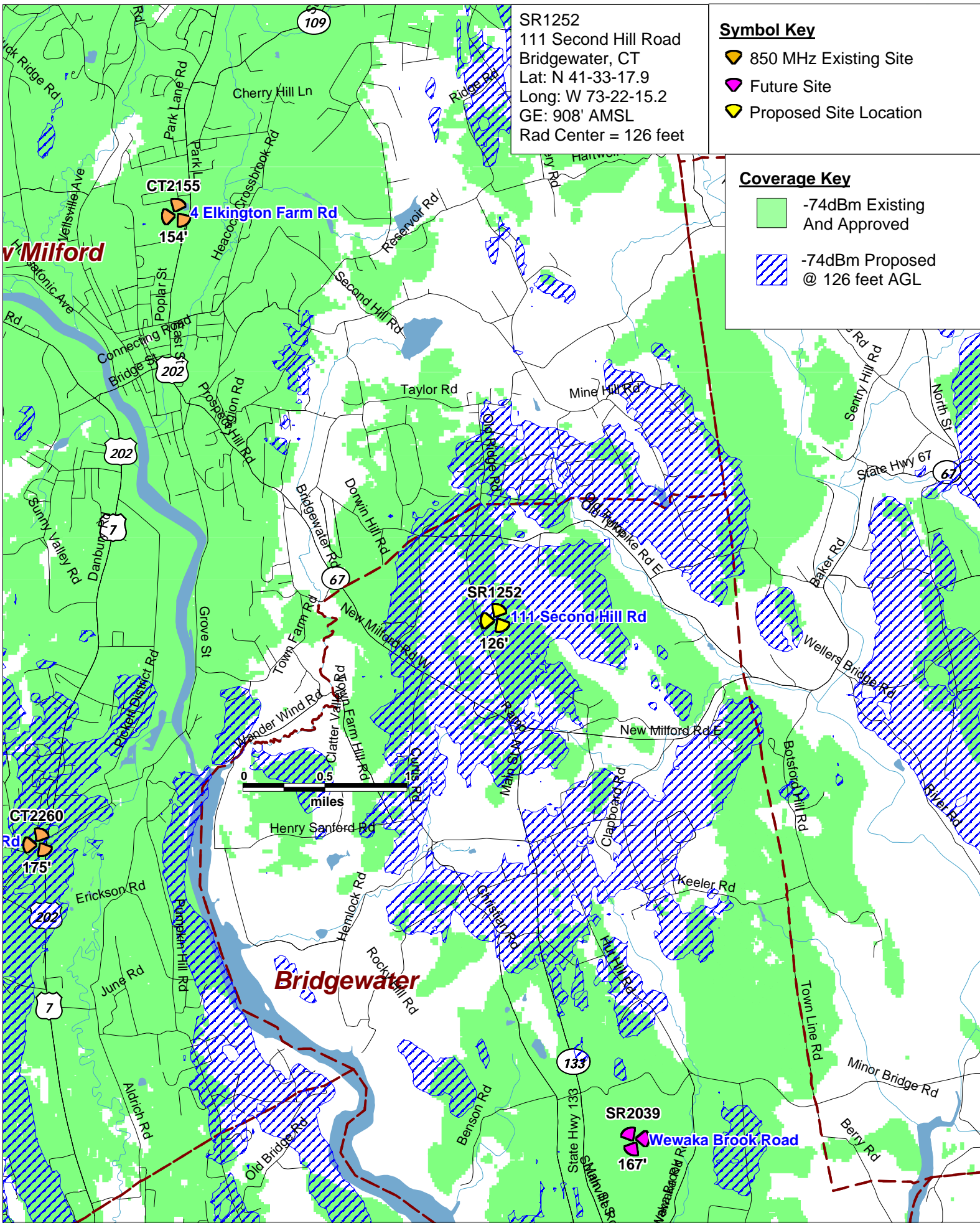
SR1252
 111 Second Hill Road
 Bridgewater, CT
 Lat: N 41-33-17.9
 Long: W 73-22-15.2
 GE: 908' AMSL
 Rad Center = 126 feet

Symbol Key

-  850 MHz Existing Site
-  Future Site
-  Proposed Site Location

Coverage Key

-  -74dBm Existing
And Approved
-  -74dBm Proposed
@ 126 feet AGL



Existing, Approved and
 Proposed @ 126' AGL
 Coverage




111 Second Hill Rd
Bridgewater, CT 06752





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DATE: 05/16/2013	0

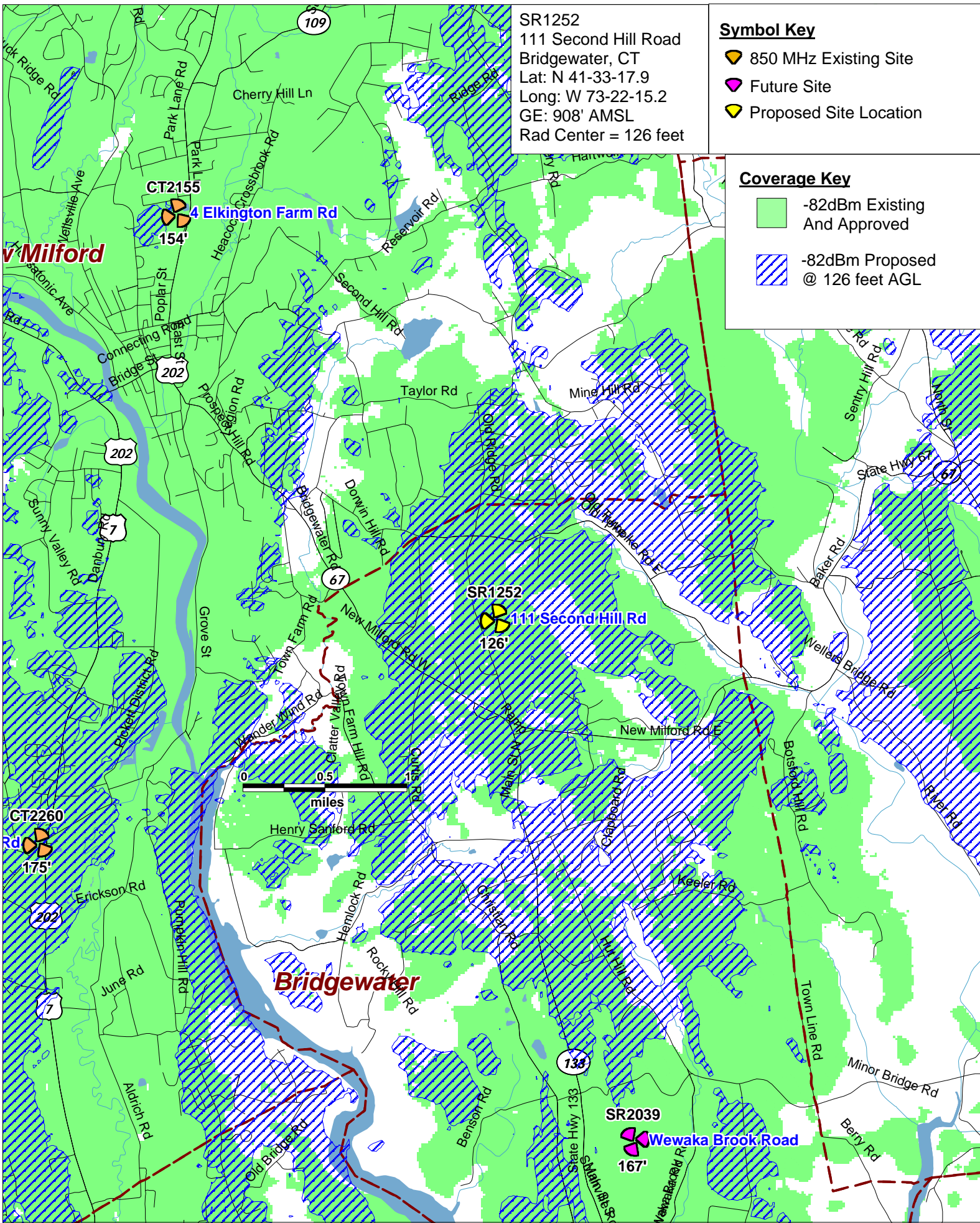
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 GE: 908' AMSL
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Symbol Key

-  850 MHz Existing Site
-  Future Site
-  Proposed Site Location

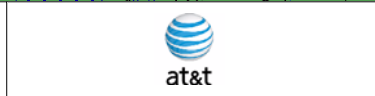
Coverage Key

-  -82dBm Existing
And Approved
-  -82dBm Proposed
@ 126 feet AGL



Existing, Approved and
 Proposed @ 126' AGL
 Coverage

111 Second Hill Rd
Bridgewater, CT 06752



PREPARED ON
DATE: 05/16/2013

REV 0

Attachment 5



MEMORANDUM

Date: May 22, 2013

**Mr. Tim Burks
New Cingular Wireless PCS, LLC
500 Enterprise Drive, Suite 3A
Rocky Hill, CT 06067**

APT Project No.: CT361110

**Re: Avian Resources Evaluation
Proposed Bridgewater Facility
111 Second Hill Road
Bridgewater, Connecticut**

New Cingular Wireless PCS, LLC ("AT&T") proposes to construct a new wireless telecommunications Facility ("Facility") at 111 Second Hill Road in Bridgewater, Connecticut (the "project area"). The Facility would provide needed wireless services in the Town of Bridgewater along Route 67, Route 133 and other local roads as well as the surrounding area including northern Bridgewater, southern New Milford and western Roxbury.

The project area is located adjacent to an agricultural field in the northeast corner of an approximately 4.8 acre parcel off Second Hill Road (Bridgewater Tax Assessor Parcel ID #28 50), currently occupied by a residency and various outbuildings including a garage. AT&T proposes to develop a 45-foot by 90-foot gravel compound area enclosed with an 8-foot tall chain link fence. AT&T is proposing to install a 160-foot tall monopole centered within this compound area. A 12-foot wide, approximately 350-foot long gravel access is proposed in order to gain admission to the facility.

The purpose of this evaluation is to document the proposed Facility's proximity to avian resource areas and its compliance with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species. All-Points Technology Corporation, P.C. ("APT") reviewed several publicly-available sources of avian data for the state of Connecticut to provide the following information with respect to potential impacts on migratory birds associated with the proposed development of the Facility. This desktop analysis and attached graphics identify avian resources and their proximities to the host property. Information within an approximate 2-mile radius of the host Property is graphically depicted on the attached Avian Resources Map. Some of the avian data referenced herein are not located in proximity to the project area and are therefore not visible on the referenced map due to its scale. However, in those cases the distances separating the host property from the resources are identified in the discussions below.

Proximity to Important Bird Areas

The National Audubon Society has identified 27 Important Bird Areas (“IBAs”) in the state of Connecticut. IBAs are sites that provide essential habitat for breeding, wintering, and/or migrating birds. The IBA must support species of conservation concern, restricted-range species, species vulnerable due to concentration in one general habitat type or biome, or species vulnerable due to their occurrence at high densities as a result of their congregatory behavior¹. The closest IBA to the project area is the Good Hill Farm Preserve, located in Roxbury approximately 4.6 miles east of the proposed Facility location (“site”). Good Hill Farm Preserve is 476 acre working farm with a 0.8-mile multi-use trail through forestland and active pastureland. The area is known as an important area for grassland bird habitat. Due to its distance from the site, this IBA would not experience an adverse impact resulting from the proposed development of the Facility.

Supporting Migratory Bird Data

Beyond Audubon’s IBAs, the following analysis and attached graphics also identify several additional avian resources and their proximities to the project area. Although these data sources may not represent habitat indicative of important bird areas, they may indicate possible bird concentrations² or migratory pathways.

Critical Habitat

Connecticut Critical Habitats depict the classification and distribution of 25 rare and specialized wildlife habitats in the state. It represents a compilation of ecological information collected over many years by state agencies, conservation organizations and individuals. Critical habitats range in size from areas less than one acre to areas that are tens of acres in extent. The Connecticut Critical Habitats information can serve to highlight ecologically significant areas and to target areas of species diversity for land conservation and protection but may not necessarily be indicative of habitat for bird species. The nearest Critical Habitat to the proposed Facility is a palustrine forested area, denoted as the Shepaug River, Roxbury Floodplain Forest located approximately 2 miles to the east of the site. Based on the distance separating this resource from the proposed Facility, no adverse impacts are anticipated.

Avian Survey Routes and Points

Breeding Bird Survey Route

The North American Breeding Bird Survey is a cooperative effort between various agencies and volunteer groups to monitor the status and trends of North American bird populations. Routes are randomly located to sample habitats that are representative of an entire region. Each year during the height of the avian breeding season (June for most of the United States) participants skilled in avian identification collect bird population data along roadside survey routes. Each survey route is approximately 24.5 miles long and contains 50 stops located at 0.5-mile intervals. At each stop, a

¹ http://web4.audubon.org/bird/iba/iba_intro.html

² “bird concentrations” is related to the USFWS *Interim Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers* (September 14, 2000) analysis provided at the end of this document

three-minute count is conducted. During each count, every bird seen or heard within a 0.25-mile radius is recorded. The resulting data is used by conservation managers, scientists, and the general public to estimate population trends and relative abundances and to assess bird conservation priorities. The nearest survey route to the project area is the Long Hill Breeding Bird Survey Route, which generally begins on the Easton/Trumbull town line and winds its way north through Monroe, Newtown, and Southbury before terminating in Roxbury, within approximately 2.3 miles east of the site. Since bird survey routes represent randomly selected data collection areas, they do not necessarily represent a potential restriction to development projects, including the proposed Facility.

Hawk Watch Site

The Hawk Migration Association of North America (“HMANA”) is a membership-based organization committed to the conservation of raptors through the scientific study, enjoyment and appreciation of raptor migration. HMANA collects hawk count data from almost 200 affiliated raptor monitoring sites throughout the United States, Canada and Mexico, identified as “Hawk Watch Sites.” In Connecticut, Hawk Watch Sites are typically situated on prominent hills and mountains that tend to concentrate migrating raptors. The nearest Hawk Watch Site, Botsford Hill, is located in Bridgewater along the Bridgewater town line and the Shepaug River, approximately 2.8 miles to the northeast of the site. Hawk Watch Sites may be an indicator of migratory routes for raptors.

Bald Eagle Site

Bald Eagle Sites consist of locations of midwinter Bald Eagle counts from 1986 to 2005 with an update provided in 2008. This survey was initiated in 1979 by the National Wildlife Federation. This database includes information on statewide, regional and national trends. Survey routes are included in the database only if they were surveyed consistently in at least four years and where at least four eagles were counted in a single year. A Bald Eagle Site survey route begins in the Town of Bridgewater approximately one mile south of the site and extends north along Route 133 to the Massachusetts border.

Flyways

The project area is located in Litchfield County, approximately 30 miles north of Long Island Sound. The Connecticut coast lies within the Atlantic Flyway, one of four generally recognized regional primary migratory bird flyways (Mississippi, Central and Pacific being the others). This regional flyway is used by migratory birds travelling to and from summering and wintering grounds. The Atlantic Flyway is particularly important for many species of migratory waterfowl and shorebirds, and Connecticut’s coast serves as vital stopover habitat. Migratory land birds also stop along coastal habitats before making their way inland. Smaller inland migratory flyways are often concentrated along major riparian areas as birds use these valuable stopover habitats to rest and refuel as they make their way further inland to their preferred breeding habitats. The Connecticut Migratory Bird Stopover Habitat Project (Stokowski, 2002)³ identified potential flyways along the Housatonic, Naugatuck, Thames, and Connecticut Rivers. This study paralleled a similar earlier study conducted by the Silvio O. Conte National Fish & Wildlife Refuge

³ Stokowski, J.T. 2002. Migratory Bird Stopover Habitat Project Finishes First Year. Connecticut Wildlife, November/December 2002. P.4.

(Neotropical Migrant Bird Stopover Habitat Survey⁴), which consisted of collection of migratory bird data along the Connecticut River and the following major Connecticut River tributaries: Farmington, Hockanum, Scantic, Park, Mattabeset, Salmon, and Eight Mile Rivers. Of these potential flyways, the nearest to the site is the Housatonic River, located approximately 1.8 miles to the west. Although the Shepaug River riparian corridor, located 2 miles east of the site, is not identified as a potential flyway, it potentially forms a secondary flyway as birds move northward from the Housatonic River corridor during the spring migration. These major riparian corridors may provide secondary flyways as they likely provide more food and protection than more exposed upland sites, particularly during the spring migration⁵.

Siting of tower structures within flyways can be a concern, particularly for tall towers and even more particularly for tall towers with guy wires and lighting. The majority of studies on bird mortality due to towers focuses on very tall towers (greater than 1000 feet), illuminated with non-flashing lights, and guyed. These types of towers, particularly if sited in major migratory pathways, do result in significant bird mortality (Manville, 2005)⁶. The proposed Facility is not this type of tower, being an unlit, unguyed monopole structure only 160 feet in height. More recent studies of short communication towers (<300 feet) reveal that they rarely kill migratory birds⁷. Studies of mean flight altitude of migrating birds reveal flight altitudes of 410 meters (1350 feet), with flight altitudes on nights with bad weather between 200 and 300 meters above ground level (656 to 984 feet)⁸.

Therefore, no adverse impacts to migrating bird species are anticipated as a result of the significant distance separating the proposed Facility from both the Housatonic and Shepaug River potential flyway corridors and the short 160-foot height of the unlit and unguyed Facility.

Waterfowl Focus Areas

The Atlantic Coast Joint Venture (“ACJV”) is an affiliation of federal, state, regional and local partners working together to address bird conservation planning along the Atlantic Flyway. The ACJV has identified waterfowl focus areas recognizing the most important habitats for waterfowl along the Atlantic Flyway. Connecticut contains several of these waterfowl focus areas. The nearest waterfowl focus area to the project area is the Lower Housatonic River – Great Meadows area, located approximately 12.5 miles to the southeast. Please refer to the attached Connecticut Waterfowl Focus Areas Map. Based on the distance of these resources to the project area, no direct impacts would occur from development of the proposed Facility.

⁴ The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey
<http://www.science.smith.edu/stopoverbirds/index.html>

⁵ The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey.
http://www.science.smith.edu/stopoverbirds/Chapter5_Conclusions&Recommendations.html

⁶ Manville, A.M. II. 2005. Bird strikes and electrocutions at power lines, communications towers, and wind turbines: state of the art and state of the science - next steps toward mitigation. Bird Conservation Implementation in the Americas: Proceedings 3rd International Partners in Flight Conference 2002. C.J. Ralph and T.D. Rich, editors. USDA Forest Service General Technical Report PSW-GTR-191. Pacific Southwest Research Station, Albany CA. pp. 1-51-1064.

⁷ Kerlinger, P. 2000. Avian Mortality at Communication Towers: A Review of Recent Literature, Research, and Methodology. Prepared for U.S. Fish and Wildlife Service Office of Migratory Bird Management.

⁸ Mabee, T.J., B.A. Cooper, J.H. Plissner, D.P. Young. 2006. Nocturnal bird migration over an Appalachian ridge at a proposed wind power project. Wildlife Society Bulletin 34:682-690.

CTDEEP Migratory Waterfowl Data

The Connecticut Department of Energy and Environmental Protection (“CTDEEP”) created a Geographic Information System (“GIS”) data layer in 1999 identifying concentration areas of migratory waterfowl at specific locations in Connecticut. The intent of this data layer is to assist in the identification of migratory waterfowl resource areas in the event of an oil spill or other condition that might be a threat to waterfowl species. This data layer identifies conditions at a particular point in time and has not been updated since 1999.

No migratory waterfowl areas are located within the Town of Bridgewater. The nearest migratory waterfowl area (Housatonic River at Nells Island in Stratford-Milford, CT) is located approximately 28 miles to the south of the candidate site. The associated species are identified as American black duck, bufflehead, Canada goose, canvasback, goldeneye, mallard, and green wing teal. Based on its distance to the site, no impacts to migratory waterfowl habitat are anticipated to result from development of the proposed Facility.

CTDEEP Natural Diversity Data Base

CTDEEP’s Natural Diversity Data Base (“NDDB”) program performs hundreds of environmental reviews each year to determine the impact of proposed development projects on state listed species and to help landowners conserve the state’s biodiversity. State agencies are required to ensure that any activity authorized, funded or performed by a state agency does not threaten the continued existence of endangered or threatened species. Maps have been developed to serve as a pre-screening tool to help applicants determine if there is a potential impact to state listed species.

The NDDB maps represent approximate locations of endangered, threatened and special concern species and significant natural communities in Connecticut. The locations of species and natural communities depicted on the maps are based on data collected over the years by CTDEEP staff, scientists, conservation groups, and landowners. In some cases an occurrence represents a location derived from literature, museum records and/or specimens. These data are compiled and maintained in the NDDB. The general locations of species and communities are symbolized as shaded areas on the maps. Exact locations have been masked to protect sensitive species from collection and disturbance and to protect landowner’s rights whenever species occur on private property.

The CTDEEP NDDB stated in a March 26, 2013 letter that their records indicate extant populations of American kestrel (*Falco sparverius*), a State Threatened Species, and wood turtle (*Glyptemys insculpta*), a State Species of Special Concern on or within the vicinity of the site. An American kestrel nest survey will be performed to determine if nesting is occurring on or near the site. The results of the American kestrel nest survey will be provided to the CTDEEP upon completion, anticipated sometime in June, along with seasonal restriction recommendations if necessary. A wood turtle protection plan, similar in scope to turtle protection plans previously developed by APT and approved by both CTDEEP and the Connecticut Siting Council (“Council”), will be developed and submitted to CTDEEP for review and concurrence. The American kestrel nest survey results and detailed wood turtle protection plan along with subsequent correspondence from CTDEEP regarding their review of these two documents will be forwarded to the Council upon completion.

USFWS Communications Towers Compliance

The U.S Fish and Wildlife Service (“USFWS”) prepared its *Interim Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers* (September 14, 2000), which recommends the 12 voluntary actions below be implemented in order to mitigate potential bird strikes that could result by the construction of telecommunications towers. With respect to Questions 28 and 47, APT offers the responses, specific to the proposed Facility at either location, following each of the recommended actions.

1. *Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communications tower or other structure (e.g., billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.*

Collocation opportunities on existing towers, buildings or non-tower structures are not available in the area while achieving the required radio frequency (“RF”) coverage objectives of AT&T.

2. *If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level (AGL), using construction techniques which do not require guy wires (e.g., use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Administration regulations permit.*

The proposed Facility would consist of a 160-foot monopole structure which requires neither guy wires nor lighting.

3. *If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.*

Multiple towers are not proposed as part of this project.

4. *If at all possible, new towers should be sited within existing “antenna farms” (clusters of towers). Towers should not be sited in or near wetlands, or other known bird concentration areas (e.g., state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.*

There are no existing “antenna farms” in the area. The site is not within wetlands, known bird concentration area, migratory or daily movement flyway, or habitat of threatened/endangered species. According to a March 2, 2011 letter from the CTDEEP Natural Diversity Data Base NDDB, there are known extant populations of state or Federal Endangered, Threatened or Special Concern Species at or proximate to the proposed Facility. In Connecticut, seasonal atmospheric conditions can occasionally produce fog, mist and/or low ceilings. However, high incidences of these meteorological conditions, relative to the region, are not known to exist at the site.

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5. *If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used.*

The proposed Facility height (160 feet AGL) is less than 199 feet and would not require any aviation safety lighting.

6. *Tower designs using guy wires for support which are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species.*

The proposed Facility would be free-standing and would not require guy wires or visual marking.

7. *Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint." However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.*

The proposed Facility is sited, designed, and would be constructed to accommodate proposed equipment and to allow for future collocations within the smallest footprint possible. The site is located proximate to existing development and therefore will not result in habitat fragmentation.

8. *If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal; restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.*

Significant numbers of breeding, feeding, or roosting birds are not known to habitually use the proposed tower construction areas at the site.

9. *In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.*

The proposed Facility has been designed in accordance with this guidance, as it could accommodate a total of four antenna platform positions. The proposed, free-standing Facility would be neither lighted nor guyed.

10. *Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.*

Security lighting for on-ground facilities would be down-shielded using Dark Sky compliant fixtures set on motion sensor with timer.

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11. If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct, dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.

With prior notification to AT&T, USFWS personnel would be allowed access to the proposed Facility to conduct evaluations.

12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

If the proposed Facility was no longer in use or determined to be obsolete, it would be removed within 12 months of cessation of use.

Summary and Conclusions

Based on the results of this desk-top evaluation, no migratory bird species are anticipated to be impacted by AT&T's proposed development. The Facility is not proximate to an Important Bird Area and would comply with the USFWS guidelines for minimizing the potential impacts to birds.

Figures





























- Avian Resources Map
- Connecticut Waterfowl Focus Areas Map

Avian Resources Map

Proposed AT&T Wireless Communications Facility

111 Second Hill Road
Bridgewater, Connecticut

Legend

-  Proposed Tower Location
 -  Hawk Watch Site
 -  Bald Eagle Watch Site
 -  Important Bird Site*
 -  Breeding Bird Survey Route
 -  Important Bird Area*
 -  Migratory Waterfowl (CT DEEP, 1999)*
 -  Natural Diversity Database Area (CT DEEP, 12/2012)
 -  Critical Habitat (CT DEEP, 07/2009)
 -  Federal Property (CT DEEP, 2004)*
 -  Municipal and Private Open Space (CT DEEP, 1997)
 - DEP Property (CT DEEP, 2010)***
 -  State Forest
 -  State Park
 -  State Park Scenic Reserve
 -  State Park Trail
 -  Natural Area Preserve
 -  Wildlife Area
 -  Wildlife Sanctuary
 -  Historic Preserve
 -  Flood Control
 -  Fish Hatchery
 -  DEP Owned Waterbody
 -  Water Access
 -  Other
 -  Waterbody
 -  Watercourse
 -  Road
 -  Town Line*
- *None within mapped extents

Last Updated Wednesday, March 13, 2013

Avian Source Information:
 Bald Eagle Sites: Midwinter Bald Eagle Count Survey website
http://ocid.nacse.org/nbii/eagles/state.php?php_screen=first&stateIn=Connecticut
 Hawk Watch Sites: Hawk Migration Association of North America (HMANA), Hawk Count website:
<http://hawkcount.org/sitesel.php?country=USA&stateprov=Connecticut>
 Migratory Waterfowl: CTDEP GIS, 1999
 Important Bird Sites/Areas: National Audubon Society, Audubon Connecticut
http://ct.audubon.org/BirdSci_IBAs.html
 Breeding Bird Survey Routes: Patuxent Wildlife Research Center of the U.S. Geological Survey and the Canadian Wildlife Service's National Wildlife Research Centre
<http://www.nationalatlas.gov/mlid/bbsrsl.html>

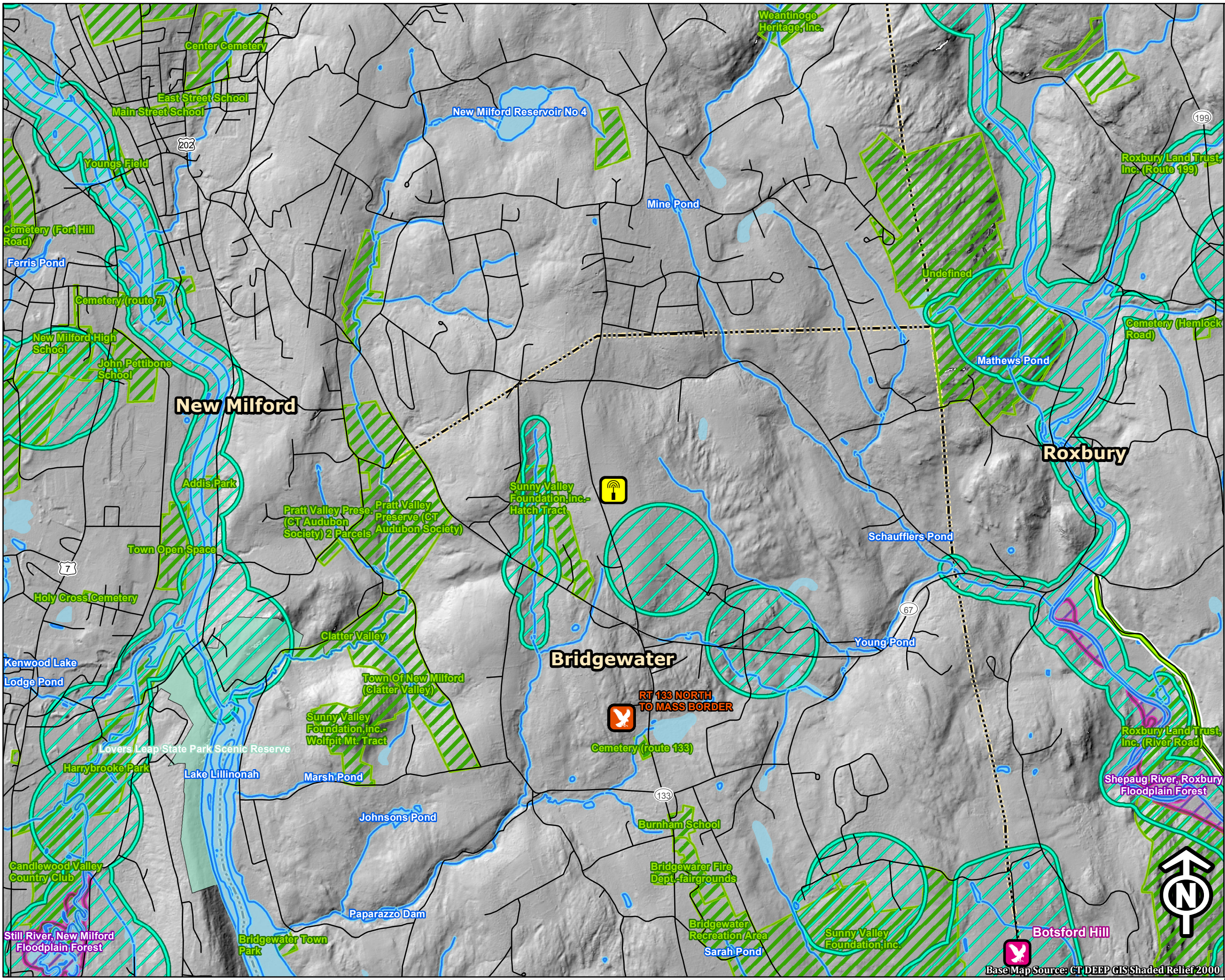
1 inch equals 2,200 feet

0 0.125 0.25 0.5
Miles

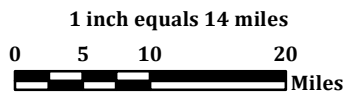
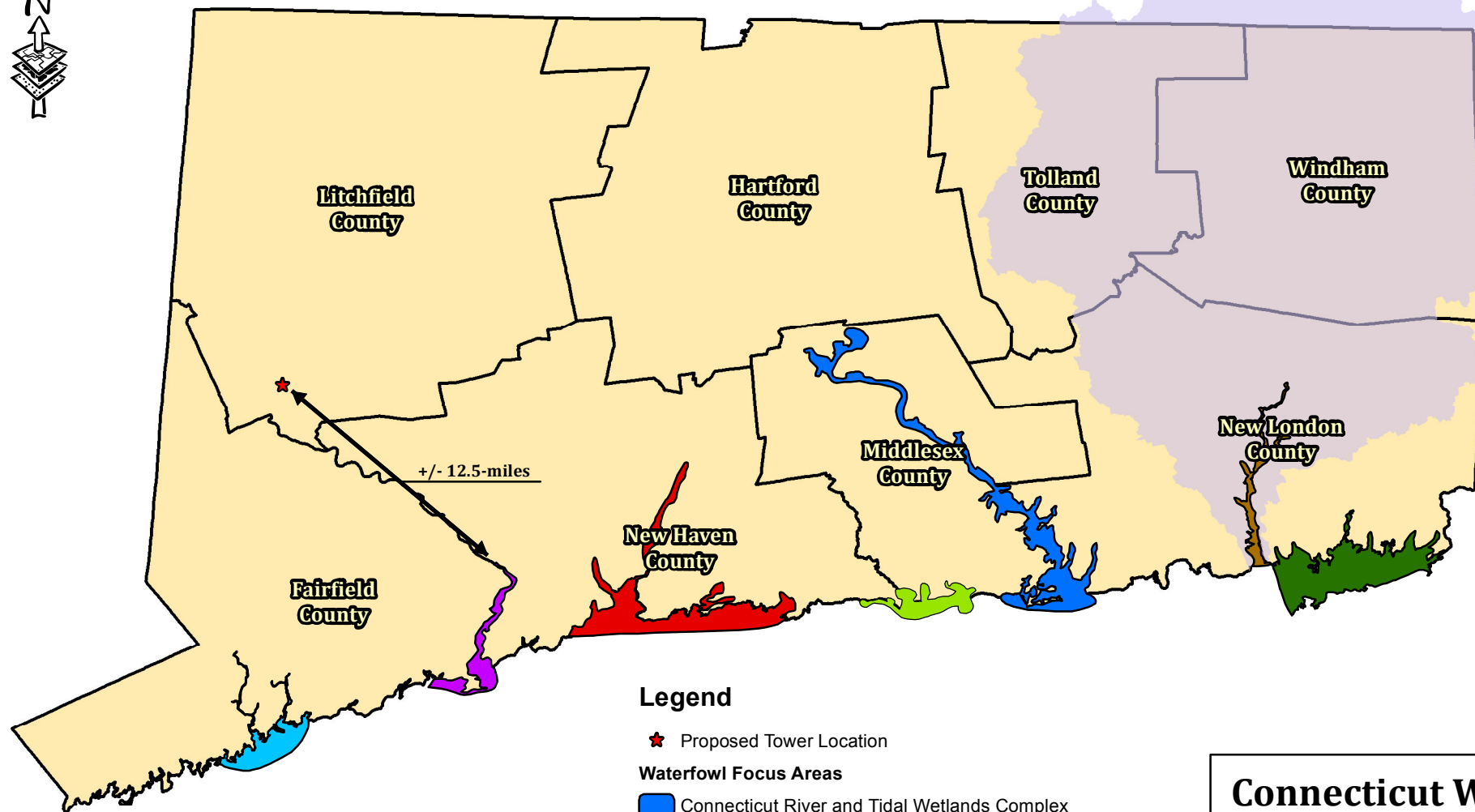


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Base Map Source: CT DEEP GIS Shaded Relief 2000



Legend

★ Proposed Tower Location

Waterfowl Focus Areas

Connecticut River and Tidal Wetlands Complex

Fishers Island Sound Complex

Greater Hammonasset Complex

Lower Housatonic River - Great Meadows

Lower Thames River System

New Haven Harbor

Norwalk Islands

Waterfowl Planning Area

Upper Thames River

Connecticut Waterfowl Focus Areas Map

Proposed AT&T Wireless Communications Facility
111 Second Hill Road
Bridgewater, Connecticut



Waterfowl Focus Areas Developed
by the Atlantic Coast Joint Venture Partnership