

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE: :
 :
 APPLICATION OF CELLCO PARTNERSHIP : DOCKET NO. 434
 D/B/A VERIZON WIRELESS FOR A :
 CERTIFICATE OF ENVIRONMENTAL :
 COMPATIBILITY AND PUBLIC NEED TO :
 RELOCATE AN EXISTING WIRELESS :
 TELECOMMUNICATIONS FACILITY AT :
 139 NORTH MAIN STREET, WEST :
 HARTFORD , CONNECTICUT : MARCH 13, 2013

RESPONSES OF CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS
TO CONNECTICUT SITING COUNCIL PRE-HEARING QUESTIONS, SET ONE

On February 20, 2013, the Connecticut Siting Council (“Council”) issued Pre-Hearing Questions to Cellco Partnership d/b/a Verizon Wireless (“Cellco”), relating to the above-captioned docket. Below are Cellco’s responses.

Question No. 1

Of the letters sent to abutting property owners, how many certified mail receipts were received? If any receipts were not returned, which owners did not receive their notice? Were any additional attempts made to contact those property owners?

Response

Of the ninety-four (94) abutters’ notices sent, Cellco received back eighty-four (82) return receipts. One notice, to Nathan Smeltz at 132 North Main Street, was returned with a notation stating that the forwarding address had expired. Cellco confirmed the address with the Town Assessor’s Office and resent the notice by regular mail. Eleven (11) other notices were returned marked “unclaimed”. Each of these “unclaimed” notices was resent to the land owner by regular mail.

Question No. 2

Which frequencies are Cellco Partnership d/b/a Verizon Wireless (Cellco) licensed to utilize in Hartford County?

Response

In Hartford County Connecticut, Cellco is licensed to operate in the Cellular (850 MHz), (LTE 700 MHz), PCS (1900 MHz) and AWS (2100 MHz) frequency ranges.

Question No. 3

What is the signal strength for which Cellco designs its system? For in-vehicle coverage? For in-building coverage?

Response

Cellco's wireless network design threshold is -85 dBm for reliable in-vehicle service and -75 dBm for reliable in-building service. Cellco's overall design coverage threshold (-85 dBm) is the same for all of its operating frequencies.

Question No. 4

What is the existing height of the Gallaudet Hall cupola?

Response

The top of the existing Gallaudet Hall cupola is 89.8 feet above ground level ("AGL") or 224.6 feet above mean sea level ("AMSL"). The ground elevation at the base of the Gallaudet Hall building is 134.8 feet AMSL.

Question No. 5

Provide Cellco's existing antenna height(s) at this facility.

Response

Cellco's antennas are mounted at a center line height of 68 feet AGL (202.8 feet AMSL)

and 73.3 feet AGL (208.1 feet AMSL) on the Gallaudet Hall cupola.

Question No. 6

Provide existing cellular, PCS, and LTE coverage plots with the existing facility at Gallaudet Hall.

Response

Attached behind Tab 1 are the coverage plots for the existing Gallaudet Hall facility.

Question No. 7

Provide existing cellular, PCS, and LTE coverage plots without the existing facility at Gallaudet Hall or the proposed clock tower. In other words, provide existing coverage plots to illustrate the coverage gaps that would result from having no Cellco facility at American School for the Deaf (ASD).

Response

Plots showing the coverage from Cellco's existing cell sites without coverage from either the existing or relocated West Hartford West facility at 139 North Main Street are included behind Tab 2. As illustrated on these plots, there is a significant amount of overlapping "coverage" near the ASD campus from Cellco's adjacent cell sites in West Hartford and Hartford. Evaluating the continuing need for the existing West Hartford West facility, however, requires more than a review of these coverage plots.

The more significant benefit of the existing and relocated West Hartford West facility is the "capacity" relief it provides to Cellco's wireless network in the West Hartford area. Within the coverage footprint of the West Hartford West cell site are high density residential areas, busy roadways with high volumes of traffic and portions of major commercial areas in West Hartford. Land use patterns around the existing cell sites that surround and interact with the West Hartford

West facility are similar.

To give you an idea of the significant need for network capacity in the center of West Hartford, consider the following information. Within the approximately 5.34 square mile West Hartford West facility coverage footprint, there are more than 13,000 residents. In January of 2013, the first month after Cellco's LTE service was activated in this area, the existing West Hartford West cell site handled over 2.1 million LTE/data connections. The existing West Hartford West facility and each of the surrounding cell sites that interact with the West Hartford West facility are currently operating at or near their available frequency capacity limits. If Cellco were to eliminate the existing West Hartford West Facility, the network in this area would quickly experience significant capacity problems resulting in more dropped calls, the inability to initiate calls, and slow or no data connectivity.

Question No. 8

Provide the lengths of the coverage gaps on key streets that would result from no Cellco facility at ASD.

Response

As discussed in Response to Question No. 7 above, the primary benefit of maintaining and relocating the West Hartford West facility is improved network capacity as opposed to expanding existing coverage. That said, the relocated West Hartford West facility, described in the application would provide coverage along a 1.2 mile portion of Farmington Avenue; a 1.5 mile portion of North Main Street; a 1.4 mile portion of Trout Brook Drive; a 1.45 mile portion of Fern Street; a 0.75 mile portion of Mountain Road; a .075 mile portion of Whitman Road; and a 1.2 mile portion of Brookside Drive/Cliffmore Road.

Question No. 9

Would there be handoff issues without a facility at ASD? Explain.

Response

It is possible that, in certain portions of the West Hartford West facility coverage area, hand-off problems could surface if the ASD facility were eliminated. Due to the maturity of Cellco's network in West Hartford and Hartford, the frequency capacity provided by the West Hartford West facility (as discussed above in response to Question No. 7) is more critical to network operations in the area than these potential "hand-off issues". If Cellco were to eliminate the existing cell site at the ASD, the surrounding cell sites would be required to provide both coverage and capacity relief to the area currently served by this facility. As mentioned above, these surrounding cell sites already operate at or near their capacity limits with the West Hartford West facility on-line. Loss of the West Hartford West facility would place significant strain on Cellco's network in the area and impact overall system performance. Under these circumstances, Cellco's customers would likely experience a significant increase in dropped calls and ineffective attempts and slow or no data connectivity in the area near the ASD campus. This result is contrary to Cellco's goal of providing high quality wireless services to its customers throughout Connecticut, generally, and in Hartford and West Hartford specifically.

Question No. 10

Provide the numerical data for column three of the following matrix.

Response

		Proposed clock tower facility statistics
Population Coverage (persons)	At in-building signal strength or higher	2,016
Population Coverage (persons)	At in-vehicle signal strength or higher	13,140
Area Covered (square miles)	At in-building signal strength or higher	0.75 square miles
Area Covered (square miles)	At in-vehicle signal strength or higher	5.34 square miles
Roadway Coverage (miles)	Main Roads	<u>See Response No. 8</u>
Roadway Coverage (miles)	Secondary Roads	<u>See Response No. 8</u>
Roadway Coverage (miles)	Total Roads (i.e. main + secondary)	8.25 miles

Question No. 11

Would the clock tower have any lighting?

Response

No FAA marking or lighting of the clock tower is required.

Question No. 12

Would Celco's proposed facility comply with E911 requirements?

Response

Yes.

Question No. 13

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

Response

Cellco is unaware of any specific manufacturer's safety standards that relate to the structures or equipment to be installed at the relocated West Hartford West facility. The clock tower will be designed and constructed in accordance with the applicable State Building and Life Safety Codes and all current supplements and amendments.

Question No. 14

Would the EIA/TIA-222 structural standards be applicable to the proposed clock tower? If yes, which version would the tower be designed for (e.g. F or G)? If no, which structural code(s) or standard(s) would the tower be designed to meet?

Response

The proposed clock tower would not be governed by the EIA/TIA-222 standards because its primary use as a building or structure has a secondary use as an antenna support structure. The proposed clock tower would be designed and constructed to comply with the Connecticut State Building and Life Safety Codes and all current supplements and amendments.

Question No. 15

What is the minimum antenna centerline height(s) required to meet Cellco's coverage objectives?

Response

Cellco's proposed antenna height of 64.5 feet for its PCS antennas and 54.5 feet for its cellular and LTE antennas is the minimum height required to satisfy its wireless service

objectives in the area.

Question No. 16

Provide the distances and directions from the proposed relocated tower site to the existing sites that it would interact with. (These sites are listed in Tab 8 of the Application.) Also include the tower or building heights.

Response

<u>Owner (Cellco Site Name)</u>	<u>Facility Height and Type</u>	<u>Location</u>	<u>Cellco Antenna Height (AGL)</u>	<u>Distance to West Hartford West Facility</u>
Hartford 4	Roof-top (50')	236 Sisson Avenue Hartford, CT	53'	2.25 miles
Hartford SW	Roof-top (65')	110 Bartholomew Avenue Hartford, CT	58'	2.62 miles
Hartford NW	Tower (140')	439 Homestead Avenue Hartford, CT	138'	2.52 miles
West Hartford North	Roof-top (73')	345 North Main Street West Hartford, CT	73'	1.0 miles
Farmington 5	Church Steeple (90')	One Westminster Drive West Hartford, CT	61.5'	1.37 miles
West Hartford 2	Tower (120')	457 South Quaker Lane West Hartford, CT	100'	1.78 miles
West Hartford 3	Roof-top (85')	2021 Albany Avenue West Hartford, CT	70'	1.57 miles
West Hartford Center	Roof-mounted Tower (25')	14-20 Isham Road West West Hartford, CT	110'	0.78 miles
West Hartford 4	Tower (108')	219 New Park Avenue Hartford, CT	105'	2.30 miles

Owner (Cellco Site Name)	Facility Height and Type	Location	Cellco Antenna Height (AGL)	Distance to West Hartford West Facility
Talcott 2	Tower (346')	3114 Albany Avenue West Hartford, CT	128'	3.03 miles

Question No. 17

Describe the land uses abutting this site.

Response

The predominant land use surrounding the 49.4 acre ASD parcel is single family residential. Several churches are also located along North Main Street in the vicinity.

Question No. 18

Calculate the amounts of cut and fill required to develop the proposed relocated tower site and access drive.

Response

Development of the clock tower will require the removal of approximately 400 cubic yards of material from the site.

Question No. 19

Would the backup generator have, for all intents and purposes, an indefinite run time in the event of a commercial power failure because it would be connected to natural gas service?

Response

Absent an unforeseen disruption of natural gas service to the site or mechanical problems with the generator itself, Cellco expects that its generator could run as long as necessary or until commercial power to the cell site is restored.

Question No. 20

Would any blasting be required to develop the site?

Response

Cellco does not anticipate the need for any blasting at this site. Subsurface soil conditions will be investigated following Council approval of the application.

Question No. 21

Is the proposed relocated facility within an “Important Bird Area” as designated by the National Audubon Society?

Response

No.

Question No. 22

Would the proposed relocated facility comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?

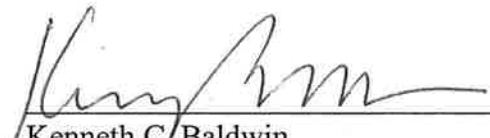
Response

Yes. Also, attached behind Tab 3 is an Avian Resources Evaluation for the proposed clock tower facility.

CERTIFICATION

I hereby certify that on this 13th day of March, 2013, a copy of the foregoing was sent,
postage prepaid, to the following parties and intervenors:

Lucia Chiocchio, Esq.
Christopher B. Fisher, Esq.
Cuddy & Feder LLP
445 Hamilton Avenue, 14th Floor
White Plains, NY 10601

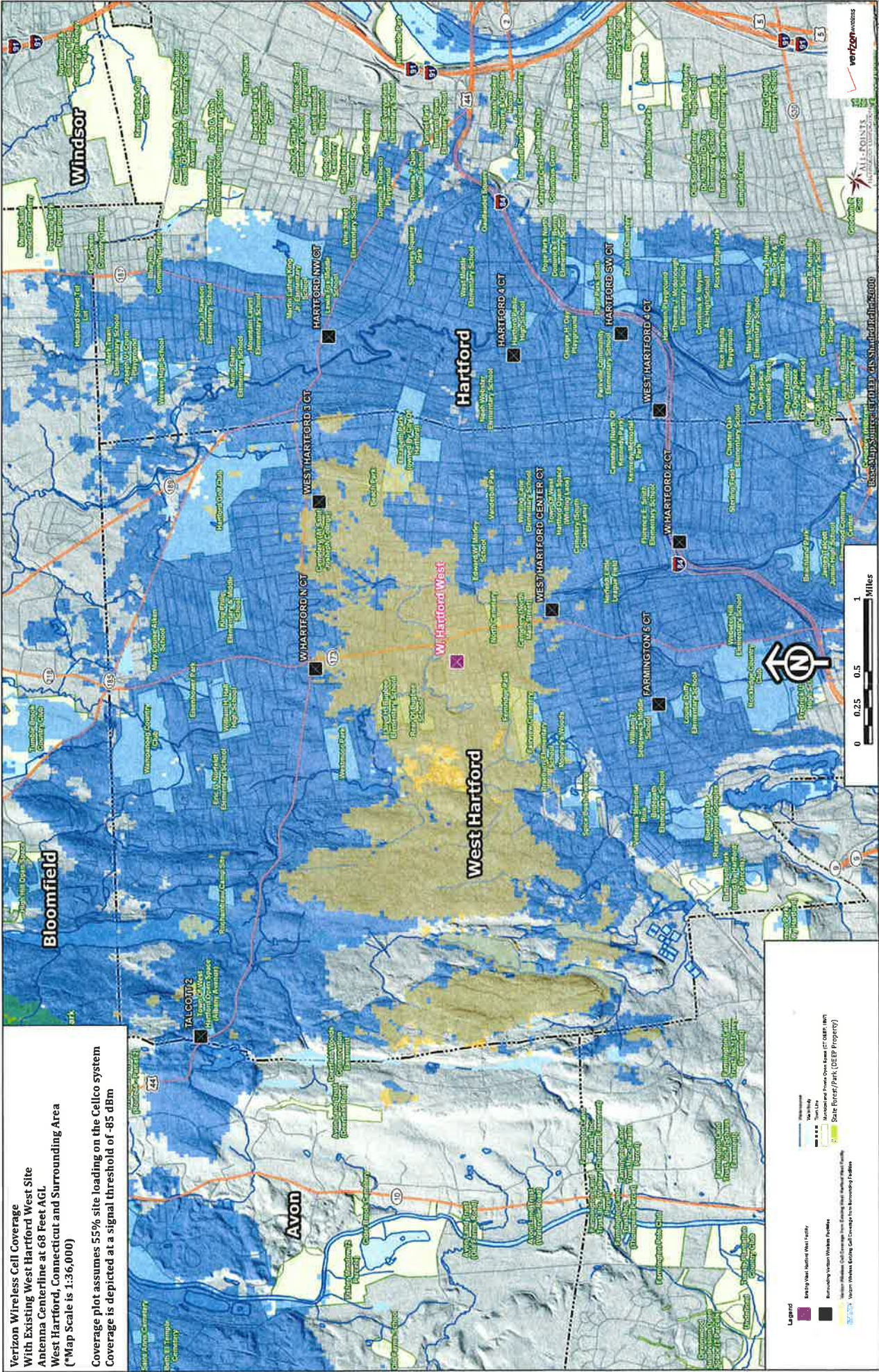


Kenneth C. Baldwin

TAB 1

Verizon Wireless Cell Coverage
 With Existing West Hartford West Site
 Antenna Centerline at 68 Feet AGL
 West Hartford, Connecticut and Surrounding Area
 (*Map Scale is 1:36,000)

Coverage plot assumes 55% site loading on the Cellico system
 Coverage is depicted at a signal threshold of -85 dBm

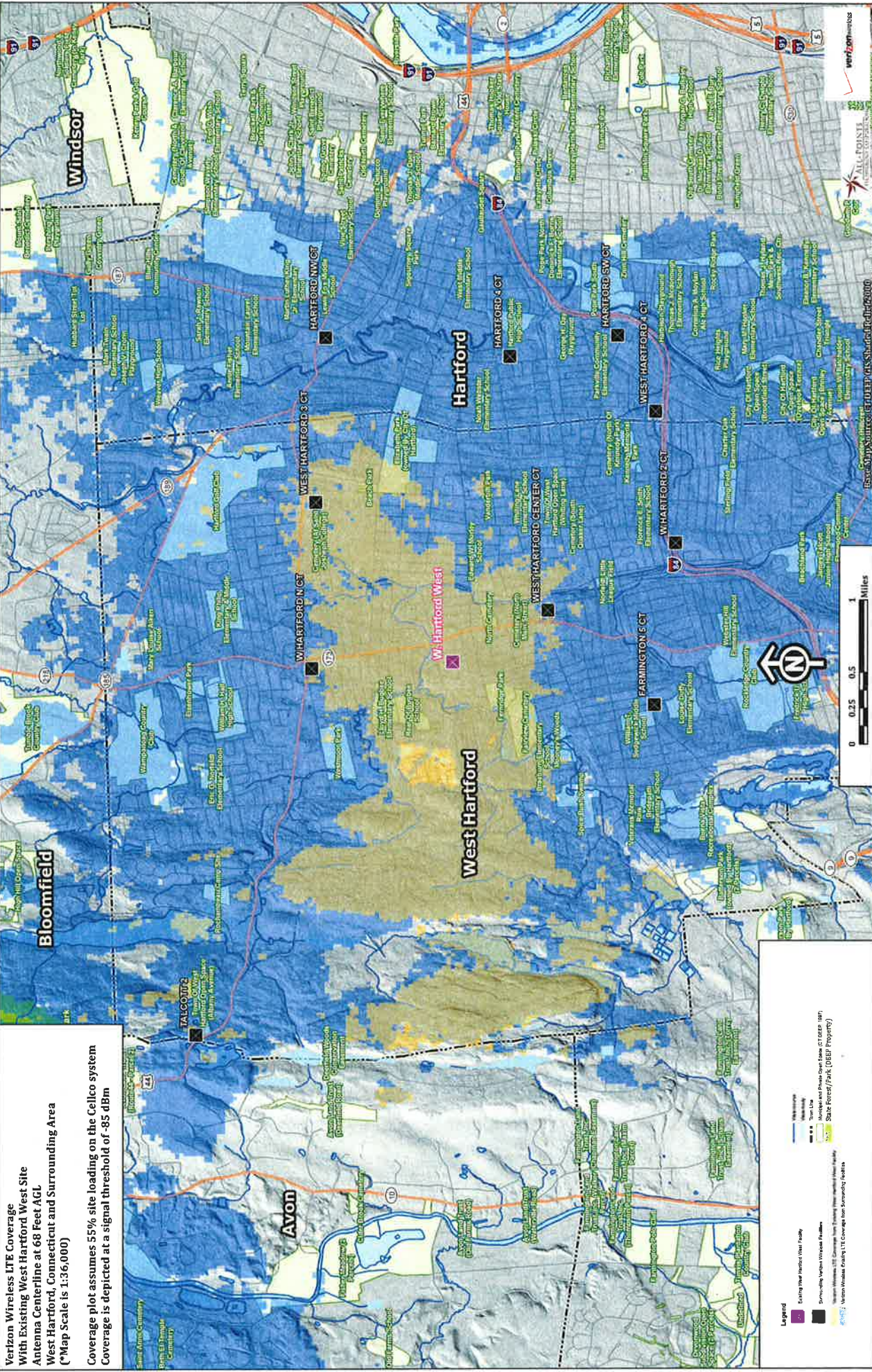


Legend

- Existing West Hartford West Facility
- Surrounding Verizon Wireless Facilities
- Antenna and Tower Open Spaces (OT) (DEEP) (M)
- State Forest/Park (DEEP Property)
- Verizon Wireless Existing Cell Coverage from Surrounding Facilities

Verizon Wireless LTE Coverage
 With Existing West Hartford West Site
 Antenna Centerline at 68 Feet AGL
 West Hartford, Connecticut and Surrounding Area
 (*Map Scale is 1:36,000)

Coverage plot assumes 55% site loading on the Cellico system
 Coverage is depicted at a signal threshold of -85 dBm



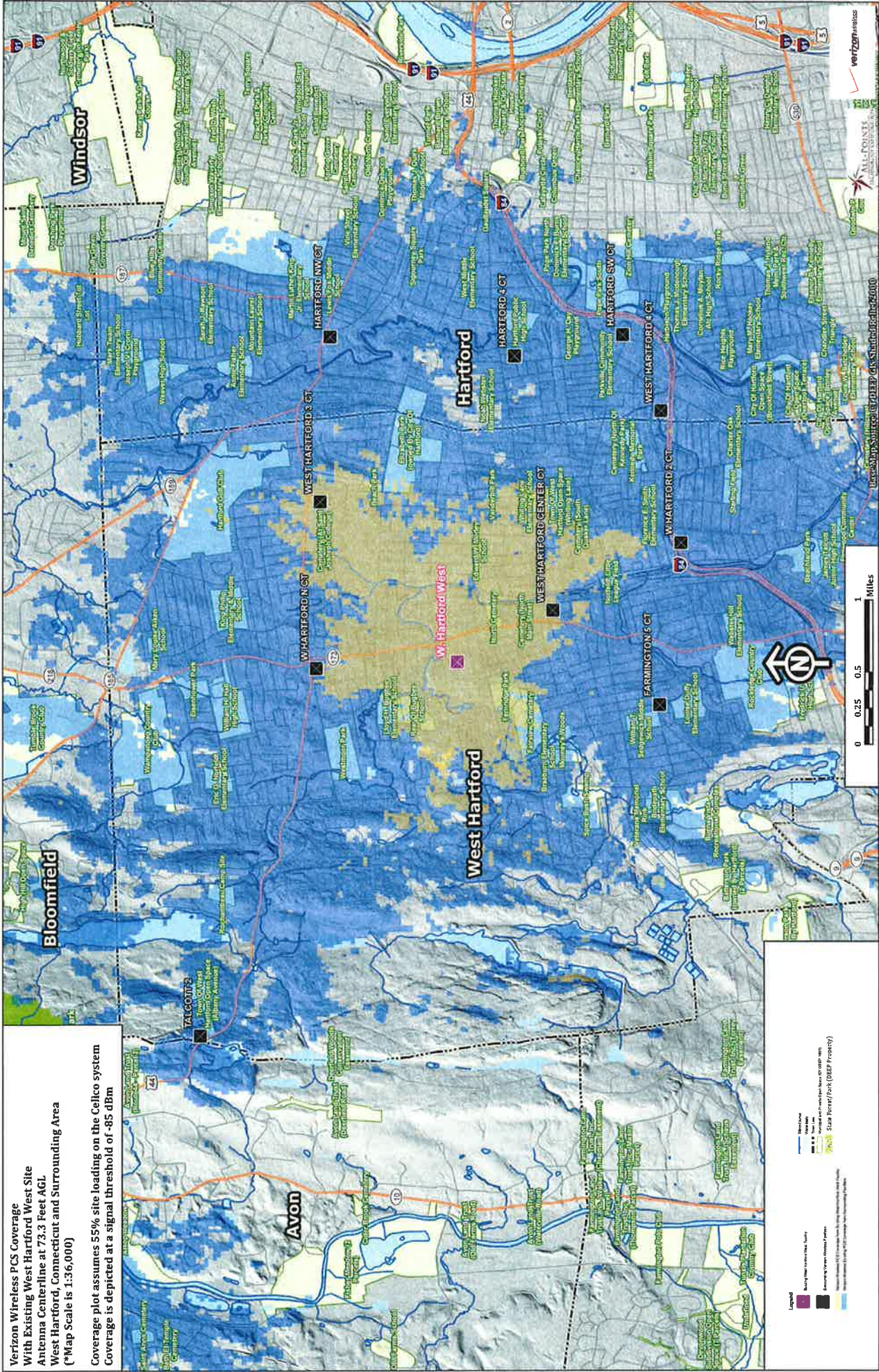
Legend

- Existing West Hartford West Facility
- Surrounding Verizon Wireless Facilities
- Municipal and Private-Owned State CT (DEEP) (1987)
- State Forest/Park (DEP/Property)
- Verizon Wireless Existing LTE Coverage from Surrounding Facilities

Map Scale is 1:36,000
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Verizon Wireless PCS Coverage
 With Existing West Hartford West Site
 Antenna Centerline at 73.3 Feet AGL
 West Hartford, Connecticut and Surrounding Area
 (*Map Scale is 1:36,000)

Coverage plot assumes 55% site loading on the Cellico system
 Coverage is depicted at a signal threshold of -85 dBm



Legend

- Blue line: New York State Thruway
- Blue line: Interstate
- Blue line: State Route / Park (DEEP Property)
- Blue line: Other State Routes
- Blue line: Other State Routes
- Blue line: Other State Routes

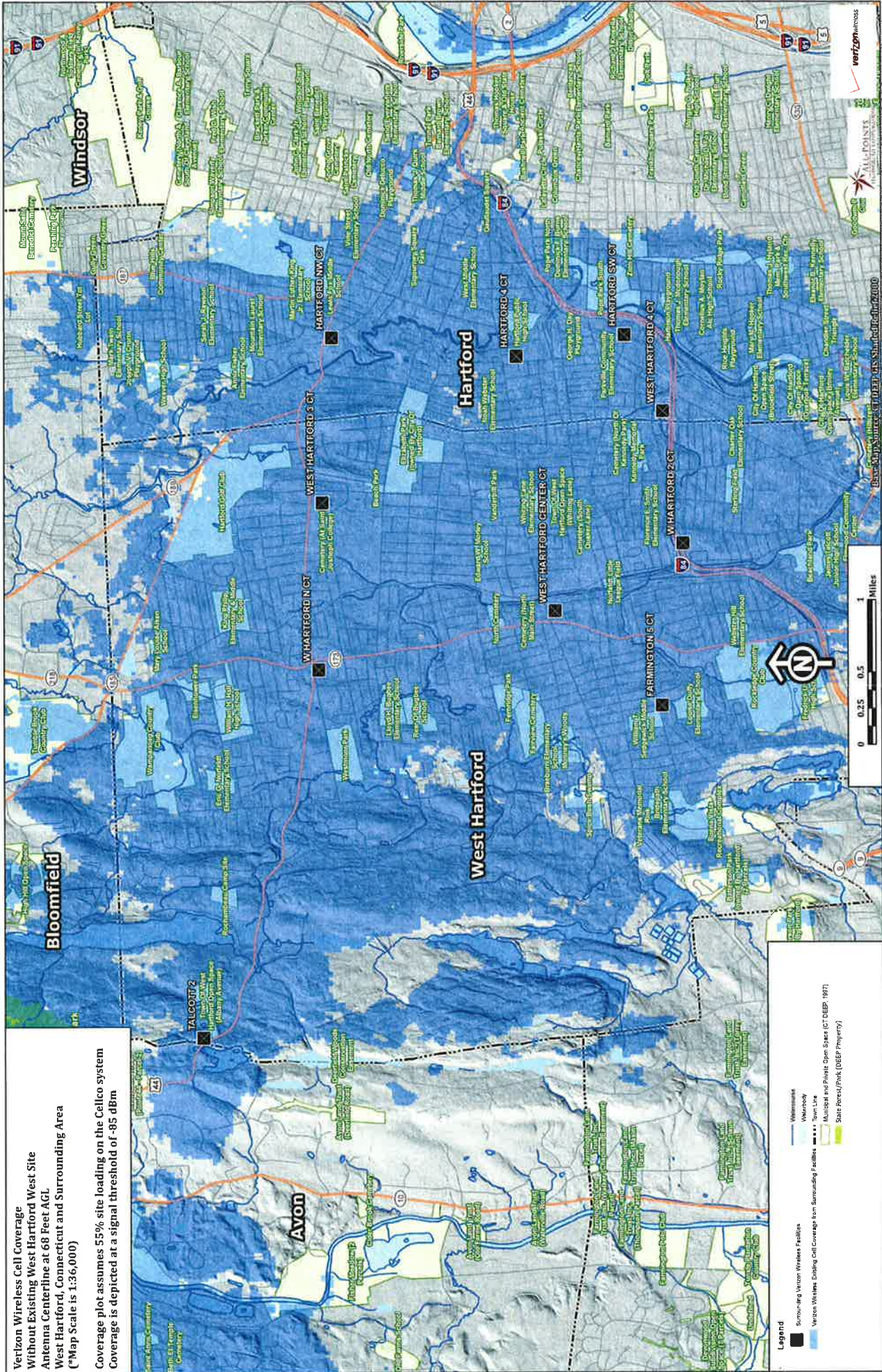


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TAB 2

Verizon Wireless Cell Coverage
 Without Existing West Hartford West Site
 Antenna Centreline at 68 Feet AGL
 West Hartford, Connecticut and Surrounding Area
 (*Map Scale is 1:36,000)

Coverage plot assumes 55% site loading on the Cellico system
 Coverage is depicted at a signal threshold of -85 dBm



Legend

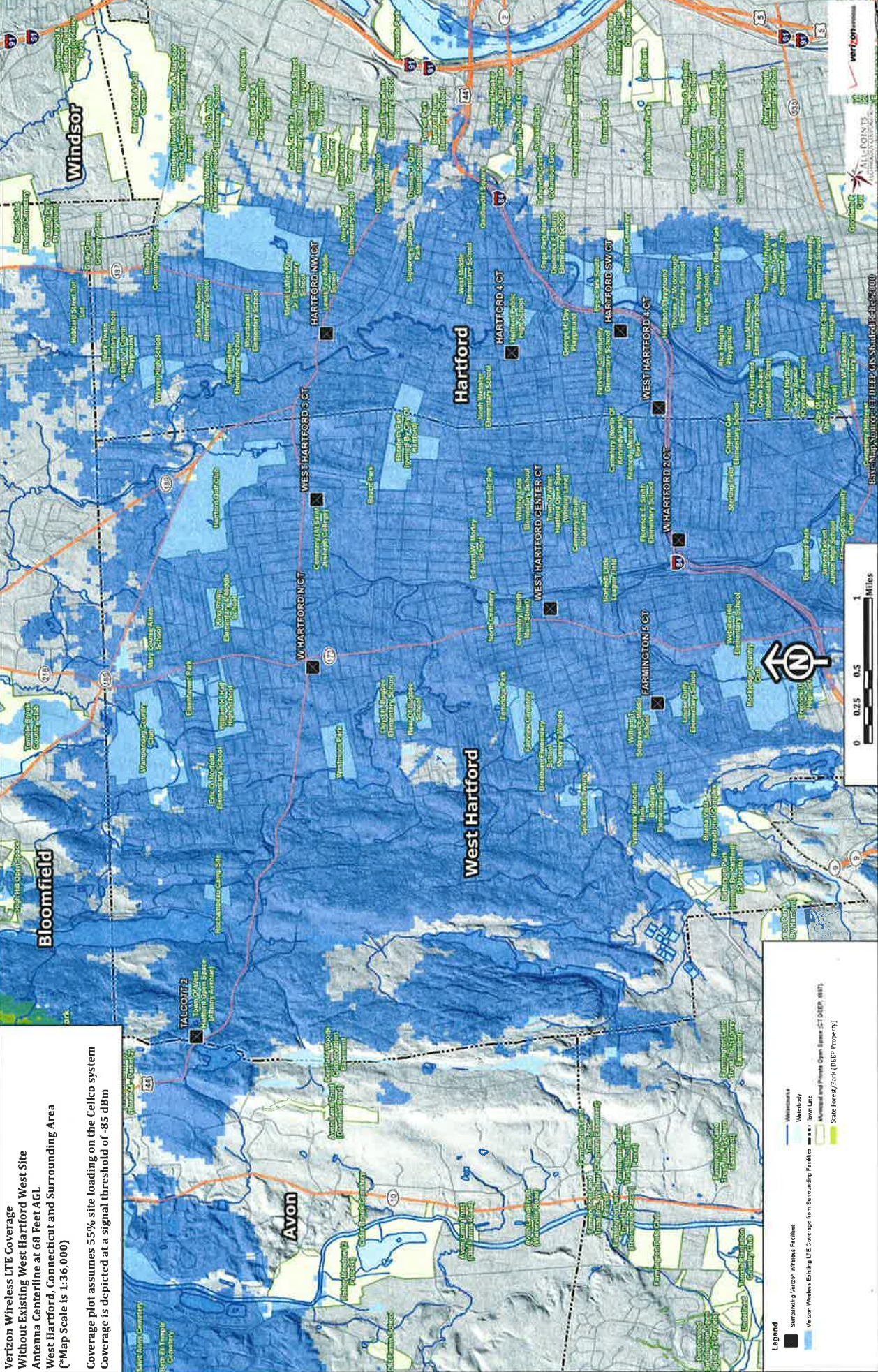
- Surrounding Verizon Wireless Facilities
- Waterbody
- Waterbody
- Town Line
- Municipal and Private Open Spaces (CT DEEP, 1997)
- State Forest/Park (DEP Property)



verizon
 ALP POINTS
 1000 West Hartford, CT 06107
 860-234-1234
 www.verizon.com

Verizon Wireless LTE Coverage
Without Existing West Hartford West Site
Antenna Centerline at 68 Feet AGL
West Hartford, Connecticut and Surrounding Area
(*Map Scale is 1:36,000)

Coverage plot assumes 55% site loading on the Cellico system
Coverage is depicted at a signal threshold of -85 dBm



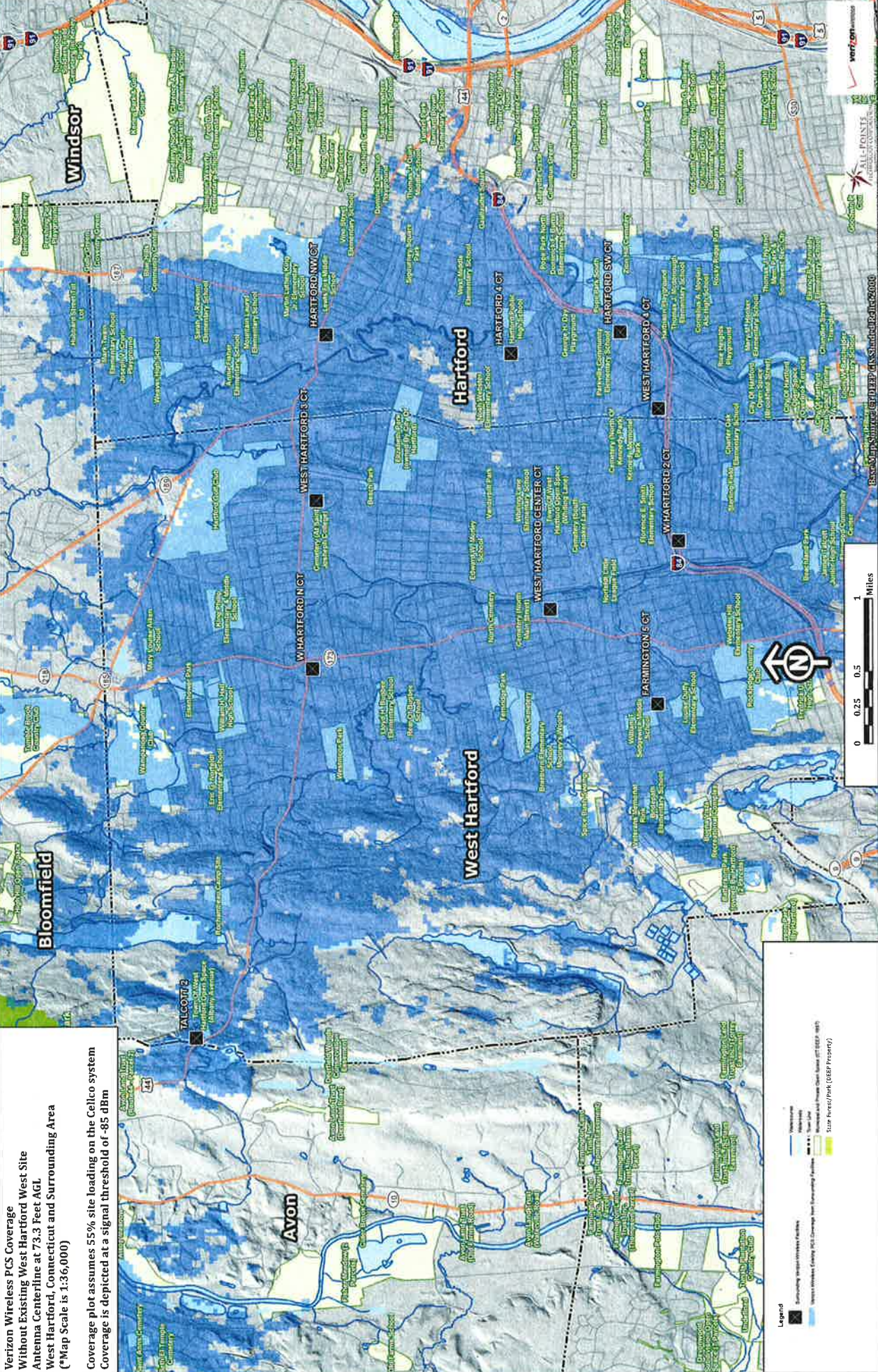
- Legend**
- Surrounding Verizon Wireless Facilities
 - Waterbody
 - Town Use
 - Verizon Wireless Existing LTE Coverage from Surrounding Facilities
 - Verizon Wireless Existing LTE Coverage from Surrounding Facilities (CT 2018)
 - State forest/Park (USFP Property)



Verizon Wireless
Map data © OpenStreetMap contributors, Imagery © Mapbox, © 2018

Verizon Wireless PCS Coverage
 Without Existing West Hartford West Site
 Antenna Centerline at 73.3 Feet AGL
 West Hartford, Connecticut and Surrounding Area
 (*Map Scale is 1:36,000)

Coverage plot assumes 55% site loading on the Cellico system
 Coverage is depicted at a signal threshold of -85 dBm



Legend

- Waterbody
- Interlocking brick/paved walkway
- Verizon Wireless PCS Coverage Area
- Verizon Wireless PCS Coverage Area (Excluding Facilities)
- Antenna Centerline
- Verizon Wireless PCS Coverage Area (Including Facilities)
- State Forest/Park (DEEP Property)

0 0.25 0.5 1 Miles



Verizon Wireless
 ALL-POINTS
 COMMUNICATIONS

TAB 3



MEMORANDUM

Date: February 24, 2013

**Ms. Alexandria Carter
Verizon Wireless
99 East River Drive
East Hartford, CT 06108**

APT Project No.: CT141710

**Re: Avian Resources Evaluation
Proposed West Hartford West
Relocation Facility
139 North Main Street
West Hartford, Connecticut**

Verizon Wireless proposes to relocate an existing wireless telecommunications Facility ("Facility") at 139 North Main Street in West Hartford, Connecticut (West Hartford Tax Assessor Parcel ID #3836 1 137 0001), referred to herein as the "host property". The relocation is necessary due to the planned demolition of the existing building in which Verizon Wireless currently houses antennas and equipment. The relocation area is located approximately 330 feet to the west of the current Facility, adjacent to a maintained lawn area generally in the middle of an approximately 49.6 acre parcel west of North Main Street, home to the American School for the Deaf. The replacement Facility would consist of a 29-foot by 29-foot clock tower, with a total height of 106 feet above grade level (including 90 feet to the top of the building's replicate cupola and additional 16-foot tall spire), mimicking the existing structure in which Verizon Wireless currently maintains its Facility. The Facility will also include an approximately 1,800 square foot access drive/parking area extending off a currently paved access road serving the American School for the Deaf.

All-Points Technology Corporation, P.C. ("APT") reviewed several sources of avian data available for the state of Connecticut to provide the following information with respect to potential impacts on migratory birds associated with the proposed relocation of the Facility. The following 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. The closest IBA to the project area is Northwest Park, located in Windsor approximately 9 miles north-northeast of the host property. Northwest Park is a 473-acre multi-recreational facility with over 12 miles of trails. The park is a complex of open early successional habitats and mixed hardwood forests. The park also borders on the Rainbow Reservoir providing a complex of open water and wetland areas for avian species. Northwest Park hosts summer nature camps and a number of outdoor programs and events. A number of Connecticut-listed endangered, threatened, and special concern avian species have been observed within the park including red-headed woodpecker, bald eagle, and grasshopper sparrow. Due to its distance from the host property, this IBA would not experience an adverse impact resulting from the proposed relocation of the Facility. Therefore, no seasonal restrictions would be recommended for the project.

Supporting Migratory Bird Data

Beyond Audubon’s IBAs, APT also identified several additional avian resources and their proximities to the project area, as discussed below. The results of APT’s research demonstrate that no adverse impacts to avian resources would result from relocation of the Facility.

Critical Habitat

Connecticut Critical Habitats depict the classification and distribution of 25 rare and specialized wildlife habitats in the state resulting in the creation of habitat maps to be used in land use planning and natural resource protection. It represents a compilation of ecological information collected over many years by state agencies, conservation organizations and many individuals. The Connecticut Critical Habitats information can serve to highlight ecologically significant areas and to target areas of species diversity for land conservation and protection. The nearest Connecticut Critical Habitat to the host property is a dry sub acidic forest, denoted as an ash/hickory glade located on the west shore of West Hartford Reservoir No. 2 approximately 2.2 miles southwest of the host property. Based on the distance separating this resource from the Facility, no adverse impacts are anticipated and no seasonal restrictions would be recommended for the project.

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 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 host property is the Southington Breeding Bird Survey Route located over 7 miles to the west. This route generally begins in Southington and winds its way north through Plainville, Farmington, Avon, and Canton before terminating in Simsbury. Bird survey routes do not represent a potential restriction to development, including the proposed Facility relocation.

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.” The nearest Hawk Watch Site, named Poquonock, is located in Windsor, Connecticut along State Route 75 and the Farmington River approximately 10 miles to the north of the host property. Hawk Watch Sites by themselves do not represent a potential restriction to development, although they can sometimes be an indicator of migratory routes for raptors. Due to the distances separating the host property and the nearest Hawk Watch Site, no impacts would result from the project and no seasonal restrictions would be recommended.

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. No Bald Eagle Sites are located within the Town of West Hartford; the nearest Bald Eagle Site is located in Hartford along the Connecticut River, approximately 3.1 miles east of the host property. Based on its distance from the host property, no impacts to bald eagles at this location would result from the Facility’s relocation and no seasonal restrictions would be recommended.

Flyways

The host property is located in Hartford County Connecticut, approximately 35 miles north of Long Island Sound. The Connecticut coast lies within the Atlantic Flyway, one of four generally recognized regional 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 make their way further inland to their preferred breeding habitats. The Connecticut River riparian corridor forms an important secondary flyway as birds move north from the shoreline into interior portions of central Connecticut. Similarly, and nearer to the host property the Park River to the

east/northeast likely forms an important tertiary flyway. Both of these resources are located sufficient distances from the Facility such that no adverse impacts would be anticipated to avian habitat potentially used by migrating species and therefore no seasonal restrictions would be recommended.

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 Connecticut River and Tidal Wetland Complex area, located approximately 12 miles to the southeast. Please refer to the attached *Connecticut Waterfowl Focus Areas Map*. Based on the distance of these resources to the host property, no direct impacts would occur from the proposed relocation of the Facility.

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. The GIS 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 West Hartford. The nearest migratory waterfowl area (Wethersfield Cove in the Town of Wethersfield, CT) is located approximately 5.5 miles to the southeast of the host property. The associated species are identified as American black duck, bufflehead, mallard, common merganser, green wing teal, and wood duck. Based on its distance to the host property, no impacts to migratory waterfowl habitat are anticipated from the proposed relocation of the 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 NDDDB. 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 when species occur on private property.

According to the CTDEEP NDDDB, there are no known extant populations of avian state or Federal Endangered, Threatened or Special Concern Species at or near (within 0.5 miles) of the Facility. The CTDEEP NDDDB did indicate there are records for a State Special Concern Species, *Terrapene Carolina Carolina* (eastern box turtle), from the vicinity of the host property. APT, on behalf of Verizon Wireless, has prepared a turtle protection plan for implementation during construction activities that would avoid impacts to this species if encountered. The CTDEEP has reviewed and accepted these protocols.

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. APT offers responses, specific to the proposed relocation of the Verizon Wireless Facility, 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 readily available in the area while achieving the required radio frequency ("RF") coverage objectives of AT&T. In this case, the existing Facility has served the community for numerous years and the surrounding Verizon Wireless network has developed over time in large part based on its specific location at the American School for the Deaf.

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 replacement Facility would consist of a 29 ft. by 29 ft., 106-foot clock tower structure which requires neither guy wires nor aviation lighting. All antennas and equipment will be internally mounted.

ALL-POINTS TECHNOLOGY CORPORATION, P.C.

3 SADDLEBROOK DRIVE · KILLINGWORTH, CT 06419 · PHONE 860-663-1697 · FAX 860-663-0935

- 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.

- 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. In Connecticut, seasonal atmospheric conditions can occasionally produce fog, mist and/or low ceilings. However, unusually high incidences of these meteorological conditions are not known to exist at the host property. The Facility location is not within a migratory or daily movement flyway. According to the CTDEEP NDDDB, there are no known extant populations of avian state or Federal Endangered, Threatened or Special Concern Species at or near (within 0.5 miles) of the Facility. The CTDEEP NDDDB did indicate there are records for a State Special Concern Species, Terrapene Carolina Carolina (eastern box turtle), from the vicinity of the host property. APT, on behalf of Verizon Wireless, has prepared a turtle protection plan for implementation during construction activities that would avoid impacts to this species if encountered. The CTDEEP has reviewed and accepted these protocols.

- 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 replacement Facility height (106 feet AGL) is less than 199 feet and would not require any aviation safety lighting.

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

- 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 replacement Facility has been sited and designed, and will be constructed to accommodate all of the Verizon Wireless equipment and allows for future collocations within the smallest footprint

possible. The host property is highly developed and located proximate to existing residential 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 host property or the surrounding properties.

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 replacement Facility has been designed to accommodate both Verizon Wireless and a second service provider that is currently housed in the existing building scheduled for demolition. The free-standing replacement 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.

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 Verizon Wireless and the property owner, USFWS personnel would be allowed access to the 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.*

Considering the clock tower will be an architectural element of the American School for the Deaf campus, there are currently no plans to remove the clock tower should Verizon Wireless no longer need to use this Facility. Any telecommunications-related antennas and equipment would be removed from the structure if they were no longer in use.

Summary and Conclusions

The results of this analysis demonstrate that no adverse impacts to migratory birds or avian resources would result from the relocation of the Verizon Wireless Facility at 139 North Main Street in West Hartford, Connecticut. The host property is not located within an Important Bird Area as designated by the National Audubon Society; the nearest IBA is located approximately 9 miles to the north of the Facility. Further, we have documented that the siting, construction, and operation of the Facility would comply with the USFWS guidelines for minimizing potential bird strikes.

Enclosures

Figures

- Avian Resources Map
- Connecticut Waterfowl Focus Areas Map

Avian Resources Map

Proposed Verizon Wireless Communications Facility Relocation

139 North Main Street
West Hartford, Connecticut

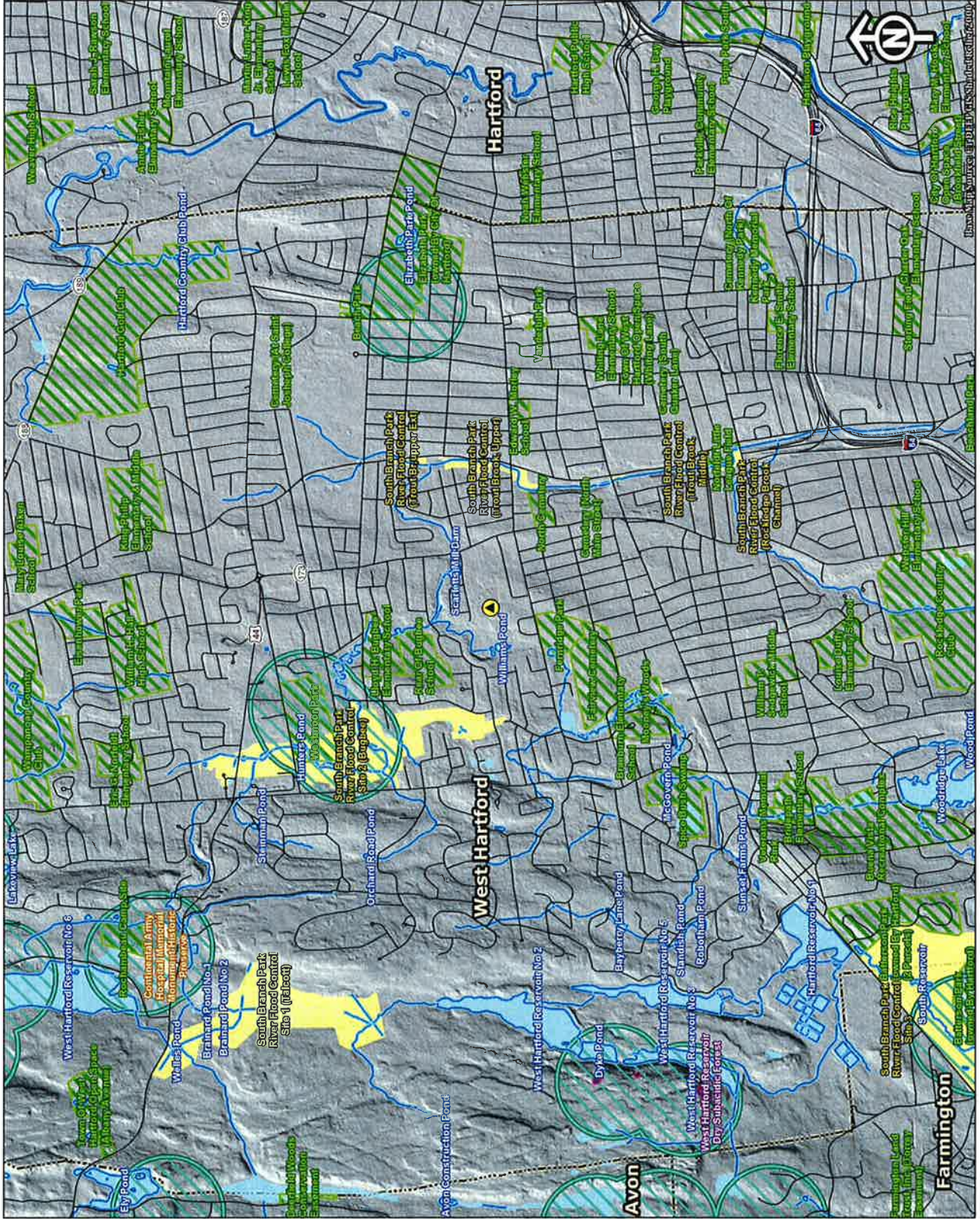
- Legend**
- Proposed Facility Relocation
 - Hawk Watch Site*
 - Bald Eagle Watch Site*
 - Important Bird Site*
 - Breeding Bird Survey Route*
 - Important Bird Area*
 - Migratory Waterfowl (CT DEEP, 1889)*
 - Critical Habitat (CT DEEP, 07/2009)
 - Natural Diversity Database Area (CT DEEP, 12/2011)
 - Federal Property (CT DEEP, 2004)*
 - Municipal and Private Open Space (CT DEEP, 1997)
 - DEP Property (CT DEEP, 2010)
 - State Forest*
 - State Park Scenic Reserve*
 - State Park Trail*
 - Natural Area Preserve*
 - Wildlife Area*
 - Wildlife Sanctuary*
 - Historic Preserve*
 - Flood Control*
 - Fish Habitat*
 - DEP Owned Waterbody*
 - Water Access*
 - Other*
 - Waterbody
 - Watercourse
 - Road
 - Town Line

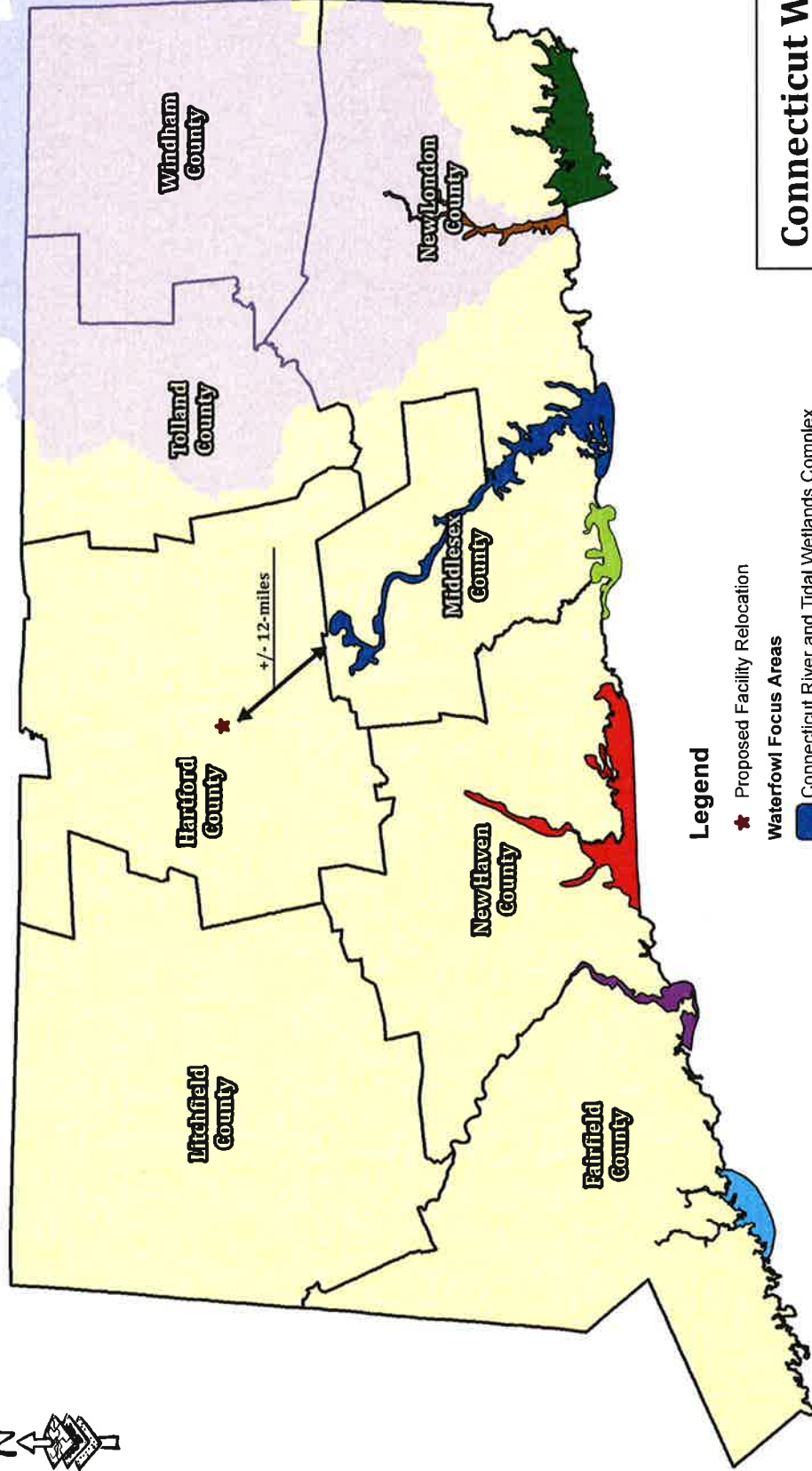
*Area within mapped extents.

Last Updated February 24, 2013

Avian Source Information:
 Bald Eagle Sites: Birdowner Bald Eagle Count Survey website
http://birdowner.org/bald_eagle_count_survey/
 Hawk Watch Sites (BHMMA): Hawk Count website
<http://hawkcounting.org/>
 Important Bird Areas: IBA Search tool
<http://www.birdconservation.org/ibas/>
 National Wildlife Database Area: National Wildlife Database Area
<http://www.fws.gov/nwdb/>
 DEP Property: DEP Property
<http://www.ct.gov/deep/>
 State Forest: State Forest
<http://www.ct.gov/deep/>
 State Park Scenic Reserve: State Park Scenic Reserve
<http://www.ct.gov/deep/>
 State Park Trail: State Park Trail
<http://www.ct.gov/deep/>
 Natural Area Preserve: Natural Area Preserve
<http://www.ct.gov/deep/>
 Wildlife Area: Wildlife Area
<http://www.ct.gov/deep/>
 Wildlife Sanctuary: Wildlife Sanctuary
<http://www.ct.gov/deep/>
 Historic Preserve: Historic Preserve
<http://www.ct.gov/deep/>
 Flood Control: Flood Control
<http://www.ct.gov/deep/>
 Fish Habitat: Fish Habitat
<http://www.ct.gov/deep/>
 DEP Owned Waterbody: DEP Owned Waterbody
<http://www.ct.gov/deep/>
 Water Access: Water Access
<http://www.ct.gov/deep/>
 Other: Other
<http://www.ct.gov/deep/>
 Waterbody: Waterbody
<http://www.ct.gov/deep/>
 Watercourse: Watercourse
<http://www.ct.gov/deep/>
 Road: Road
<http://www.ct.gov/deep/>
 Town Line: Town Line
<http://www.ct.gov/deep/>

1 inch equals 2,167 feet
 0 0.125 0.25 0.5 Miles





Legend

- ★ Proposed Facility Relocation
- 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 Verizon Wireless Communications Facility Relocation
 139 North Main Street
 West Hartford, Connecticut

