### STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF CELLCO PARTNERSHIP

DOCKET NO. 471

D/B/A VERIZON WIRELESS FOR A

CERTIFICATE OF ENVIRONMENTAL

COMPATIBILITY AND PUBLIC NEED FOR

THE CONSTRUCTION, MAINTENANCE :

AND OPERATION OF A WIRELESS TELECOMMUNICATIONS FACILITY AT

208 KIRK ROAD (a/k/a 1075 PARADISE

AVENUE) IN HAMDEN, CONNECTICUT : APRIL 6, 2017

### RESPONSES OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS TO CONNECTICUT SITING COUNCIL PRE-HEARING QUESTIONS

On March 23, 2017, the Connecticut Siting Council ("Council") issued Pre-Hearing Questions to Cellco Partnership d/b/a Verizon Wireless ("Cellco"), relating to Docket No. 471. Below are Cellco's responses.

#### Question No. 1

Which frequencies would Cellco initially install at the proposed site? What is the determining factor for the deployment of additional frequencies within the proposed service area?

Response

Cellco will initially deploy equipment that supports 700 MHz and 2100 MHz frequencies in three (3) sectors at the Hamden 8 cell site. Radio equipment supporting the additional frequencies would be added if and when at least one of the three (3) operating antenna sectors at the new Hamden 8 Facility is projected to reach its capacity limit (exhaust).

#### Question No. 2

How do the different frequencies interact? Are all frequencies used to transmit voice and data services? Are all frequencies LTE capable? Please explain.

#### Response

Cellco uses all its licensed frequencies to provide both Voice and Data services. Cellco currently utilizes 700 MHz, 1900 MHz, and 2100 MHz frequencies for LTE Voice and Data services and 850 MHz frequency for CDMA Voice and Data Services. In areas not calling for more LTE capacity, the 1900 MHz frequency is being used for CDMA Voice and/or Data Services. We expect that radio equipment that supports LTE services for 850 MHz frequency will be available in the near future.

#### Question No. 3

What is Cellco's service design threshold for each frequency?

#### Response

Cellco's minimum design threshold for CDMA signal strength is -85 dBm, Receive Signal Strength Indicator (RSSI) for in-vehicle service and -75 dBm RSSI for in-building service. For LTE signal strength, Cellco's minimum design threshold is 114 dB Reverse Link Operational Path Loss (RLOPL) for in-vehicle service and 95 dB RLOPL for in-building service.

#### Question No. 4

Page 7 of the application describes existing "coverage gaps" in the proposed service area. Please provide the area, in square miles, of existing inadequate service for each frequency within the proposed service area. Would any "coverage gaps" remain in the proposed service area after deployment of the Hamden 8 facility? If so, indicate their location and size.

#### Response

The existing gaps in service are: 1.16 square miles at 700 MHz; 1.17 square miles at 850 MHz; 1.56 square miles at 1900 MHz; and 2.3 square miles for 2100 MHz. The Hamden 8 Facility will fill these existing gaps in service.

#### Question No. 5

Page 7 of the application describes significant capacity relief to existing adjacent Cellco sites. Please indicate what frequencies are at or near exhaustion for each listed adjacent site.

Please include a projected exhaustion date for each of these sectors. Would the deployment of Hamden 8 facility be sufficient to address these capacity concerns or would an additional facility be required in the near term to off-load traffic?

#### Response

Hamden 8 Facility will provide direct capacity relief to its existing Hamden North cell site, Gamma sector antennas. The 700 MHz carrier in the Gamma sector at Hamden North is projected to exhaust its capacity on or about April 24, 2017. The proposed Hamden 8 Facility will resolve this impending capacity problem completely. In addition to Hamden North, the Hamden North 2 cell site, the 700 MHz (Beta sector) antennas and Hamden cell site, the 700 MHz and 2100 MHz (Beta sector) antennas are currently exhausting and in need of capacity relief. The Hamden 8 Facility will also provide some capacity relief to these two exhausting sectors.

#### Question No. 6

Can the proposed facility support text-to-911 service? Is additional equipment required for this purpose? Is Cellco aware of any Public Safety Answering Points in the area of the proposed site that are able to accept text-to-911?

#### Response

Yes, the proposed Hamden 8 Facility will support text-to-911 as soon as the Public Safety Answering Point (PSAP) is capable of receiving text-to-911. No additional cell site equipment is necessary to support this service. Cellco is not aware of any Public Safety Answering Points in

the area of the proposed site that are able to accept text-to-911 at this time.

#### Question No. 7

Would Cellco's installation comply with the intent of the Warning, Alert and Response Network Act of 2006?

#### Response

Yes.

#### Question No. 8

When was the search area for this proposed facility issued?

#### Response

The Hamden 8 search area was issued in May of 2014.

#### Question No. 9

The list of sites and attached site diagram in the Site Search Summary (Application Tab 8) do not match. Please clarify.

#### Response

An updated Site Search Summary corresponding to the Site Search Summary Map in the Application is included in <u>Attachment 1</u>. (Four (4) full size copies of Sheet C-1 are also submitted in bulk).

#### Question No. 10

Did Cellco consider the undeveloped parcels north of the host property for a telecommunications facility? If not, why not?

#### Response

No. Other than the municipal parcels identified in the revised Site Search Summary

(Attachment 1) and the subject parcel, Cellco did not explore any alternative parcels to the north

for several reasons. First, compared to the subject parcel, access to the land to the north is more of a challenge as developed portions of Kirk Road and Paradise Avenue do not extend to these parcels. Also, both lots are heavily wooded and would require more significant clearing of mature vegetation to construct an access drive and facility compound. Finally, prior to entering into a land lease agreement with Cellco, the owner of the subject site had previously entered into a tower lease agreement with AT&T. After the AT&T lease expired, Cellco representatives approached the property owner and negotiated terms of the current land lease agreement resulting in a somewhat abbreviated site search effort.

#### Question No. 11

Was the industrial area east of Sherman Avenue considered for a telecommunications facility?

#### Response

No. The industrial area to the east of Sherman Road is at a ground elevation that is approximately 150 to 200 feet lower than the proposed cell site off Kirk Road. Cellco would not be able to satisfy its wireless service objectives in the area.

#### Question No. 12

Did the Town indicate why the potential site at the Laurel View Country Club was no longer available to Cellco?

#### Response

No. As discussed in the Application narrative, the Town of Hamden contacted Cellco after the initial municipal consultation meeting on September 7, 2016, and offered the Laurel View Country Club ("LVCC") parcel for consideration as an alternative cell site. The Town identified the area near the maintenance garage in the northern-most portion of the Town-owned

parcel as a suitable location. Cellco's project engineer prepared a draft lease exhibit for the LVCC parcel and performed a preliminary (desktop) wetlands impact analysis and visual assessment. The Town withdrew the LVCC site from consideration following the public information meeting.

#### Question No. 13

The scale on Site Plan Sheet C-1 is not correct, please clarify.

#### Response

The scale on Sheet C-1 is 1"=50' and not 1" = 500'. A corrected Plan Sheet C-1 is included in Attachment 2.

#### Question No. 14

Does Paradise Avenue continue south as a public right-of-way between the Laurel View Country Club and the west side of the site property?

#### Response

According to the Town Assessor's map the Paradise Avenue Right of Way does not extend beyond the parcel located at 1116 Paradise Avenue. (See Attachment 3).

#### Question No. 15

What measures are proposed to ensure site security?

#### Response

The Hamden 8 Facility compound will be surrounded by an eight (8) foot tall security fence and gate. (See Plan Sheets C-3 and C-8). Cellco's equipment cabinets will be equipped with silent intrusion alarms which are monitored 24/7 at the Wallingford MTSO. In an effort to restrict vehicle access to the compound, Cellco will also install pipe bollards and a chain barrier near the edge of the Country Club Road right of way.

#### Question No. 16

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

#### Response

- 2016 Connecticut State Building Code and adopted model codes (as amended).
- TIA-222-G-05 "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

#### Question No. 17

An emergency power battery and diesel powered generator are proposed. Which system offers primary backup power to the cell site? What is the estimated run time of the emergency power system before recharging/refueling is required? What is the capacity of the diesel fuel tank?

#### Response

The primary backup power source for the cell site will be the on-site battery system. The proposed 20 kW generator is used to recharge the batteries as needed. The diesel fuel tank has a capacity of 92 gallons and can run for 67 hours, at a nominal load of 75%, before refueling is required.

#### Question No. 18

Is it feasible to install a single generator within the compound capable of supplying emergency power to multiple carriers? Please explain.

#### Response

Yes, it is technically feasible to install an adequately-sized generator that could serve the back-up power needs of multiple wireless carriers. For the reasons discussed in previous

dockets, it continues to be Cellco's preference, however, to install and maintain a generator that is capable of addressing its own back-up power needs.

#### Question No. 19

What is the distance/direction to the nearest National Audubon Society designated Important Bird Area?

#### Response

The closest Important Bird Area ("IBA") to the site is the Quinnipiac River Tidal Marsh in Hamden, New Haven and North Haven located approximately 3 miles to the southeast of the Hamden 8 Facility. This IBA consists of 900 acres of the tidal marsh owned by the State of Connecticut and managed by the Department of Energy & Environmental Protection as a Wildlife Management Area. The marsh provides important nesting, roosting and wintering habitat for a wide variety of bird species. Due to the significant distance separating the proposed facility from this IBA, no adverse impact to this resource or the bird species it supports are anticipated by the proposed development. (See the Avian Resources Map provided as Attachment 4 for additional information.

#### Question No. 20

Would the proposed facility comply with the United States Fish and Wildlife Service recommended guidelines for reducing impacts to migratory birds?

#### Response

Yes. In 2013, the USFWS prepared its *Revised Voluntary Guidelines for communication*Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning (Manville 2013). These voluntary guidelines were developed to assist tower developer in developing their communication systems in a way which minimizes the risk to migratory birds and threatened and

endangered species. The proposed Hamden 8 Facility would consist of a 160-foot monopole structure which requires neither guy wires nor lighting and is therefore consistent with USFWS' environmentally preferred "gold standard" (towers that are unlit, unguyed, monopole or lattice, and less than 200 feet above ground level), thereby complying with these guidelines to reduce impacts to migratory birds.

#### Question No. 21

Application Tab 1, p. 4 lists surrounding land uses within ¼ mile. What is the land use to the east of the site property?

#### Response

Land to the east of the subject parcel is used for residential purposes.

#### Question No. 22

Application Tab 10 indicates consultation with the DEEP NDDB program. Has DEEP responded to Cellco's request for information? If so, please provide related documentation.

#### Response

A response from the DEEP NDDB program has not been received. Once the response is received, it will be forwarded to the Council.

#### Question No. 23

Application p. 16 indicates consultation with the State Historic Preservation Office. Has SHPO made a final determination on Cellco's submittal?

#### Response

Verizon has not received a determination from SHPO at this time but will forward a copy of agency correspondence to the Council upon receipt.

#### Question No. 24

Is the site within the coastal resource boundary, as defined by the Connecticut Coastal Management Act?

#### Response

No. The Coastal Resource Boundary located in the Town of Hamden is isolated to areas proximate (generally 1,000 feet from) to the Quinnipiac River. The proposed Facility is located approximately 2.9 miles northwest of the nearest Coastal Resource Boundary.

#### Question No. 25

The lease exhibit in Application Tab 17 depicts a faux tree monopole. Was a tree tower originally contemplated? If so, why was this design not pursued in this application?

#### Response

At the time the lease was being negotiated, the land owner expressed an interest in the installation of a tree tower rather than a conventional monopole. Following the execution of the lease and prior to the submission of the application to the Council, Cellco and the land owner revisited the tower design issue and together determined that a 160' tree tower would be out of character and have more of a visual impact than a conventional monopole. Cellco and the property owner are open to further consideration of a monopine tower if deemed appropriate by the Council.

#### Question No. 26

Submit photo simulations of a faux tree monopole from the surrounding area.

#### Response

The photosimulations requested are included in <u>Attachment 5</u>.

#### Question No. 27

Were return receipts received for each abutting landowner identified in the application?

If not, list the abutters that did not receive notice and describe any additional effort to serve notice.

#### Response

As of the date of this filing, Cellco has received return receipts from ten (10) of the thirteen (13) abutting landowners to whom notice was originally sent. A copy of the notice letter was resent, via regular mail, to the remaining three (3) abutting landowners on April 5, 2017.

#### CERTIFICATION OF SERVICE

I hereby certify that on this 6<sup>th</sup> day of April 2017, a copy of the foregoing was sent via electronic mail to the following:

Burt B. Cohen, Esq. Murtha Cullina LLP 265 Church Street P.O. Box 704 New Haven, CT 06503-0704 bcohen@murthalaw.com

Kenneth Ć. Baldwin

#### Cellco Partnership d/b/a Verizon Wireless 208 Kirk Road Hamden, Connecticut

#### Hamden 8 Facility

#### Site Search Summary

Section 16-50j-74(j) of the Regulations of Connecticut State Agencies requires the submission of a statement that describes "the narrowing process by which other possible sites were considered and eliminated." In accordance with this requirement, descriptions of the general site search process, the identification of the applicable search area and the alternative locations considered for development of the proposed telecommunications facility in central Hamden are provided below.

#### Site Search Process

To initiate its site selection process in an area where wireless service problems have been identified, Cellco first establishes a "site search ring" or "site search area". In any search ring or search area, Cellco seeks to avoid the unnecessary proliferation of towers and to reduce the potential adverse environmental effects of the cell site, while at the same time maximizing the quality of service provided from a particular facility. These objectives are achieved by initially locating existing towers and other sufficiently tall structures within and near the site search area. If any are found, they are evaluated to determine whether they are capable of supporting Cellco's telecommunications antennas and related equipment at a location and elevation that satisfies its technical requirements.

The list of available locations may be further reduced if, after preliminary negotiations, the property owners withdraw a site from further consideration. From among the remaining locations, the proposed sites are selected by eliminating those that have greater potential for adverse environmental effects and fewer benefits to the public (i.e., those requiring taller towers; those with substantial adverse environmental impacts, or located in densely populated areas; and those with limited ability to share space with other public or private telecommunications service providers). It should be noted that in any given site search, the weight afforded to factors considered in the selection process will vary depending upon the availability and nature of sites within the search area.

#### Need for the Hamden 8 Facility

Cellco's Hamden North, Hamden East, Centerville, Hamden 2, Hamden, Hamden North 2, and Bethany cell sites. Cellco's Hamden North facility consists of antennas inside a faux-silo at the Connecticut Agricultural Station at 890 Evergreen Avenue in Hamden. Cellco's Hamden East facility consists of antennas on the roof of a building at 2313 Whitney Avenue in Hamden. Cellco's Centerville facility consists of antennas on the roof of a building at 955 Mix Avenue in Hamden. Cellco's Hamden 2 facility consists of antennas on a roof-mounted tower at 265 Benham Street in Hamden. Cellco's Hamden facility consists of antennas at the 170-foot level

on a 250-foot tower at 1055 Wintergreen Avenue in Hamden. Cellco's Hamden North 2 facility consists of antennas at the 147-foot level on a 160-foot self-supporting monopole tower at 150 Willow Street in Hamden. Cellco's Bethany facility consists of antennas at the 180-foot level on a 338-foot tower at 93 Old Amity Road in Bethany. Today, these existing facilities provide wireless coverage in central portions of Hamden and western portions of North Haven but cannot serve the significant area of need described in this report. In addition, Cellco's existing Hamden 2 and Hamden North facilities are currently operating at or near their capacity limits, resulting in more significant reductions in reliable wireless service in the area. Cellco's Hamden 8 cell site will also provide capacity relief to the Hamden 2 and Hamden North cell sites.

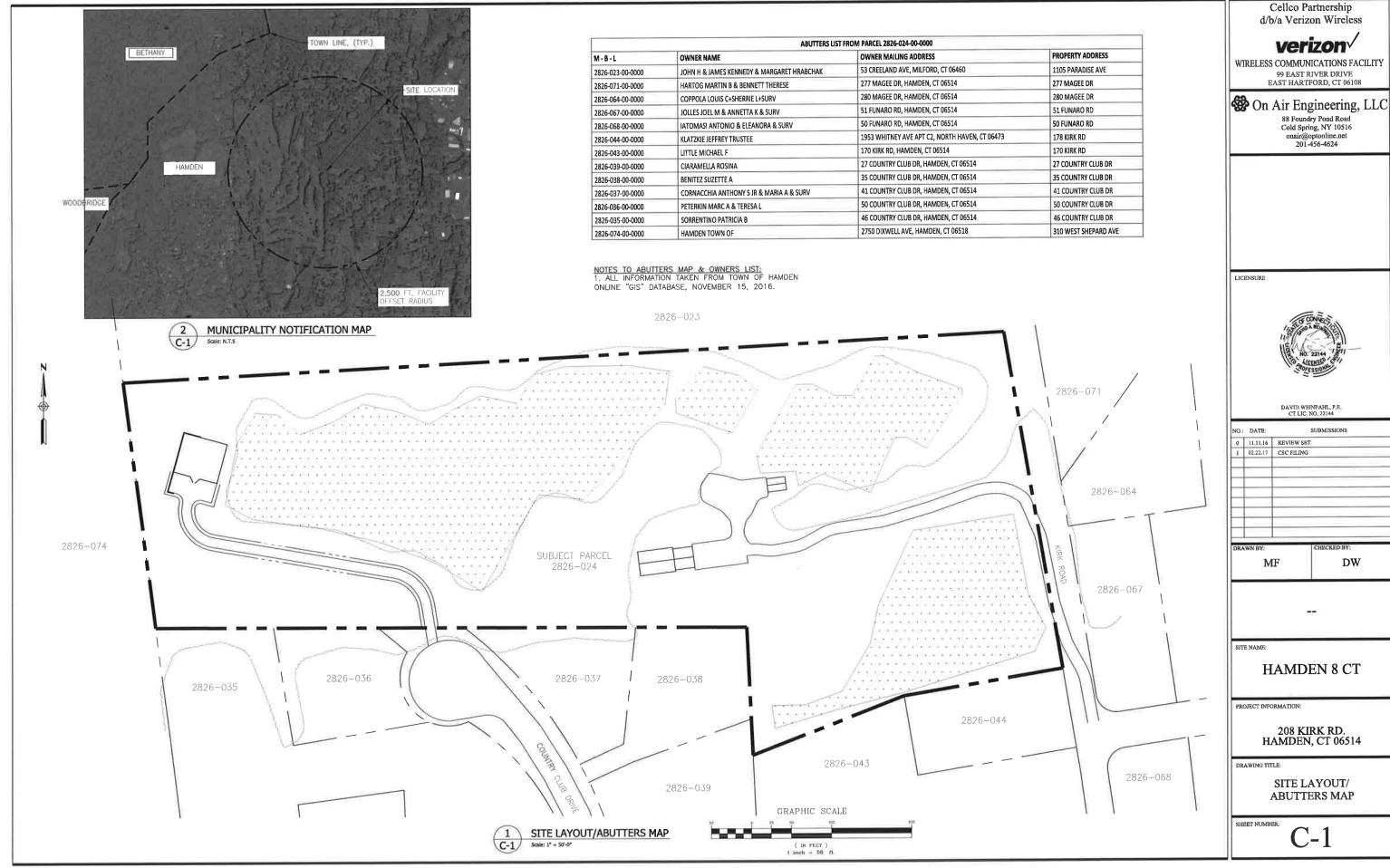
#### Identification of the Hamden 8 Search Area

The purpose of the proposed Hamden 8 Facility is to provide coverage along portions of Shepard Avenue and West Shepard Avenue in the area, and to the surrounding commercial and residential land uses in central Hamden. The facility will also provide network capacity relief to Cellco's existing Hamden 2 and Hamden North cell sites which is currently operating at or near its capacity limit. (*See* attached Coverage Maps behind <u>Attachment 1</u>).

#### Sites Investigated

Cellco investigated a total of four (4) sites in central Hamden. A listing of the sites investigated is provided below.

- 1. <u>1125 Shepard Avenue, Hamden, CT</u>: At the request of the Town, Cellco investigated the Hamden Public Works facility as an alternative cell site location. This site was rejected by Cellco's RF Engineers. A site at this location would not provide the coverage enhancement that Cellco is looking to achieve to the south and west of the 208 Kirk Road facility and would interfere with service from Cellco's existing Hamden North facility.
- 2. <u>208 Kirk Road, Hamden, CT</u>: Cellco entered into a lease agreement with the owner for this parcel, the Hamden 8 Facility.
- 3. 310 W. Shepard Avenue, Hamden, CT: This parcel (Laurel View Country Club) was acceptable by Cellco's RF Engineers at an antenna height of 180 feet. After initially recommending the site, the town withdrew the site from consideration prior to filing the application.
- 4. <u>905 Shepard Avenue, Hamden, CT</u>: This parcel was rejected by Cellco's RF Engineers. Overall, the ground elevation at this location was too low to allow Cellco to satisfy its wireless service objectives in the area.
- 5. <u>1125 Shepard Avenue, Hamden, CT</u>: At the request of the Town, Cellco investigated a second Hamden Public Works facility (a.k.a. Rocky Top facility) as an alternative cell site location. This site was rejected by Cellco's RF Engineers. A site at this location would not provide the coverage enhancement that Cellco is looking to achieve to the south and west of the 208 Kirk Road facility and would interfere with service from Cellco's existing Hamden North facility.



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### **Town of Hamden**

Geographic Information System (GIS)



Date Printed: 4/4/2017



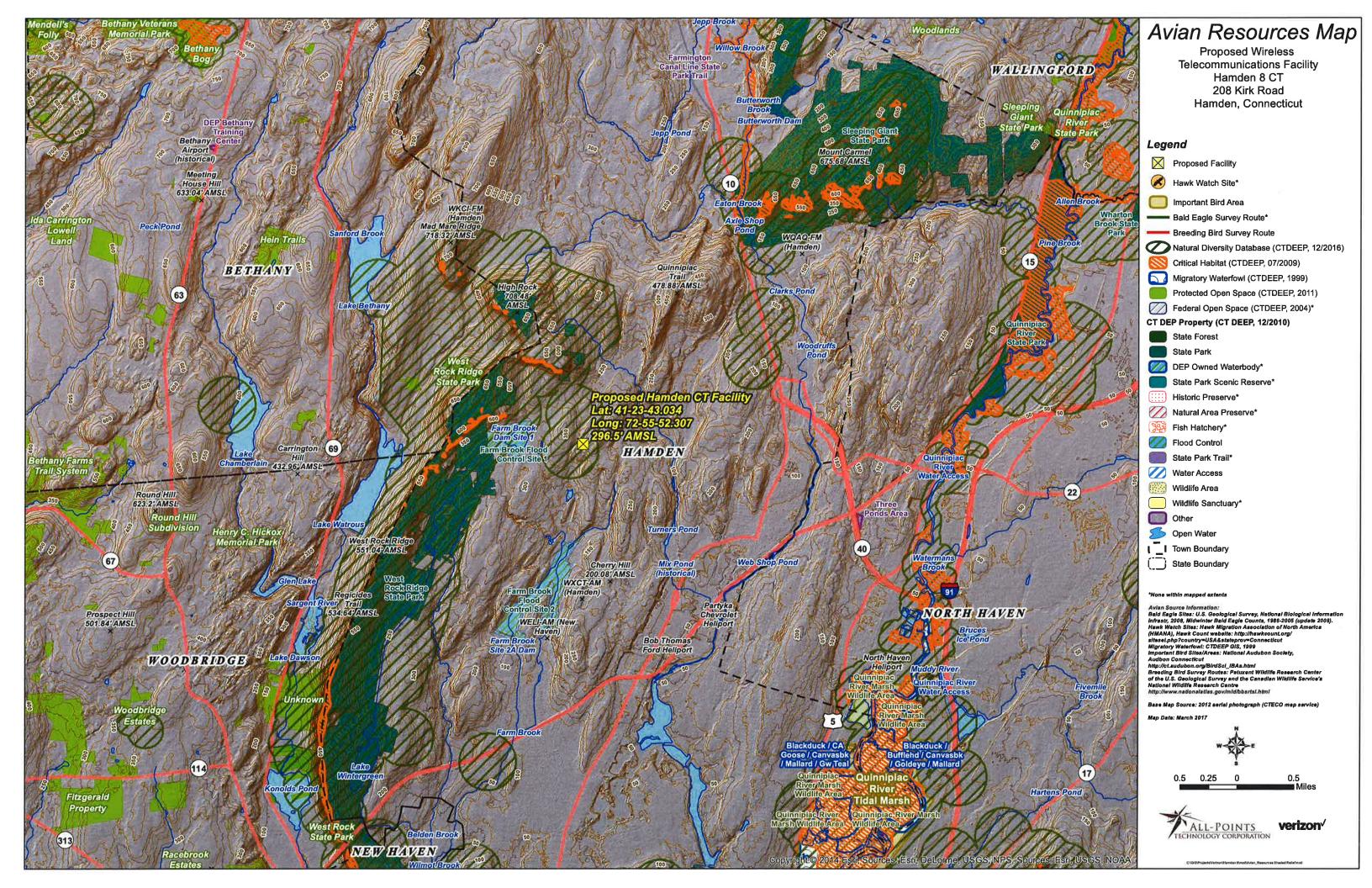
#### MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Hamden and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 200 feet







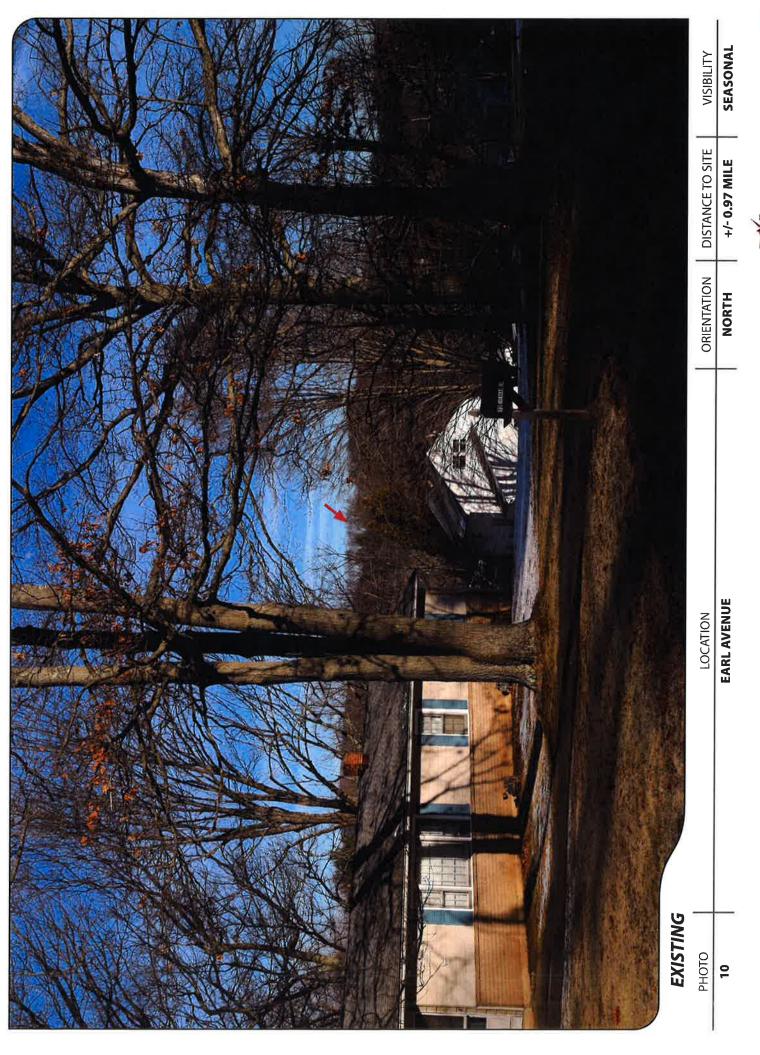




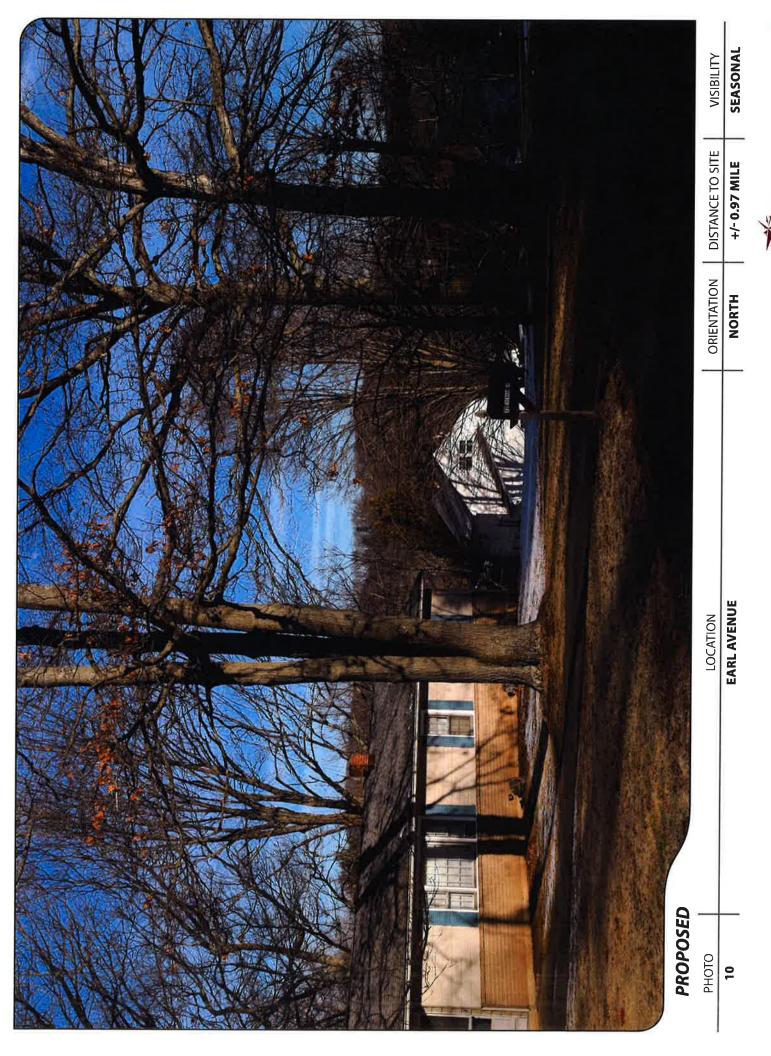


















DISTANCE TO SITE +/- 0.57 MILE ORIENTATION **HILL STREET** LOCATION

> PHOTO 19



