

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@ct.gov Internet: ct.gov/csc

February 10, 2010

TO:

Parties and Intervenors

FROM:

S. Derek Phelps, Executive Director

RE:

DOCKET NO. 384 – Phoenix Partnership, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 50 Devine Street,

North Haven, Connecticut.

As stated at the hearing in North Haven on December 1, 2009, after the Council issues its draft findings of fact, parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record; however, no new information, evidence, argument, or reply briefs will be considered by the Council.

Parties and Intervenors may file written comments with the Connecticut Siting Council on the Draft Findings of Fact issued on this docket by February 23, 2010.

SDP/CDM/laf

Enclosure



Docket No. 384 Page 1 of 1

LIST OF PARTIES AND INTERVENORS $\underline{SERVICE\ LIST}$

	Document	Status Holder	Representative
Status Granted	Service	(name, address & phone number)	(name, address & phone number)
Applicant	⊠ U.S. Mail	Phoenix Partnership	Julie D. Kohler, Esq. Monte E. Frank, Esq. Jesse A. Langer, Esq. Cohen and Wolf, P.C. 1115 Broad Street Bridgeport, CT 06604 (203) 368-0211 (203) 394-9901 fax jkohler@cohenandwolf.com mfrank@cohenandwolf.com jlanger@cohenandwolf.com
Party (granted on Sept. 17, 2009)	□ U.S. Mail	Youghiogheny Communications Northeast LLC d/b/a Pocket Wireless	Carrie Larson, Esq. Pullman & Comley, LLC 90 State House Square Hartford, CT 06103-3702 (860) 424-4312 (860) 424-4370 fax clarson@pullcom.com

DOCKET NO. 384 – Phoenix Partnership, LLC application for a	}	Connecticut
Certificate of Environmental Compatibility and Public Need for		
the construction, maintenance and operation of a	}	Siting
telecommunications facility located at 50 Devine Street, North		
Haven, Connecticut.	}	Council
		January 15, 2010

DRAFT

Findings of Fact

Introduction

- 1. Pursuant to Chapter 277a, Sections 16-50g et seq. of the Connecticut General Statutes (CGS), as amended, and Section 16-50j-1 et. seq. of the Regulations of Connecticut State Agencies (RCSA), Phoenix Partnership, LLC (Phoenix) applied to the Connecticut Siting Council (Council) on August 24, 2009 for the construction, operation, and maintenance of a telecommunications facility, which would include a 120-foot tall monopole tower, to be located at 50 Devine Street in the Town of North Haven, Connecticut. (See Figures 1, 2, and 3) (Phoenix 1, p. 1)
- 2. Phoenix is a limited liability company organized under the laws of the State of Connecticut, with a principal place of business at 110 Washington Avenue, North Haven, Connecticut. Phoenix would construct, maintain, and operate a telecommunications facility at the proposed site. (Phoenix 1, pp. 1-2)
- 3. The party in this proceeding is Phoenix. Youghiogheny Communications Northeast, LLC d/b/a Pocket Wireless (Pocket) is an intervenor. (Transcript, December 1, 2009, 3:00 p.m. [Tr. 1], p. 6)
- 4. Pocket is licensed by the Federal Communications Commission (FCC) to provide Advanced Wireless Services (AWS) in Connecticut. (Pocket 2 Pre-filed Testimony of Anthony Wells, Q3-A)
- 5. The proposed facility would enable Pocket to fill existing coverage gaps on I-91, State Highway 40, and the Wilbur Cross Parkway (State Highway 15) in North Haven. (Phoenix 1, p. 3)
- 6. Pursuant to CGS § 16-50*l*(b), public notice of the Phoenix's intent to submit this application was published on August 2, 2009 and August 4, 2009 in the <u>New Haven Register</u>. (Phoenix 1, p. 4; Exhibit F <u>New Haven Register</u> Affidavit of Publication)
- 7. In accordance with CGS § 16-50*l*(b), Phoenix sent notice of its intent to file an application with the Council to each person appearing of record as owner of property abutting the property on which its proposed facility is located. (Phoenix 1, p. 4, Exhibit G)

Docket 384: North Haven Findings of Fact Page 2

- 8. Phoenix received return receipts from all of the abutting owners to whom it sent notices. (Phoenix 2, A1)
- 9. Pursuant to CGS § 16-50*l* (b), Phoenix provided a copy of its application to all federal, state, regional, and local officials and agencies listed therein. (Phoenix 1, p. 4, Exhibit E)
- 10. Phoenix posted a sign on the host property providing notice of its pending application on November 12, 2009. The sign included the time, date, and place of the public hearing scheduled for the application and contact information for the Council. (Phoenix 3, A.11. and Exhibit B)
- 11. Pursuant to CGS § 16-50m, the Council, after giving due notice thereof, held a public hearing on December 1, 2009, beginning at 3:00 p.m. and continuing at 7:05 p.m. in the Library Community Room of the North Haven Library at 17 Elm Street, North Haven, Connecticut. (Tr. 1, p. 3 ff.)
- 12. The Council and its staff conducted an inspection of the proposed site on December 1, 2009 beginning at 2:00 p.m. On the day of the field inspection, Phoenix flew a balloon at the location of the proposed tower beginning at approximately 7:16 a.m. From that time until approximately 11:50 a.m., there was little wind and the balloon was able to fly at the height of the proposed tower. After 11:50 a.m., the wind velocity increased, and five balloons were lost when they were blown into trees. The applicant moved the location from which the balloon was flown away from the trees, but strong winds prevented the balloon from flying at the height of the tower. The balloon flew until 4:30 p.m. (Tr. 1, pp. 16-17; Exhibit 6)

State Agency Comments

- 13. Pursuant to CGS § 16-50*I*, the Council solicited comments on this application on September 23, 2009 and December 2, 2009 from the following state departments and agencies: Department of Agriculture, Department of Environmental Protection (DEP), Department of Public Health, Council on Environmental Quality, Department of Public Utility Control, Office of Policy and Management, Department of Economic and Community Development, and the Department of Transportation. (CSC Hearing Package dated September 23, 2009; Letter to State Department Heads dated December 2, 2009)
- 14. The Connecticut Department of Transportation responded to the Council's solicitation with no comments. (Letter from Department of Transportation, dated December 1, 2009)
- 15. The Connecticut Department of Public Health responded to the Council's solicitation with no comments because the proposed facility does not appear to be in a public water supply source water area. (Letter from Department of Public Health, dated November 19, 2009)
- Other than the Departments of Transportation and Public Health, the Council did not receive comments from any other of the state agencies from which comments were solicited. (Record)

Docket 384: North Haven Findings of Fact

Page 3

Municipal Consultation

- 17. Phoenix submitted a technical report to the North Haven First Selectman on May 29, 2009. The report included descriptions of Phoenix's proposed facility, the site selection process, and its likely environmental effects. (Phoenix 1, p. 18; Exhibit R)
- 18. On June 11, 2009, Phoenix representatives met with Alan Fredericksen, North Haven's Land Use Administrator, to discuss the proposed facility. (Phoenix 1, pp. 18-19)
- 19. The Town of North Haven requested that Phoenix revise its original site plan in order to place its proposed tower a distance of at least three-quarters of its height from property lines. Phoenix revised its site plans to accommodate the town's request and submitted revised site plans to the town prior to a meeting with the North Haven Planning and Zoning Commission on August 3, 2009. (Phoenix 3, A.9)
- 20. Phoenix representatives attended a public meeting held on August 3, 2009 by the North Haven Planning and Zoning Commission to discuss its proposed facility. (Phoenix 1, p. 19)
- 21. Phoenix would provide space on its proposed tower, free of charge, for North Haven's public safety communications antennas. (Phoenix 1, p. 9; Tr. 1, pp. 35-36)
- 22. The Town of North Haven's Planning and Zoning Commission determined that the proposed site was appropriate for a cell tower. (Letter from Town of North Haven Land Use Office, dated December 1, 2009)

Public Need for Service

- 23. In 1996, the United States Congress recognized a nationwide need for high quality wireless telecommunications services, including cellular telephone service. Through the Federal Telecommunications Act of 1996, Congress seeks to promote competition, encourage technical innovations, and foster lower prices for telecommunications services. (Council Administrative Notice Item No. 7 Telecommunications Act of 1996; Phoenix 1, p. 5)
- 24. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. (Council Administrative Notice Item No. 7 Telecommunications Act of 1996)
- 25. The Telecommunications Act of 1996 prohibits local and state bodies from discriminating among providers of functionally equivalent services. (Council Administrative Notice No. 7 Telecommunications Act of 1996)

Docket 384: North Haven

Findings of Fact

Page 4

- 26. The Telecommunications Act of 1996 prohibits any state or local agency from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. This Act also blocks the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Council Administrative Notice No. 7 Telecommunications Act of 1996)
- 27. Congress enacted the Wireless Communications and Public Safety Act of 1999 (the 911 Act) in order to promote public safety through the deployment of a seamless, nationwide emergency communications infrastructure that includes wireless communications services. (Phoenix 1, p. 6)
- 28. As an outgrowth of the 911 Act, the Federal Communications Commission has mandated that wireless carriers provide enhanced 911 services (E911) as part of their communications networks. (Phoenix 1, p. 7)
- 29. Pocket's antennas on Phoenix's proposed tower would be an integral component of its E911 network. (Phoenix 1, p. 7)
- 30. Pocket experiences a coverage gap in the vicinity of the proposed site that encompasses portions of I-91, State Highway 40, State Highway 5, and the Wilbur Cross Parkway (State Highway 15). (Phoenix 1, p. 5)
- 31. Clearwire has expressed an interest in locating antennas on the proposed tower. (Tr. 1, p. 20)

Site Selection

- 32. Phoenix began searching for a site in the vicinity of the proposed facility in September, 2008. It focused its search in the area between Exit 9 and Exit 12 of I-91 in North Haven. (Phoenix 2, A7)
- 33. Phoenix identified 13 communications towers within a radius of approximately four miles from its proposed site. None of these towers was found to be adequate for Pocket's coverage purposes. The towers are listed in the table below.

Tower Location	Height of Tower	Tower Owner	Approx. Distance and Direction
120 Universal Avenue, North Haven	120 feet	Candid Cmcns	1.86 miles to S
117 Washington Ave, North Haven	120 feet (Pocket @ 100')	Crown Castle	2.31 miles to NE
125 Washington Ave, North Haven	120 feet	Candid Cmcns	2.31 miles to NE

Tower Location	Height of Tower	Tower Owner	Approx. Distance and Direction
265 Benham Street, Hamden	91 feet	Apostles of Sacred Heart	3.02 miles to WSW
275 Mount Carmel Ave, Hamden	22.9 feet	Quinnipiac College	3.34 miles to N
8/15 Dwight Street, North Haven	150 feet (Pocket @ 120')	Spectrasite	3.22 miles to NNE
20 Dwight Street, North Haven	150 feet	Nextel	3.42 miles to NNE
2755 State Street, Hamden	120 feet (Pocket @ 100')	Sprint	1.69 miles to SW
2895 State Street, Hamden	140 feet	Nextel	1.44 miles to SW
222 Sackett Point Road, North Haven	56 feet	T-Mobile	.75 mile to S
495 Benham Street, Hamden	251 feet	Clear Channel	3.42 miles to WSW
473 Denslow Hill Road, Hamden	208 feet	Quinnipiac University dba WQUN	2.8 miles to W
Linsley Street, North Haven	124 feet	Town of North Haven	1.21 miles to NE

(Phoenix 1, Exhibit I; Pocket 1, A12)

34. In addition to the host property, Phoenix investigated several other properties in the vicinity as potential locations for its proposed facility. The properties and the determination of their suitability as a facility site are listed below.

Commercial property, 41 Stiles Lane – This is a large parcel owned by Pharmacea and Upjohn Company (c/o Pfizer). The property is secured by a security gate and is apparently used for manufacturing purposes. Property owners did not respond to correspondence sent by Phoenix.

<u>Stiles Lane Company, 33 Stiles Lane</u> – Owners of this property did not respond to correspondence sent by Phoenix.

Marlin Firearms, 100 Kenna Drive – In November, 2000, the North Haven Planning and Zoning Commission denied an AT&T Wireless application for a tower on this property citing a concern over the visual impact on nearby residents. This property's owner has indicated it will not sign a lease for a facility on this property without a demonstration of clear support from the town.

New York Central Lines LLC (Map 52, Lots 1 and 2) – These parcels are directly adjacent to the host property. They are, however, not suitable because of existing wetlands and a salt marsh.

(Phoenix 1, Exhibit J)

Docket 384: North Haven Findings of Fact Page 6

- 35. Pocket could not adequately cover its target area using a transmission line tower located on Devine Street because it could not extend the tower's height enough for its antennas to provide service to all of its coverage objective area. The height of the nearby tower is approximately 85 feet, and extending the height 10 feet would still leave Pocket with a coverage problem on I-91. Ten feet is about the most a monopole-type of transmission line tower could be extended (Tr. 1, pp. 78-80)
- 36. Repeaters, microcell transmitters, distributed antenna systems and other types of transmitting technologies are not practicable or feasible means to provide service within the area that would be covered from the proposed site due to significant terrain variations and tree cover in the area, as well as other practical considerations. (Phoenix 1, p. 7)

Site Description

- 37. The proposed facility is located in the southeasterly corner of a 6.037 acre parcel at 50 Devine Street in North Haven. The property is owned by 424 Chapel Street, LLC and is located north of Route 40, approximately 2,000 feet west of I-91 and 4,000 feet southeast of the Wilbur Cross Parkway. The property is occupied by an approximately 40,000 square foot, single story, steel warehouse building and associated asphalt driveways, and landscaped areas. (Phoenix 1, Exhibits B, C, and N)
- 38. The host property is in an IG-80 General Industrial zoning district. Wireless telecommunications towers are permitted in General Industrial zones with a special use permit. North Haven's zoning regulations encourage the location of towers in non-residential areas and in areas where the adverse impact on the community is minimal. (Phoenix 1, p. 15 ff.; Bulk filed North Haven Zoning Regulations Section 8.2 Wireless Telecommunications Towers and Antennae)
- 39. The proposed facility would consist of a 120-foot monopole tower located within a 70-foot by 70-foot (4,900 square feet) compound that would be enclosed by an eight-foot high chain link fence. The compound would be within a 100-foot by 100-foot parcel leased from the property owners. (See Figure 3)(Phoenix 1, pp. 1, 9; Exhibit B)
- 40. The proposed facility would be located at 41° 22' 40" north latitude and 72° 52' 34.17" west longitude. Its ground elevation would be 7.87 feet above mean sea level (AMSL). (Phoenix 1, Exhibit B; Exhibit S)
- 41. The proposed tower would be designed in accordance with the specifications of the Electronic Industries Association Standard ANSI/TIA-222-G "Structural Standards for Steel Antenna Towers and Antenna Support Structures" consistent with the International Building Code. The diameter of the tower would be approximately 34 inches at its top and approximately 52 inches at its base. The tower would be designed to accommodate the antennas of up to six wireless carriers with full platform arrays. (Phoenix 2, A3)
- 42. Phoenix would design the tower so that it could be extended in height by an additional 30 feet. (Tr. 1, p. 24)

- 43. Pocket would install three flush-mounted panel antennas on the proposed tower at a centerline height of 117 feet above ground level (AGL). (Pocket 1, A8; Tr. 1, pp. 66-67)
- 44. Pocket's use of flush-mounted antennas is a business decision based on the lesser expense of flush-mounts compared to t-arm and platform mounts. (Tr. 1, pp. 74-76)
- 45. The use of flush-mounts does not compromise Pocket's coverage because of the limited spectrum it uses. (Tr. 1, pp. 75-76)
- 46. Pocket would install an 8-hour battery backup for emergency power at the proposed facility. Pocket could bring in portable generators in the event of a prolonged power outage. (Pocket 1, A11)
- 47. Developing the proposed facility would require 94 cubic yards of fill. (Phoenix 2, A4)
- 48. Vehicular access to the proposed facility would extend from Devine Street over an existing paved parking lot. (Phoenix 1, p. 9)
- 49. Utility service would extend underground from an existing utility pole on Devine Street for a distance of approximately 440 feet to the proposed facility. (Phoenix 1, p. 9; Exhibit B Drawing Z1)
- 50. There is existing commercial utility service on the east side of the Amtrak tracks, making it unnecessary for Phoenix to cross the nearby railroad tracks to extend service to its proposed site. (Tr. 1, p. 37)
- 51. No blasting would be required to develop the proposed facility. (Phoenix 2, A5)
- 52. Phoenix would plant some Baker Blue Spruce (*Picea Pungens (Baker)*) trees on the west side of the proposed compound. (Phoenix 1, Exhibit Q, Drawings Z3 and Z12)
- 53. The proposed tower's setback radius would extend approximately 30 feet onto the adjacent property to the east. (Phoenix 1, Exhibit B, Drawing Z1)
- 54. Phoenix would design a yield point into the proposed tower in order to contain the setback radius on the host property. (Tr. 1, pp. 21-23)
- 55. There are four residences within 1,000 feet of the proposed facility. Two of these residences are in a duplex. The nearest residence is located at 22 Devine Street, 696 feet northwest of the proposed facility. It is owned by Papa Associates LP. (Phoenix 1, Exhibit L)
- Land use in the area surrounding the host property is a mixture of sparse residential, mixed commercial, and light industrial uses. (Phoenix 1, Exhibit N:Visual Resource Evaluation Report - Project Site Setting)

Docket 384: North Haven

Findings of Fact

Page 8

57. The estimated cost of the proposed facility, not including antennas and related equipment, is:

Tower and foundation costs	\$ 45,000
Site development costs	101,000
<u>Utility installation costs</u>	22,000
Total estimated costs	\$168,000

(Phoenix 1, p. 20)

58. The estimated cost of Pocket's antennas and related equipment would be \$130,000. (Pocket 1, A10)

Environmental Considerations

- 59. The proposed facility would have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. (Phoenix 1, Exhibit O Letter from Deputy State Historic Preservation Officer, dated March 12, 2009)
- 60. There are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur on the property where the proposed facility would be located. (Phoenix 1, Exhibit O Letter from Connecticut Department of Environmental Protection, Bureau of Natural Resources, Wildlife Division, dated February 3, 2009)
- 61. Approximately 25 trees with a diameter at breast height of six inches or more would be removed to construct the proposed facility. (Phoenix 1, Exhibit M)
- 62. The nearest wetlands to the proposed facility are located more than 100 feet to the north and east. No impacts to the wetlands would be anticipated from development of the facility. (Phoenix 1, p. 18; Exhibit K)
- 63. The proposed facility would be located within the area regulated under Connecticut's Coastal Management Program; however, the proposed facility would not adversely impact coastal resources as defined by the Connecticut Coastal Management Act. These resources include: water quality, coastal water circulation patterns, natural erosion patterns, natural or existing drainage patterns, coastal flooding, visual quality, essential wildlife, finfish, or shellfish habitat, and tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments. (Coastal Consistency Analysis, dated December 23, 2009)
- 64. The proposed tower would not be visible from any navigable waterways, shorefronts, or beaches. (Tr. 1, p. 33)
- 65. The proposed facility would be located within a Federal Emergency Management Agency (FEMA) 100-year flood plain. The approximate elevation of the 100-year flood is 9.5 feet AMSL. (Phoenix 1, Exhibit Q National Environmental Policy Act (NEPA) Screening Report; Phoenix 2, A13)

Docket 384: North Haven Findings of Fact Page 9

- 66. The impact of the proposed facility on potential hydraulic flows would be negligible. (Hydraulic Effect Analysis, dated December 2, 2009)
- 67. In order to protect their equipment from possible flood damage, carriers using the proposed facility could design their equipment shelters or pads to be above the level of the 100-year flood. (Tr. 1, p. 28)
- 68. Phoenix would establish and maintain appropriate soil erosion and sedimentation control measures, in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control established by the Connecticut Council for Soil and Water Conservation, in cooperation with the Connecticut Department of Environmental Protection, throughout the construction period of the proposed facility. (Phoenix 1, p. 18)
- 69. Phoenix has received a determination from the Federal Aviation Administration that its proposed facility would not be a hazard to air navigation and that marking and lighting of the tower would not be necessary. (Phoenix 1, Exhibit S)
- 70. The cumulative worst-case maximum power density from the radio frequency emissions of the proposed Pocket antennas is calculated to be 0.0553 mW/cm² or 5.53% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower. This calculation was based on methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997) that assumes all antennas would be pointed at the base of the tower and all channels would be operating simultaneously, which creates the highest possible power density levels. Under normal operation, the antennas would be oriented outward, directing radio frequency emissions away from the tower, thus resulting in significantly lower power density levels in areas around the tower. (Phoenix 1, Exhibit P)

Visibility

- 71. The proposed tower would be at least partially visible, during leaf-on conditions, from approximately 50 acres. The proposed tower would be at least partially visible, during leaf-off conditions, from approximately 78 acres. Six of these acres are on the proposed facility's host property. (See Figure 7) ((Phoenix 2, A15; Phoenix 1, p. 11; Exhibit N: Visual Resource Evaluation Report Conclusions)
- 72. Areas from which the proposed tower would be visible are mostly within a one mile radius of the site and are confined to the major transportation routes of I-91, Route 40, and Route 5. Fewer than 12 residences would have views of the proposed tower during leaf-on conditions. These residences are located along Route 5, within mixed commercial/residential areas. (Phoenix 1, Exhibit N: Visual Resource Evaluation Report Conclusions)
- 73. The proposed tower would not be visible from the Pines Bridge Historic District, located approximately 0.7 miles to the north. (Phoenix 1, Exhibit N: Visual Resource Evaluation Report Conclusions)

- 74. The proposed tower would not be visible from the Wilbur Cross Highway or the Sleeping Giant, Quinnipiac, or Wharton Brook State Parks, which are located between two and five miles to the north. (Phoenix 1, Exhibit N: Visual Resource Evaluation Report Conclusions)
- 75. The visibility of the proposed tower from different vantage points in the surrounding vicinity is summarized in the table below.

Location	Visible	Approx. Portion of (120') Tower Visible (ft.)	Approx. Distance and Direction to Tower
1 – Route 40 North Ramp	Yes	70°	1,250 feet; W
2 – Route 5	Yes	40'	3,000 feet; NNE
3 – Devine Street	Yes	60'	800 feet; E
4 – Route 5	No	n/a	4,800 feet; SSW
5 - Hartford Drive and Devine Street	Yes	60'	2,300 feet; SE
6 - Route 5 and Ridge Road Overpass	No	n/a	4,800 feet; SE
7 – Stoddard Avenue and Elm Street	No	n/a	4,500 feet; SW
8 – North Haven High School	Seasonal	10'	3,800 feet; NW
9 – Route 5	Seasonal	10'	11,500 feet; NNE
10 – Route 5	No	n/a	5,000 feet; NNE
11 – Hartford Turnpike	No	n/a	14,600 feet; SSE
12 – Mt. Carmel Road & Hartford Tpk	No	n/a	21,000 feet; SSE
13 – Mansfield and Kings Highway	No	n/a	8,100 feet; S
14 – Mill Road School	No	n/a	10,700 feet; WSW
15 – Route 5	Yes	10'	2,900 feet; S
16 – Route 5	Seasonal	20'	1,500 feet; S
17 – Route 5	Seasonal	20'	1,000 feet, S

(Phoenix 1, Exhibit N: Visual Resource Evaluation Report - Photographic Documentation Views)

Existing and Proposed Wireless Coverage

- 76. Pocket is licensed for Advanced Wireless Services (AWS) in the C-Block spectrum and utilizes the following frequencies: 1730-1735 MHz and 2130-2135 MHz. (Pocket 1, A1)
- 77. For in-vehicle coverage, Pocket's design signal strength is -79 dBm. For in-building coverage, its design signal strength is -84 dBm. (Pocket 1, A2)
- 78. Pocket's existing signal strengths in the area that would be covered from the proposed site range between -84 dBm and -101 dBm. (See Figure 4) (Pocket 1, A3)

79. Pocket has existing coverage gaps on its major target highways as shown in the table below:

Target Highway	Length of Coverage Gap
I-91	1.1 miles
Route 40	.2 mile
Route 15 (Merritt Parkway)	.4 mile

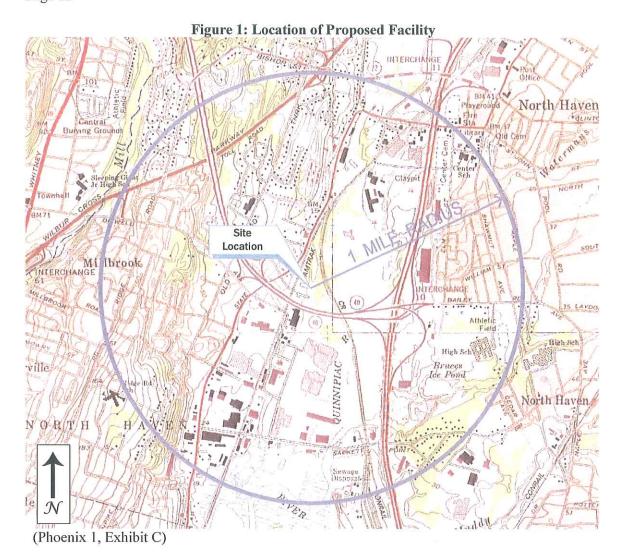
(Pocket 1, A5)

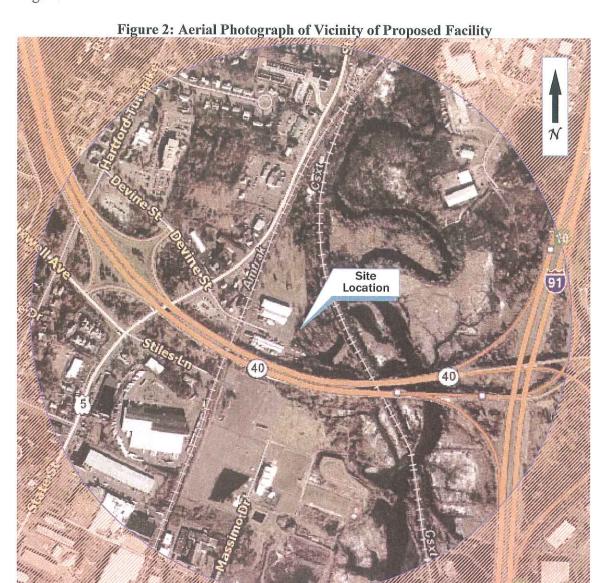
- 80. Pocket would be able to cover its existing gaps on its major target highways from the proposed facility. (See Figure 5) (Pocket 1, A6)
- 81. From the proposed site, Pocket would cover 4.0 square miles at its in-building signal strength and 6.5 square miles at its in-vehicle signal strength. (Pocket 1, A4)
- 82. From the proposed facility, Pocket's antennas would hand off signals with sites at the following locations (See Figure 6):

Site Address	Distance and Direction
2755 State Street, Hamden	1.72 miles to SSW
88 Parsonage Hill Road, North Branford	3.47 miles to ESE
117 Washington Avenue, North Haven	1.6 miles to NE
Horseshoe Hill Road, North Haven	3.03 miles to SSE
1199 Whitney Avenue, Hamden	2.93 miles to SW
890 Evergreen Avenue, Hamden	2.48 miles to NW
2405 Whitney Avenue, Hamden	1.37 miles to WNW
865 Mix Avenue, Hamden	2.27 miles to W
8/15 Dwight Street, North Haven	3.4 miles to NNE

(Pocket 1, A7)

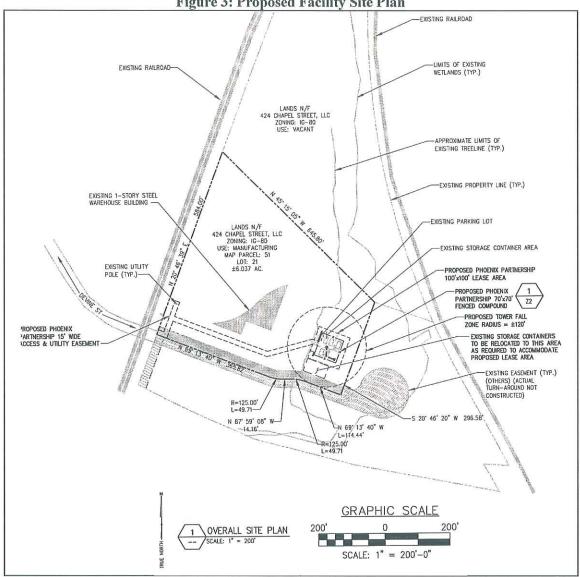
83. The minimum centerline height required by Pocket for its antennas to achieve its coverage objectives is 117 feet AGL. At lower heights, Pocket would experience coverage gaps on I-91. (Pocket 1, A8)





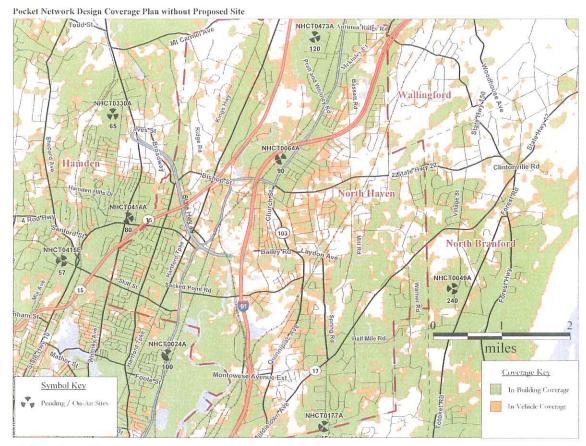
(Phoenix 1, Exhibit Q)





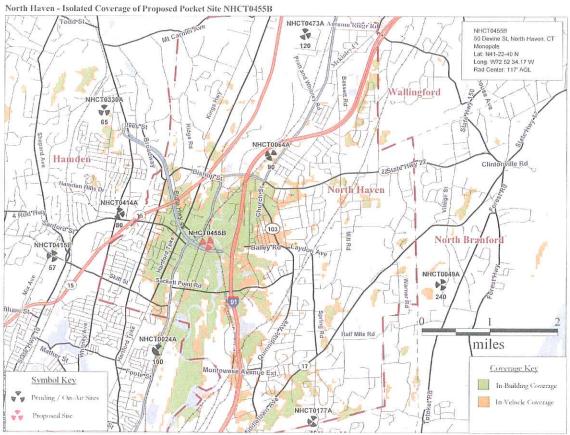
(Phoenix 1, Exhibit B – Sheet Z10)

Figure 4: Pocket Wireless' Existing Coverage



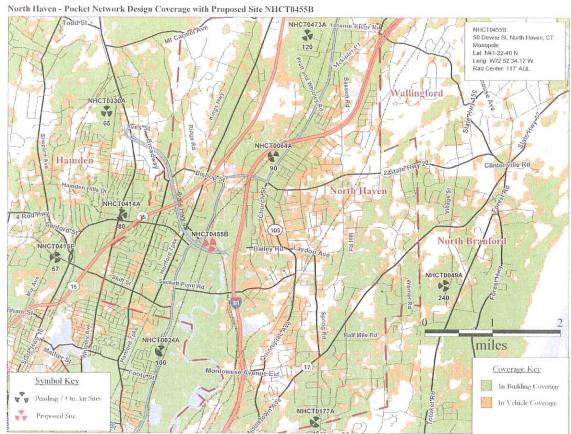
(Phoenix 1, Exhibit H)

Figure 5: Pocket Wireless' Coverage from Proposed Site



(Pocket 1, Exhibit H)

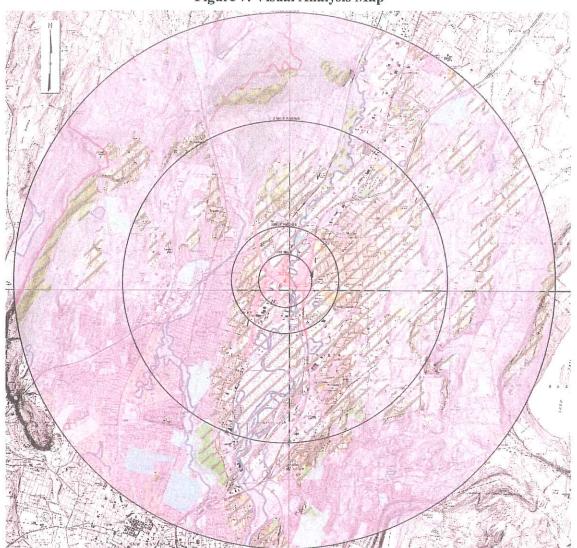
Figure 6: Pocket Wireless' Composite Coverage

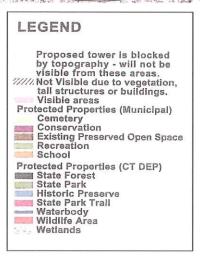


(Phoenix 1, Exhibit H)

Docket 384: North Haven Findings of Fact Page 18

Figure 7: Visual Analysis Map





(Phoenix 1, Exhibit N)