



December 20, 2024

Members of the Siting Council  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**RE: Tower Share Application // Site: Salisbury 2 (ATC: 209359)**  
**250 Canaan Road, Salisbury, CT 06068**  
**42.006222° N, -73.391447° W**

Dear Ms. Bachman:

This letter and attachments are submitted on behalf of Cellco Partnership d/b/a Verizon Wireless. Verizon Wireless plans to install antennas and related equipment to the tower site located at 250 Canaan Road, Salisbury, Connecticut.

Verizon Wireless proposes installing nine (9) 700/850/1900 5G MHz antenna and six (6) RRUs at the 135-foot level of the existing 150-foot monopine tower, two (2) hybrid cable will also be installed. Verizon Wireless equipment cabinets will be placed within 12x30 lease area. Included are plans by A.T Engineering Services, LLC, dated December 18, 2024. Also included is a structural analysis prepared by American Tower Engineering Professionals, dated August 28, 2024, confirming that the existing tower is structurally capable of supporting the proposed equipment. This facility was approved by the Connecticut Siting Council, Docket No. 452 on March 6, 2015.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of Verizon Wireless intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to Curtis G. Rand, First Selectman, Michael Carbone, Building Official, as well as the property owner and tower owner.

The planned modifications of the facility fall squarely within those activities explicitly provided for in R.C.S.A. 16-50j-89

1. The proposed modifications will not result in an increase in the height of the existing structure. The top of the tower is 150-feet; Verizon Wireless proposed antennas will be located at a center line height of 135-feet.
2. The proposed modification will not result in the increase of the site boundary as depicted on the attached site plan.
3. The proposed modification will not increase the noise levels at the facility by six decibels or more, or to levels that exceed local and state criteria. The incremental effect of the proposed changes will be negligent.
4. The operation of the proposed antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

Connecticut General Statutes 16-50-aa indicates that the Council must approve the shared use of a telecommunications facility provided it finds the shared use is technically, legally, environmentally, and economically feasible and meets public safety concerns. As demonstrated in this letter, Verizon Wireless respectfully indicates that the shared use of this facility satisfies these criteria.

A. Technical Feasibility. The existing monopine has been deemed structurally capable of supporting Verizon Wireless proposed loading.

B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this monopine in Salisbury. Under the authority granted to the Council, an order of the Council approving the requested shared use would permit Verizon Wireless to obtain a building permit for the proposed installation. Further, a letter of Authorization is included authorizing Pyramid Network Services to file this application for shared use.

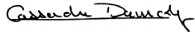
C. Environmental Feasibility. The proposed shared use of this facility would have a minimal environmental impact. The installation of Verizon Wireless equipment at the 135-foot level of the existing 150-foot tower would have an insignificant visual impact on the area around the monopine. Verizon Wireless ground equipment would be installed within the existing facility compound. Verizon Wireless shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

D. Economic Feasibility. Verizon Wireless will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Authorization has been provided by the owner to assist Pyramid with this tower share application.

E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting Verizon Wireless proposed loading. Verizon Wireless is not aware of any public safety concerns relative to the

proposed sharing of the existing tower. Verizon Wireless intentions of providing new and improved wireless service through the shared use of this facility is expected to enhance the safety and welfare of local residents and individuals traveling through Washington.

Sincerely,

A handwritten signature in cursive script, appearing to read "Cassandra Darmody", followed by a horizontal line.

Cassandra Darmody  
Agent for American Tower  
c/o Pyramid Network Services, LLC  
6615 Towpath Road  
East Syracuse, NY 13057  
Cell (315) 569-9241  
Fax (315) 445-0653

Attachments Cc:  
Curtis G. Rand, First Selectman  
Town Hall  
P.O. Box 548  
27 Main Street  
Salisbury, Connecticut 06068

Michael Carbone, Building Official  
Town Hall  
P.O. Box 548  
27 Main Street  
Salisbury, Connecticut 06068

American Tower – as the tower owner  
10 Presidential Way  
Woburn, MA 01801

Salisbury School Inc – Property Owner  
251 Canaan Road  
Salisbury, CT 06068



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

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March 6, 2015

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

RE: **DOCKET NO. 452** - Homeland Towers, LLC and New Cingular Wireless PCS, LLC  
application for a Certificate of Environmental Compatibility and Public Need for the  
construction, maintenance, and operation of a telecommunications facility located at  
Salisbury Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut.

Dear Attorneys Chiocchio and Fisher:

By its Decision and Order dated March 5, 2015, the Connecticut Siting Council (Council) granted a  
Certificate of Environmental Compatibility and Public Need (Certificate) for for the construction,  
maintenance, and operation of a telecommunications facility located at 250 Canaan Road, Salisbury,  
Connecticut.

Enclosed are the Council's Certificate, Findings of Fact, Opinion, and Decision and Order.

Very truly yours,

Philip T. Ashton  
Acting Chairman

PTA/cm

Enclosures (4)

c: Parties and Intervenors (without Certificate enclosure)  
State Documents Librarian (without Certificate enclosure)





# STATE OF CONNECTICUT

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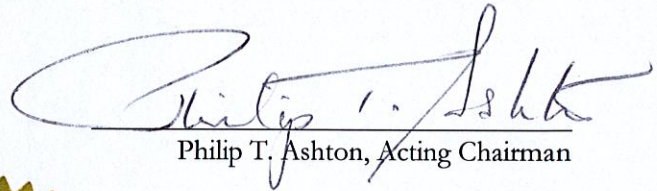
E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

**CERTIFICATE  
OF  
ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED  
DOCKET NO. 452**

Pursuant to General Statutes § 16-50k, as amended, the Connecticut Siting Council hereby issues a Certificate of Environmental Compatibility and Public Need to Homeland Towers, LLC for the construction, maintenance, and operation of a telecommunications facility located at 250 Canaan Road, Salisbury, Connecticut. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on March 5, 2015.

By order of the Council,

  
Philip T. Ashton, Acting Chairman

March 5, 2015



<b>DOCKET NO. 452</b> - Homeland Towers, LLC and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Salisbury Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut.	} } }	Connecticut  Siting  Council  March 5, 2015
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## Findings of Fact

### Introduction

1. Homeland Towers, LLC (HT) and New Cingular Wireless PCS, LLC (AT&T) collectively referred to as the Applicant (Applicant), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g, et seq, applied to the Connecticut Siting Council (Council) on October 7, 2014 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a 150-foot monopole wireless telecommunications facility disguised as a tree at 250 Canaan Road, Salisbury, Connecticut. (Applicant 1, pp. 1-2)
2. HT is a New York limited liability company with offices at 22 Shelter Rock Lane, Danbury, Connecticut. HT currently owns and operates numerous tower facilities in the State of New York and is developing tower sites in Connecticut. HT would construct, maintain, and own the proposed facility and would be the Certificate holder. (Applicant 1, p. 2)
3. AT&T is a Delaware limited liability company with an office at 500 Enterprise Drive, Rocky Hill, Connecticut. The company's member corporation is licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless services system. The company does not conduct any other business in the State of Connecticut other than the provision of wireless services under FCC rules and regulations. (Applicant 1, pp. 2-3)
4. The parties in this proceeding are the Applicant and the Town of Salisbury (Town). (Transcript 1- 3:00 p.m. [Tr. 1], p. 5)
5. The purpose of the proposed facility is to provide reliable wireless services to residents, businesses, schools, municipal facilities, and visitors to eastern Salisbury. (Applicant 1, p. 1)
6. Pursuant to C.G.S. § 16-50l (b), public notice of the application was published in The Lakeville Journal on September 25, 2014 and October 2, 2014. (Applicant 1, p. 4 and Tab 12; Applicant 2)
7. On September 29, 2014, notice of the application was provided to all abutting property owners by certified mail. All certified mail receipts for the notices sent to abutting property owners were received by the Applicant. (Applicant 1, p. 4 and Tab 12; Applicant 3, response 2)
8. On October 6, 2014, the Applicant provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50l (b). (Applicant 1, Tab 13 – Certification of Service)
9. Upon receipt of the application, the Council sent a letter to the Town of Salisbury on October 7, 2014 as notification that the application was received and is being processed in accordance with C.G.S. §16-50gg. (record)
10. Pursuant to C.G.S. §16-50m, the Council published legal notice of the date and time of the public hearing in The Lakeville Journal on November 6, 2014. (record)

11. Pursuant to C.G.S. § 16-50l (m), on October 31, 2014, the Council sent a letter to the Town of Salisbury to provide notification of the scheduled public hearing and to invite the municipality to participate. (record)
12. Pursuant to R.C.S.A. §16-50j-21, the Applicant installed a four-foot by six-foot sign at the entrance to the subject property on November 16, 2014. The sign presented information regarding the project and the Council's public hearing. (Applicant 6)
13. The Council and its staff conducted an inspection of the proposed site on December 4, 2014, beginning at 2:00 p.m. During the field inspection, the Applicant flew a four-foot diameter red balloon at the proposed site to simulate the height of the proposed tower. Weather conditions were blustery in the morning, and one balloon was lost. However, by the time of the field review, the winds had calmed and the balloon was fairly straight/vertical. During the field review, the balloon reached a height of 157 feet above ground level (agl). The balloon was aloft from 7:00 a.m. to 4:00 p.m. for the convenience of the public. (Council's Hearing Notice dated October 31, 2014; Tr. 1, pp. 14-16)
14. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on December 4, 2014, beginning with the evidentiary portion of the hearing at 3:00 p.m. and continuing with the public comment session at 7:00 p.m. at the Salisbury Town Hall, Upstairs Meeting Room, 27 Main Street, Salisbury, Connecticut. (Council's Hearing Notice dated October 31, 2014; Tr. 1, p. 1; Transcript 2 – 7:00 p.m. [Tr. 2], p. 87)

#### **State Agency Comment**

15. Pursuant to C.G.S. § 16-50j (g), on October 31, 2014 and December 5, 2014, the following State agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Energy and Environmental Protection (DEEP); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and Management (OPM); Department of Economic and Community Development (DECD); Department of Agriculture (DOAg); Department of Transportation (DOT); Connecticut Airport Authority (CAA); Department of Emergency Management and Public Protection (DESPP); and State Historic Preservation Office (SHPO). (Record)
16. The Council received a response from the DOT's Bureau of Engineering and Construction dated November 26, 2014 that the agency has no comments. (DOT Comments dated November 26, 2014)
17. The following agencies did not respond with comment on the application: DEEP, DPH, CEQ, PURA, OPM, DECD, DOAg, CAA, DESPP, and SHPO. (Record)

#### **Municipal Consultation**

18. The Applicant notified the Town of Salisbury of the proposal on May 30, 2014 by sending a technical report to First Selectman Curtis Rand. Approximately the last week of June 2014, the Applicant had discussions with First Selectman Rand who advised that he had referred the matter to other Town agencies for review and comment. A follow-up letter was sent from the Applicant to First Selectman Rand on August 1, 2014 inquiring as to the Town's preferred consultation process. A follow-up call with First Selectman Rand from the Applicant's representatives in September confirmed that the Town had no preferences and no official comment on the proposed facility. (Applicant 1, p. 20 and Tab 11)
19. The Town has a need to co-locate emergency services antennas on the tower to improve public safety, especially in the vicinity of the Twin Lakes. The Applicant would provide space on the tower for the Town's emergency communication services for no compensation. (Tr. 1, pp. 30-31)

20. Litchfield County Dispatch (LCD) is also interested in co-locating on the proposed tower. LCD's needs may include three whip antennas: two at the top of the tower and one located at a lower height. (Tr. 1, pp. 29-30)
21. At the evidentiary hearing held on December 4, 2014, Second Selectman Jim Dresser made a statement that the Town has no comments about the specifics of the tower, but noted that there is definitely a need for cell service in the Taconic region of Salisbury. (Tr. 1, p. 7)
22. There are no municipalities located within 2,500 feet of the proposed tower site. (Applicant 4)

**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. 4)
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. AT&T is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Litchfield County, Connecticut. (Council Administrative Notice Item No. 4; Applicant 3, response 8)
25. Section 253 of the Telecommunications Act of 1996 prohibits any state or local statute or regulation, or other state or local legal requirement from prohibiting or having the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service. (Council Administrative Notice Item No. 4)
26. Section 704 of the Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services and from prohibiting or having the effect of prohibiting the provision of personal wireless services. This section also requires state or local governments to act on applications within a reasonable period of time and to make any denial of an application in writing supported by substantial evidence in a written record. (Council Administrative Notice Item No. 4)
27. Section 704 of the Telecommunications Act of 1996 also prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects, which include effects on human health and wildlife, of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. (Council Administrative Notice Item No. 4)
28. In February 2009, as part of the American Recovery and Reinvestment Act, Congress directed the FCC to develop a National Broadband Plan to ensure every American has "access to broadband capability." Congress also required that this plan include a detailed strategy for achieving affordability and maximizing use of broadband to advance "consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes." (The National Broadband Plan - Council Administrative Notice Item No. 19)

29. Section 706 of the Telecommunications Act of 1996 requires each state commission with regulatory jurisdiction over telecommunications services to encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans, including elementary and secondary schools, by utilizing regulating methods that promote competition in the local telecommunications market and remove barriers to infrastructure investment. (Council Administrative Notice Item No. 4)
30. In December 2009, President Barack Obama recognized cell phone towers as critical infrastructure vital to the United States. The Department of Homeland Security, in collaboration with other federal stakeholders, state, local, and tribal governments, and private sector partners, has developed the National Infrastructure Protection Plan (NIPP) to establish a framework for securing our resources and maintaining their resilience from all hazards during an event or emergency. (Council Administrative Notice Item No. 11 – Barack Obama Presidential Proclamation 8460, Critical Infrastructure Protection)
31. In February 2012, Congress adopted the Middle Class Tax Relief and Job Creation Act to advance wireless broadband service for both public safety and commercial users. The Act established the First Responder Network Authority to oversee the construction and operation of a nationwide public safety wireless broadband network. Section 6409 of the Act contributes to the twin goals of commercial and public safety wireless broadband deployment through several measures that promote rapid deployment of the network facilities needed for the provision of broadband wireless services. (Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012)
32. In June 2012, President Barack Obama issued an Executive Order to accelerate broadband infrastructure deployment, declaring that broadband access is a crucial resource essential to the nation's global competitiveness, driving job creation, promoting innovation, expanding markets for American businesses and affording public safety agencies the opportunity for greater levels of effectiveness and interoperability. (Council Admin Notice Item 21 – FCC Report and Order; Council Admin Notice Item 12 – Executive Order 13616)
33. Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, also referred to as the Spectrum Act, a state or local government may not deny and shall approve any request for collocation, removal or replacement of equipment on an existing wireless tower provided that this does not constitute a substantial change in the physical dimensions of the tower. The Federal Communications Commission defines a substantial change in the physical dimensions of a tower as follows:
  - a) An increase in the existing height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater. Changes in height should be measured from the dimensions of the tower, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.
  - b) Adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater.
  - c) Installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four, or more than one new equipment shelter.
  - d) A change that entails any excavation or deployment outside the current site.
  - e) A change that would defeat the concealment elements of the tower.
  - f) A change that does not comply with conditions associated with the siting approval of the construction or modification of the tower, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would exceed the thresholds identified in (a) – (d).(Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012; Council Administrative Notice Item No. 21 – FCC Report and Order)

34. According to State policy, if the Council finds that a request for shared use of a facility by a municipality or other person, firm, corporation or public agency is technically, legally, environmentally and economically feasible, and the Council finds that the request for shared use of a facility meets public safety concerns, the Council shall issue an order approving such shared use to avoid the unnecessary proliferation of towers in the state. (Conn. Gen. Stat. §16-50aa)

**Existing and Proposed Wireless Services – AT&T**

35. AT&T's proposed facility is needed for both coverage and capacity. (Applicant 3, response 20)
36. AT&T would provide service over 700 MHz, 850 MHz, and 1900 MHz frequency bands. 700 MHz and 850 MHz would be primarily for coverage, and 1900 MHz would provide extra capacity. All three bands would be used for voice and data. All three bands would be on air when the site enters service. (Applicant 3, responses 9, 20, 21)
37. For 700 MHz, AT&T's design signal strengths for in-building and in-vehicle coverage are -83 dBm and -93 dBm, respectively. For 850 MHz, the design signal strengths for in-building and in-vehicle coverage are -74 and -82 dBm, respectively. For 1900 MHz, the design signal strengths for in-building and in-vehicle coverage are -86 dBm and -96 dBm, respectively. (Applicant 3, responses 23 and 29)
38. For 700 MHz, AT&T's existing signal strength in the area of the proposed facility ranges from -93 dBm to -120 dBm. For 850 MHz, AT&T's existing signal strength ranges from -82 dBm and lower (i.e. weaker signal strength). For 1900 MHz, AT&T's existing signal strength ranges from -96 dBm to -120 dBm. (Applicant 3, response 24)
39. The table below indicates AT&T's current coverage gaps along main routes.

<b>Street Name</b>	<b>Coverage Gap at 700 MHz</b>	<b>Coverage Gap at 850 MHz</b>	<b>Coverage Gap at 1900 MHz</b>
Belden Street	0.14 miles	0.14 miles	0.26 miles
Canaan Road	2.07 miles	2.07 miles	2.86 miles
East Main Street	0.18 miles	0.18 miles	0.27 miles
Salisbury Road	0.05 miles	0.05 miles	0.63 miles
Route 41	1.07 miles	1.07 miles	1.07 miles
Under Mountain Rd.	3.13 miles	3.13 miles	3.24 miles
<b>Main Road Total</b>	6.64 miles	6.64 miles	8.33 miles

(Applicant 3, response 26)

40. The table below indicates AT&T's current total coverage gaps along secondary routes.

<b>Street Name</b>	<b>Coverage Gap at 700 MHz</b>	<b>Coverage Gap at 850 MHz</b>	<b>Coverage Gap At 1900 MHz</b>
<b>Secondary Road Total</b>	32.46 miles	32.46 miles	35.89 miles

(Applicant 3, response 26)



41. The tables below indicate the distances that AT&T would cover along main roads in the area of its proposed facility at various heights.

Street Name	700 MHz Coverage at 146 feet	700 MHz Coverage at 136 feet	850 MHz Coverage at 146 feet	850 MHz Coverage at 136 feet
Canaan Road	0.71 miles	0.69 miles	0.71 miles	0.67 miles
Under Mountain Road	1.00 miles	0.84 miles	0.87 miles	0.80 miles
<b>Main Road Total</b>	1.71 miles	1.53 miles	1.58 miles	1.47 miles

Street Name	1900 MHz Coverage at 146 feet	1900 MHz Coverage at 136 feet
Canaan Road	0.61 miles	0.61 miles
Under Mountain Road	0.54 miles	0.44 miles
<b>Main Road Total</b>	1.15 miles	1.05 miles

(Applicant 5, response 2)

42. The tables below indicate the distances that AT&T would cover along secondary roads in the area of its proposed facility at various heights.

Street Name	700 MHz Coverage at 146 feet	700 MHz Coverage at 136 feet	850 MHz Coverage at 146 feet	850 MHz Coverage at 136 feet
<b>Secondary Road Total</b>	9.51 miles	9.32 miles	8.88 miles	8.45 miles

Street Name	1900 MHz Coverage at 146 feet	1900 MHz Coverage at 136 feet
<b>Secondary Road Total</b>	4.72 miles	4.42 miles

(AT&T 5, response 2)

43. AT&T's proposed facility would interact with the adjacent existing facilities identified in the following table.

Site Location	Distance and Direction from Proposed Tower	Height of AT&T Antennas	Structure Type
497 Lime Rock Road, Lakeville	5.44 miles south	42 feet	Monopole
38 Lower Road, North Canaan	3.37 miles east	148 feet	Lattice Tower
477 Route 7, Sharon	6.81 miles south-southeast	100 feet	Monopole
52 Library Street, Salisbury	2.25 miles southwest	144 feet	Monopole

(Applicant 3, response 10; Applicant 1, Tab 1 – Radio Frequency Analysis Report, pp. 8-9)

44. This table indicates the total areas that AT&T would cover from its proposed facility at various heights.

Antenna Height	Area Coverage* with 700 MHz	Area Coverage* with 850 MHz	Area Coverage* with 1900 MHz
146 feet	4.52 square miles	4.95 square miles	2.42 square miles
136 feet	4.31 square miles	4.73 square miles	2.21 square miles

\*Based on the more conservative in-building coverage thresholds rather than in-vehicle.

(Applicant 3, response 28)

45. AT&T's minimum design antenna centerline height to meet coverage objectives is 146 feet. (Applicant 3, response 22)
46. At lower antenna heights than 146 feet, further loss of road and area coverage would occur. (Tr. 1, p. 31; Applicant 3, response 28; Applicant 5, response 2)
47. The proposed facility would provide reliable service to Salisbury School, which has a student/faculty/employee population of approximately 450. (Applicant 1, p. 8)
48. The proposed facility would also provide reliable service to the Twin Lakes (i.e. Lakes Washinee and Washining). (Applicant 3, response 12)

### Site Selection

49. HT established a formal search ring for this area in January 2012. HT concentrated its search along Route 44 in the vicinity of the Salisbury School with an approximately ½ mile search radius. The center of the search ring is located at 42° 0' 1.47" north latitude and 73° 23' 28.31" west longitude. (Applicant 3, response 1)
50. HT met with First Selectman Rand in February 2012 to discuss its preliminary search area. At that meeting, First Selectman Rand suggested the Salisbury School property due to large acreage available. (Applicant 1, Tab 2, Site Search Summary, p. 2)

51. AT&T independently established its search ring for this area in August 2013. AT&T concentrated its search along Route 44 in the vicinity of Prospect Mountain Road and Taconic Road with an approximately ½ mile search radius. The center of this search ring is located at 41° 59' 51.9" north latitude and 73° 24' 20.82" west longitude. (Applicant 3, response 1)
52. There are two existing towers/structures located within a four-mile radius of the center of AT&T's search ring. The locations of the two existing towers and the reasons for the rejections are listed below:
- a) 52 Library Street, Salisbury – AT&T is already co-located on this existing monopole facility.
  - b) Bunker Hill Road, Salisbury – This existing lattice tower facility would not meet AT&T's coverage objectives.
- (Applicant 1, Tab 2, Existing Tower/Cell Site Listing)
53. After determining there were no suitable structures existing within their search area, AT&T searched for properties suitable for tower development. AT&T investigated four parcels/areas, one of which was selected for site development. The three rejected parcels/areas and reasons for their rejection are as follows:
- a) 167 Canaan Road, Salisbury (Salisbury Garden Center) – AT&T rejected this site due to wetland resources on the site.
  - b) 171 Canaan Road, Salisbury – The property is for sale with several buildings to be demolished. AT&T rejected this site due to uncertainty regarding property ownership
  - c) 15 Prospect Mountain Road, Salisbury – AT&T rejected this site because this smaller residential property was not deemed suitable for siting.
- (Applicant 1, Tab 2, Properties Investigated by AT&T)
54. HT independently searched for properties suitable for tower development. HT investigated five parcels/areas, one of which was selected for site development. The four rejected parcels/areas and reasons for their rejection are as follows:
- a) Housatonic River Road (Salisbury School) – Salisbury School was not interested in a tower on this parcel because its preference was to keep this parcel undeveloped.
  - b) Taconic Road, Salisbury (Edith Scoville Memorial Sanctuary) – The property has multiple conservation restrictions and covenants that would will not allow development of a tower.
  - c) 251 Canaan Road, Salisbury (Salisbury School – Main Campus) – Salisbury School was not interested in a tower on the parcel that contains its main campus.
  - d) Canaan Road, Salisbury (Map/Lot 16/4) (Salisbury School) – Salisbury School was not interested in a tower on this parcel because its preference was to keep this parcel undeveloped.
- (Applicant 1, Tab 2, Properties Investigated by HT)
55. Repeaters, microcell transmitters, distributed antenna systems, and other types of transmitting technologies are not a practicable or feasible means to providing such services within Salisbury. These technologies are better suited to provide new coverage at certain small, specially defined areas such as commercial buildings, shopping malls, and tunnels, or to address capacity. Closing the coverage gaps and providing reliable wireless services in eastern Salisbury requires a tower site that can provide reliable service over a footprint that spans several thousand acres. (Tr. 1, pp. 45-48)

#### **Facility Description**

56. The proposed site is located on a 169.3-acre parcel located at 250 Canaan Road (Route 44) in Salisbury. The parcel is owned by Salisbury School Inc. The parcel includes a large, undeveloped wooded area to the north of a maintenance garage and athletic fields. The facility is proposed within the undeveloped portion of the parcel. The parcel is zoned RR-1 residential. (Applicant 1, pp. 1 and 17)

57. Land use in the surrounding area includes undisturbed wooded areas and residential land to the east and west, undisturbed wooded area and Lake Washinee to the north, and Salisbury School campus to the south. (Applicant 4, Site Evaluation Report)
58. The proposed facility would consist of a 150-foot stealth tree monopole or "monopine." The total height to the top of the faux tree branch material would be 157 feet agl. The monopole or "tree trunk" would be approximately five feet wide at the base tapering to 3.5 feet wide at the top. The tower would be designed to support six levels of antennas (including AT&T) with a 10-foot center-to-center vertical separation. (Applicant 1, Tab 3 – Facilities and Equipment Specifications; Applicant 1, Tab 4 – Sheet SP-2)
59. Because of proximity to a culturally sensitive area proximate to the proposed facility location, on November 19, 2014, the Applicant shifted the location of the tower and compound by approximately 107 feet to the southwest. The original tower site was removed from consideration. The relocation of the tower and compound is expected to provide adequate separation distance from the culturally sensitive area, which would be left isolated in situ and physically protected during construction activities. (Applicant 4; Tr. 1, pp. 14, 22, 26-28)
60. The proposed tower would be located approximately 1,869 feet north of Canaan Road at 42° 00' 22.40" north latitude and 73° 23' 29.22" west longitude at an elevation of 893 feet AMSL. (Applicant 4, Sheets T-1 and A-1)
61. Pursuant to C.G.S. § 16-50p(a)(3)(G), no occupied school structures are located within 250 feet of the proposed tower. The closest building that may be occupied is the maintenance garage, located about 744 feet to the southwest. The nearest commercial day care center is Puddle Jumpers Day Care Center, located at 19 Park Avenue in North Canaan, approximately 2.15 miles to the east. The nearest commercial day care center within the Town of Salisbury is located at 30B Salmon Kill Road, approximately 2.5 miles to the southwest. (Applicant 1, p. 14 and Tab 8 – Visibility Analysis, p. 7; Applicant 4, Sheet A-1)
62. The nearest property boundary from the proposed tower is approximately 756 feet to the east (Kenneth property). (Applicant 4 – Sheet A-1)
63. There are no residences within 1,000 feet of the proposed tower site. The closest off-site residence is located at 284 Canaan Road, approximately 2,180 feet to the southeast. (Applicant 4, Site Impact Statement and Abutters Map – Sheet A-1)
64. HT does not plan to design the tower to be expandable in height. However, the tower could be designed to be expandable in height if requested by the Council. (Tr. 1, pp. 32-33)
65. A 60-foot by 70-foot equipment compound (within a 70-foot by 80-foot leased area) would be enclosed by an eight-foot high chain link fence would be established at the base of the tower. The size of the lease area would be able to accommodate the equipment of six wireless carriers including AT&T. (Applicant 1, Tab 3, Facilities and Equipment Specifications; Applicant 4, Sheet SP-2)
66. AT&T would install an 11-foot 5-inch by 16-foot equipment shelter inside the fenced compound. (Applicant 4, Sheet SP-2)
67. AT&T would install 12 panel antennas, 21 remote radio heads, and six surge suppressors on T-arm mounts at the 146 foot agl of the tower. (Applicant 3, response 6; Tr. 1, p. 20)

68. The faux tree branch material would disguise the antenna array because the T-arms are approximately three feet long, and the faux tree branches are approximately six to eight feet long at the top of the tower. (Applicant 3, response 47)
69. Only one other carrier, Cellco Partnership d/b/a Verizon Wireless (Cellco), expressed an interest in co-locating on the proposed tower. However, Cellco did not intervene in the proceeding. (Tr. 1, p. 16; Record)
70. Access to the proposed site would extend from Canaan Road in a northerly direction over an existing paved access drive, then continue north along an existing gravel access drive (towards the boathouse/lakes area), and then turn east for approximately 500 feet over new, proposed gravel drive that utilizes an existing logging road path to reach the equipment compound. The average grade of the new, proposed access would be 5.4 percent. (Applicant 1, p. 12; Applicant 3, response 7; Applicant 4)
71. Telephone utility service would run underground approximately 1,400 feet in a northerly direction from an existing demarcation point located near the maintenance garage. Then, it would turn eastward and run underground for about 500 feet parallel to the new, proposed gravel driveway. (Tr. 1, pp. 20-21; Applicant 4, Sheet A-1)
72. Electric utility service would connect to an existing distribution line on the existing boathouse access road. Then the electric utilities would run underground for about 500 feet to reach the compound. (Tr. 1, p. 21; Applicant 4, Sheet A-1)
73. Both underground telephone and electric utility services could be run along the northerly side of the new, proposed gravel access drive (as opposed to the south side as proposed) to increase the distance from the wetland. (Tr. 1, p. 21)
74. Development of the site would require approximately 550 cubic yards of cut for utility trenching in addition to 30 cubic yards of fill and approximately 215 cubic yards of crushed stone for the compound and driveway construction. (Applicant 4 – Site Evaluation Report)
75. The site preparation phase of construction would be expected to take four to five weeks. Installation of the tower, antennas, and other equipment would take an additional three weeks. After completion of construction, facility integration and system testing would take an additional approximately two weeks before the site would be operational. (Applicant 1, p. 21)
76. The estimated construction cost of the proposed facility is:

Tower and Foundation	\$ 160,000.
Site Development	\$ 105,000.
Utility Installation	\$ 45,000.
<u>Facility Installation</u>	<u>\$ 45,000.</u>
HT Subtotal	\$355,000.
<u>Antennas and Equipment</u>	<u>\$250,000.</u>
AT&T Subtotal	\$250,000.
Total Estimated Cost	\$605,000.

(Applicant 1, p. 21; Tr. 1, p. 20)

### **Backup Power**

77. In response to two significant storm events in 2011, Governor Malloy formed a Two Storm Panel (Panel) that was charged with an objective review and evaluation of Connecticut's approach to the prevention, planning and mitigation of impacts associated with emergencies and natural disasters that can reasonably be anticipated to impact the state. Two of the Panel's findings are as follows:
- a) "Wireless telecommunications service providers were not prepared to serve residential and business customers during a power outage. Certain companies had limited backup generator capacity;" and
  - b) "The failure of a large portion of Connecticut's telecommunications system during the two storms is a life safety issue."
- (Final Report of the Two Storm Panel, Council Administrative Notice Item No. 40)
78. The Panel made the following recommendations:
- a) "State regulatory bodies should review telecommunications services currently in place to verify that the vendors have sufficient generator and backhaul capacity to meet the emergency needs of consumers and businesses;" and
  - b) The Connecticut Siting Council should require continuity of service plans for any cellular tower to be erected. In addition, where possible, the Siting Council should issue clear and uniform standards for issues including, but not limited to, generators, battery backups, backhaul capacity, response times for existing cellular towers."
- (Final Report of the Two Storm Panel, Council Administrative Notice Item No. 40)
79. In response to the findings and recommendations of the Panel, Public Act 12-148, An Act Enhancing Emergency Preparedness and Response, codified at C.G.S. §16-50ll, required the Council, in consultation and coordination with the Department of Energy and Environmental Protection, the Department of Emergency Services and Public Protection and the Public Utilities Regulatory Authority (PURA), to study the feasibility of requiring backup power for telecommunications towers and antennas as the reliability of such telecommunications service is considered to be in the public interest and necessary for the public health and safety. The study was completed on January 24, 2013. (Council Docket No. 432, Council Administrative Notice Item No. 25)
80. The Council's study included consideration of the following matters:
- a) Federal, state and local jurisdictional issues of such backup power requirements, including, but not limited to, siting issues;
  - b) Similar laws or initiatives in other states;
  - c) The technical and legal feasibility of such backup power requirements;
  - d) The environmental issues concerning such backup power; and
  - e) Any other issue concerning backup power that PURA deems relevant to such study.
- (Council Docket No. 432, Council Administrative Notice Item No. 25)
81. The Council reached the following conclusions in the study:
- a) "Sharing a backup source is feasible for CMRS providers, within certain limits. Going forward, the Council will explore this option in applications for new tower facilities;" and
  - b) "The Council will continue to urge reassessment and implementation of new technologies to improve network operations overall, including improvements in backup power."
- (Council Docket No. 432, Council Administrative Notice Item No. 25)
82. For backup power, AT&T would utilize a 50 kW diesel generator on an 11-foot 5-inch by 24-foot concrete pad within the fenced compound and next to AT&T's equipment shelter. It would have a 200-gallon fuel tank. The estimated full-load run time of the generator before it requires refueling is 48 hours. (Applicant 3, response 36; Applicant 4, Sheet SP-2; Tr. 1, p.20)



83. AT&T would also have a battery backup in order avoid a “re-boot” condition during the generator start-up delay period. In the event that the generator fails to start, the battery backup system alone could provide approximately four to six hours of backup power. (Applicant 2, response 37)
84. While the backup generator would only be sized for AT&T’s needs, the Applicant would consider reserving space within the fenced compound for the possible deployment of a larger shared generator should another carrier decide to deploy one in the future. (Applicant 3, response 35)
85. According to R.C.S.A. §22a-69-1.8, noise created as a result of, or relating to, an emergency, such as an emergency backup generator, are exempt from the State Noise Control Regulations. (R.C.S.A. §22a-69-1.8)

### Public Safety

86. The Wireless Communications and Public Safety Act of 1999 (911 Act) was enacted by Congress to promote and enhance public safety by making 9-1-1 the universal emergency assistance number, by furthering deployment of wireless 9-1-1 capabilities, and by encouraging construction and operation of seamless ubiquitous and reliable networks for wireless services. (Council Administrative Notice Item No. 6)
87. AT&T’s facility would be in compliance with the requirements of the 911 Act (Applicant 1, pp. 9-10)
88. The proposed facility would provide Enhanced 911 services. This allows carriers to help 911 public safety dispatchers identify wireless callers’ geographical locations within several hundred feet. (Applicant 1, pp. 9-10)
89. On May 15, 2014, AT&T as well as other wireless carriers have voluntarily begun supporting text-to-911 services nationwide in areas where municipal Public Safety Answering Points (PSAP) support text-to-911 technology. Text-to-911 will extend emergency services to those who are deaf, hard of hearing, have a speech disability, or are in situations where a voice call to 911 may be dangerous or impossible. Even with carrier upgrades to its telecommunications system, the ability to text to 911 is limited by the ability of the local 911 call center to accept a text message. The FCC does not have the authority to regulate 911 centers; therefore, it cannot require 911 centers to accept text messages. (Council Admin. Notice No. 6; Applicant 1, pp. 7-8)
90. AT&T would be able to support text-to-911 service at the proposed facility once this functionality is supported and requested by the PSAP. AT&T is not aware that this functionality has yet been requested for this area. (Applicant 3, response 18)
91. Pursuant to the Warning, Alert and Response Network Act of 2006, the FCC has established a Personal Localized Alerting Network (PLAN) that requires wireless communication providers to issue text message alerts from Federal bodies, including the President of the United States. PLAN would allow the public to receive e-mails and text messages on mobile devices based on geographic location. The proposed facility would enable the public to receive e-mails and text messages from the CT Alert ENS system. (Applicant 1, p. 10)
92. The tower will be constructed in accordance with the American National Standards Institute TIA/EIA-222 “Structural Standards for Steel Antenna Towers and Antenna Support Structures” Versions F and G, using the more stringent of the two standards. The tower design would be in compliance with the applicable International Building Code standards as adopted by the State of Connecticut. (Applicant 1, Tab 3; Applicant 3, response 3)

93. The proposed equipment compound will be surrounded by an eight-foot high chain-link fence. The fence would have an anti-climb weave and would not have barbed wire. (Applicant 3, response 16; Applicant 4, Sheet SP-2; Applicant 3, response 16)
94. In addition to the gated and locked compound, AT&T's equipment shelter would be locked and remotely monitored for intrusion on a 24-hour basis. (Applicant 3, response 17)
95. The tower setback radius would remain within the boundaries of the subject property. (Applicant 1, Tab 4 – Sheets A-1 and SP-1)

### **Environmental Considerations**

96. A review of historic resources data indicates that no sites listed on the National Register of Historic Places are located within a 0.5-mile radius. (Applicant 1, Tab 10, p. 15; Tr. 1, pp. 55-56)
97. Vegetation at the site consists mainly of mixed deciduous hardwood species interspersed with scattered stands of conifers. The average tree canopy height in the vicinity of the tower site is approximately 85 feet. (Application 1, Tab 8, p. 4; Applicant 3, response 45)
98. Approximately 35 trees six inches or greater in diameter would be removed to construct the facility. (Tr. 1, pp. 11-12)
99. The northern long-eared bat, a State-designated Species of Special Concern, is known to occur in the vicinity of the tower site. Given the known concentrated seasonal use of this area by bats, DEEP recommends the following:
  - a) Tree cutting should be conducted from November 1 through March 30 to ensure that bats are safely situated in their hibernacula; and
  - b) Retaining large diameter trees 12 inches in diameter or greater wherever possible at the site may additionally minimize the potential for negative impacts to bats.(Applicant 1, Tab 9, DEEP Letter dated August 10, 2014; Tr. 1, p. 23)
100. The Applicant has retained large diameter trees in the facility design to the extent possible to comply with DEEP's recommendation. (Tr. 1, p. 25)
101. The Applicant would also perform tree clearing during the November 1 through March 30 window. Such details would be included in the Development and Management Plan (D&M Plan). (Tr. 1, p. 23)
102. The proposed tower site is not proximate to an Important Bird Area (IBA). The closest IBA is the White Memorial Foundation in Litchfield, approximately 20.7 miles to the southwest. (Applicant 3, response 43)
103. The proposed tower would comply with the U.S. Fish and Wildlife Services guidelines for minimizing the potential impacts to birds. (Applicant 3, response 44)
104. There are two wetlands on the host property: Wetland 1 to the northeast of the proposed site and Wetland 2 to the south and southwest of the site. (Applicant 1, Tab 6)
105. Wetland 1 is a hillside seep headwater wetland system located northeast of the proposed facility. A seasonal diffuse intermittent watercourse is centrally located with this wetland system, starting with a seasonal spring with shallow flows to the north. (Applicant 1, Tab 6, p. 4)

106. Wetland 1 is located approximately 211 feet to the northeast of the proposed facility compound and approximately 275 feet to the northeast of the proposed access drive. (Applicant 4, Sheet SP-1)
107. Wetland 2 is a forested wetland system associated with an unnamed perennial watercourse that flows to the west, then turns north at an existing culvert crossing associated with the Salisbury School's gravel road that leads to the boathouse on Washinee Lake. (Applicant 1, Tab 6, p. 4)
108. Wetland 2 is located approximately 119 feet to the southwest of the proposed facility compound at its closest point. It is located approximately eight feet to the south of the proposed gravel access drive at its closest point. (Applicant 4; Tr. 1, p. 22)
109. While an alternate access route could have been designed farther to the north to increase the distance from Wetland 2, such an alternative would have been associated with a greater disturbance to forested uplands. In addition, it would require greater tree removal. Thus, the Applicant proposes to utilize the existing logging road. (Applicant 1, Tab 6, p. 5)
110. No temporary impacts associated with the construction activities to nearby wetlands and watercourses are anticipated provided that erosion and sedimentation controls are designed, installed, and maintained during construction activities in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* (2002 E&S Guidelines). (Applicant 1, Tab 6, p. 5)
111. Long term secondary impacts to wetland resources associated with the operation of the facility are expected to be minimized by the fact that the facility would be unmanned, minimizes the creation of impervious surfaces with the use of a gravel access drive and compound and creates minimal traffic. (Applicant 1, Tab 6, p. 5)
112. In addition to compliance with 2002 E&S Guidelines, the Applicant's environmental consultant, All Points Technology, Inc., recommends that stormwater generated by the proposed development would be properly handled and treated in accordance with the *2004 Connecticut Stormwater Quality Manual* (2004 Stormwater Manual), with an emphasis on the utilizing Green Infrastructure/Low Impact Development techniques where appropriate. (Applicant 1, Tab 6, p. 5)
113. The erosion and sedimentation control plans and stormwater management plans would be submitted as part of the D&M Plan. (Applicant 1, Tab 6, p. 5)
114. With 2002 E&S Guidelines and 2004 Stormwater Manual compliance, the project would not likely result in an adverse impact to wetland resources. (Applicant 1, Tab 5, p. 6; Tr. 1, p. 22)
115. The backup generator's diesel fuel tank has double-walled containment to protect against leakage. (Tr. 1, p. 20)
116. Obstruction marking and lighting of the tower would not be required. Notice to the Federal Aviation Administration would also not be required. (Applicant 4, Site Safe Report)
117. The proposed equipment shelter would have a 100-watt exterior light fixture. The light would be off except when turned on by a motion sensor. (Applicant 3, response 15)
118. The HVAC units would meet State noise standards at the property boundaries. (Applicant 3, response 53)
119. The proposed site is located in Federal Emergency Management Agency Zone X, an area outside of the 100-year and 500-year flood zones. (Applicant 4, Sheets A-1 and T-1; Applicant 3, response 14)

120. The cumulative worst-case maximum power density from the radio frequency emissions from the operation AT&T's proposed antennas is 24.1% of the standard for the General Public/Uncontrolled 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. (Council Administrative Notice Item No. 18; Applicant 1, Tab 7 – Power Density Table; Applicant 3, response 33)

### Visibility

121. The proposed tower would be visible year-round from approximately 138 acres within a two-mile radius of the site (refer to Figure 14). It would be seasonally visible from approximately 343 acres within a two-mile radius of the site. (Applicant 1, Tab 8 – Viewshed Map)
122. The proposed tower would be visible year-round from less than ten homes, including a few along Twin Lakes Road (at two miles away and greater), Taconic Road (approximately 1.5 miles to the northwest), and Between the Lakes Road (approximately 1.6 miles northeast). However, at these distances, the tower would be barely recognizable as anything other than a tree among the existing tree canopy. (Applicant 3, response 50)
123. The proposed tower would be seasonally visible from approximately another 10 to 12 residential properties, including the same areas with year-round visibility as well as select locations off the southern end of Between the Lakes Road near its intersection with Canaan Road (within 0.75 miles) and possibly off Weatogue Road (at distances of approximately two miles away). (Applicant 3, response 50)
124. Visibility of the proposed tower from specific locations within a two-mile radius of the site is presented in the table below:

Location	Visible	Approx. Portion of Tower Visible	Approx. Distance to Tower
Twin Lakes Road	Yes	15 feet – above trees	1.98 miles southwest
Between the Lakes Road	Yes	20 feet - through trees	1.58 miles south
Taconic Road	Yes	20 feet – through trees	1.49 miles southeast
Edith Scoville Memorial Sanctuary	Yes	70 feet – through trees	0.31 miles east
Edith Scoville Memorial Sanctuary at the edge of playing fields	Yes	70 feet – through trees	0.18 miles east
Host Property	Yes	50 feet – through trees	0.16 miles northeast
Host Property	Yes	70 feet – above trees	0.24 miles northeast
Host Property	Yes	70 feet – above trees	0.37 miles north
Host Property	Yes	70 feet – above trees	0.42 miles north
Host Property	Yes	60 feet – above trees	0.42 miles north
Appalachian Trail	No	None	1.86 miles north
Appalachian Trail	No	None	1.62 miles north
Prospect Mountain Summit	No	None	1.83 miles northwest

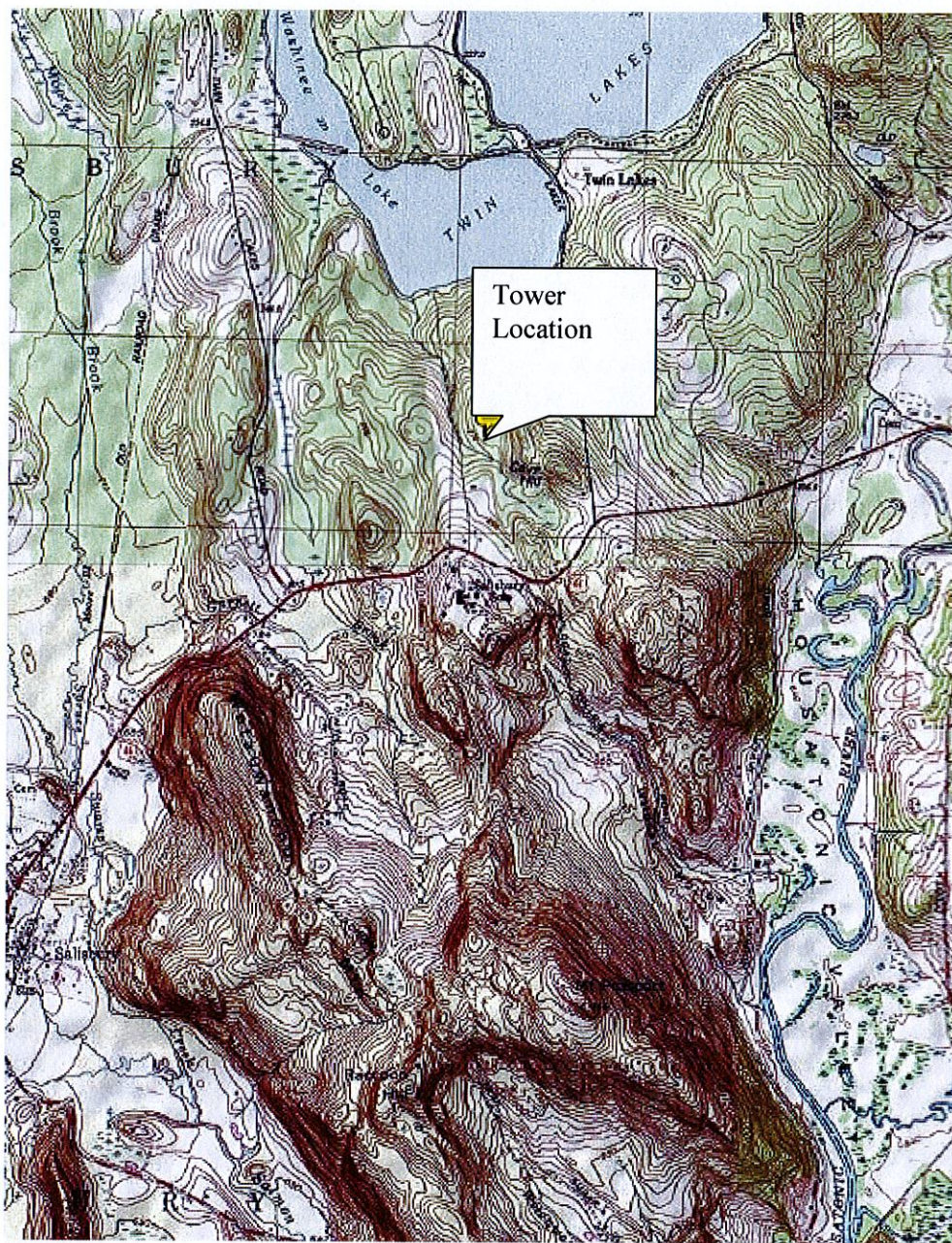
(Applicant 1, Tab 8 – Visibility Analysis)

125. Residential halls and faculty residences located at Salisbury School campus would likely experience some year-round views of the proposed tower. (Applicant 3, response 50)

126. Some year-round views of the proposed tower from Lake Washinee are possible. They could extend from a few feet to upwards of 40 feet above the existing tree canopy. (Applicant 1, Tab 8, Viewshed Map; Applicant 3, response 51)
127. Limited seasonal views of the tower from the Edith Scoville Memorial Sanctuary (ESMS) are possible along portions of the eastern-most trails within the ESMS. (Applicant 3, response 19)
128. The proposed tower would not be visible from the Appalachian Trail. (Applicant 1, Tab 8, Viewshed Map)
129. The proposed facility is located within the Upper Housatonic Valley National Heritage Corridor (UHVNHC). However, it is not expected to adversely impact the UHVNHC because of the limited visibility and the stealth “tree” design. (Tr. 1 pp. 17-18)
130. The monopole or “tree trunk” is proposed as a galvanized steel grey color, but it could be painted brown if requested. (Tr. 1, p. 28)
131. The antennas and antenna mounts could be painted to blend in with the faux tree branch material where exposed. (Applicant 3, response 48)

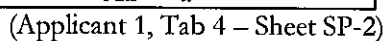


**Figure 1 – Site Location**

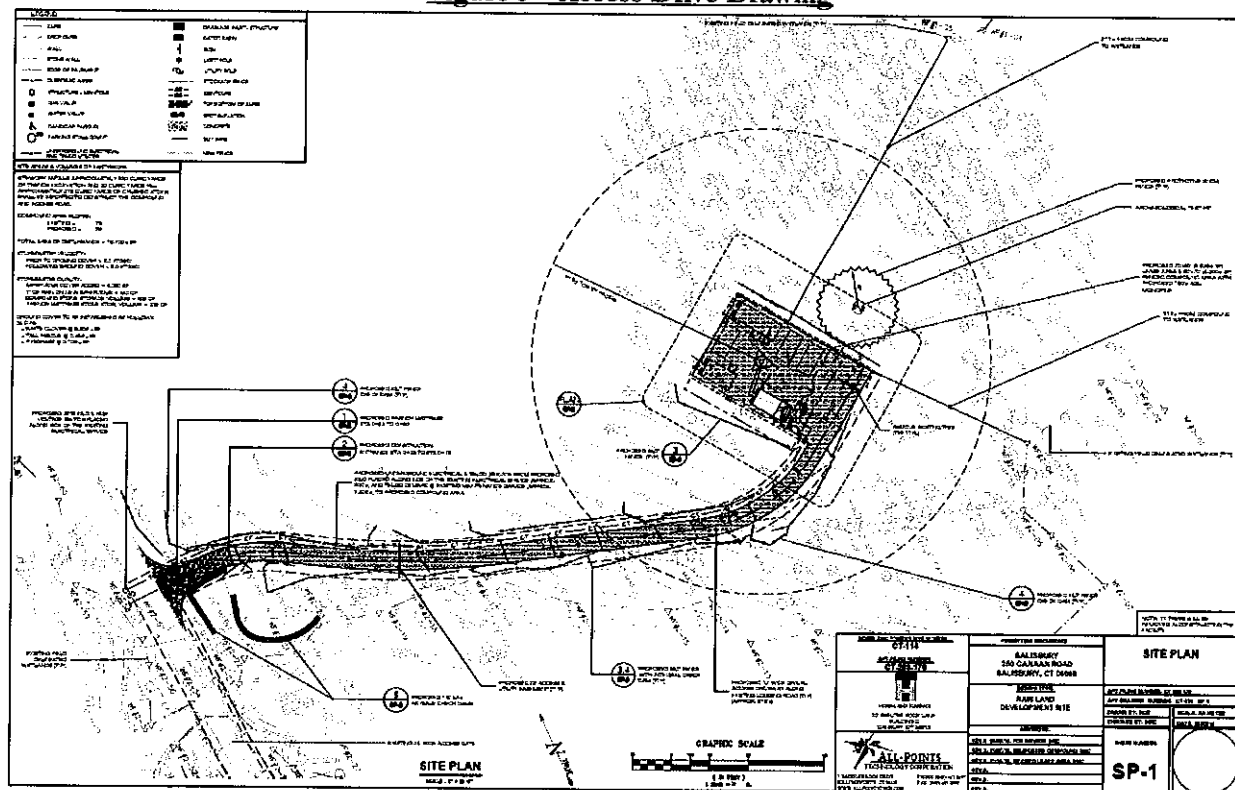


(Applicant 4)



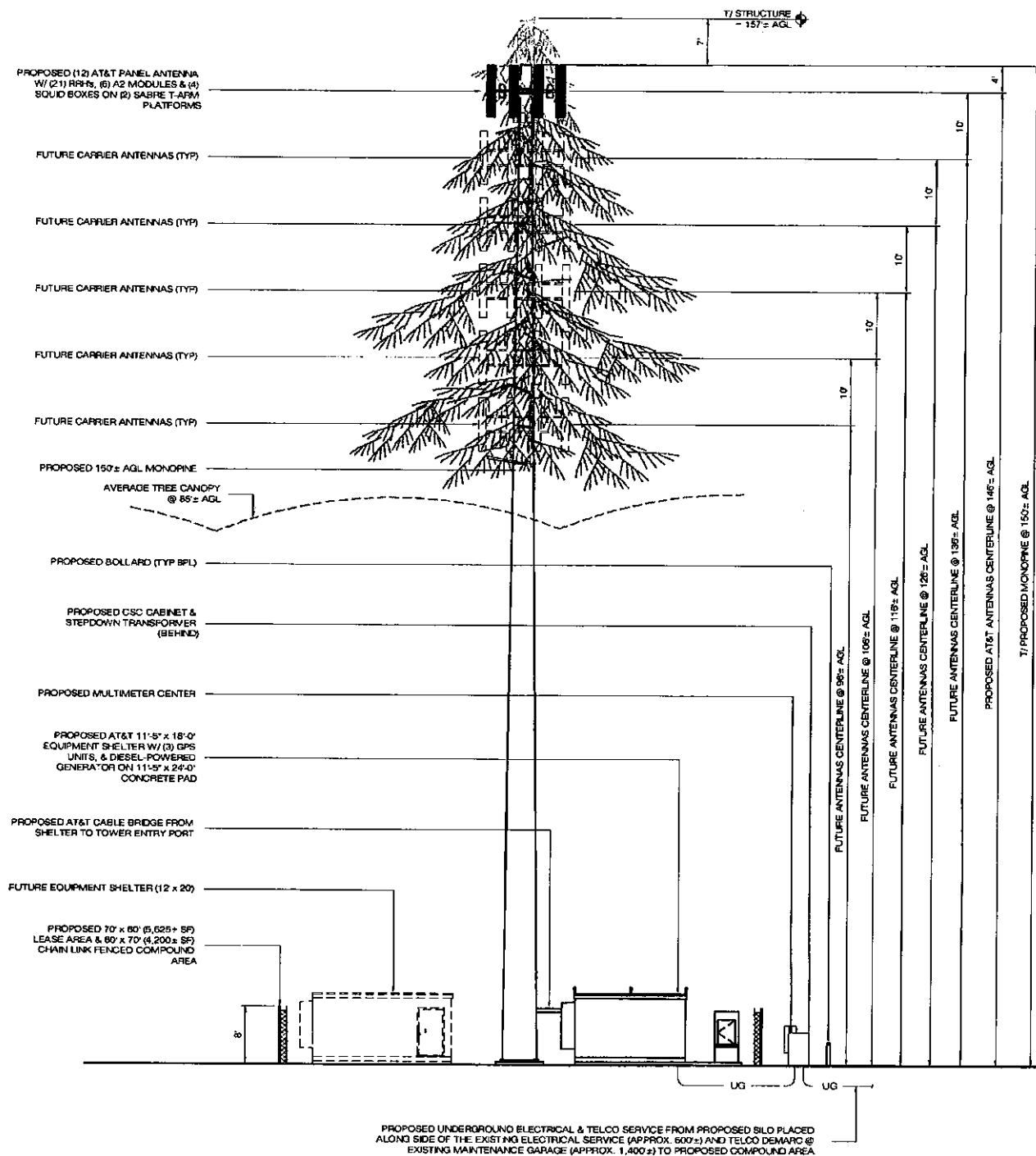


**Figure 3 – Access Drive Drawing**



(Applicant 4 – Sheet SP-1)

**Figure 4 – Tower Elevation Drawing**



GRAPHIC SCALE

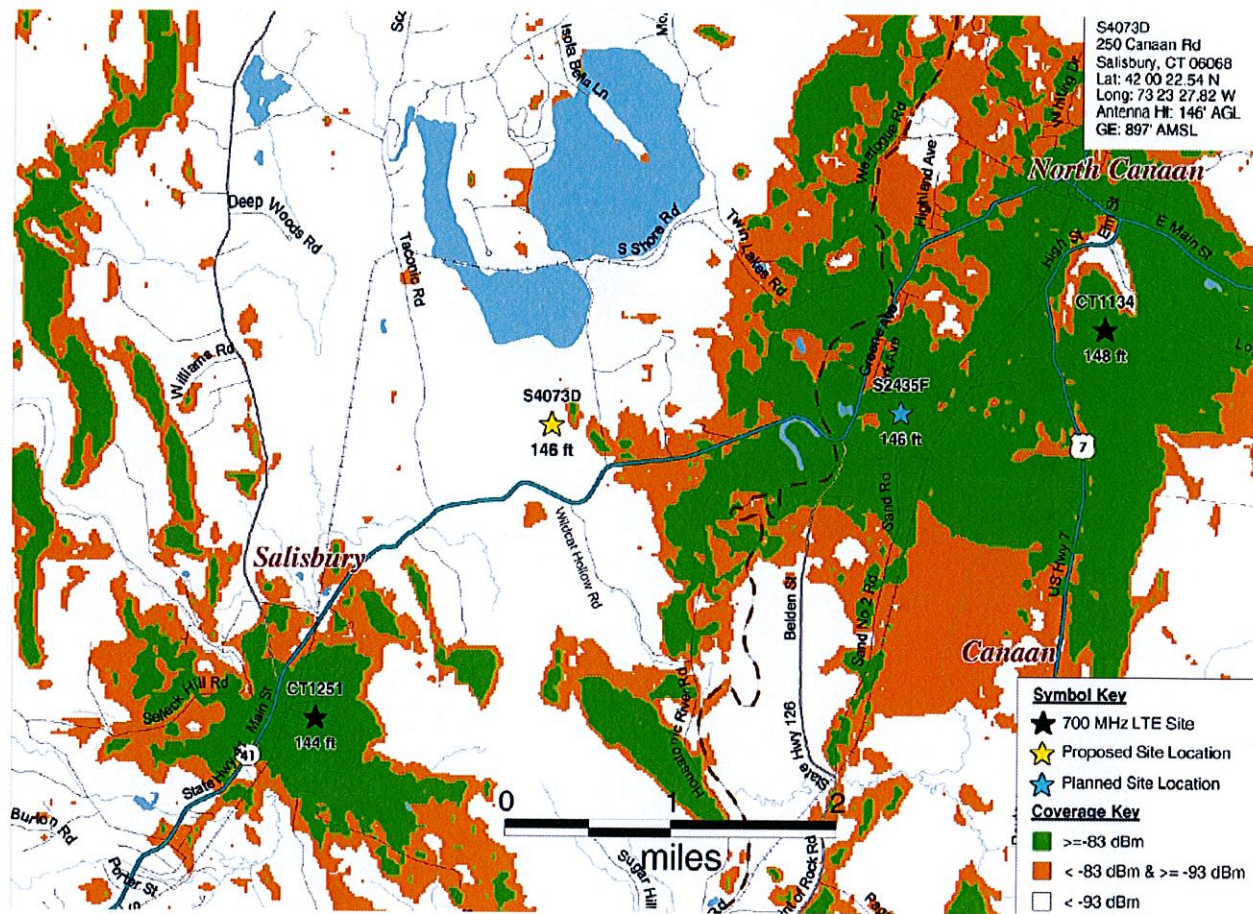
( IN FEET )  
1 inch = 10 ft.

(Applicant 4 – Sheet SP-2)

### SOUTHWESTERN ELEVATION

SCALE: 1" = 10'-0"

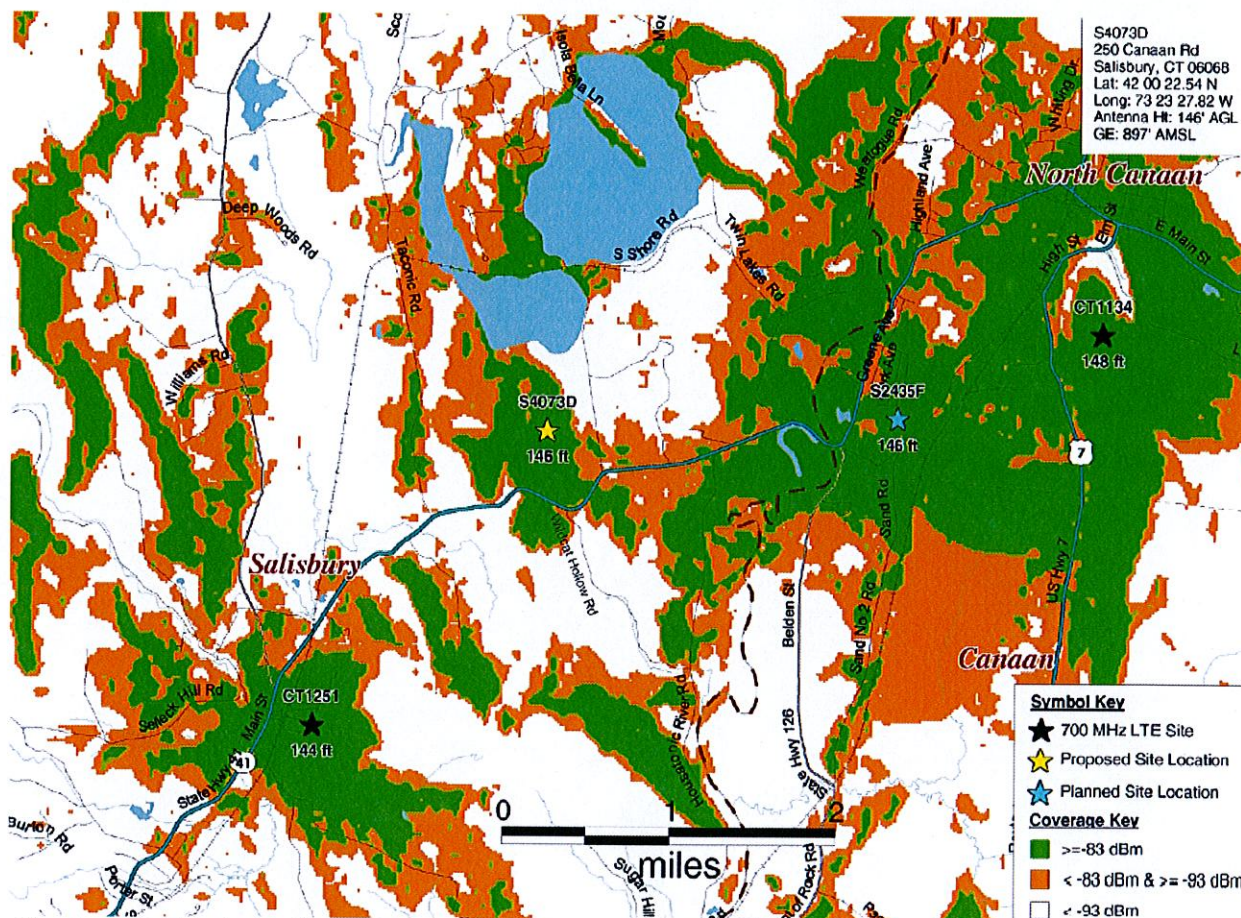
**Figure 5 – AT&T's Existing 700 MHz Coverage**



(Applicant 1, Tab 1 – Radio Frequency Analysis Report, p. 10)



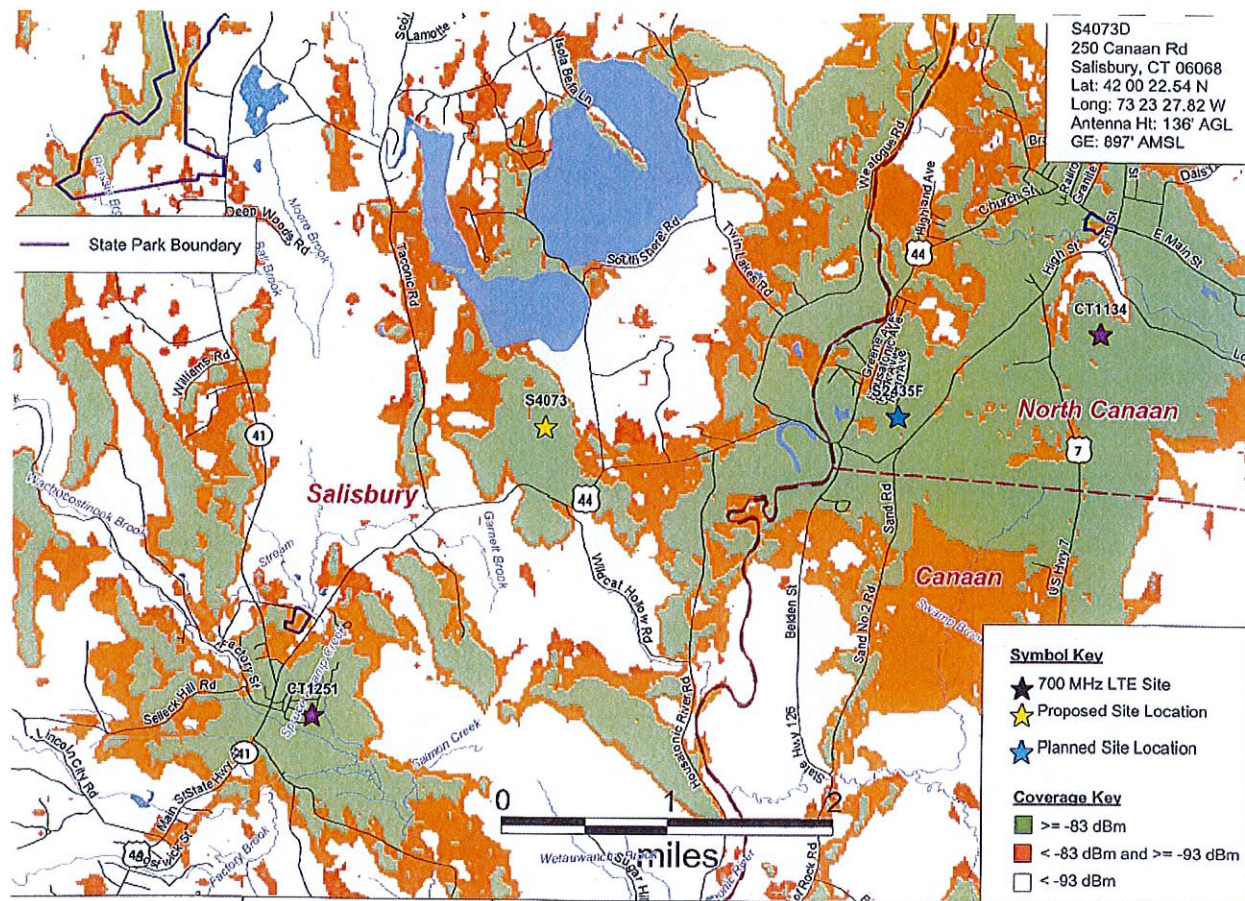
**Figure 6 – AT&T's Existing and Proposed 700 MHz Coverage at Antenna Centerline Height of 146 feet**



(Applicant 1, Tab 1 – Radio Frequency Analysis Report, p. 11)



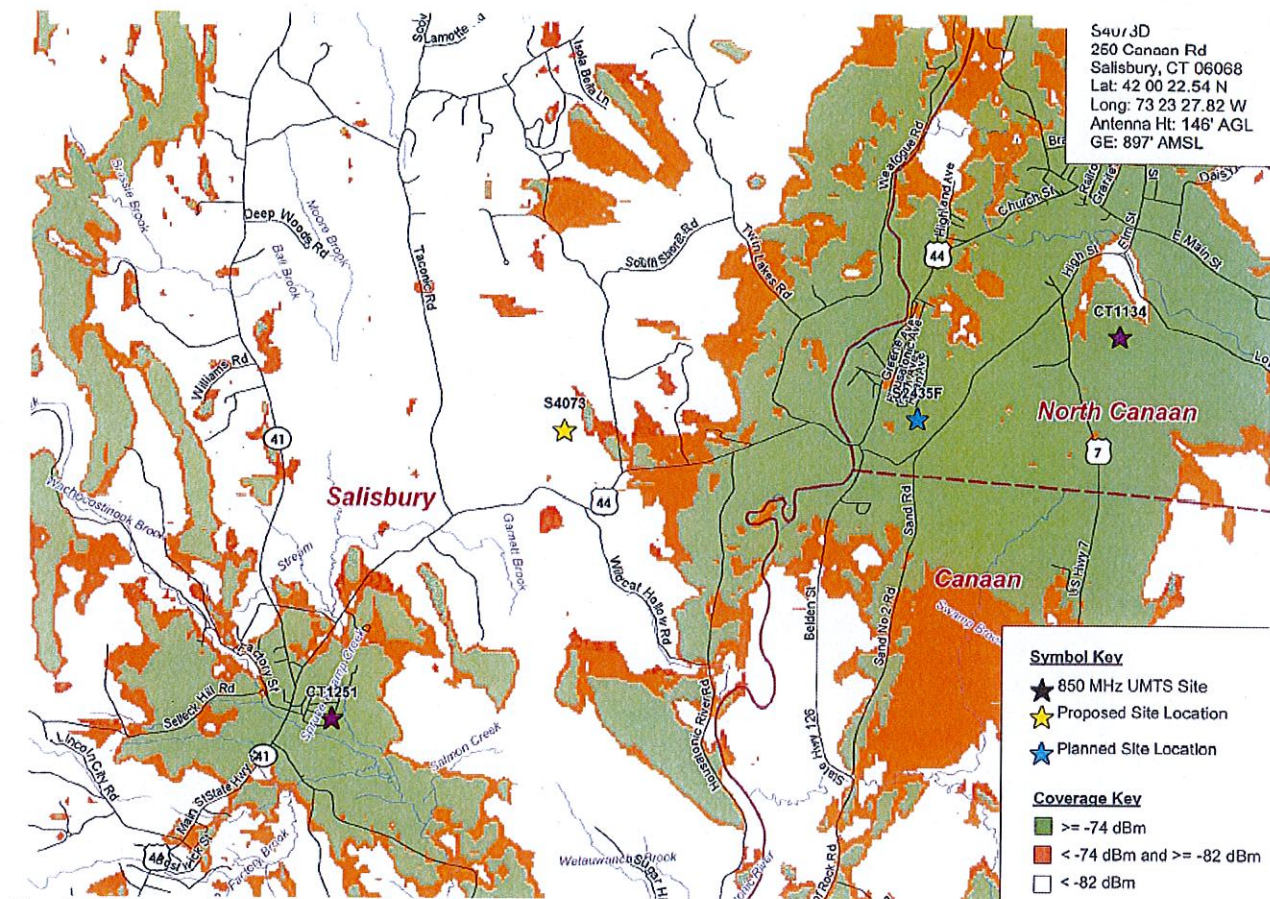
**Figure 7 – AT&T’s Existing and Incremental 700 MHz Coverage at Antenna Centerline Height of 136 feet**



(Applicant 3, response 30)

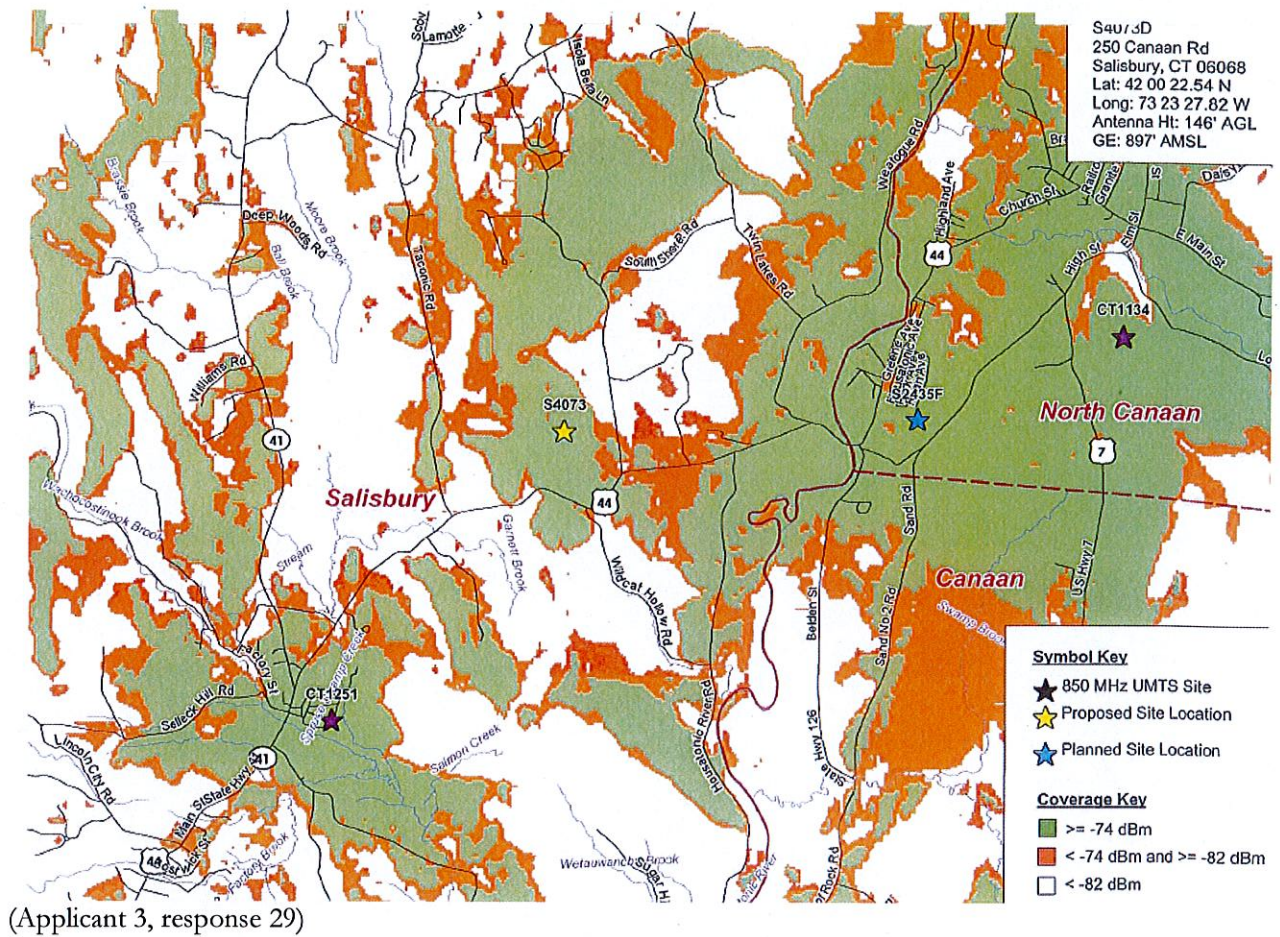


**Figure 8 – AT&T's Existing 850 MHz Coverage**



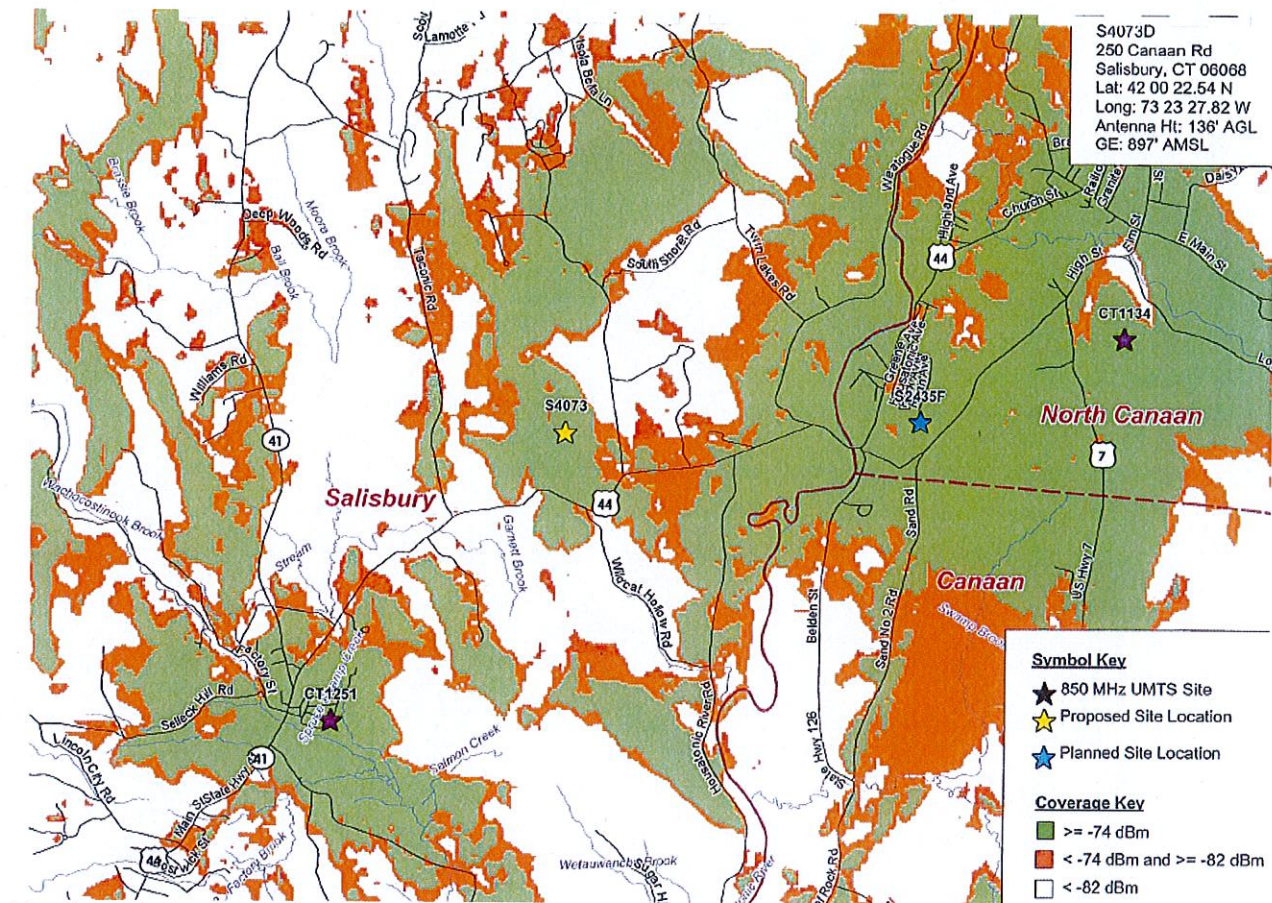
(Applicant 3, response 29)

**Figure 9 – AT&T's Existing and Proposed 850 MHz Coverage at Antenna Centerline Height of 146 feet**



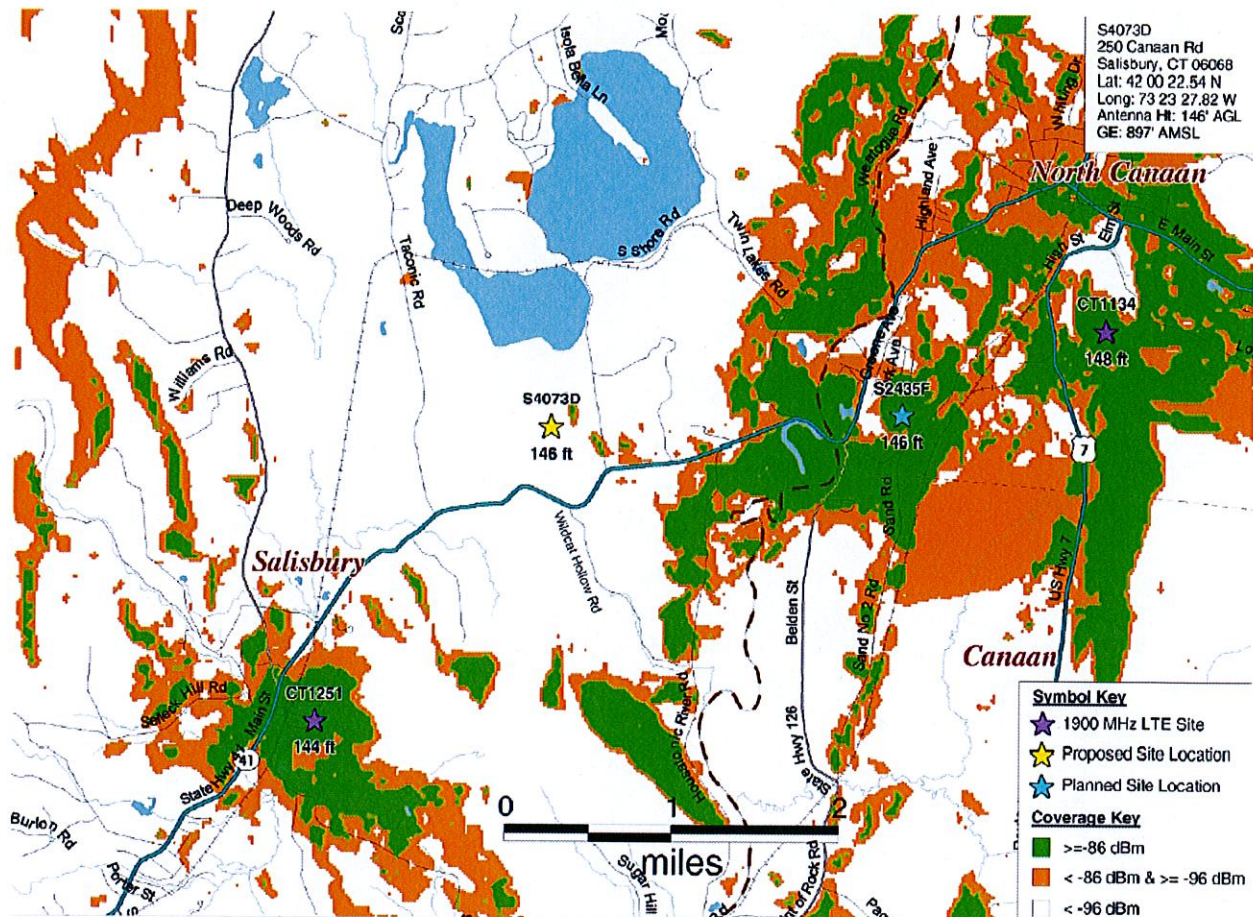


**Figure 10 – AT&T's Existing and Incremental 850 MHz Coverage at Antenna Centerline Height of 136 feet**



(Applicant 3, response 30)

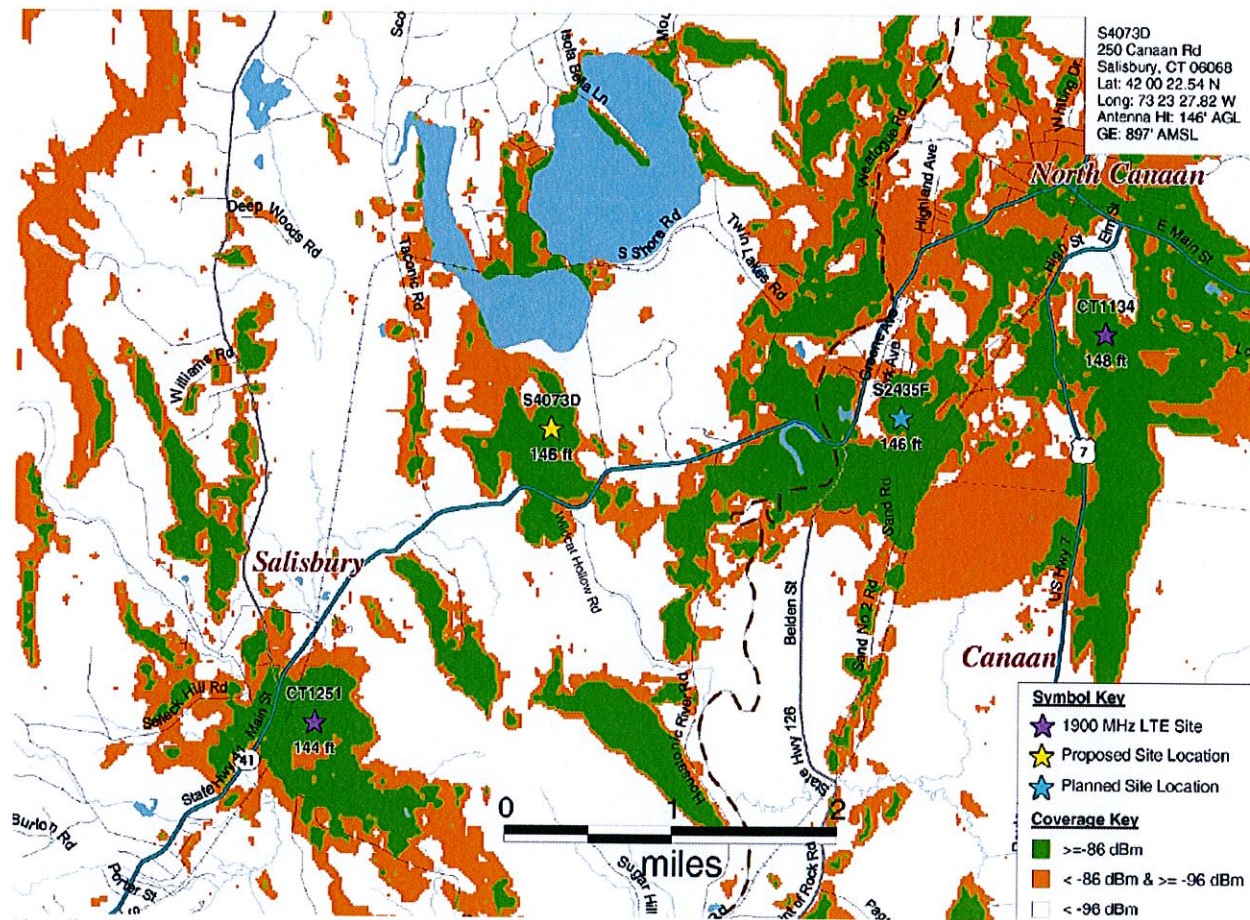
**Figure 11 – AT&T's Existing 1900 MHz Coverage**



(Applicant 1, Tab 1 – Radio Frequency Analysis Report, p. 12)

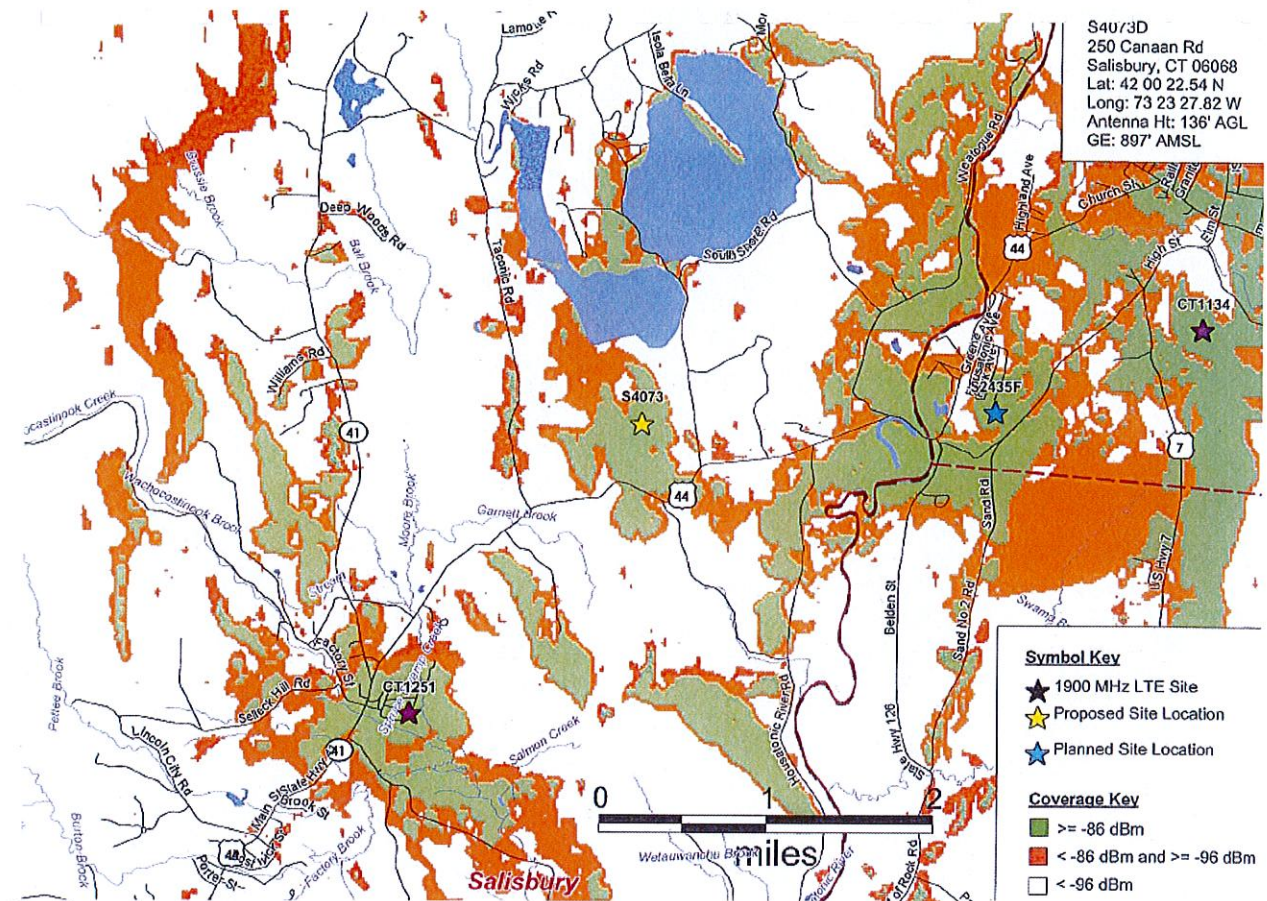


**Figure 12 – AT&T's Existing and Proposed 1900 MHz Coverage at Antenna Centerline Height of 146 feet**



(Applicant 1, Tab 1 – Radio Frequency Analysis Report, p. 13)

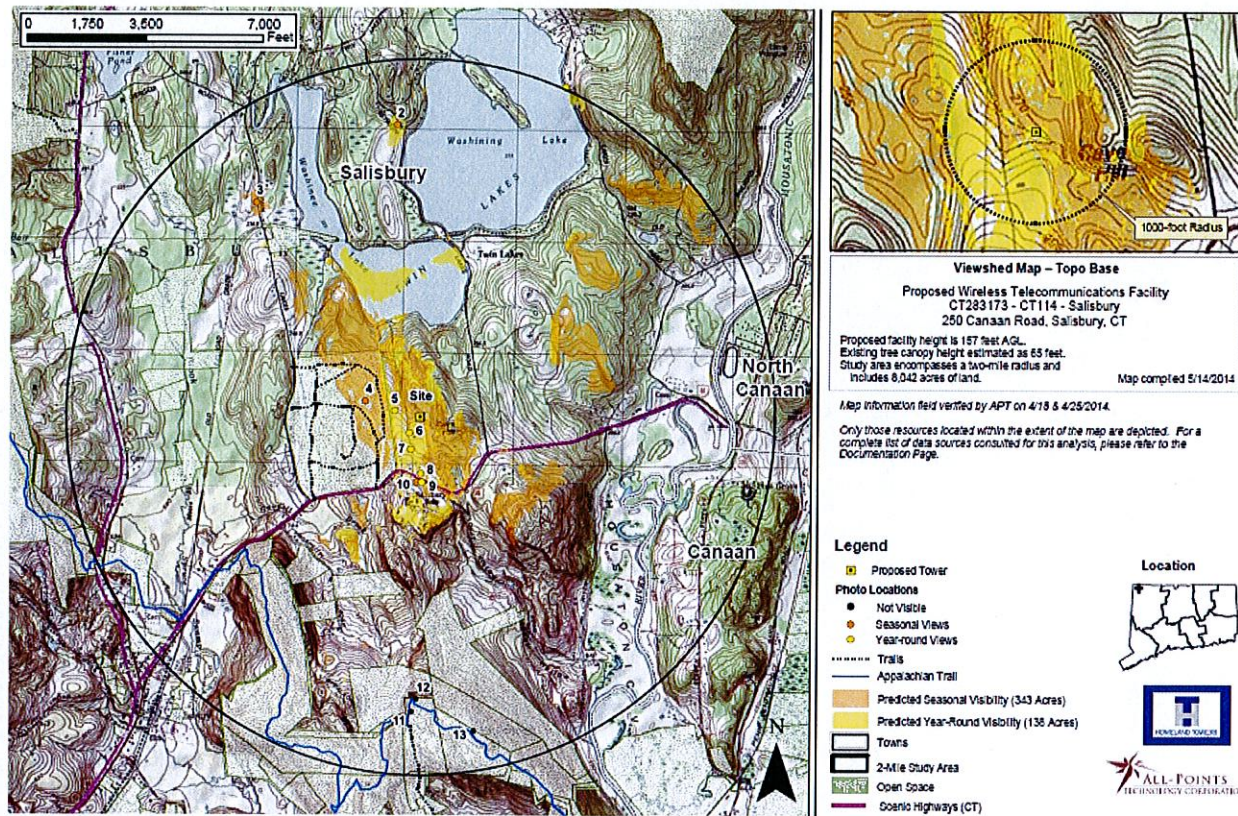
**Figure 13 – AT&T's Existing and Incremental 1900 MHz Coverage at Antenna Centerline Height of 136 feet**



(Applicant 3, response 30)



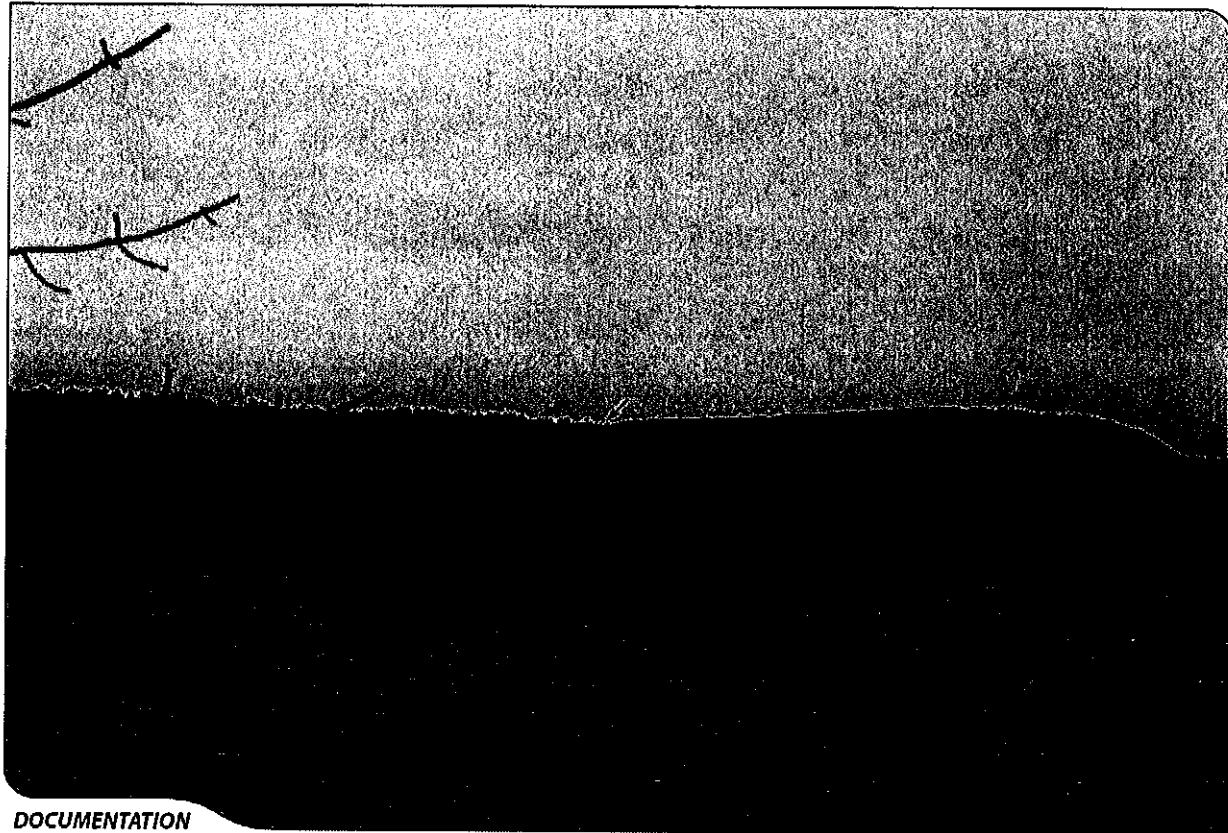
**Figure 14 – Visibility Analysis**



(Applicant 1, Tab 8 – Viewshed Map)



**Figure 15 – Photo-simulation**



**DOCUMENTATION**

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	TWIN LAKES ROAD	SOUTHWEST	+/- 0.198 MILES	YEAR ROUND

(Applicant 1, Tab 8 – Photo-simulation No. 1)

**Figure 16 – Photo-simulation**



***SIMULATION***

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	EDITH SCOVILLE MEMORIAL SANCTUARY AT EDGE OF PLAYING FIELDS	EAST	+/- 0.18 MILE	YEAR ROUND

(Applicant 1, Tab 8 – Photo-simulation No. 5)

<b>DOCKET NO. 452</b> - Homeland Towers, LLC and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Salisbury Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut.	} } }	Connecticut  Siting  Council
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March 5, 2015

### Opinion

On October 7, 2014, Homeland Towers, LLC (HT) and New Cingular Wireless PCS, LLC (AT&T) collectively referred to as the Applicant (Applicant) applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a wireless telecommunications facility to be located in the Town of Salisbury, Connecticut. The purpose of the proposed facility is to provide wireless services to residents, businesses, schools, municipal facilities, and visitors to eastern Salisbury.

The Applicant is seeking to develop a facility on a 169.3-acre property owned by Salisbury School Inc. The parcel includes a large, undeveloped wooded area to the north of the school's maintenance garage and athletic fields. The facility would be located in an undeveloped portion of the parcel located north of Canaan Road. The Town of Salisbury (Town) participated as a party in this proceeding.

On November 19, 2014, the Applicant moved the proposed site location by 107 feet to the southwest (on the same parcel) due to the identification of a culturally sensitive area. This relocation is expected to provide an adequate separation distance from the culturally sensitive area, which will be left isolated in situ and physically protected during construction activities. The original tower location is no longer under consideration. The Council believes that the relocation was a prudent action.

At the revised location, the Applicant proposes to construct a 150-foot stealth tree monopole tower inside a 60-foot by 70-foot equipment compound. The tower's faux tree branch material would result in a total height to the "tree top" of 157 feet above ground level (agl). AT&T would install 12 antennas on T-arm mounts at the 146-foot level of the tower. The tree branch material is intended to disguise such tower-mounted equipment. The tower setback radius will remain within the subject property boundaries. Thus, no yield point is necessary. AT&T would install its radio equipment in an 11-foot 5-inch by 16-foot equipment shelter inside the fenced compound.

Access to the site would extend from Canaan Road over an existing paved access drive, then continue north along an existing gravel access drive towards the school's boathouse area, and then turn east for approximately 500 feet over a new, proposed gravel drive that utilizes an existing logging road path to reach the tower compound.

Telephone utility service would run underground approximately 1,400 feet in a northerly direction from an existing demarcation point near the maintenance garage. Then, it would turn eastward and run underground for about 500 feet parallel to the new, proposed gravel driveway. Electric utility service would connect to an existing distribution line on the existing gravel boathouse access drive, and run underground parallel to the telephone access to reach the compound.

In the event an outage of commercial power occurs, AT&T will utilize a 50-kW diesel generator located inside the fenced compound and next to its equipment shelter. This generator would have a

200-gallon diesel fuel tank that would be double-walled to protect against leakage. It would provide about 48 hours of backup power at full load, based on the size of its fuel tank. Also, to prevent a "reboot" condition, AT&T will have battery backup to provide seamless power in the event of a power interruption. If the generator fails to start, the battery backup system alone could provide approximately four to six hours of emergency power.

At least one additional commercial wireless carrier, Cellco Partnership d/b/a Verizon Wireless (Cellco), has expressed interest in co-locating on the tower in the future, but did not intervene in this proceeding. The Town, as well as Litchfield County Dispatch, have also expressed an interest in co-locating on the tower in the future. However, the specific details of their co-locations have not been finalized at this time. Thus, while the proposed backup generator will be for AT&T's needs only, the Council will require that the Applicant reserve space in the equipment compound for a future shared generator.

The site contains existing vegetation consisting mainly of mixed deciduous hardwood species interspersed with scattered stands of conifers. The average tree height in the vicinity of the tower site is approximately 85 feet.

The tower is expected to be visible year-round from approximately 138 acres and seasonally visible from approximately 343 acres within a two-mile radius. The tower would be visible year-round from fewer than ten homes and seasonally visible from 10 to 12 homes. Residential halls and faculty residences located at Salisbury School campus will also likely experience some year-round views of the tower. Some year-round views from Lake Washinee (one of the "Twin Lakes") are also possible. The proposed tower would not be visible from the Appalachian Trail. Although the proposed facility is located within the Upper Housatonic Valley National Heritage Corridor (UHVNHC), it is not expected to adversely impact the UHVNHC because of limited visibility and stealth "tree" design. While the Council is concerned about visibility of the tower from Lake Washinee and nearby residences, the Council believes that the tree design will help mitigate the visual impact. Furthermore, the faux tree branch material will conceal the antennas and other tower-mounted equipment.

There are two wetlands on the host property: Wetland 1 to the northeast of the proposed site and Wetland 2 to the south and southwest of the site. Wetland 1 is located approximately 211 feet to the northeast of the proposed facility compound and approximately 275 feet to the northeast of the proposed access drive. Wetland 2 is located approximately 119 feet to the southwest of the proposed facility compound at its closest point. It is located approximately eight feet to the south of the proposed gravel access drive at its closest point.

While an alternate access route could have been designed farther to the north to increase the distance from Wetland 2, such an alternative would have been associated with a greater disturbance to forested uplands. In addition, it would require greater tree removal. Thus, the Applicant proposes to utilize the existing logging road. The Council concurs and supports minimizing tree removal and disturbance to forested uplands. The Council also recommends that the underground utility service be run along the northerly side of the proposed access drive to increase the distance to Wetland 2. The details of the utility service would be included in the D&M Plan. Finally, as long as the project complies with the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control* and the 2004 *Connecticut Stormwater Quality Manual* (also to be included in the D&M Plan), it will not likely result in an adverse impact to wetland resources.

The northern long-eared bat, a State-designated Species of Special Concern, is known to occur in the vicinity of the tower site. Accordingly, the Connecticut Department of Energy and Environmental Protection (DEEP) recommends that tree cutting be conducted from November 1 through March

30 to ensure that bats are safely situated in their hibernacula, and that large diameter trees 12 inches diameter or greater be retained wherever possible. The Applicant agrees to take such measures. Accordingly, the Council will require that they be included in the D&M Plan.

The site is not proximate to an Important Bird Area. The proposed tower will comply with the U.S. Fish and Wildlife Services Guidelines for minimizing impacts to birds.

A review of historic resources data indicates that no sites listed on the National Register of Historic Places are located within a 0.5-mile radius of the site.

The Council concludes that the proposed facility will have no substantial adverse environmental effect. In considering the public need for a facility, the Council notes that the FCC preempts state or local regulation on matters that are exclusively within the jurisdiction and authority of the FCC, including, but not limited to, network operations. Notwithstanding this pre-emption, and on the basis of extensive experience with the rapid increase in public demand for wireless services and the evidence in this record, the Council finds that the proposed site would provide coverage to identified service-deficient areas. Thus, the Council will approve the facility with a monopole or "tree trunk" tower height of 150 feet above ground level to accommodate AT&T's proposed antenna centerline height of 146 feet agl.

The tower is not proposed to be expandable in height. However, the Council believes that it would be prudent to design the tower for a possible future expansion to accommodate future co-locations such as Cellco, which has antenna height requirements that are not yet known. In order to accommodate at least one additional carrier at a height not less than that of AT&T, the Council will require that the tower and foundation be designed to accommodate an expansion in tower height.

According to a methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997), the combined radio frequency power density levels of AT&T's antennas proposed to be installed on the tower have been calculated by Council staff to amount to 24.1% of the FCC's General Public/Uncontrolled Maximum Permissible Exposure, as measured at the base of the tower. This percentage is well below federal standards established for the frequencies used by wireless companies. If federal standards change, the Council will require that the tower be brought into compliance with such standards. The Council will require that the power densities be recalculated in the event other carriers add antennas to the tower. 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. Regarding potential harm to wildlife from radio emission; this, like the matter of potential hazard to human health, is a matter of federal jurisdiction. The Council's role is to ensure that the tower meets federal permissible exposure limits.

Based on the record in this proceeding, the Council finds that the effects associated with the construction, maintenance, and operation of the telecommunications facility at the proposed site, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with policies of the State concerning such effects, and are not sufficient reason to deny this application. Therefore, the Council will issue a Certificate for the construction, maintenance, and operation of a 150-foot tree monopole telecommunications facility at the proposed site at Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut.



<b>DOCKET NO. 452</b> - Homeland Towers, LLC and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Salisbury Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut.	} } }	Connecticut Siting Council
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March 5, 2015

### Decision and Order

Pursuant to Connecticut General Statutes §16-50p and the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, maintenance, and operation of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Homeland Towers, LLC, hereinafter referred to as the Certificate Holder, for a telecommunications facility at Salisbury Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut.

Unless otherwise approved by the Council, the facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a stealth tree monopole at a height of 150 feet above ground level (agl) with faux tree branch material extending to not more than 157 feet agl to provide the proposed wireless services, sufficient to accommodate the antennas of New Cingular Wireless PCS, LLC and other entities, both public and private. The height of the tower may be extended after the date of this Decision and Order pursuant to regulations of the Federal Communications Commission.
2. The tower and foundation shall be designed to accommodate a possible future expansion in tower height.
3. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Salisbury for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) final site plan(s) for development of the facility to include specifications for the tower, tower foundation, antennas, and equipment compound including, but not limited to, fence with less than two inch mesh, radio equipment, access road, utility line, emergency backup generator, (and space in the equipment compound for a future shared backup generator), that employ the governing standard in the State of Connecticut for tower design in accordance with the currently adopted International Building Code;
  - b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control and the 2004 Connecticut Stormwater Quality Manual, as amended; and
  - c) northern long-eared bat protection plans.

4. Prior to the commencement of operation, the Certificate Holder shall provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
5. Upon the establishment of any new federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
6. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.
8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Salisbury. Any proposed modifications to this Decision and Order shall likewise be so served.
9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council within 90 days from the one year period of cessation of service. The Certificate Holder may submit a written request to the Council for an extension of the 90 day period not later than 60 days prior to the expiration of the 90 day period.
10. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.
11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.
12. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.



13. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.
14. The Certificate Holder shall maintain the facility and associated equipment, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line and landscaping in a reasonable physical and operational condition that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.
15. If the Certificate Holder is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Certificate Holder within 30 days of the sale and/or transfer.
16. This Certificate may be surrendered by the Certificate Holder upon written notification and approval by the Council.

We hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed in the Service List, dated November 13, 2014, and notice of issuance published in The Lakeville Journal.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

## CERTIFICATION

The undersigned members of the Connecticut Siting Council (Council) hereby certify that they have heard this case, or read the record thereof, in **DOCKET NO. 452** - Homeland Towers, LLC and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Salisbury Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut, and voted as follows to approve the proposed telecommunications facility:

### Council Members

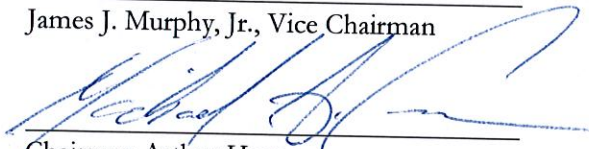
### Vote Cast

\_\_\_\_\_  
Robert Stein, Chairman

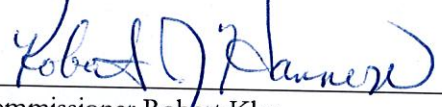
Absent

\_\_\_\_\_  
James J. Murphy, Jr., Vice Chairman

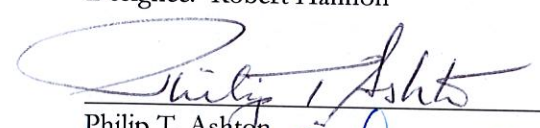
Absent

  
\_\_\_\_\_  
Chairman Arthur House  
Designee: Michael Caron

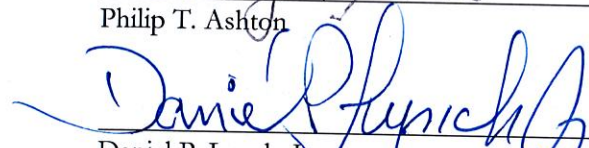
Yes

  
\_\_\_\_\_  
Commissioner Robert Klee  
Designee: Robert Hannon

Yes

  
\_\_\_\_\_  
Philip T. Ashton

Yes

  
\_\_\_\_\_  
Daniel P. Lynch, Jr.

Yes

  
\_\_\_\_\_  
Dr. Barbara Currier Bell

Yes

\_\_\_\_\_  
Dr. Michael W. Klemens

Recused

Dated at New Britain, Connecticut, March 5, 2015.

STATE OF CONNECTICUT )

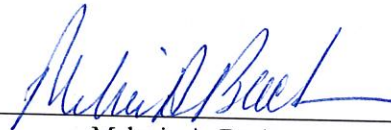
ss. New Britain, Connecticut :

March 6, 2015

COUNTY OF HARTFORD )

I hereby certify that the foregoing is a true and correct copy of the Findings of Fact, Opinion, and Decision and Order issued by the Connecticut Siting Council, State of Connecticut.

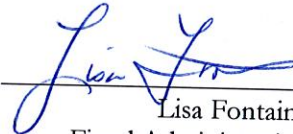
ATTEST:



Melanie A. Bachman  
Acting Executive Director  
Connecticut Siting Council

I certify that a copy of the Findings of Fact, Opinion, and Decision and Order in Docket No. 452 has been forwarded by Certified First Class Return Receipt Requested mail, on March 6, 2015, to all parties and intervenors of record as listed on the attached service list, dated November 13, 2014.

ATTEST:



Lisa Fontaine  
Fiscal Administrative Officer  
Connecticut Siting Council

**LIST OF PARTIES AND INTERVENORS  
SERVICE LIST**

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
<b>Applicant</b>	<input checked="" type="checkbox"/> E-Mail	Homeland Towers, LLC & New Cingular Wireless PCS, LLC	<p>Lucia Chiocchio, Esq. Christopher B. Fisher, Esq. Cuddy &amp; Feder LLP 445 Hamilton Avenue, 14<sup>th</sup> Floor White Plains, NY 10601 (914) 761-1300 (914) 761-5372 fax <a href="mailto:cfisher@cuddyfeder.com">cfisher@cuddyfeder.com</a> <a href="mailto:lchiocchio@cuddyfeder.com">lchiocchio@cuddyfeder.com</a></p> <p>Michele Briggs AT&amp;T 500 Enterprise Drive Rocky Hill, CT 06067-3900 <a href="mailto:MC3185@att.com">MC3185@att.com</a></p> <p>Vincent Xavier Homeland Towers, LLC 22 Shelter Rock Lane, Bldg. C Danbury, CT 06810 <a href="mailto:rv@homelandtowers.us">rv@homelandtowers.us</a></p>
<b>Party (Approved 11/13/14)</b>	<input checked="" type="checkbox"/> E-Mail	Town of Salisbury	<p>Curtis Rand, First Selectman Jim Dresser, Selectman Katherine Kiefer, Selectman P.O. Box 548 Salisbury, CT 06068 860-435-5170 <a href="mailto:crand@salisburyct.us">crand@salisburyct.us</a> <a href="mailto:jdresser@salisburyct.us">jdresser@salisburyct.us</a> <a href="mailto:kkiefer@salisburyct.us">kkiefer@salisburyct.us</a></p>





# 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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

March 6, 2015

TO: Classified/Legal Supervisor  
**452150306**  
The Lakeville Journal  
P.O. Box 1688  
Lakeville, CT 06039

FROM: Lisa Fontaine, Fiscal Administrative Officer

RE: **DOCKET NO. 452** - Homeland Towers, LLC and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Salisbury Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut.

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Please publish the attached notice as soon as possible, but not on Saturday, Sunday, or a holiday.

Please send an affidavit of publication and invoice to my attention.

Thank you.

LF



# 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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

### NOTICE

Pursuant to General Statutes § 16-50p (a), the Connecticut Siting Council (Council) announces that, on March 5, 2015, the Council issued Findings of Fact, an Opinion, and a Decision and Order approving an application from Homeland Towers, LLC and New Cingular Wireless PCS, LLC for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Salisbury Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut. This application record is available for public inspection in the Council's office, Ten Franklin Square, New Britain, Connecticut.



# Town of Salisbury, CT

## Property Listing Report

Map Block Lot

16-05

Building # 1

Section #

Account

98103062

### Property Information

Property Location	250 CANAAN ROAD
Owner	SALISBURY SCHOOL INC
Co-Owner	na
Mailing Address	251 CANAAN ROAD SALISBURY CT 06068
Land Use	2-1C COMM LAND MDL-94
Land Class	C
Zoning Code	RR1
Census Tract	

Street Index	24
Acreage	169.3
Utilities	UNKNOWN
Lot Setting/Desc	UNKNOWN UNKNOWN
Additional Info	

### Photo



### Sketch



### Primary Construction Details

Year Built	1971
Stories	1
Building Style	Service Shop
Building Use	Comm/Ind
Building Condition	
Interior Floors 1	average
Interior Floors 2	NA
Total Rooms	0
Basement Garages	
Occupancy	
Building Grade	C+

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Bath Style	NA
Kitchen Style	NA
Roof Style	average
Roof Cover	average
AC Type	None
Fireplaces	

Exterior Walls	Pre-finsh Metl
Exterior Walls 2	NA
Interior Walls	average
Interior Walls 2	NA
Heating Type	Forced Air-Duc
Heating Fuel	Oil
Sq. Ft. Basement	
Fin BSMT Quality	
Extra Kitchens	



# Town of Salisbury, CT

# Property Listing Report

Map Block Lot

**16-05**

Building # **1**

Section #

Account

**98103062**

Valuation Summary			Sub Areas		
(Assessed value = 70% of Appraised Value)					
Item	Appraised	Assessed	Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Buildings	1417700	992400	First Floor	6000	6000
Extras	6300	4400			
Improvements					
Outbuildings	1604800	1123400			
Land	10786400	7550500			
Total	13815200	9670700			

## Outbuilding and Extra Features

Type	Description
FIREPLACE	1.00 UNITS
FIREPLACE	1.00 UNITS
EX FRAME	4500.00 S.F.
Garage	920.00 S.F.
FIREPLACE	1.00 UNITS

Total Area	6000	6000

## Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
SALISBURY SCHOOL INC	0/0		0



# Town of Salisbury, CT

## Property Listing Report

Map Block Lot

16-05

Building #

2

Section #

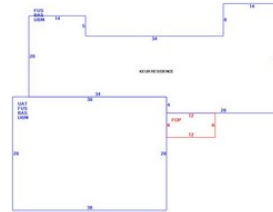
Account

98103062

### Photo



### Sketch



## Primary Construction Details

Year Built	1800
Stories	2
Building Style	OLD STYLE
Building Use	Residential
Building Condition	
Interior Floors 1	Wood
Interior Floors 2	NA
Total Rooms	16
Basement Garages	
Occupancy	2.00
Building Grade	B

Bedrooms	6 Bedrooms
Full Bathrooms	4
Half Bathrooms	0
Extra Fixtures	0
Bath Style	Average
Kitchen Style	Average
Roof Style	average
Roof Cover	average
AC Type	None
Fireplaces	

Exterior Walls	clapboard
Exterior Walls 2	NA
Interior Walls	average
Interior Walls 2	NA
Heating Type	Forced Air-Duc
Heating Fuel	Oil
Sq. Ft. Basement	
Fin BSMT Quality	
Extra Kitchens	

## Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Attic, Unfinished	1064	0
Basement	2288	0
First Floor	2288	2288
Porch, Open	72	0
Upper Story, Finished	2288	2288

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	8000	4576



# Town of Salisbury, CT

## Property Listing Report

Map Block Lot

16-05

Building #

3

Section #

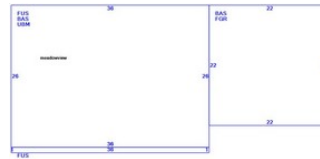
Account

98103062

### Photo



### Sketch



## Primary Construction Details

Year Built	1965
Stories	2
Building Style	Colonial
Building Use	Residential
Building Condition	
Interior Floors 1	Wood
Interior Floors 2	NA
Total Rooms	7
Basement Garages	
Occupancy	
Building Grade	B

Bedrooms	3 Bedrooms
Full Bathrooms	2
Half Bathrooms	1
Extra Fixtures	0
Bath Style	Average
Kitchen Style	Average
Roof Style	average
Roof Cover	average
AC Type	None
Fireplaces	

Exterior Walls	clapboard
Exterior Walls 2	NA
Interior Walls	average
Interior Walls 2	NA
Heating Type	Forced Air-Duc
Heating Fuel	Oil
Sq. Ft. Basement	
Fin BSMT Quality	
Extra Kitchens	

## Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	1420	1420
Garage	484	0
Upper Story, Finished	972	972
Basement	936	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	3812	2392



# Town of Salisbury, CT

## Property Listing Report

Map Block Lot

16-05

Building #

4

Section #

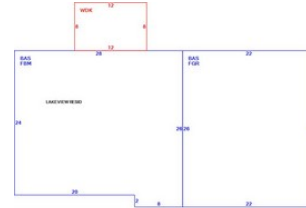
Account

98103062

### Photo



### Sketch



## Primary Construction Details

Year Built	1972
Stories	1
Building Style	Raised Ranch
Building Use	Residential
Building Condition	
Interior Floors 1	average
Interior Floors 2	NA
Total Rooms	7
Basement Garages	
Occupancy	
Building Grade	C+

Bedrooms	4 Bedrooms
Full Bathrooms	3
Half Bathrooms	1
Extra Fixtures	0
Bath Style	Average
Kitchen Style	Average
Roof Style	average
Roof Cover	average
AC Type	None
Fireplaces	

Exterior Walls	Vinyl Siding
Exterior Walls 2	NA
Interior Walls	average
Interior Walls 2	NA
Heating Type	Forced Air-Duc
Heating Fuel	Oil
Sq. Ft. Basement	
Fin BSMT Quality	
Extra Kitchens	

## Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	1260	1260
Basement finished	688	0
Garage	572	0
Wood Deck	96	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	2616	1260



# Town of Salisbury, CT

## Property Listing Report

Map Block Lot

16-05

Building #

5

Section #

Account

98103062

### Photo



### Sketch



## Primary Construction Details

Year Built	1976
Stories	1
Building Style	Dormitory
Building Use	Comm/Ind
Building Condition	
Interior Floors 1	Wood
Interior Floors 2	NA
Total Rooms	0
Basement Garages	
Occupancy	
Building Grade	B+

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Bath Style	NA
Kitchen Style	NA
Roof Style	average
Roof Cover	average
AC Type	None
Fireplaces	

Exterior Walls	Vinyl Siding
Exterior Walls 2	NA
Interior Walls	average
Interior Walls 2	NA
Heating Type	Forced Air-Duc
Heating Fuel	Oil
Sq. Ft. Basement	
Fin BSMT Quality	
Extra Kitchens	

## Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	1820	1820
Basement	1820	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	3640	1820





# Town of Salisbury, CT

Property Listing Report

Map Block Lot

16-05

Building #

6

Section #

Account

98103062

Photo



Sketch



## Primary Construction Details

Year Built	1969
Stories	2
Building Style	Dormitory
Building Use	Comm/Ind
Building Condition	
Interior Floors 1	average
Interior Floors 2	NA
Total Rooms	0
Basement Garages	
Occupancy	
Building Grade	C+

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Bath Style	NA
Kitchen Style	NA
Roof Style	average
Roof Cover	average
AC Type	None
Fireplaces	

Exterior Walls	brick/stone
Exterior Walls 2	NA
Interior Walls	average
Interior Walls 2	NA
Heating Type	Forced Air-Duc
Heating Fuel	Oil
Sq. Ft. Basement	
Fin BSMT Quality	
Extra Kitchens	

## Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	2240	2240
Upper Story, Finished	2400	2400
Wood Deck	448	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	5088	4640



# Town of Salisbury, CT

## Property Listing Report

Map Block Lot

16-05

Building #

7

Section #

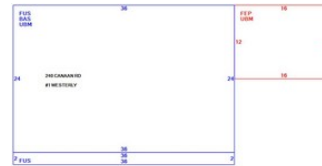
Account

98103062

### Photo



### Sketch



## Primary Construction Details

Year Built	1962
Stories	2
Building Style	OLD STYLE
Building Use	Residential
Building Condition	
Interior Floors 1	Wood
Interior Floors 2	NA
Total Rooms	8
Basement Garages	
Occupancy	1.00
Building Grade	C+

Bedrooms	4 Bedrooms
Full Bathrooms	2
Half Bathrooms	2
Extra Fixtures	0
Bath Style	NA
Kitchen Style	NA
Roof Style	average
Roof Cover	average
AC Type	None
Fireplaces	

Exterior Walls	Vinyl Siding
Exterior Walls 2	NA
Interior Walls	average
Interior Walls 2	NA
Heating Type	Hot Water
Heating Fuel	Oil
Sq. Ft. Basement	
Fin BSMT Quality	
Extra Kitchens	

## Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Basement	1056	0
First Floor	864	864
Porch, Enclosed	192	0
Upper Story, Finished	936	936

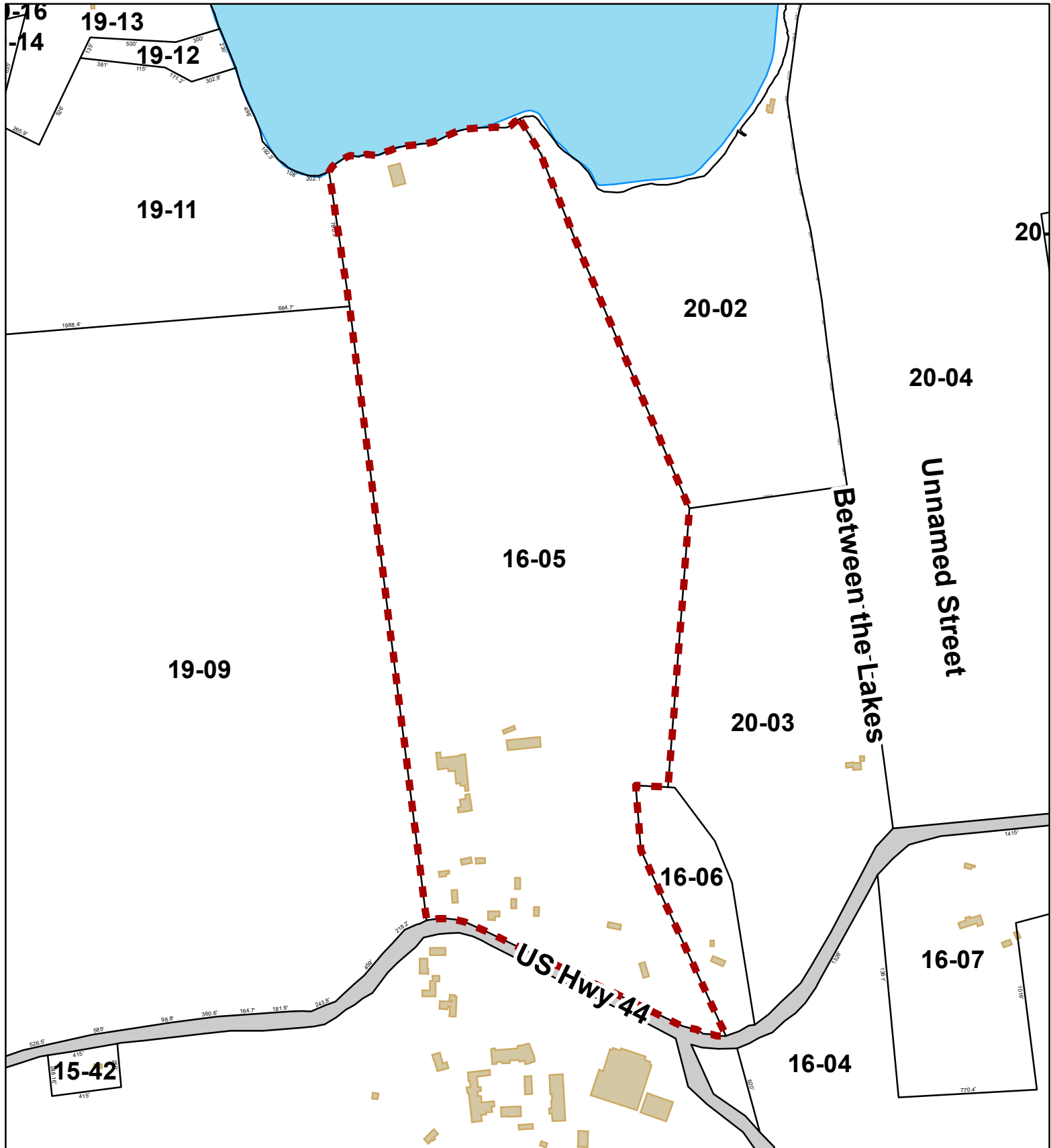
Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	3048	1800

# Town of Salisbury, Connecticut - Assessment Parcel Map

Unique ID: 2645

MBL: 16-05

Address: 250 CANAAN ROAD

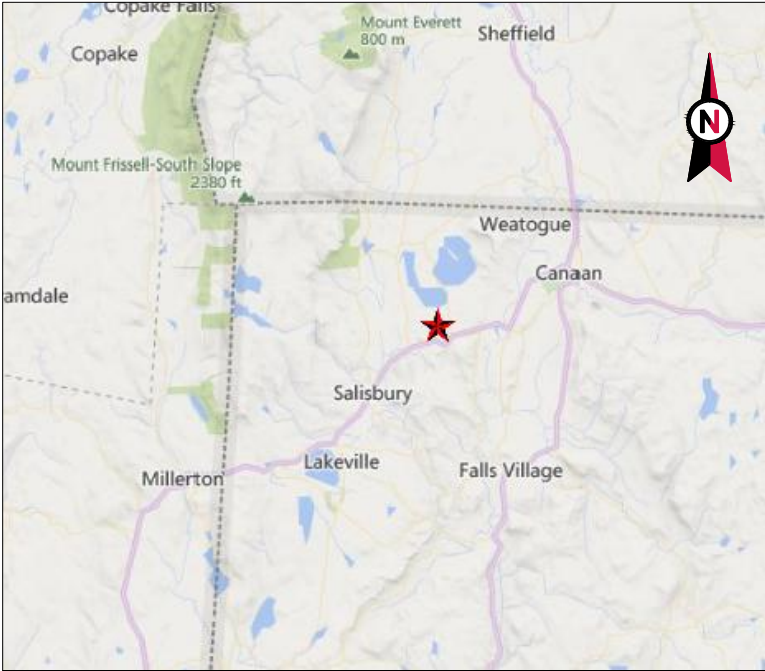


Map Produced May 2024



Approximate Scale: 1 inch = 743 feet

Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The Town of Salisbury and its mapping contractors assume no legal responsibility for the information contained herein.



VICINITY MAP




AMERICAN TOWER®

ATC SITE NAME: SALISBURY 2  
ATC SITE NUMBER: 209359  
VERIZON SITE NAME: SALISBURY NE CT  
VERIZON SITE NUMBER: 5000955862  
VERIZON FUZE PID: 17075106  
SITE ADDRESS: 250 CANAAN ROAD  
SALISBURY, CT 06068



LOCATION MAP

VERIZON COLLOCATION PLAN

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX									
<p>ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.</p> <p>2021 IBC NATIONAL ELECTRICAL CODE (NFPA 70, NEC 2020 W/ AMND) 2022 CONNECTICUT STATE BUILDING CODE, IMC PORTION (IMC 2021 W/ AMND) 2022 CONNECTICUT STATE BUILDING CODE, IPC PORTION (IPC 2021 W/ AMND) 2022 CONNECTICUT STATE BUILDING CODE, IECC PORTION (IECC 2021 W/ AMND) 2022 CONNECTICUT STATE BUILDING CODE, IEBC PORTION (IEBC 2021 W/ AMND) 2022 CONNECTICUT STATE BUILDING CODE 2022 CONNECTICUT STATE BUILDING CODE, IRC PORTION (IRC 2021 W/ AMND) CONNECTICUT STATE FUEL GAS CODE (IFGC 2021 W/ AMND)</p>	<p><u>SITE ADDRESS:</u> 250 CANAAN ROAD SALISBURY, CT 06068 COUNTY: LITCHFIELD</p> <p><u>REGISTERED COORDINATES:</u> LATITUDE: 42.006222 42° 0' 22.399" N LONGITUDE: -73.391447 73° 23' 29.209" W GROUND ELEVATION: 894' AMSL</p>	<p>THE PROPOSED PROJECT INCLUDES PLACING EQUIPMENT CABINETS ON A PROPOSED CONCRETE PAD INSIDE A 12' X 30' GROUND SPACE WITHIN THE EXISTING COMPOUND, AND PLACING NEW ANTENNAS ON A PROPOSED SECTOR FRAME MOUNTED TO THE EXISTING TOWER.</p>	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:					
			G-001	TITLE SHEET	0	12/17/24	MNC					
			G-002	GENERAL NOTES	0	12/17/24	MNC					
				EXISTING SURVEY								
			C-101	DETAILED SITE PLAN	0	12/17/24	MNC					
			C-102	DETAILED EQUIPMENT PLAN	0	12/17/24	MNC					
			C-201	TOWER ELEVATION	0	12/17/24	MNC					
			C-401	ANTENNA INFORMATION & SCHEDULE	0	12/17/24	MNC					
			C-501	MOUNT DETAILS	0	12/17/24	MNC					
			C-502	CONSTRUCTION DETAILS	0	12/17/24	MNC					
<p><b>PROJECT TEAM</b></p> <table><tr><td><u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801</td><td><u>APPLICANT:</u> VERIZON WIRELESS</td></tr><tr><td colspan="2"><u>ENGINEER:</u> A.T. ENGINEERING SERVICES LLC 1 FENTON MAIN, STE 300 CARY, NC 27511</td></tr><tr><td colspan="2"><u>PROPERTY OWNER:</u> SALISBURY SCHOOL INC 250 CANAAN ROAD SALISBURY, CT 06068</td></tr></table>	<u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801	<u>APPLICANT:</u> VERIZON WIRELESS	<u>ENGINEER:</u> A.T. ENGINEERING SERVICES LLC 1 FENTON MAIN, STE 300 CARY, NC 27511		<u>PROPERTY OWNER:</u> SALISBURY SCHOOL INC 250 CANAAN ROAD SALISBURY, CT 06068		<p>1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).</p>	C-503	CONSTRUCTION DETAILS	0	12/17/24	MNC
	<u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801	<u>APPLICANT:</u> VERIZON WIRELESS										
	<u>ENGINEER:</u> A.T. ENGINEERING SERVICES LLC 1 FENTON MAIN, STE 300 CARY, NC 27511											
	<u>PROPERTY OWNER:</u> SALISBURY SCHOOL INC 250 CANAAN ROAD SALISBURY, CT 06068											
	E-101	GROUNDING PLAN AND NOTES	0	12/17/24	MNC							
	E-501	GROUNDING DETAILS	0	12/17/24	MNC							
	E-601	ONE-LINE AND PANEL SCHEDULE	0	12/17/24	MNC							
		SUPPLEMENTAL SHEETS (3 PAGES)										
<p><b>UTILITY COMPANIES</b></p> <p>POWER COMPANY: UNKNOWN PHONE: N/A</p> <p>TELEPHONE COMPANY: UNKNOWN PHONE: N/A</p> <div></div>	<p><b>PROJECT LOCATION DIRECTIONS</b></p> <p>FROM SALISBURY, CONNECTICUT: HEAD WEST TOWARD UNDER MOUNTAIN RD. SHARP RIGHT ONTO US-44 E/E MAIN ST. CONTINUE TO FOLLOW US-44 E.</p>											




**AMERICAN TOWER®**  
**A.T. ENGINEERING SERVICES LLC**  
1 FENTON MAIN  
SUITE 300  
CARY, NC 27511  
PHONE: (919) 468-0112  
PEC.0001553

THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OR THE SPECIFIED CARRIER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	12/17/24

ATC SITE NUMBER:  
209359  
ATC SITE NAME:  
SALISBURY 2  
VERIZON SITE NAME:  
SALISBURY NE CT  
SITE ADDRESS:  
250 CANAAN ROAD  
SALISBURY, CT 06068





ATC JOB NO:	14869357_D2
CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

TITLE SHEET

SHEET NUMBER:  
G-001

REVISION:  
0



GENERAL CONSTRUCTION NOTES:

1.

OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL

A.

BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)

B.

AC/TELCO INTERFACE BOX (PPC)

C.

ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)

D.

TOWERS, MONOPOLES

E.

TOWER LIGHTING

F.

GENERATORS & LIQUID PROPANE TANK

G.

ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING

H.

ANTENNAS (INSTALLED BY OTHERS)

I.

TRANSMISSION LINE

J.

TRANSMISSION LINE JUMPERS

K.

TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS

L.

TRANSMISSION LINE GROUND KITS

M.

HANGERS

N.

HOISTING GRIPS

O.

BTS EQUIPMENT
2.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3.

ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4.

CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6.

ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7.

DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8.

DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9.

THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10.

CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11.

CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12.

INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13.

EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14.

CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15.

ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16.

WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17.

CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18.

CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19.

CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20.

CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21.

PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22.

PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23.

CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24.

CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25.

ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26.

THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27.

CONTRACTOR SHALL NOTIFY VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28.

CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29.

THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30.

ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31.

IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32.

VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33.

VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.
- STRUCTURAL STEEL NOTES:
1.

STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."

2.

STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

A.

ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE

B.

ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.

C.

ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)

D.

ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS

E.

ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE

3.

ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.

4.

ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

5.

DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.

6.

CONNECTIONS:

A.

ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
- B.

ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.

C.

INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.

D.

IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.

E.

ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.

F.

MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.

G.

PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

H.

THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.

I.

ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND VERIZON PROJECT MANAGER IN WRITING

B.

INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND VERIZON SPECIFICATIONS.

C.

INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.

D.

INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.

E.

CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.

F.

INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.

G.

ANTENNA AND COAXIAL CABLE GROUNDING:

2.

ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPlice WEATHERPROOFING KIT #221213 OR EQUAL.

3.

ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).
- CONCRETE AND REINFORCING STEEL NOTES:
1.

DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."

2.

MIX DESIGN SHALL BE APPROVED BY VERIZON REP PRIOR TO PLACING CONCRETE.

3.

CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI UNLESS OTHERWISE NOTED.

4.

THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:

ASTM C150, TYPE 2

REINFORCEMENT:

ASTM A185, PLAIN STEEL WELDED WIRE FABRIC

REINFORCEMENT BARS:

ASTM A615, GRADE 60, DEFORMED

NORMAL WEIGHT AGGREGATE:

ASTM C33

WATER:

ASTM C 94/C 94M

WELDED WIRE FABRIC:

ASTM A185

ADMIXTURES:

-WATER-REDUCING AGENT:ASTM C 494/C 494M, TYPE A

-AIR-ENTERING AGENT:ASTM C 260/C 260M

-SUPERPLASTICIZER:ASTM C494, TYPE F OR TYPE G

-RETARDING:ASTM C 494/C 494M, TYPE B

5.

MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".

6.

A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.

7.

INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN ATC ENGINEER WHEN DRILLING HOLES IN CONCRETE.

8.

ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.

9.

DO NOT WELD OR TACK WELD REINFORCING STEEL.

10.

ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.

11.

REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.

12.

DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.

13.

FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.

14.

ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."

15.

SPlicing OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPliced TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.

16.

DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).

17.

ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.

18.

LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.

19.

SPlices OF WWF, AT ALL SPliced EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".

20.

BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.

21.

ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.

22.

SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.

ELECTRICAL NOTES:

1.

ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.

2.

ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES) ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF ATC. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

3.

CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUNDING CABLES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUNDING LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OR THE SPECIFIED CARRIER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION.

REV.	DESCRIPTION	BY	DATE
△0	FOR CONSTRUCTION	MNC	12/17/24
△1			
△2			
△3			
△4			

ATC SITE NUMBER:  
209359  
ATC SITE NAME:  
SALISBURY 2  
VERIZON SITE NAME:  
SALISBURY NE CT  
SITE ADDRESS:  
250 CANAAN ROAD  
SALISBURY, CT 06068

Digitally Signed: 2024-12-18

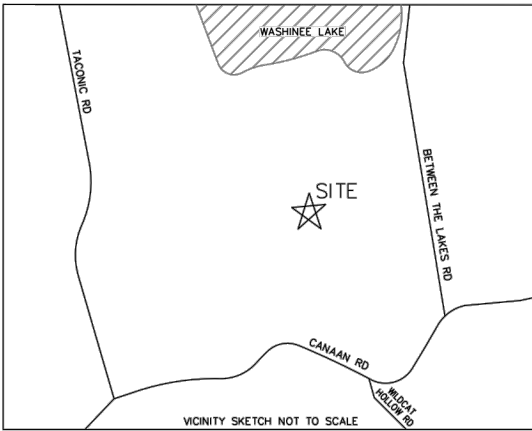
ATC JOB NO:	14869357_D2
CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

GENERAL NOTES

SHEET NUMBER: G-002	REVISION: 0
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## SURVEY NOTES:

1. BASIS OF BEARING: CT GRID NAD83
2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.
3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.
4. ALL VISIBLE TOWER EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITH IN THE DESCRIBED AREA.
5. ALL SYMBOLS SHOWN ON HEREON NOT DEPICTED TO SCALE.

## TOWER 1-A INFO

150.6' +/- 1 METAL TOWER ON TOP OF A CONCRETE CAISSON ON FINISHED GRADE.  
LATITUDE: 42° 00' 22.41" N +/- 20"  
LONGITUDE: 073° 23' 29.22" W +/- 20"  
GROUND ELEVATION AT BASE OF TOWER: 892.8 ± 20.0 NAVD, 1988  
HEIGHT OF TOP OF TOWER ABOVE GROUND: 150.6' +/- 1'  
ELEVATION OF TOP OF TOWER: 1043.4' +/- 20 NAVD 1988  
HEIGHT OF HIGHEST APPURTENANCE ABOVE GROUND: 156.9' +/- 1' [6.3 FAKE TREE LIMB]  
ELEVATION OF TOP OF HIGHEST APPURTENANCE: 1049.7' +/- 20 NAVD 1988

## LEGAL

**LEGAL DESCRIPTION: PARENT PARCEL (AS PROVIDED)**  
SITUATED IN THE COUNTY OF LITCHFIELD, STATE OF CONNECTICUT:  
PARENT PARCEL:  
ALL THAT CERTAIN PIECE OR PARCEL OF LAND, TOGETHER WITH THE BUILDINGS AND IMPROVEMENTS THEREON, SITUATED IN THE TOWN OF SALISBURY, COUNTY OF LITCHFIELD, AND STATE OF CONNECTICUT, BEING SHOWN AND DESIGNATED AS "169.304+- ACRES 7,374,882 S.F." ON A CERTAIN MAP ENTITLED, "MAP PREPARED FOR SALISBURY SCHOOL, INCORPORATED CANAAN ROAD -- ROUTE 44 SALISBURY, CONNECTICUT SCALE 1" = 100' JUNE 25, 2008 TOTAL AREA = 169.304+- ACRES", WHICH MAP IS FILED IN THE SALISBURY TOWN CLERK'S OFFICE AS MAP NO. 2540, TO WHICH MAPS REFERENCE IS HEREBY MADE AND HAD FOR A MORE PARTICULAR DESCRIPTION OF SAID PREMISES.  
TAX I.D. NUMBER: MAP 16 LOT 5  
BEING A PORTION OF THE SAME PROPERTY CONVEYED TO SALISBURY SCHOOL, INCORPORATED, A CONNECTICUT CORPORATION, GRANTEE, FROM AMANDA K. FRINK, MARY E. FRINK, CATHERINE A. FRINK, AND CHARLES R. FRINK, GRANTOR, BY DEED RECORDED 08/16/1926, AS BOOK 52, PAGE 197 OF THE LITCHFIELD COUNTY RECORDS.

ZONING: R-40 (RESIDENTIAL)

THIS PARCEL OF LAND LIES WITHIN FLOOD ZONE X WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS PER F.I.R.M. PANEL NUMBER: 09009C0161J  
EFFECTIVE DATE: 05/16/2017

### LEGEND

- : SET 5/8" REBAR.
- : FOUND 1/2" REBAR AS NOTED.
- : CONCRETE MONUMENT, AS NOTED.
- (.....) : RECORD DESCRIPTION DATA.
- P.O.B. : POINT OF BEGINNING.
- P.O.C. : POINT OF COMMENCEMENT.
- : FENCE AS NOTED.
- OH— : OVER HEAD UTILITY LINES.
- W— : WOOD UTILITY POLE.
- E— : ELECTRIC TRANSFORMER.
- - - - - : SUBJECT PARCEL

AREA	SQUARE FEET	ACRE
PARENT PARCEL	7,361,640	169
TOWER COMPOUND	4,203	0.096
TOWER LEASE AREA	5,600	0.129
ACCESS/UTILITY EASEMENT	56,415	1.295

## TITLE REVIEW

SURVEYORS REVIEW OF OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY TITLE COMMITMENT 01-16014407-01T UPDATED, EFFECTIVE 09/06/2017 AT 7:00 AM.  
SCHEDULE B -- SECTION II  
(1-6) STANDARD EXCEPTIONS.  
(7) EASEMENT IN FAVOR OF STATE OF CONNECTICUT, RECORDED 11/18/1960, AS BOOK 831, PAGE 51 OF THE LITCHFIELD COUNTY RECORDS.  
--AFFECTS PARENT PARCEL. UNABLE TO DETERMINE AFFECTS TO TOWER LEASE AREA OR ACCESS/UTILITY EASEMENT. NOTHING TO PLOT.  
(8) EASEMENT IN FAVOR OF THE HARTFORD ELECTRIC LIGHT COMPANY, RECORDED 06/16/1964, AS BOOK 88, PAGE 401 OF THE LITCHFIELD COUNTY RECORDS.  
--AFFECTS PARENT PARCEL. UNABLE TO DETERMINE AFFECTS TO TOWER LEASE AREA OR ACCESS/UTILITY EASEMENT. ASSOCIATED MAP "C-64008" NOT PROVIDED FOR REVIEW.  
(9) GRANT OF VARIANCE SPECIAL PERMIT IN FAVOR OF SALISBURY SCHOOL, INC., RECORDED 08/15/1994, AS BOOK 159, PAGE 640 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(10) GRANT OF VARIANCE SPECIAL PERMIT IN FAVOR OF SALISBURY SCHOOL, INC., RECORDED 10/07/1994, AS BOOK 159, PAGE 1076 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(11) ZONING BOARD OF APPEALS DECISION AND ORDER, RECORDED 07/09/1998, IN BOOK 169, PAGE 1153 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(12) GRANT OF VARIANCE SPECIAL PERMIT IN FAVOR OF TOWN OF SALISBURY, CONNECTICUT, RECORDED 08/11/1998, AS BOOK 170, PAGE 341 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(13) GRANT OF VARIANCE SPECIAL PERMIT IN FAVOR OF SALISBURY SCHOOL, INC., RECORDED 08/11/1998, AS BOOK 170, PAGE 342 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(14) CERTIFICATE, RECORDED 08/25/1998, IN BOOK 170, PAGE 513 OF THE LITCHFIELD COUNTY RECORDS.  
--AFFECTS PARENT PARCEL AND ACCESS/UTILITY EASEMENT. DOES NOT AFFECT TOWER LEASE AREA. NOTHING TO PLOT.  
(15) DECISION AND ORDER ZONING BOARD OF APPEALS, RECORDED 04/27/1999, IN BOOK 172, PAGE 849 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(16) CONSENT ORDER, RECORDED AS BOOK 174, PAGE 8 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(17) GRANT OF VARIANCE SPECIAL PERMIT IN FAVOR OF SALISBURY SCHOOL, INC., RECORDED 09/14/2001, AS BOOK 181, PAGE 11 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(18) GRANT OF VARIANCE SPECIAL PERMIT IN FAVOR OF SALISBURY SCHOOL, INC., RECORDED 09/22/2003, AS BOOK 195, PAGE 529 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(19) CERTIFICATE OF COMPLIANCE IN FAVOR OF SALISBURY SCHOOL, INC., RECORDED 01/28/2004, AS BOOK 197, PAGE 933 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(20) DECISION AND ORDER IN FAVOR OF SALISBURY SCHOOL, INC., RECORDED 07/12/2007, AS BOOK 215, PAGE 1125 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(21) DECISION AND ORDER ZONING BOARD OF APPEALS IN FAVOR OF SALISBURY SCHOOL, INC., RECORDED 07/12/2007, AS BOOK 215, PAGE 1126 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(22) TRAFFIC INVESTIGATION REPORT TO THE STATE TRAFFIC COMMISSION, RECORDED 06/01/2009, IN BOOK 224, PAGE 17 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(23) ORDER FROM STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, RECORDED 07/13/2009, IN BOOK 224, PAGE 861 OF THE LITCHFIELD COUNTY RECORDS.  
--NOT A SURVEY MATTER.  
(24) NOTICE OF LEASE BY AND BETWEEN SALISBURY SCHOOL, INCORPORATED, LESSOR(S) AND HOMELAND TOWERS, LLC, LESSEE(S), RECORDED 05/19/2014 AS BOOK 243, PAGE 2 OF THE LITCHFIELD COUNTY RECORDS.  
--AFFECTS PARENT PARCEL. UNABLE TO DETERMINE AFFECTS TO TOWER LEASE AREA OR ACCESS/UTILITY EASEMENT. NO PLOTTABLE INFORMATION PROVIDED ON SITE PLAN.  
(25) A MORTGAGE TO SECURE AN INDEBTEDNESS OF THE AMOUNT STATED AND ANY OTHER AMOUNTS PAYABLE UNDER THE TERMS THEREOF; AMOUNT: \$48,194,000.00; MORTGAGOR: SALISBURY SCHOOL, INCORPORATED; MORTGAGEE: TO BANK, N.A.; DATED: 12/01/2015; RECORDED 12/10/2015; DOC#/BOOK--PAGE: 247-146  
--NOT A SURVEY MATTER.  
(26) SUBJECT TO EASEMENTS AND RIGHTS OF WAY AS SHOWN ON THE MAP PREPARED FOR SALISBURY SCHOOL, INCORPORATED, AS RECORDED IN INSTRUMENT NO. 2540 OF LITCHFIELD COUNTY RECORDS.  
--AFFECTS PARENT PARCEL. DOES NOT AFFECT TOWER LEASE AREA OR ACCESS/UTILITY EASEMENT. NOTHING TO PLOT.



WASHINEE LAKE

PARENT PARCEL

STATE TRAIL

## PARENT PARCEL

CURRENT OWNER: SALISBURY SCHOOL, INC., A CONNECTICUT CORP.  
250 CANAAN RD., SALISBURY, CT 06068  
DEED BOOK 52 PAGE 197  
TAX ID #: MAP 16 LOT 5

ACCESS/UTILITY EASEMENT (SEE SHEET 2)

TOWER LEASE AREA (SEE SHEET 2)

869.2' LEASE TIE  
919.3' TOWER TIE

748.7' TOWER TIE  
696.4' LEASE TIE

POC TIE INTERSECTION TO THE MAIN ROAD AND OF CHART HOLDING RD.

POC TOWER LEASE AREA & ACCESS/UTILITY EASEMENT (EXISTING ROW MONUMENT) E: 826413' - N: 925614'

WINDYAT HOLLOW RD  
PUBLIC RIGHT OF WAY

NOTE: THE TOWN OF SALISBURY DOES NOT PROVIDE A PUBLIC, ONLINE GIS APPLICATION, THUS NO ADJOINING PARCEL OWNER INFORMATION WAS INCLUDED HEREON.

NAD 83



# AS-BUILT SURVEY

FOR: InSite Towers, LLC.

I, WILLIAM J. NAGLE, JR., DO HEREBY CERTIFY TO INSITE TOWERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY WITH ITS HEADQUARTERS ADDRESS AT 1199 N. FAIRFAX STREET, SUITE 700, ALEXANDRIA, VA 22314, INSITE TOWERS DEVELOPMENT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, INSITE TOWERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, VANGUARD WIRELESS, A DELAWARE LIMITED LIABILITY COMPANY, INSITE WIRELESS GROUP, LLC, A DELAWARE LIMITED LIABILITY COMPANY, ("INSITE TOWERS"), THE FEDERAL AVIATION ADMINISTRATION, OLD REPUBLIC NATIONAL TITLE COMPANY, GOLDMAN SACHS SPECIALTY LENDING GROUP L.P., DEUTSCHE BANK TRUST COMPANY AMERICAS, A NEW YORK BANKING CORPORATION, LATHAM & WATKINS LLP, STEWART TITLE GUARANTY COMPANY, FIDELITY NATIONAL TITLE INSURANCE COMPANY, OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY AND THE SUCCESSORS AND ASSIGNS OF EACH OF THE FOREGOING, THAT THIS SURVEY WAS MADE ON THE GROUND UNDER MY PERSONAL SUPERVISION AND THAT THIS PLAT IS A TRUE, CORRECT AND ACCURATE REPRESENTATION OF THE FACTS AS FOUND AT THE TIME OF THE SURVEY, AND MORE SPECIFICALLY,

I SO HEREBY CERTIFY THAT THE SURVEY CONFORMS TO THE CONDITIONS AND STIPULATIONS AS CHECKED (X) BELOW.

- ☒ 1. THE BOUNDARY LINES AND DIMENSIONS OF THE INSITE TOWER LEASE AREA AND ACCESS AND UTILITIES EASEMENTS (COLLECTIVELY, THE "EASEMENTS") INDICATED HEREON IS CORRECT.
- ☒ 2. TO THE EXTENT THE TOWER LEASE AREA AND EASEMENTS INDICATED HEREON ARE PART OF A PARENT PARCEL, SUCH TOWER LEASE AREA AND EASEMENTS ARE LOCATED WITHIN THE BOUNDARIES OF THE RECORD TITLE LEGAL DESCRIPTION OF SUCH PARENT PARCEL. THE LOCATION OF SAID TOWER LEASE AREA AND EASEMENTS RELATIVE TO AN APPROXIMATION OF THE LOCATION OF THE BOUNDARIES OF THE PARENT TRACT IS ILLUSTRATED ON THE INSET SHOWN HEREON.
- ☐ 3A. IRON PINS ARE SET AT EACH TOWER LEASE AREA CORNER UNLESS OTHERWISE INDICATED HEREON OR
- ☒ 3B. NOT APPLICABLE IN THIS STATE DUE TO RECORDING NEEDS.
- ☒ 4. THE DISTANCE FROM THE NEAREST INTERSECTING PUBLIC STREET OR ROAD IS AS SHOWN HEREON.
- ☒ 5. SHOWS THE LOCATION AND DIMENSION OF ALL ALLEYS, STREETS, ROADS, RIGHTS-OF-WAY, EASEMENTS AND OTHER MATTERS OF RECORD WHICH THE SURVEYOR HAS BEEN ADVISED AFFECTS THE TOWER LEASE AREA AND/OR EASEMENTS (EACH HAS BEEN IDENTIFIED BY INSTRUMENT VOLUME AND PAGE NUMBER IF AVAILABLE).
- ☒ 6. EXCEPT AS SHOWN, THERE ARE NO VISIBLE EASEMENTS, RIGHTS-OF-WAY, PARTY WALLS OR CONFLICTS AFFECTING THE TOWER LEASE AREA AND/OR EASEMENTS; FURTHER, THIS SURVEY IS NOT SUBJECT TO ANY EASEMENTS OR RIGHTS-OF-WAY NOT VISIBLE ON THE GROUND.
- ☒ 7. THE LOCATION OF ALL BUILDINGS, STRUCTURES AND OTHER IMPROVEMENTS OF VISIBLE ITEMS AFFECTING THE TOWER LEASE AREA AND EASEMENTS, IF SHOWN, ARE AS INDICATED HEREON. THE LOCATION OF ALL OTHER BUILDINGS, STRUCTURES AND OTHER IMPROVEMENTS OF VISIBLE ITEMS ON THE PARENT TRACT, IF SHOWN HEREON, ARE APPROXIMATE IN NATURE, EXCEPT THAT THE TOWER LEASE AREA AND EASEMENTS ARE ENTIRELY LOCATED WITHIN THE BOUNDARIES OF THE PARENT PARCEL, AS SHOWN ON THE INSET.
- ☒ 8. EXCEPT AS SHOWN, THERE ARE NO VISIBLE PROTRUSIONS ON ADJOINING PREMISES, STREETS OR ALLEYS BY ANY BUILDING, STRUCTURE OR OTHER IMPROVEMENTS SITUATED ON THE TOWER LEASE AREA AND/OR EASEMENTS.
- ☒ 9. EXCEPT AS SHOWN, THERE ARE NO VISIBLE ENCROACHMENTS ONTO THE TOWER LEASE AND/OR EASEMENTS BY ANY BUILDING, STRUCTURE OR OTHER IMPROVEMENTS SITUATED ON ADJOINING PREMISES.
- ☐ 10A. SHOWS THE LOCATION AND ACRES CONTAINED IN ALL PORTIONS OF THE TOWER LEASE AND EASEMENTS WHICH ARE LOCATED IN AN AREA DESIGNATED AS A "FLOOD PRONE AREA (ZONE 'A') AS DEFINED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT PURSUANT TO THE FLOOD DISASTER ACT OF 1973; NONE, FIRM COMMUNITY PANEL NO. 3710250500J
- ☒ 10B. THE SITE TOWER LEASE AREA AND EASEMENTS ARE LOCATED IN AN AREA DESIGNATED AS A FLOOD ZONE (X) AS DEFINED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT PURSUANT TO THE FLOOD DISASTER ACT OF 1973 FIRM COMMUNITY PANEL NO. 3710250500J
- ☒ 11. DESCRIBES AND SHOWS THE LOCATION OF ALL PUBLIC STREETS AND ROADS VISIBLY PROVIDING ACCESS TO AND FROM THE SUBJECT PROPERTY, AND CORRECTLY SETS FORTH THE MUNICIPAL ADDRESS OF THE SUBJECT PROPERTY.
- ☒ 12. DEPICTS THE LATITUDINAL AND LONGITUDINAL COORDINATES OF THE TOWER(S) LOCATION(S), TO THE NEAREST TENTH OF A SECOND, THE ELEVATION ABOVE MEAN SEA LEVEL OF THE BASE AND TIP OF EACH TOWER, PLUS OR MINUS 20 FEET, THE ELEVATION OF THE TIP OF EACH TOWER AS MEASURED FROM GROUND LEVEL, AND ADDITIONALLY, THE ELEVATION OF THE TIP OF THE HIGHEST APPURTENANCE ON THE TOWER AS MEASURED FROM GROUND LEVEL, IF SUCH APPURTENANCE IS HIGHER IN ELEVATION THAN THE HIGHEST POINT OF THE TOWER STRUCTURE ITSELF, TO THE NEAREST FOOT, ON THE SURVEY DRAWING AND ON A SEPARATE 8 1/2 X 11 CERTIFIED LETTERHEAD.
- ☒ 13. SURVEY OF THE TOWER LEASE AREA AND EASEMENTS MEETS OR EXCEEDS THE MINIMUM TECHNICAL STANDARDS FOR LAND BOUNDARY SURVEYS SET FORTH BY CONNECTICUT STATE LAW.
- ☒ 14. THE SUBJECT PROPERTY IS CURRENTLY ZONED (R-40, RESIDENTIAL).

WILLIAM J. NAGLE, JR.  
CT REGISTRATION #70269  
DATE CERTIFIED: 10/3/2018  
DATE FILED: 10/09/17



CERTIFICATION NOTE: THE WORD "CERTIFY" IS UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE LAND SURVEYOR WHICH IS BASED UPON THEIR BEST KNOWLEDGE AND BELIEF AND DOES NOT CONSTITUTE A GUARANTEE OR WARRANTY.



SITE NAME: SALISBURY  
SITE NUMBER: CT114

SURVEY WORK PERFORMED BY:

**JONATHAN MURPHY**

**Professional Land Surveying**

6300 LIMOUSINE DRIVE STE 114 (919) 787-7873  
Raleigh NC 27617 FAX 400-4442  
FIRM# L-4382 E-MAIL : raleigh@murphygeomatics.com

NATIONAL SURVEY SERVICES COORDINATION BY:

**GEOLINE SURVEYING, INC.**

13430 NW 104th Terrace, Suite A  
Alachua, FL 32615  
(386) 418-0600  
(386) 462-9986 Fax  
WWW.GEOLINEINC.COM

SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE VERIZON REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

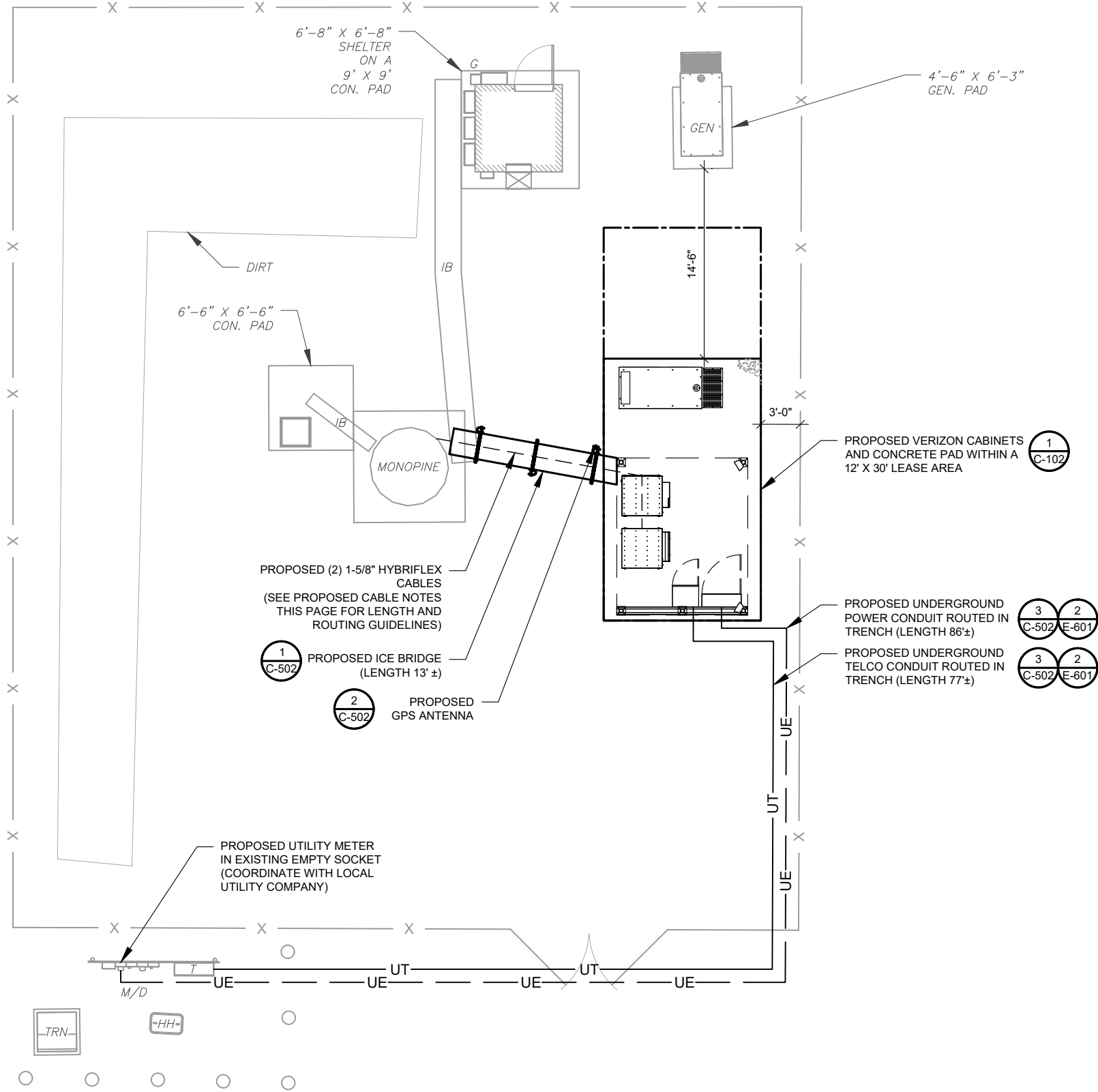
LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
—	CHAINLINK FENCE

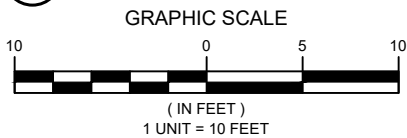
PROPOSED CABLE NOTES:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **170'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

BOLLARD (TYP.)



1 DETAILED SITE PLAN



**AMERICAN TOWER®**  
**A.T. ENGINEERING SERVICES LLC**  
1 FENTON MAIN  
SUITE 300  
CARY, NC 27511  
PHONE: (919) 468-0112  
PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	12/17/24
1			
2			
3			
4			

ATC SITE NUMBER:

209359

ATC SITE NAME:

**SALISBURY 2**

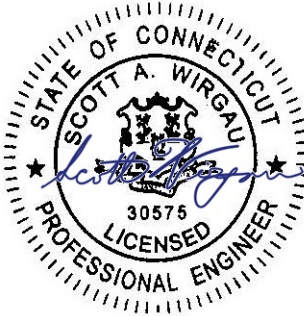
VERIZON SITE NAME:

**SALISBURY NE CT**

SITE ADDRESS:

250 CANAAN ROAD  
SALISBURY, CT 06068

SEAL:



Digitally Signed: 2024-12-18



ATC JOB NO:	14869357_D2
CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

DETAILED SITE PLAN

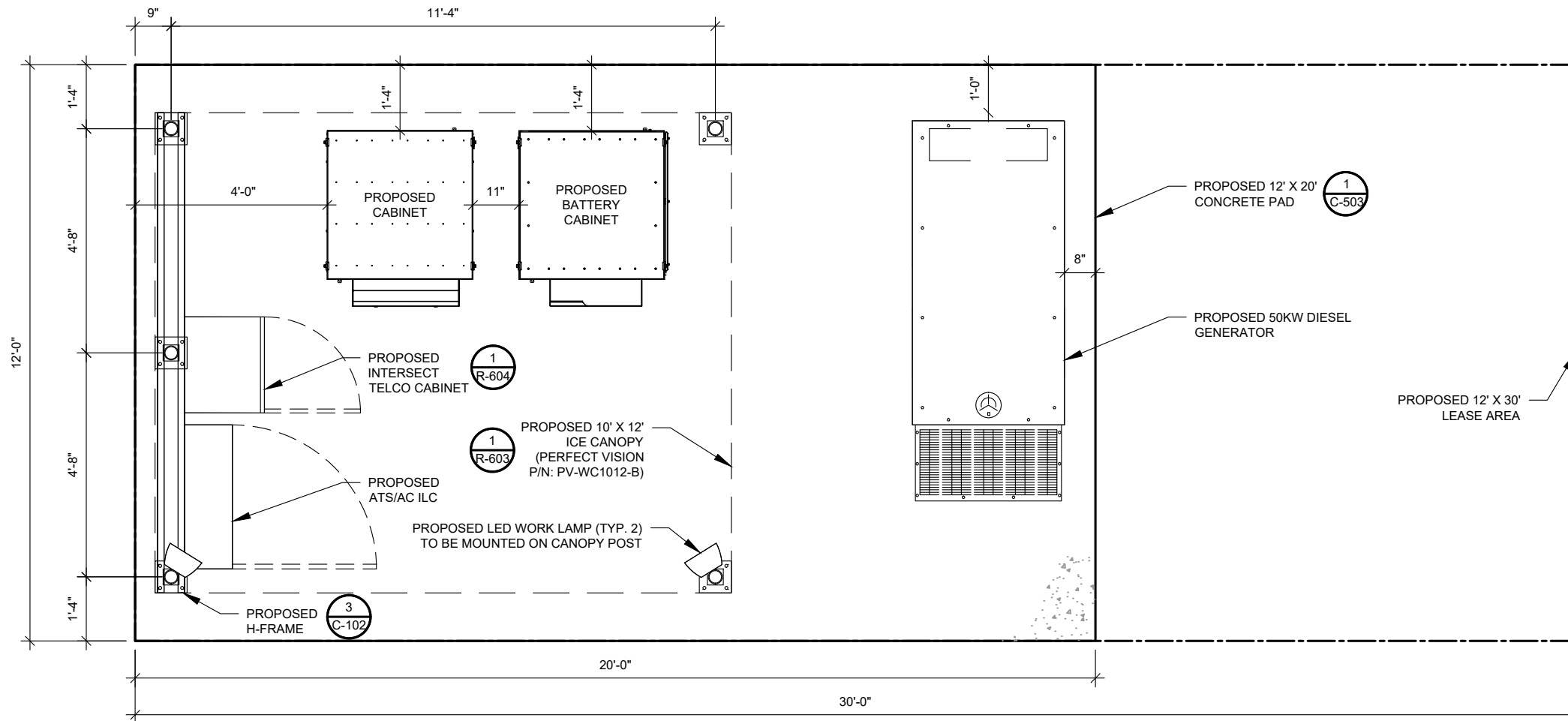
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**C-101**

REVISION:

**0**

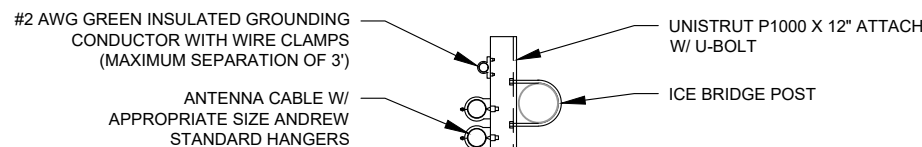
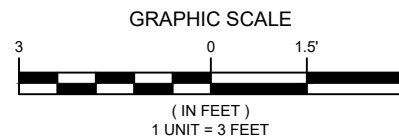




#### H-FRAME NOTES:

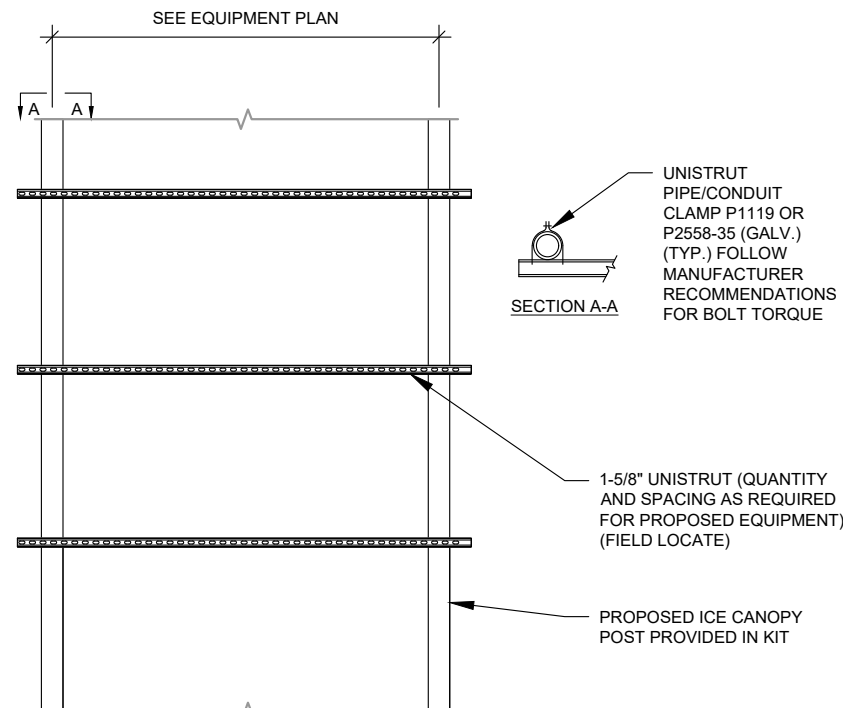
- IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST WILL ALWAYS BE REQUIRED.
- PROPOSED UNISTRUTS TO BE FIELD CUT AND SHOULD NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
- SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
- UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
- ALL PROPOSED HARDWARE TO BE MOUNTED PER MANUFACTURERS SPECS.

### 1 PROPOSED GROUND EQUIPMENT LAYOUT



### 2 WAVEGUIDE UNISTRUT

SCALE: N.T.S.



### 3 TYPICAL H-FRAME DETAIL

SCALE: N.T.S.

#### VERIZON WIRELESS PROVIDED EQUIPMENT

- CHARLES INDUSTRIES CUBE-SS4B231PX2 EQUIPMENT WITH BATTERY CHARGER
- RAYCAP OVP-12 (RCMDC-6627-PF-48)

#### CONTRACTOR PROVIDED EQUIPMENT

\* THIS IS NOT A COMPREHENSIVE LIST. IT SHOULD BE ASSUMED BY THE CONTRACTOR THAT ALL OTHER ITEMS DETAILED IN THIS SET OF DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.

- 18"X18" FIBER JUNCTION BOX, NEMA 3R CABINET ENCLOSURE WITH WOODEN BACKBOARD, PADLOCK LATCH, AND COMBINATION LOCK (USE FOR DARK FIBER)

- 26.2" WIDE X 78" TALL X 12.3" DEEP ASCO D300L SERIES POWER TRANSFER LOAD CENTER MODEL AA300G-1PH-N-3R INTEGRATED LOAD CENTER "ILC" WITH COMBINATION PAD LOCK.

- 22" WIDE X 26" TALL X 20" DEEP CHARLES INDUSTRIES CUBE-RL1003C-1 WITH HEAT EXCHANGER (120V) WITH TRIPP-LITE UPS PART #SM1200RMXL2UTAA INSIDE (ONLY REQUIRED WHEN VZT PROVIDES LIT FIBER. UTILITY COORDINATOR MUST VERIFY IF NEEDED)

- COORDINATE ADDITIONAL ENTRY GATE LOCK(S) WITH CONSTRUCTION MANAGER



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ATC SITE NUMBER:

209359

ATC SITE NAME:

**SALISBURY 2**

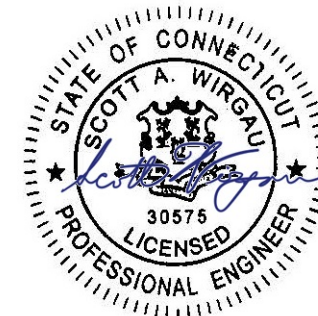
VERIZON SITE NAME:

**SALISBURY NE CT**

SITE ADDRESS:

250 CANAAN ROAD  
SALISBURY, CT 06068

SEAL:



Digitally Signed: 2024-12-18

**verizon**

ATC JOB NO:	14869357_D2
CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

### DETAILED EQUIPMENT PLAN

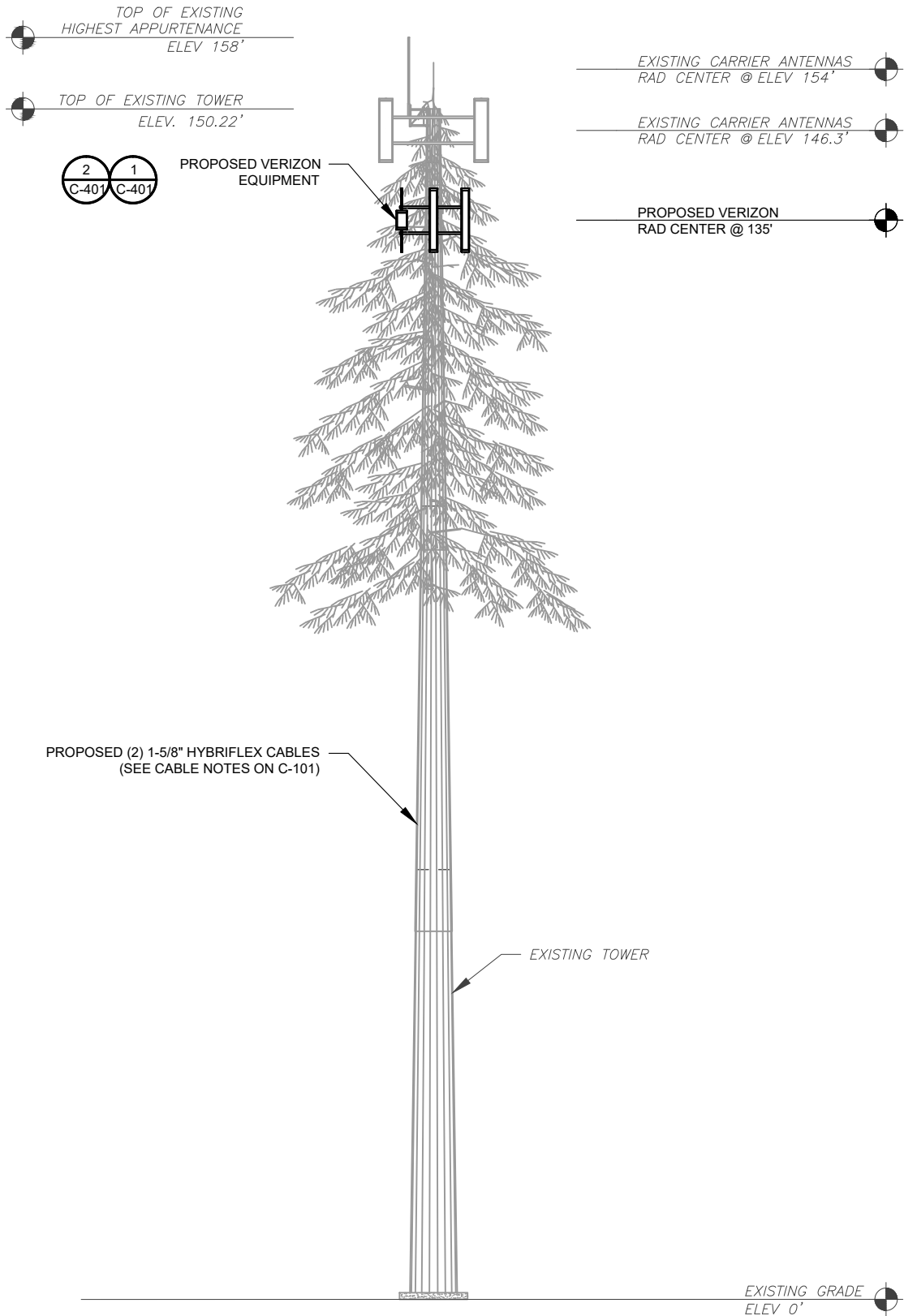
SHEET NUMBER:

**C-102**

REVISION:

**0**

FAA REGISTERED HEIGHT: 157' AGL



1 TOWER ELEVATION  
SCALE: N.T.S.

ALL ELEVATIONS REFLECT ABOVE GROUND LEVEL (A.G.L.)

- TOWER NOTE:
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
  - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
  - ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
  - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



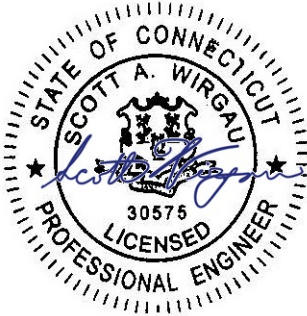
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ATC SITE NUMBER:  
209359  
ATC SITE NAME:  
SALISBURY 2  
VERIZON SITE NAME:  
SALISBURY NE CT  
SITE ADDRESS:  
250 CANAAN ROAD  
SALISBURY, CT 06068

SEAL:



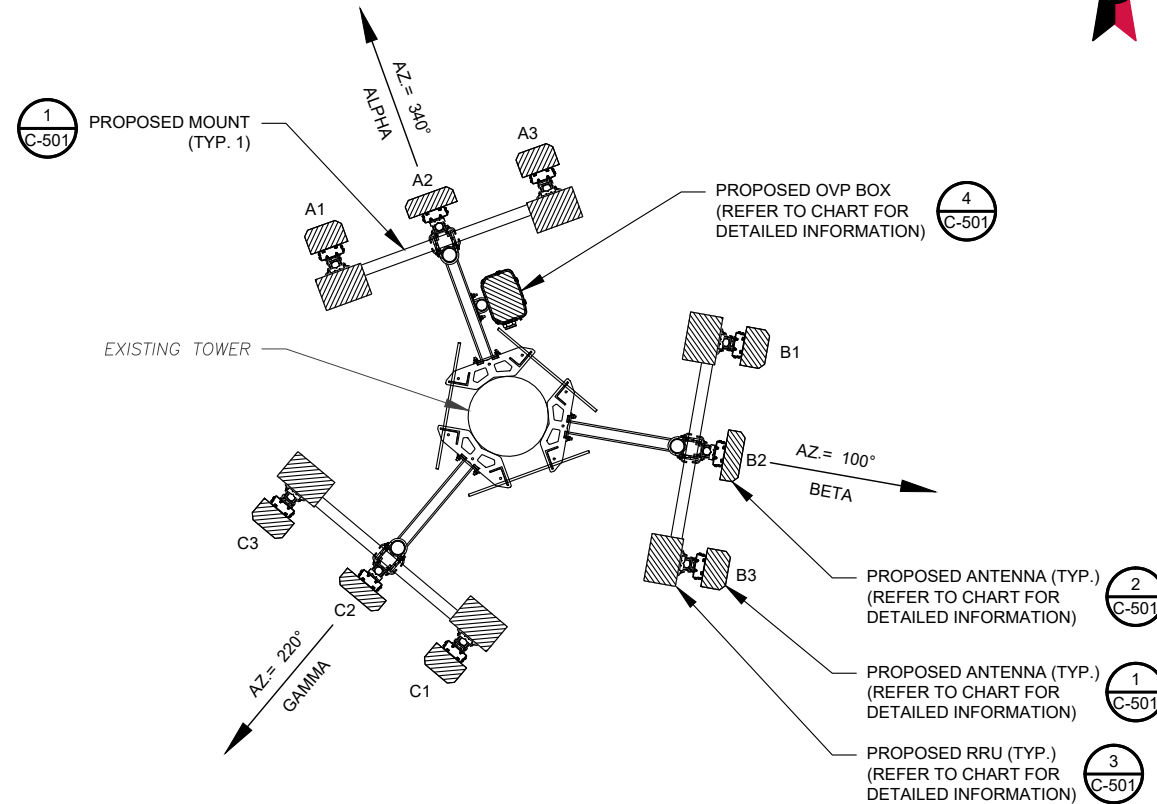
Digitally Signed: 2024-12-18



ATC JOB NO:	14869357_D2
CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

## TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0



1 FINAL ANTENNA PLAN  
SCALE: N.T.S.

FINAL EQUIPMENT SCHEDULE							
LOCATION			ANTENNA SUMMARY			NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	ADDITIONAL TOWER MOUNTED EQUIPMENT	CABLE DESCRIPTION
ALPHA	135'	340°	A1	MX06FHG865-HG	LTE 700, LTE 850, LTE 1900, LTE AWS, 5G 850	RF4461D-13A	(2) 1-5/8" HYBRIFLEX CABLES
			A2	MT6413-77A	5G L-SUB6	-	
			A3	MX06FHG865-HG	LTE 700, LTE 850, LTE 1900, LTE AWS, 5G 850	RF 4439D-25A	
BETA	135'	100°	B1	MX06FHG865-HG	LTE 700, LTE 850, LTE 1900, LTE AWS, 5G 850	RF4461D-13A	
			B2	MT6413-77A	5G L-SUB6	-	
			B3	MX06FHG865-HG	LTE 700, LTE 850, LTE 1900, LTE AWS, 5G 850	RF 4439D-25A	
GAMMA	135'	220°	C1	MX06FHG865-HG	LTE 700, LTE 850, LTE 1900, LTE AWS, 5G 850	RF4461D-13A	
			C2	MT6413-77A	5G L-SUB6	-	
			C3	MX06FHG865-HG	LTE 700, LTE 850, LTE 1900, LTE AWS, 5G 850	RF 4439D-25A	
1. GC TO VERIFY THE FINAL RFDS MATCHES THE FINAL CONSTRUCTION DRAWINGS. GC TO NOTIFY ATC PM OF ANY DISCREPANCY PRIOR TO INSTALLING THE EQUIPMENT. 2. GC TO CAP ALL UNUSED PORTS. 3. GC TO CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS. 4. *REFER TO FINAL RFDS FOR MECH/ELEC D-TILT. 5. INSTALL (1) RCMD-6627-PF-48.							

2 ANTENNA SCHEDULE

RF JUMPER LENGTH
MONOPOLE = 15'± GUYED / SELF SUPPORT = FACE WIDTH + 15'
REFER TO FINAL RFDS FOR TYPE AND QUANTITY



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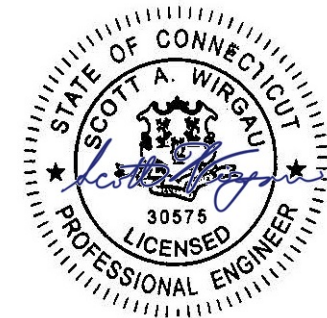
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	12/17/24

ATC SITE NUMBER:  
209359  
ATC SITE NAME:  
SALISBURY 2  
VERIZON SITE NAME:

SALISBURY NE CT

SITE ADDRESS:  
250 CANAAN ROAD  
SALISBURY, CT 06068

SEAL:



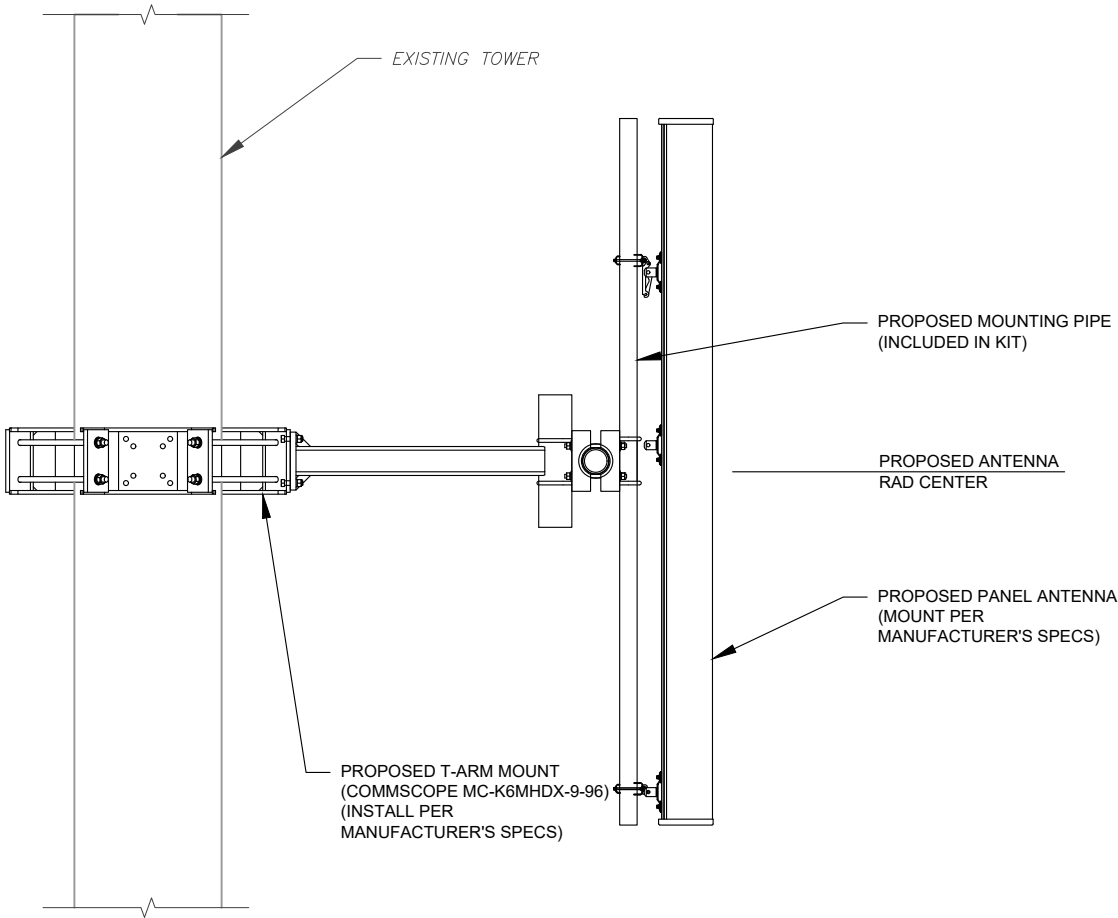
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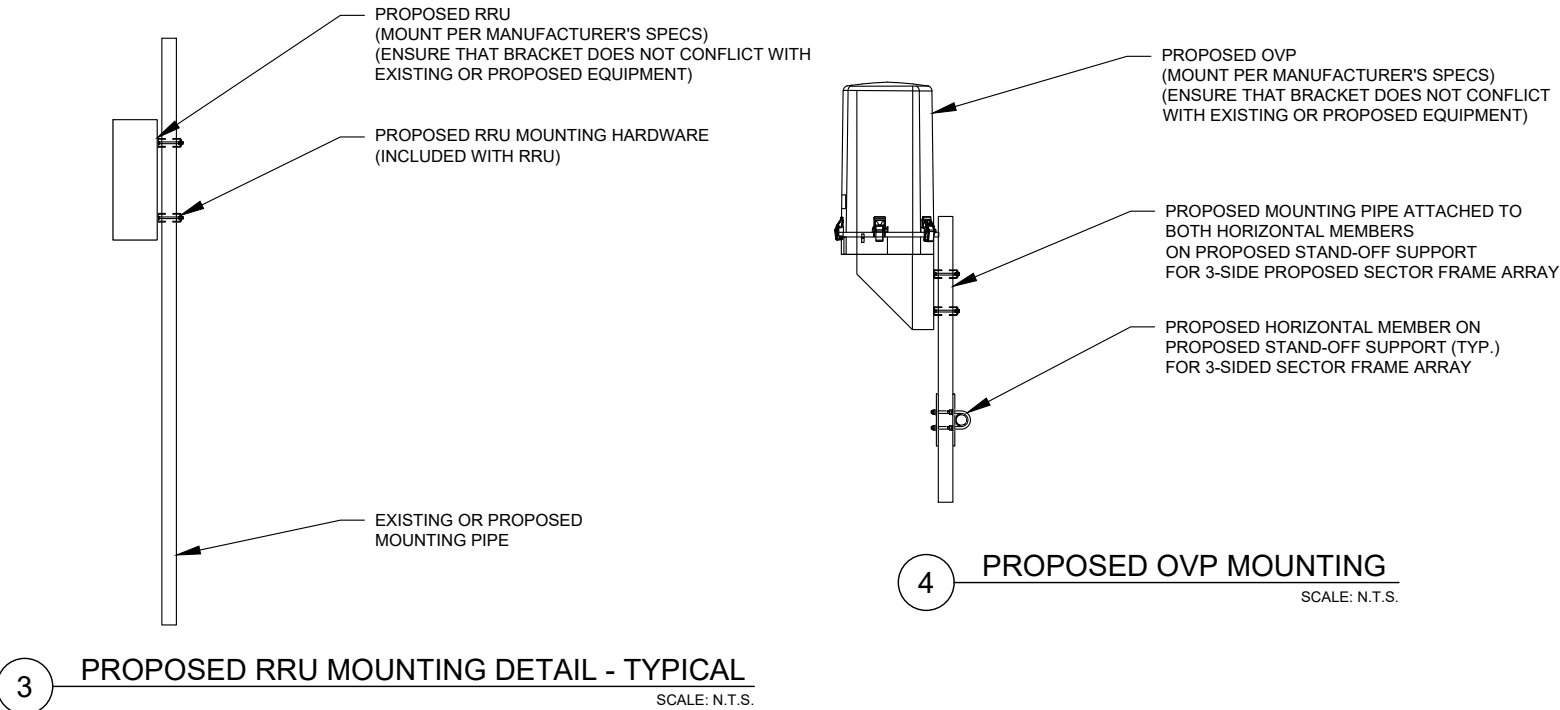
ATC JOB NO:	14869357_D2
CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

## ANTENNA INFORMATION & SCHEDULE

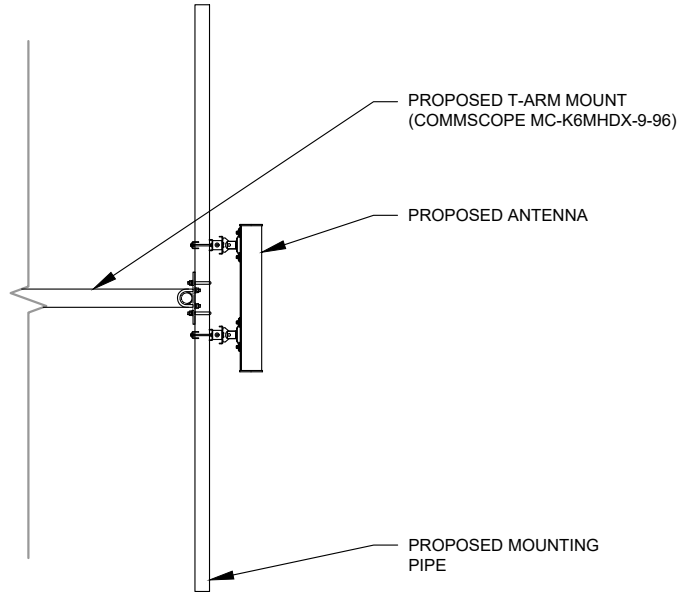
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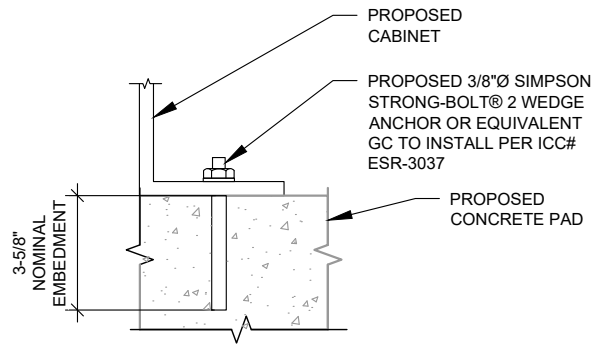
1 PROPOSED ANTENNA MOUNTING DETAIL (ELEVATION)  
SCALE: N.T.S.



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



NOTE:  
INSTALL SIMPSON STRONG-TIE® STRONG-BOLT® 2 WEDGE ANCHOR(S) STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT [WWW.STRONGTIE.COM](http://WWW.STRONGTIE.COM). PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

5 CABINET ATTACHMENT DETAIL  
SCALE: N.T.S.

4 PROPOSED OVP MOUNTING  
SCALE: N.T.S.



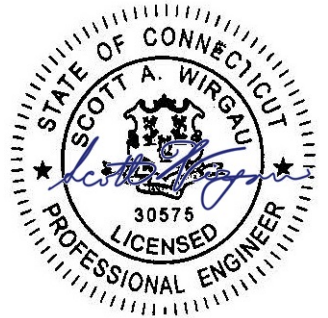
**AMERICAN TOWER®**  
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CARY, NC 27511  
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ATC SITE NUMBER:  
209359  
ATC SITE NAME:  
SALISBURY 2  
VERIZON SITE NAME:  
SALISBURY NE CT  
SITE ADDRESS:  
250 CANAAN ROAD  
SALISBURY, CT 06068

SEAL:



Digitally Signed: 2024-12-18



ATC JOB NO:	14869357_D2
CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

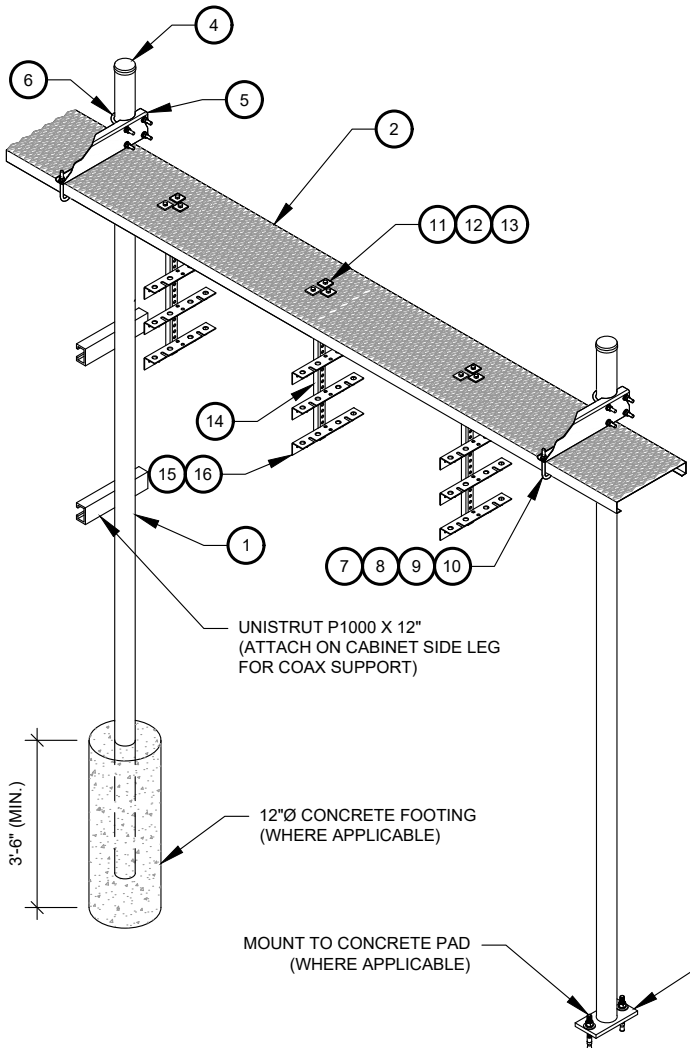
## MOUNT DETAILS

SHEET NUMBER:	REVISION:
C-501	0



CONSTRUCTION NOTE:

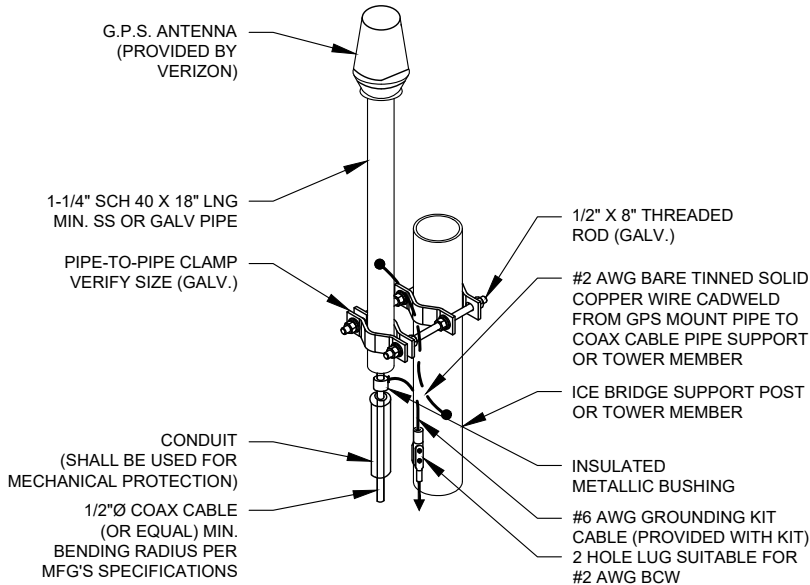
1. INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.



WB-K210-B WAVEGUIDE BRIDGE KIT - BILL OF MATERIALS (INCLUDED WITH KIT UNLESS NOTED OTHERWISE)					
ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1	MF126.01 MF-130	10'-4" COLUMN & BASE SHOE* 13'-4" PIPE COLUMN	9	GWL-04	1/2" GALV LOCK WASHER
2	WB-CY210	SAFETY GRATING 24" X 10'	10	GN-04	1/2" GALV HEX NUT
3	WBK110BHK	HARDWARE KIT (ITEMS 4-16)	11	GB-03205	3/8" X 2" GALV BOLT KIT
4	PC-034	PIPE CAP 3-1/2"	12	MT-387	SQUARE WASHER, 1-1/2" X 1-1/2" W/ 7/16" HOLE
5	WBLB243.08	24" WAVEGUIDE BRIDGE SUPPORT BRACKET	13	GWF-03	3/8" GALV FLAT WASHER
6	GUB-4356	1/2" X 3-5/8" X 6" GALV U-BOLT	14	WBT243.01	VERTICAL TRAPEZE SECTION
7	WB-JB-6	1/2" J-BOLT	15	GB-03105	3/8" X 1" GALV BOLT KIT
8	GWF-04	1/2" GALV FLAT WASHER	16	WBT243.02	HORIZONTAL TRAPEZE SECTION

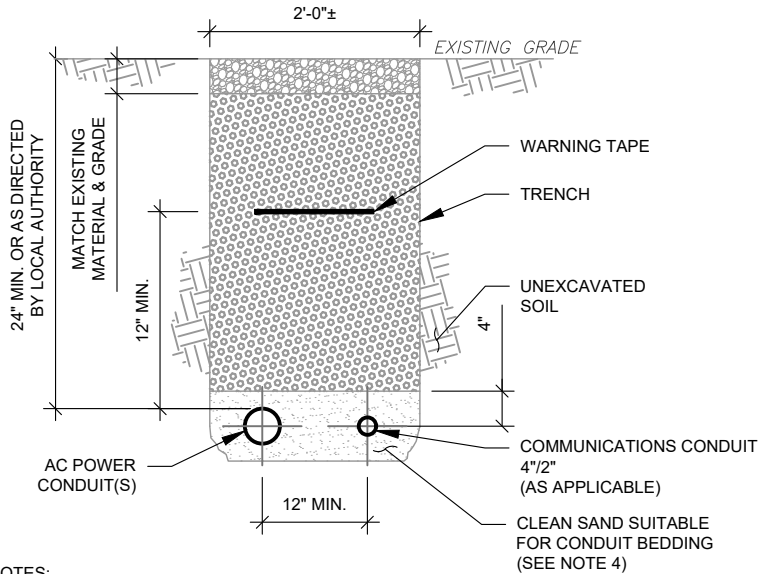
CONTRACTOR SHALL USE PARTS MANUFACTURED BY COMMScope OR APPROVED EQUIVALENT.  
\*BASE SHOE NOT INCLUDED IN WB-K210-B KIT, ORDER COLUMN SEPARATELY OR KIT WB-K210-S.

1 WAVEGUIDE BRIDGE KIT  
SCALE: N.T.S.



- NOTE:
- GPS SHALL BE PLACED WITH CLEAR SIGHT LINE TO THE SOUTHERN SKY.
  - CONTRACTOR TO SUPPLY COAX FOR GPS UNIT.

2 GPS ANTENNA ATTACHMENT DETAIL  
SCALE: N.T.S.



TRENCH NOTES:

- IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL.
- COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
- IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
- USE COMMUNICATIONS ONLY TRENCH FOR COMMUNICATIONS CONDUIT UNLESS TRAVELING UNDER PATH OF VEHICLE TRAVEL, THEN CONDUIT MUST BE 24" MIN. BELOW GRADE.
- CONFIRM SPACING AND DEPTH WITH NEC OR LOCAL CODE REQUIREMENTS

3 POWER/TELCO CONDUIT TRENCH DETAILS  
SCALE: N.T.S.

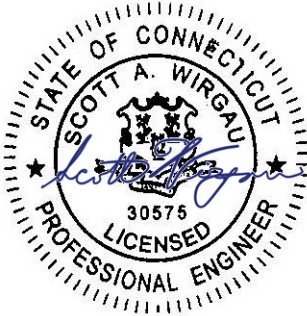
**AMERICAN TOWER®**  
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209359  
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SALISBURY 2  
VERIZON SITE NAME:  
SALISBURY NE CT  
SITE ADDRESS:  
250 CANAAN ROAD  
SALISBURY, CT 06068

SEAL:



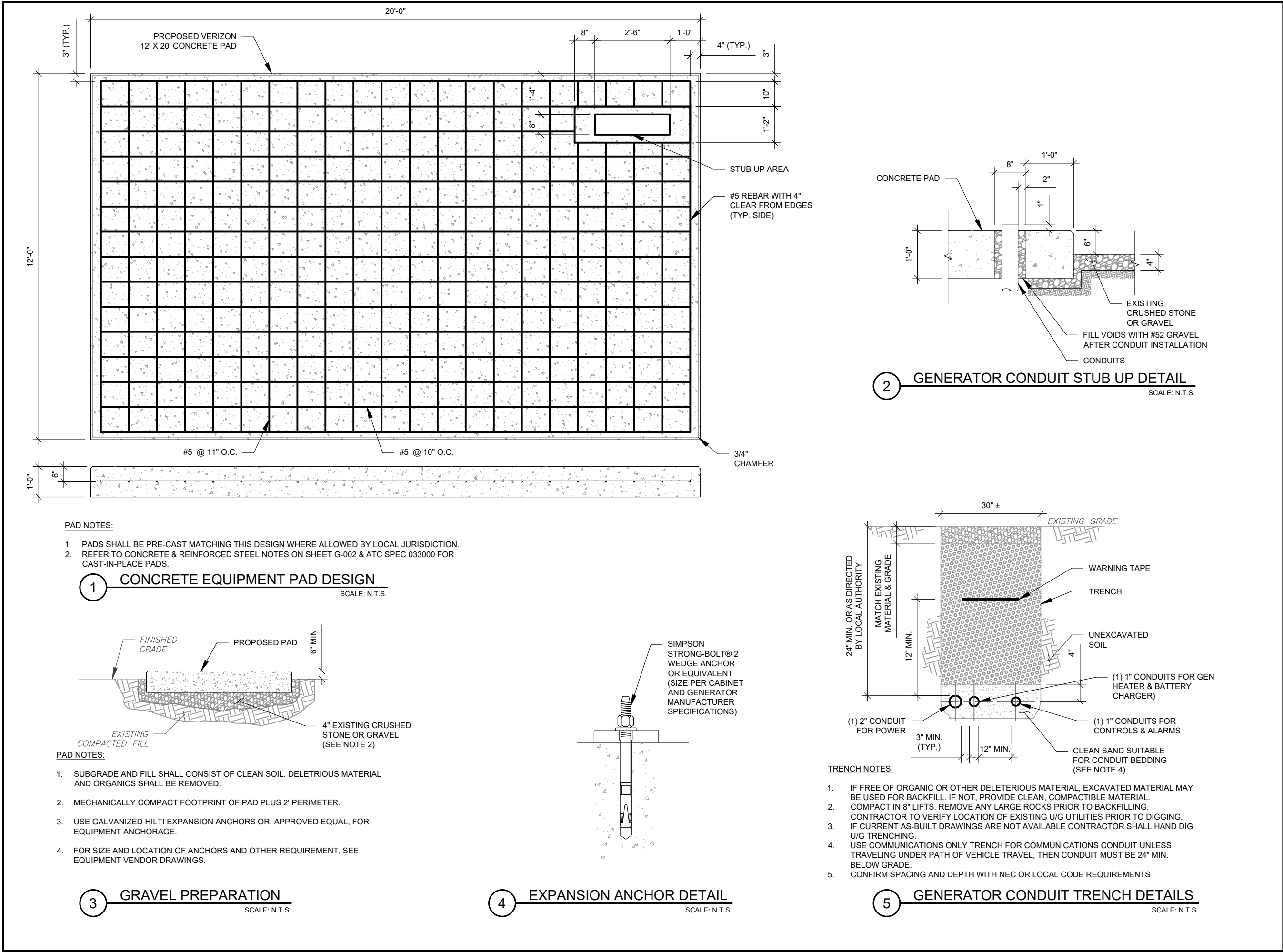
Digitally Signed: 2024-12-18



ATC JOB NO:	14869357_D2
CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

CONSTRUCTION  
DETAILS

SHEET NUMBER:	REVISION:
C-502	0



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SALISBURY, CT 06068

SEAL:

Digitally Signed: 2024-12-18

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CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

**CONSTRUCTION DETAILS**

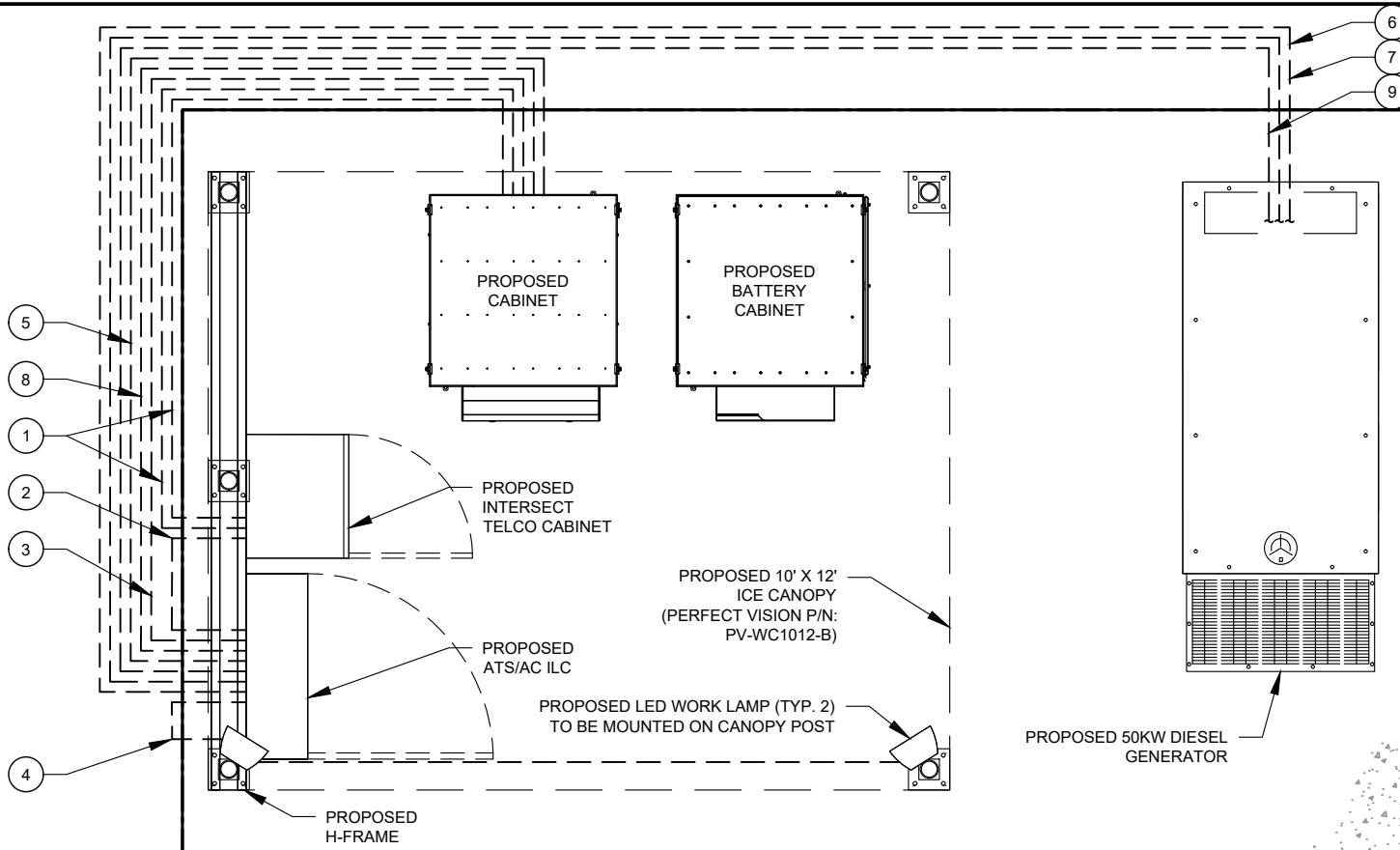
SHEET NUMBER: <b>C-503</b>	REVISION: <b>0</b>
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CONDUIT KEYED NOTES:

- 1 FIBER CABINET CONDUITS  
(2) 2" SCH. 40 PVC CONDUIT WITH MULE TAPE FROM TELCO BOX TO THE EQUIPMENT CABINET.
- 2 AC POWER CONDUITS  
(1) 1" CONDUIT WITH (2) #12 & (1) #12 G FROM ILC TO THE TELCO BOX FOR OUTLET/HEATER AND FAN.
- 3 (1) 1-1/2" CONDUIT WITH (16) #10 & (1) #10 G FROM THE ILC TO THE EQUIPMENT CABINET FOR (8) 30 AMP 2-POLE CIRCUITS.
- 4 (1) 1" CONDUIT WITH (2) #12 & (1) #12 G FROM ILC TO GFI RECEPTACLE/LIGHT.
- 5 (1) 1-1/2" CONDUIT WITH PULLSTRING FOR FUTURE RECTIFIER CIRCUITS FROM EQUIPMENT CABINET TO ILC.
- 6 (1) 2" CONDUIT WITH (3) #3/0 & (1) #6 G FROM THE ILC TO THE GENERATOR.
- 7 (1) 1" CONDUIT WITH (4) #12 & (1) #12 G FROM ILC TO GENERATOR. (GEN HEATER & BATTERY CHARGER)
- 8 ALARM/MISCELLANEOUS CONDUITS  
(1) 1" CONDUIT FROM ILC TO EQUIPMENT CABINET FOR ILC ALARMS.
- 9 (1) 1" CONDUIT FROM ILC TO GENERATOR FOR GEN CONTROLS & ALARMS.

NOTE:  
BELOW GRADE CONDUIT SHALL BE SCHEDULE 80 PVC. ABOVE GRADE CONDUIT SHALL BE GALVANIZED RIGID CONDUIT. BELOW GRADE PVC CONDUIT SHALL TRANSITION TO GRC PRIOR TO RISING ABOVE GRADE. ALL BENDS SHALL HAVE MINIMUM 24" RADIUS. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. VERIFY CONDUIT TYPE WITH LOCAL CONSTRUCTION MANAGER AND ADJUST AS NECESSARY. ALL CONDUIT SHALL MEET NEC, STATE, AND LOCAL CODE REQUIREMENTS AS REQUIRED.

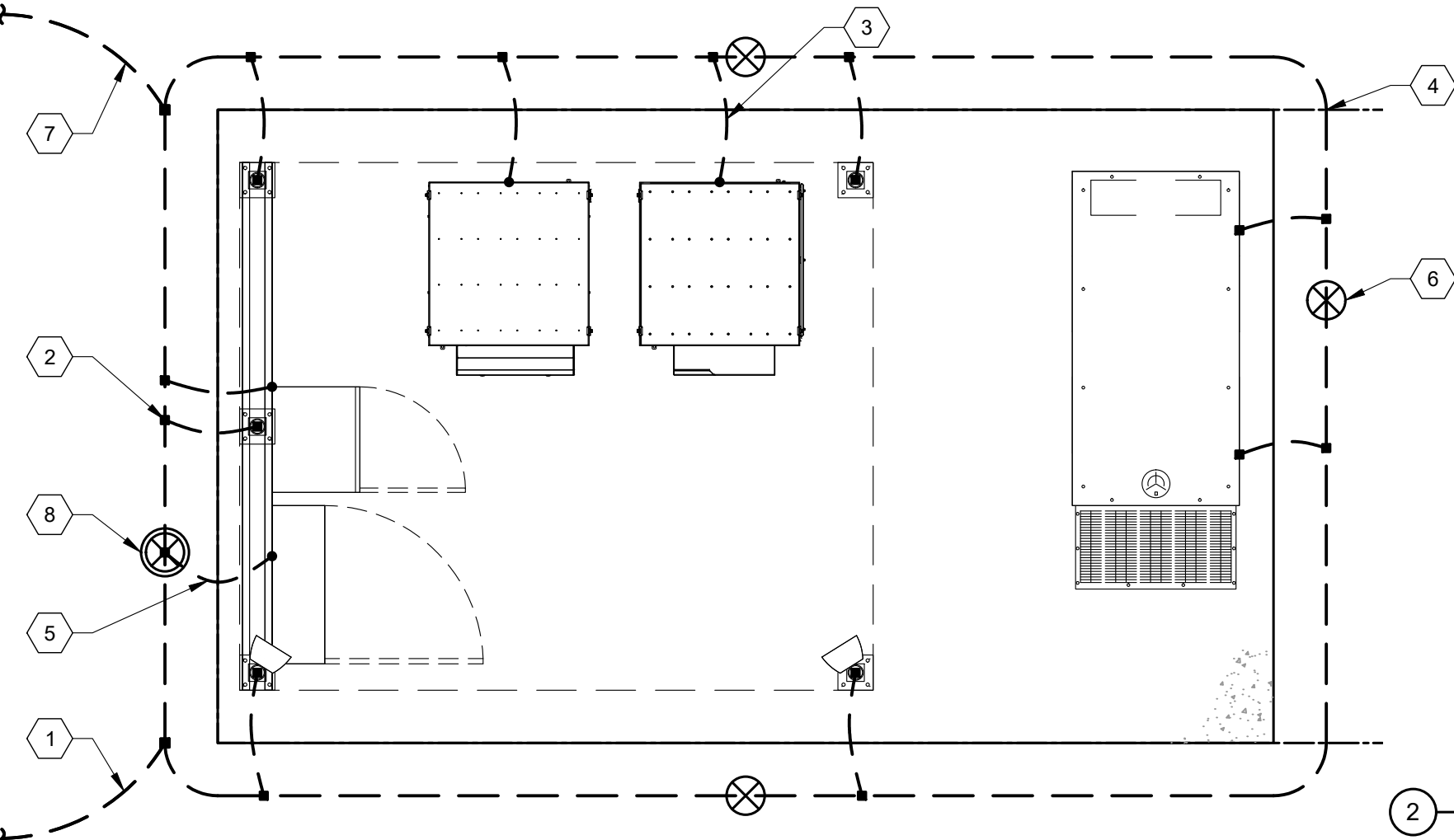
PROPOSED 12' X 20'  
CONCRETE PAD



1 DETAILED CONDUIT LAYOUT  
SCALE: N.T.S.

GROUNDING KEYED NOTES:

- 1 BOND TO TOWER GROUND RING
- 2 #2 AWG BOND FROM VERTICAL H-FRAME AND ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
- 3 EQUIPMENT BOND TO GROUND RING (TYP.).
- 4 #2 GROUND RING
- 5 GROUNDING ELECTRODE CONDUCTOR PER NEC
- 6 GROUNDING ELECTRODE (TYP.)
- 7 BOND TO COMPOUND GROUND RING
- 8 GROUNDING ELECTRODE WITH TEST WELL



2 DETAILED GROUNDING LAYOUT  
SCALE: N.T.S.



**AMERICAN TOWER®**  
**A.T. ENGINEERING SERVICES LLC**  
1 FENTON MAIN  
SUITE 300  
CARY, NC 27511  
PHONE: (919) 468-0112  
PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	12/17/24

ATC SITE NUMBER:

209359

ATC SITE NAME:

SALISBURY 2

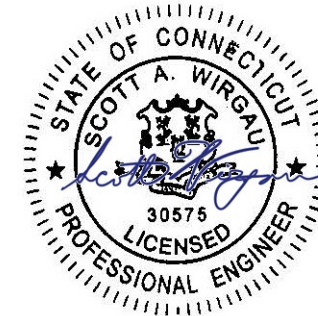
VERIZON SITE NAME:

SALISBURY NE CT

SITE ADDRESS:

250 CANAAN ROAD  
SALISBURY, CT 06068

SEAL:



Digitally Signed: 2024-12-18



ATC JOB NO:	14869357_D2
CUSTOMER ID:	SALISBURY NE CT
CUSTOMER #:	5000955862

GROUNDING PLAN  
AND NOTES

SHEET NUMBER:

E-101

REVISION:

0





- ### 1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.



- ## 2 MAIN GROUND BAR DETAIL

SCALE: N.T.S.



- ## 1 GROUND ROD DETAIL

SCALE: N.T.S.

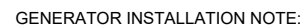


- 2 TOWER GROUND BAR DETAIL

SCALE: N.T.S



SCALE: N.T.S

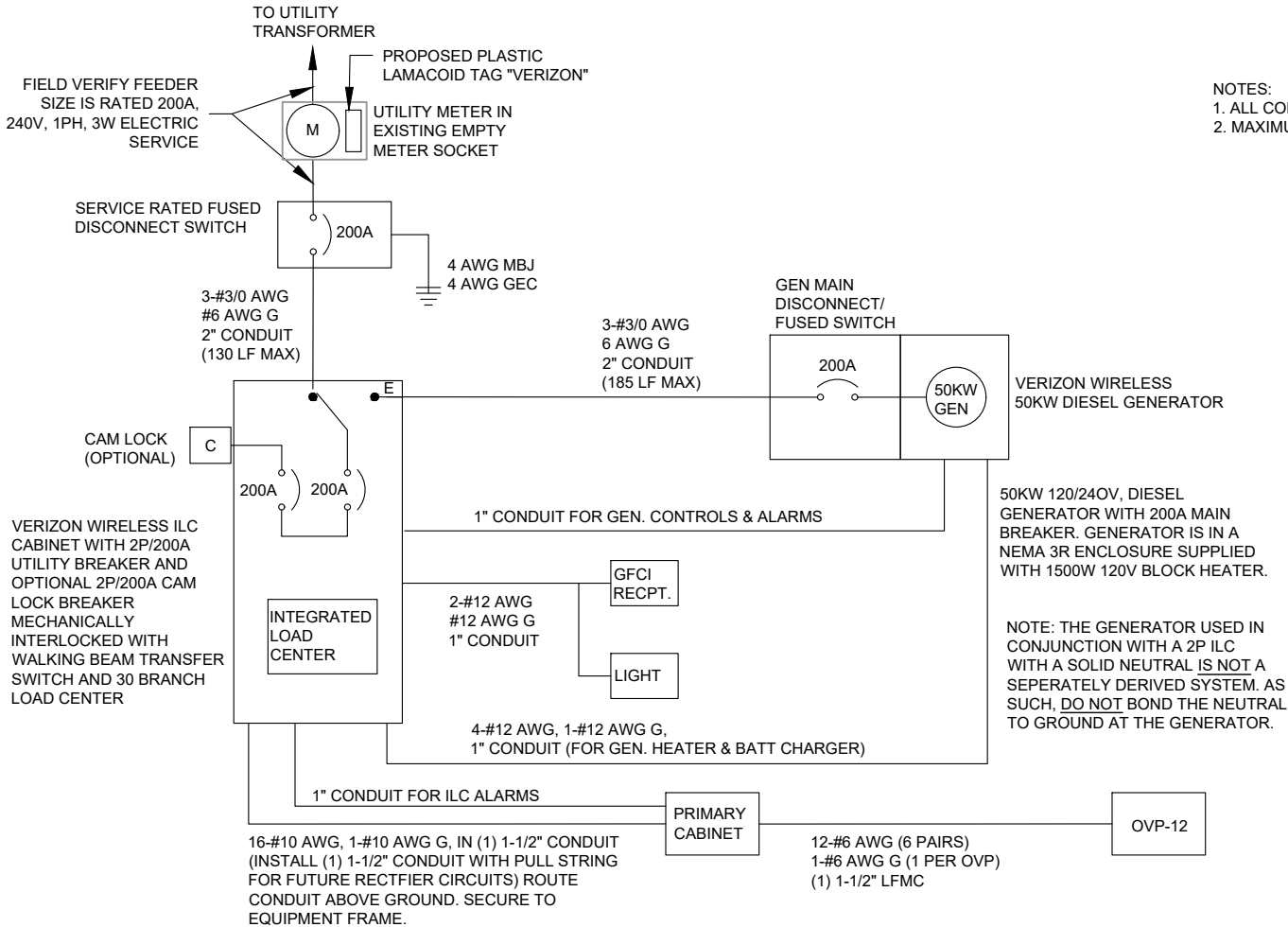


## 6 GENERATOR GROUNDING

SCALE: N.T.S.



PANEL DESIGNATION: <div>VZW</div>		TYPE: LIGHTING & APPLIANCE	SYSTEM: 120/240V, 3W, 30 CK	LOCATION: VZW LEASE AREA									
		MOUNTING: SURFACE	MAIN BREAKER (MB): MLO										
		ENCLOSURE: NEMA 3R	MAIN BUS RATING: 200A	PANEL NOTES: ASCO D300L SERIES									
			MIN. A.I.C. RATING: 65K										
CONNECTED LOAD (kVA)		BRIEF DESCRIPTION		FEEDER OR BRANCH CIRCUIT				FEEDER OR BRANCH CIRCUIT		BRIEF DESCRIPTION		CONNECTED LOAD (kVA)	
				BREAKER		POLE NO.		CIRC. NOTES					
A B				AMPS POLES		POLE NO.		CIRC. NOTES		POLES AMPS		A B	
1.78		RECTIFIER		30 2		1				2		1.78	
						3				4		1.78	
1.78		RECTIFIER		30 2		5				6		1.78	
						7				8		1.78	
1.78		RECTIFIER		30 2		9				10		1.78	
						11				12		1.78	
1.78		RECTIFIER		30 2		13				14		0.00	
						15				16		0.00	
0.68		GFI RECEPT / LIGHT		20 1		17				18		0.00	
		GEN BLOCK HEATER		20 1		19				20		0.00	
0.50		BATTERY CHARGER		20 1		21				22		0.00	
		SPACE				23				24		0.00	
0.00		SPACE				25				26		0.00	
		SPACE				27				28		0.00	
0.00		SPACE				29				30		0.00	
8.3		8.6				A		B		TOTAL		5.3	
						13.6		14.0		27.6		5.3	
						13.6		14.0		27.6		5.3	




PANEL SCHEDULE

- NOTES:
- ALL CONDUCTORS ARE TYPE THWN (75°C) COPPER.
  - MAXIMUM LENGTH OF RUN FOR RECTIFIER CIRCUITS IS 50 FT.

ELECTRICAL SINGLE LINE DIAGRAM

- NOTES:
- ALL EQUIPMENT SHALL BE NEMA 3R RATED.
  - ALL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH TIA-222-G AND VERIZON WIRELESS STANDARDS.
  - CONDUCTOR SIZES AND DISTANCES HAVE BEEN SIZED FOR 3% MAX VOLTAGE DROP. (TOTAL SYSTEM VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST DEMAND SHALL NOT EXCEED 5%)
  - WIRE SIZING AND MAXIMUM DISTANCE FROM GENERATOR TO ILC ASSUMES POWER FACTOR OF 0.9.
  - BELOW GRADE PVC CONDUIT SHALL TRANSITION TO RMC PRIOR TO RISING ABOVE GRADE, ALL BENDS SHALL HAVE A MINIMUM 24" RADIUS. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. VERIFY CONDUIT TYPE WITH LOCAL CONSTRUCTION MANAGER AND ADJUST IF NECESSARY. ALL CONDUIT SHALL MEET NEC, STATE, AND LOCAL CODE REQUIREMENTS AS REQUIRED.



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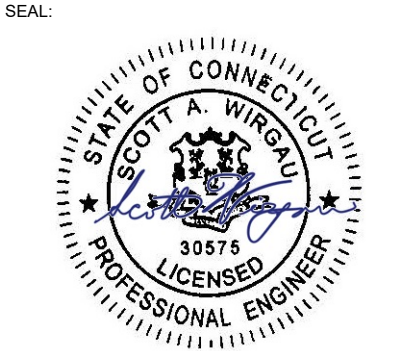
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	12/17/24

ATC SITE NUMBER:  
209359


ATC SITE NAME:  
SALISBURY 2

VERIZON SITE NAME:  
SALISBURY NE CT

SITE ADDRESS:  
250 CANAAN ROAD  
SALISBURY, CT 06068



Digitally Signed: 2024-12-18



ATC JOB NO: 14869357\_D2

CUSTOMER ID: SALISBURY NE CT

CUSTOMER #: 5000955862

ONE-LINE AND PANEL SCHEDULE

SHEET NUMBER: E-601

REVISION: 0



NORTHEAST > North East > New England > Wallingford-1 > SALISBURY NE CT - NEW BUILD  
Brauer, Mark - mark.brauer2@verizonwireless.com - 20240502\_103141

Project Details						Location Information		
Carrier Aggregation		N				Site Id		617392636
Eclp		N				Search Ring#		
Project Name		SALISBURY NE CT				E-NodeB ID#		null
Project Alt Name		SALISBURY NE CT - NEW BUILD				PSLC#		0
Project Id		17075106				Switch Name		Wallingford-1
Designed Sector Carrier 4G		15				Tower Type		
Designed Sector Carrier 5G		6				Site Type		MACRO
Additional Sector Carrier 4G		0				Street Address		
Additional Sector Carrier 5G		0				City		
Suffix						State		
FP Solution Type & Tech Type		MCR;4G_700;5G_850;4G_850;4G_AWS;5G_L-Sub6;4G_PCS				Zip Code		
						County		
						Latitude		42.00625/ 42° 0' 22.500"
						Longitude		-73.39145/ 73° 23' 29.220"

Project Scope
New macro build SALISBURY NE CT. - Preliminary, antenna height and azimuth may change per drawings and additional site details.

Antenna Summary											
700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
				5G	Samsung	MT6413-77A	135	136.2	340(A),100(B),220(C)	PHYSICAL	3
LTE	5G,LTE	LTE	LTE		JMA Wireless	MX06FHG865-HG	135	139	340(A),100(B),220(C)	PHYSICAL	6

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity

Added: 9	Removed: 0	Retained: 0
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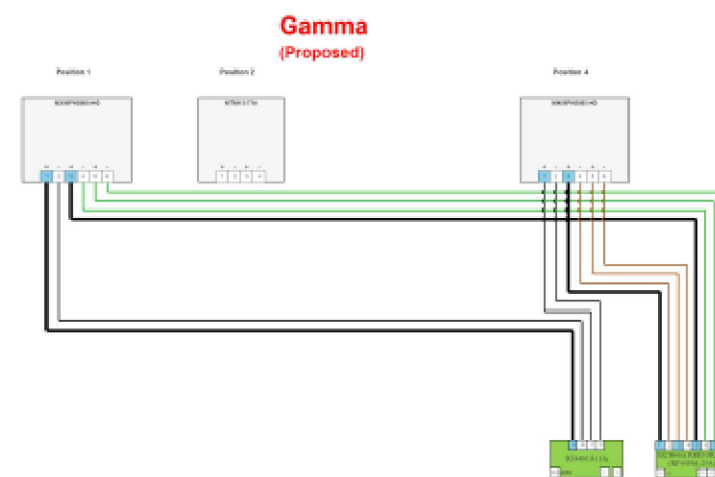
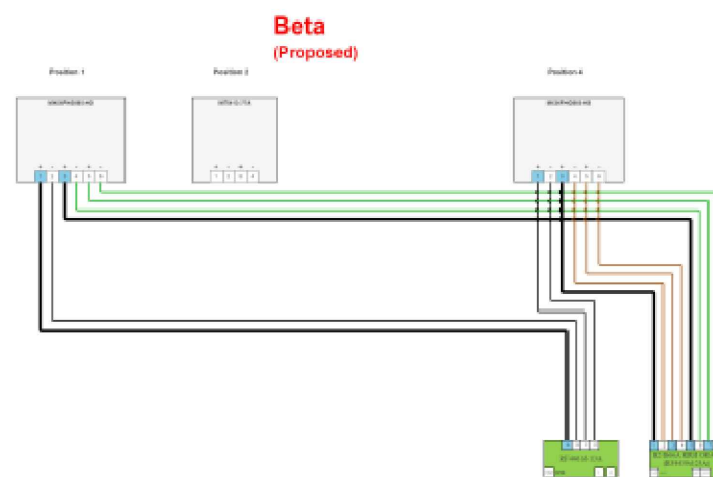
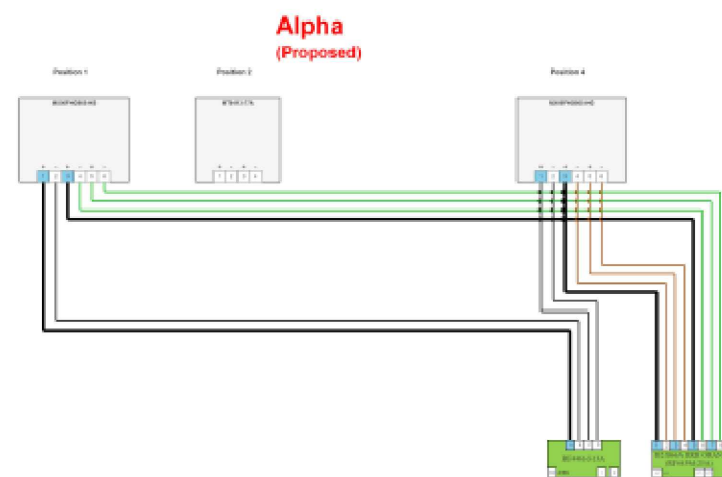
Non Antenna Summary									
Added Non Antenna									
Equipment Type	Location	700	850	1900	AWS	Make	Model	Install Type	Quantity
RRU	Tower			LTE	LTE	Samsung	B2/B66A RRH ORAN (RF4439d-25A)	PHYSICAL	3
RRU	Tower	LTE	5G,LTE			Samsung	RF4461d-13A	PHYSICAL	3

Equipment Type	Location	700	850	1900	AWS	Make	Model	Install Type	Quantity

Equipment Type	Location	700	850	1900	AWS	Make	Model	Install Type	Quantity

Added: 6	Removed: 0	Retained: 0
----------	------------	-------------





Backdoor design  
Wetter

1 PLUMBING DIAGRAM

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:

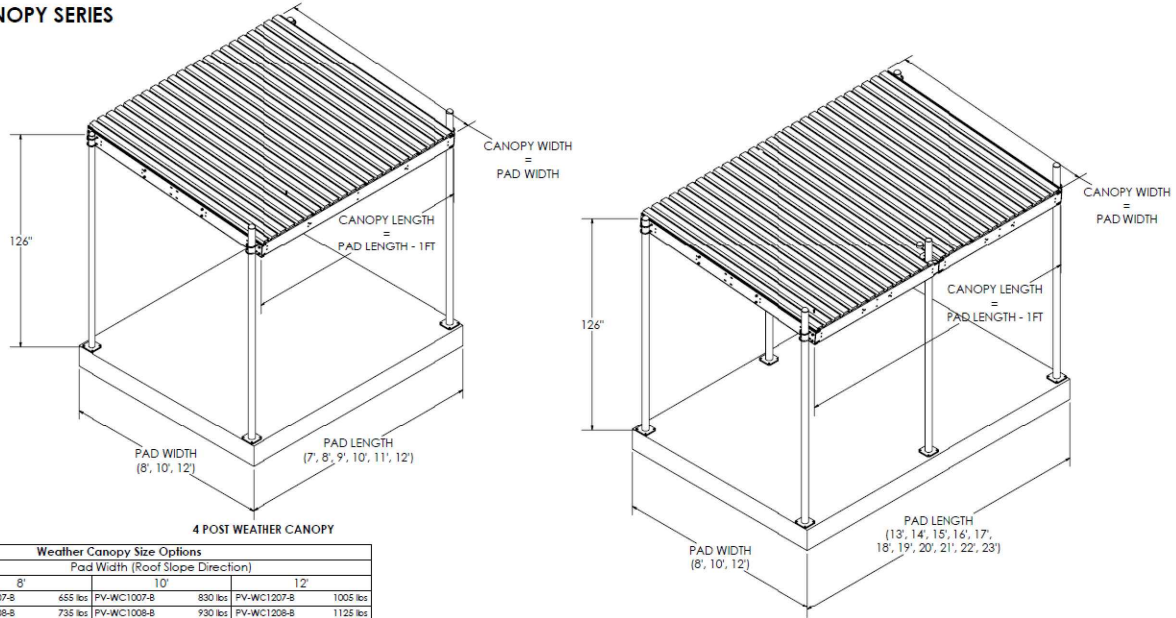
R-602

REVISION:

0

WEATHER CANOPY SERIES

SERIES OVERVIEW



Weather Canopy Size Options				
Pad Width (Roof Slope Direction)				
Pad Length	8'	10'	12'	
	7' PV-WC0807-B 655 lbs	PV-WC1007-B 830 lbs	PV-WC1207-B 1005 lbs	
	8' PV-WC0808-B 735 lbs	PV-WC1008-B 930 lbs	PV-WC1208-B 1125 lbs	
	9' PV-WC0809-B 815 lbs	PV-WC1009-B 1035 lbs	PV-WC1209-B 1255 lbs	
	10' PV-WC0810-B 895 lbs	PV-WC1010-B 1135 lbs	PV-WC1210-B 1375 lbs	
	11' PV-WC0811-B 975 lbs	PV-WC1011-B 1235 lbs	PV-WC1211-B 1495 lbs	
	12' PV-WC0812-B 1055 lbs	PV-WC1012-B 1340 lbs	PV-WC1212-B 1625 lbs	
	13' PV-WC0813-B 1221 lbs	PV-WC1013-B 1549 lbs	PV-WC1213-B 1875 lbs	
	14' PV-WC0814-B 1229 lbs	PV-WC1014-B 1649 lbs	PV-WC1214-B 1999 lbs	
	15' PV-WC0815-B 1382 lbs	PV-WC1015-B 1755 lbs	PV-WC1215-B 2125 lbs	
	16'	18'	20'	
	PV-WC0816-B 1460 lbs	PV-WC1016-B 1854 lbs	PV-WC1216-B 2249 lbs	
	PV-WC0817-B 1538 lbs	PV-WC1017-B 1954 lbs	PV-WC1217-B 2370 lbs	
	PV-WC0818-B 1620 lbs	PV-WC1018-B 2059 lbs	PV-WC1218-B 2499 lbs	
	PV-WC0819-B 1698 lbs	PV-WC1019-B 2159 lbs	PV-WC1219-B 2619 lbs	
	PV-WC0820-B 1776 lbs	PV-WC1020-B 2258 lbs	PV-WC1220-B 2741 lbs	
	PV-WC0821-B 1859 lbs	PV-WC1021-B 2364 lbs	PV-WC1221-B 2867 lbs	
	PV-WC0822-B 1937 lbs	PV-WC1022-B 2464 lbs	PV-WC1222-B 2991 lbs	
	PV-WC0823-B 2016 lbs	PV-WC1023-B 2564 lbs	PV-WC1223-B 3113 lbs	

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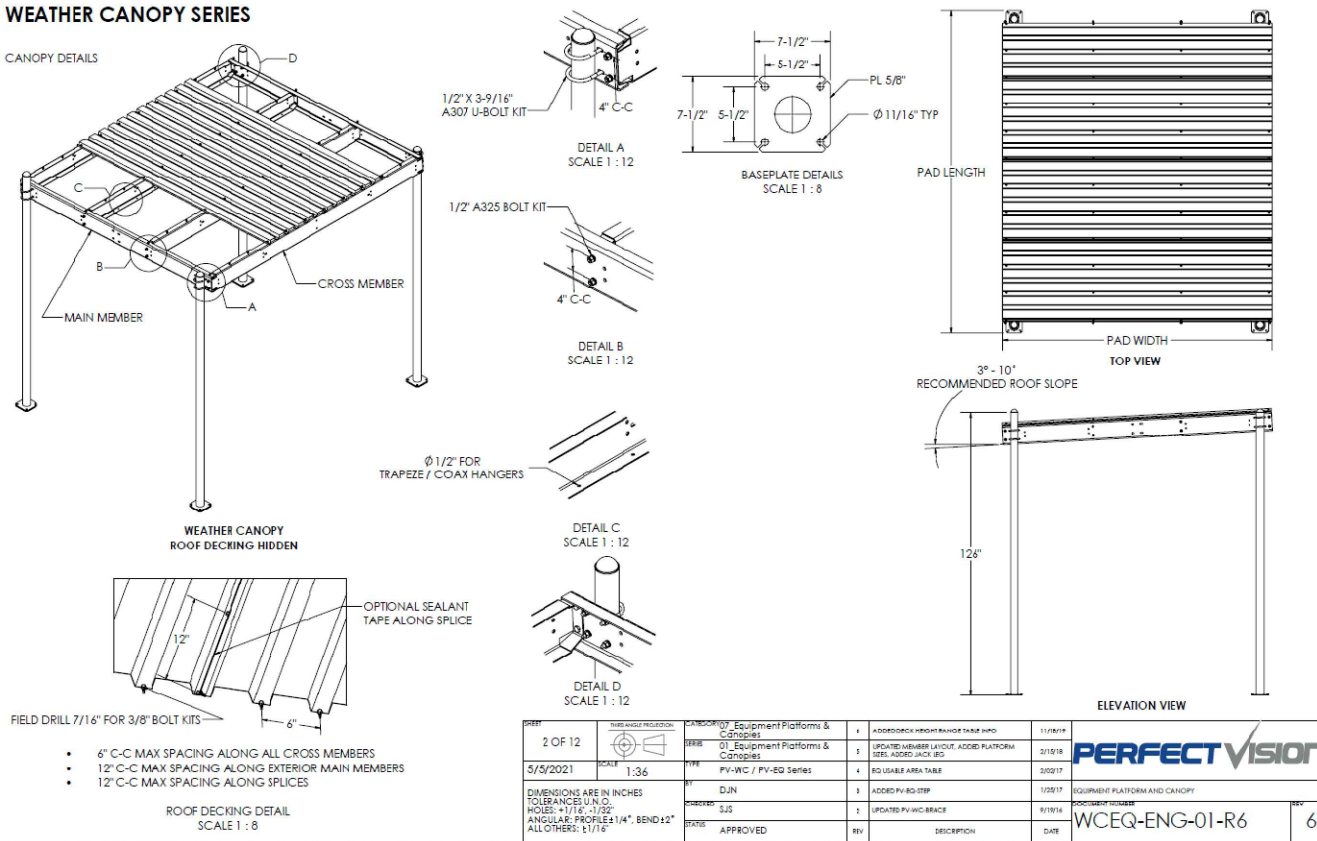
1	OF 12	THIRD ANGLE PROJECTION	CANOPY/OT Equipment Platforms & Canopies		11/18/19
5/5/2021	SCALE 1:40	01 Equipment Platforms & Canopies	2	UPDATED MEMBER LAYOUT, ADDED PLATFORM DEEL, ADDED JACK LEG	2/15/18
		PV-WC / PV-EG Series	4	EG USABLE AREA TABLE	3/26/17
		DUN	3	ADDED PV-EG STEP	1/25/17
		SJS	5	UPDATED PV-WC BRACE	9/19/16
		APPROVED	REV	DESCRIPTION	DATE

WCEQ-ENG-01-R6


6

WEATHER CANOPY SERIES

CANOPY DETAILS



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2 OF 12				THIRD ANGLE PROJECTION		CATEGORY: Equipment Platforms & Canopies		11/18/19	
5/5/2021		SCALE 1:36		REVISED: 01 Equipment Platforms & Canopies		1. ADDED DECK HEIGHT RANGING INFO		11/18/19	
				PV-WC / PV-EG Series		2. UPDATED MEMBER LAYOUT, ADDED PLATFORM DEEL, ADDED JACK LEG		2/15/18	
				DUN		3. EG USABLE AREA TABLE		3/26/17	
				SJS		4. ADDED PV-EG STEP		1/25/17	
				APPROVED		5. UPDATED PV-WC BRACE		9/19/16	
				REV		DESCRIPTION		DATE	

WCEQ-ENG-01-R6

6

1 PROPOSED CANOPY

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:

R-603

REVISION:

0



## Structural Analysis Report

**Structure** : 149 ft Monopine  
**ATC Asset Name** : Salisbury 2  
**ATC Asset Number** : 209359  
**Engineering Number** : 14869357\_C3\_03  
**Proposed Carrier** : VERIZON WIRELESS  
**Carrier Site Name** : SALISBURY NE CT  
**Carrier Site Number** : 5000955862  
**Site Location** : 250 Canaan Road  
Salisbury, CT 06068  
42.0063° N, 73.3915° W  
**County** : Litchfield  
**Date** : August 28, 2024  
**Max Usage** : 82%  
**Analysis Result** : Pass

Created By:

Thomas Ambrosio  
Structural Engineer I

A handwritten signature in red ink, appearing to read 'T. Ambrosio'.



COA: PEC.0001553



## **Table of Contents**

Introduction .....	3
Supporting Documents .....	3
Analysis .....	3
Conclusion .....	3
Structure Usages .....	4
Maximum Reactions .....	4
Tower Loading .....	5
Standard Conditions .....	Attached
Calculations .....	Attached



## **Introduction**

The purpose of this report is to summarize results of a structural analysis performed on the 149 ft Monopine tower to reflect the change in loading by VERIZON WIRELESS.

## **Supporting Documents**

<b>Tower:</b>	Sabre Job #130280, dated November 3, 2015
<b>Foundation:</b>	Sabre Job #130280, dated November 3, 2015
<b>Geotechnical:</b>	Terracon Project #J2155143, dated June 4, 2015

## **Analysis**

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

<b>Basic Wind Speed:</b>	113 mph (3-second gust)
<b>Basic Wind Speed w/ Ice:</b>	40 mph (3-second gust) w/ 1.00" radial ice concurrent
<b>Code(s):</b>	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
<b>Exposure Category:</b>	C
<b>Risk Category:</b>	II
<b>Topographic Factor Procedure:</b>	Method 1
<b>Topographic Category:</b>	1
<b>Spectral Response:</b>	$S_s = 0.16$ , $S_i = 0.05$
<b>Site Class:</b>	D - Stiff Soil - Default

## **Conclusion**

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact [Engineering@americantower.com](mailto:Engineering@americantower.com). Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

### Structure Usages

Structural Component	Usage	Control	Result
Pole Shaft	63.0%	1.2D + 1.0W	Pass
Serviceability Usage	37.7%	1.0D + 1.0W	Pass
Base Plate @ 0.0 ft	62.7%	Rods	Pass
Mat & Pier	82.4%	Shear [Steel (Mat)]	Pass

### Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	6,620.6	71.7	57.6

*\*Reactions shown reflect the results from the Load Case with maximum Moment*

Structure base reactions were analyzed using available geotechnical and foundation information.

### VERIZON WIRELESS Final Loading

Elev (ft)	Qty	Equipment	Lines
135.0	1	Raycap RCMD-6627-PF-48	(2) 1 5/8" Hybriflex
	3	Sector Frame	
	3	Samsung B2/B66A RRH ORAN (RF 4439d-25A)	
	3	Samsung MT6413-77A	
	3	Samsung RF4461d-13A	
	6	JMA Wireless MX06FHG865-HG	

Install proposed lines inside the pole shaft.

### Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
154.0	1	8' Omni	-	SALISBURY VOLUNTEER AMBULANCE SERVICE, INC.
150.0	1	Telewave ANT150F2 (12lbs)	(1) 7/8" Coax	
146.0	3	T-Arm	-	AT&T MOBILITY
	2	Raycap DC9-48-60-24-8C-EV	(1) 0.51" (13mm) Hybrid (4) 0.98" (25mm) Coax (2) 2" conduit	
	3	CCI DMP65R-BU8D		
	3	CCI TPA65R-BU8D		
	3	Ericsson RRUS 4415 B30		
	3	Ericsson RRUS 4449 B5, B12		
	3	Ericsson RRUS 4478 B14		
	3	Ericsson RRUS 8843 B2, B66A		
	6	CCI HPA-65R-BUU-H8		
	6	Ericsson RRUS A2 B2		
	9	Ericsson RRUS12 LTE B4, B2, B5		

(If table breaks across pages, please see previous page for data in merged cells)



## **Standard Conditions**

All engineering services performed by A.T. Engineering Services LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Services LLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



ANALYSIS PARAMETERS

Design Wind:	113 mph	Ice Wind:	40 mph w/ 1.0" ice	Service Wind:	60 mph
Risk Category:	II	Exposure:	C	S <sub>g</sub> :	0.165
Topo Factor:	Method 1	Topo Feature:		S <sub>i</sub> :	0.054
Structure Height:	149.0 ft	Base Elevation:	0.00 ft	Topo Category:	1
Base Diameter:	70.45 in	Base Rotation:	0.00°	Structure Type:	Taper
				Taper:	0.3570 (in/ft)

POLE SECTION PROPERTIES

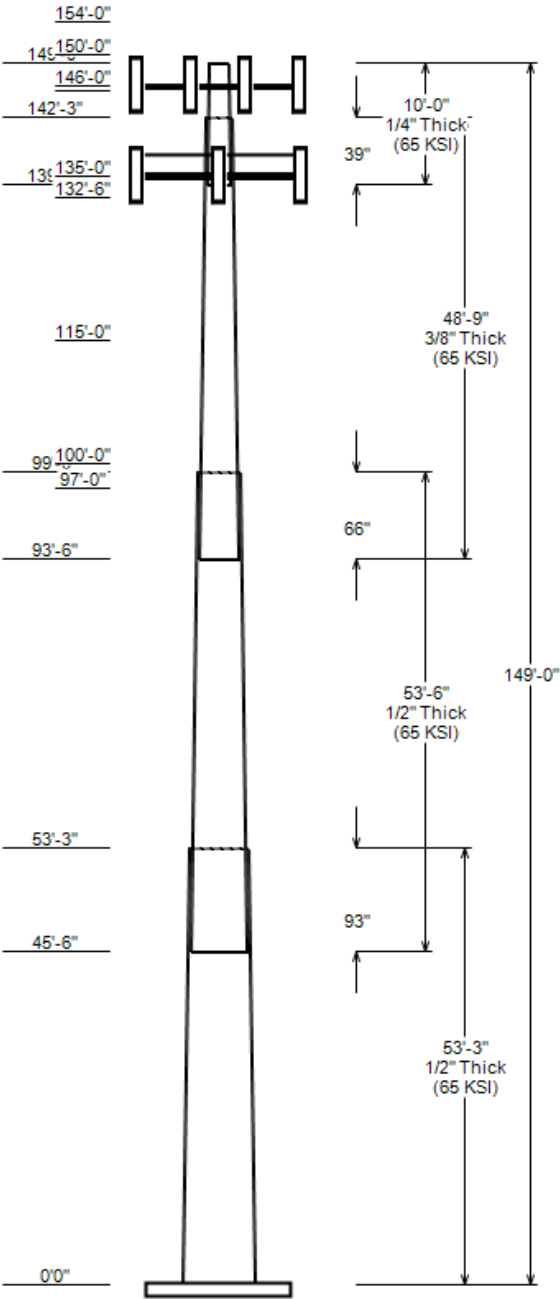
Section	Length (ft)	Flat Diameter (in)		Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
		Top	Bottom					
1	53.250	51.46	70.45	0.500		0.00	18 Sides	65
2	53.500	36.15	55.23	0.500	Slip Joint	93.00	18 Sides	65
3	48.750	21.48	38.86	0.375	Slip Joint	66.00	18 Sides	65
4	10.000	19.57	23.14	0.250	Slip Joint	39.00	18 Sides	65

DISCRETE APPURTENANCE

Elev (ft)	Description
154.0	(1) Generic 8' Omni
150.0	(1) Telewave ANT150F2 (12lbs)
150.0	(3) Chameleon 6' Pine Branch
146.0	(3) CCI DMP65R-BU8D
146.0	(6) Ericsson RRUS A2 B2
146.0	(3) Ericsson RRUS 4478 B14
146.0	(9) Ericsson RRUS12 LTE B4, B2, B5
146.0	(3) Ericsson RRUS 4415 B30
146.0	(3) Generic Round T-Arm
146.0	(2) Raycap DC9-48-60-24-8C-EV
146.0	(3) Ericsson RRUS 8843 B2, B66A
146.0	(3) Ericsson RRUS 4449 B5, B12
146.0	(6) CCI HPA-65R-BUU-H8
146.0	(3) CCI TPA65R-BU8D
145.5	(40) Chameleon 6' Pine Branch
135.0	(1) Raycap RCMDC-6627-PF-48
135.0	(3) Samsung RF4461d-13A
135.0	(3) Samsung B2/B66A RRH ORAN (RF 4
135.0	(6) JMA Wireless MX06FHG865-HG
135.0	(3) Generic Sector Frame
135.0	(3) Samsung MT6413-77A
132.5	(64) Chameleon 8' Pine Branch
115.0	(33) Chameleon 10' Pine Branch
100.0	(32) Chameleon 12' Pine Branch
97.0	(21) Chameleon 12' Pine Branch

LINEAR APPURTENANCE

Elev To (ft)	Description
150.0	(1) 7/8" Coax
146.0	(4) 0.98" (25mm) Coax
146.0	(2) 2" conduit
146.0	(1) 0.51" (13mm) Hybrid
135.0	(2) 1 5/8" Hybriflex



GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	6620.61	71.65	57.58
0.9D + 1.0W	6572.14	53.72	57.56
1.2D + 1.0Di + 1.0Wi	1213.11	101.74	10.61
1.2D + 1.0Ev + 1.0Eh	218.50	71.45	1.84
0.9D + 1.0Ev + 1.0Eh	216.60	50.03	1.84
1.0D + 1.0W	1663.42	59.77	14.52

ANALYSIS PARAMETERS

Location:	Litchfield County,CT	Height:	149 ft
Type and Shape:	Taper, 18 Sides	Base Diameter:	70.45 in
Manufacturer:	Sabre	Top Diameter:	19.57 in
K <sub>d</sub> (non-service):	0.95	Taper:	0.3570 in/ft
K <sub>e</sub> :	0.97	Rotation:	0.000°

ICE & WIND PARAMETERS

Risk Category:	II	Design Wind Speed:	113 mph
Exposure Category:	C	Design Wind Speed w/ Ice:	40 mph
Topo Factor Procedure:	Method 1	Design Ice Thickness:	1.00 in
Topographic Category:	1	Service Wind Speed:	60 mph
Crest Height:	0 ft	HMSL:	894.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method	Period Based on Rayleigh Method (sec):	1.87
Site Class:	D - Stiff Soil		
T <sub>L</sub> (sec):	6	P:	1
S <sub>ds</sub> :	0.176	S <sub>d1</sub> :	0.086
S <sub>s</sub> :	0.165	S <sub>1</sub> :	0.054
F <sub>a</sub> :	1.600	F <sub>v</sub> :	2.400
		C <sub>s</sub> :	0.031
		C <sub>s</sub> Max:	0.031
		C <sub>s</sub> Min:	0.030

LOAD CASES

1.2D + 1.0W	113 mph Wind with No Ice
0.9D + 1.0W	113 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40 mph Wind with 1" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES																			
Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top						Taper (in/ft)
							Dia (in)	Elev (ft)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	
1-18	53.25	0.5000	65		0.00	17,384	70.45	0.000	111.01	68,624.2	23.08	140.90	51.46	53.25	80.87	26,537.	16.39	102.92	0.3566
2-18	53.50	0.5000	65	Slip	93.00	13,055	55.23	45.500	86.85	32,861.6	17.71	110.45	36.15	99.00	56.57	9,083.5	10.98	72.30	0.3566
3-18	48.75	0.3750	65	Slip	66.00	5,882	38.86	93.500	45.81	8,571.4	16.51	103.63	21.48	142.25	25.12	1,413.0	8.34	57.27	0.3566
4-18	10.00	0.2500	65	Slip	39.00	570	23.14	139.000	18.16	1,201.7	14.55	92.54	19.57	149.00	15.33	722.9	12.04	78.28	0.3566
Total Shaft Weight						36,891													

DISCRETE APPURTENANCE PROPERTIES										
Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice			Ice		
					Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor
154.00	Generic 8' Omni	1	1.00	0.000	25.00	2.400	1.00	65.68	4.232	1.00
150.00	Chameleon 6' Pine Branch	3	1.00	0.000	45.00	3.510	1.00	103.54	4.978	1.00
150.00	Telewave ANT150F2 (12lbs)	1	1.00	0.000	12.00	1.290	1.00	35.89	1.994	1.00
146.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	113.93	2.590	0.50
146.00	CCI TPA65R-BU8D	3	0.80	0.000	82.50	18.089	0.63	312.17	20.549	0.63
146.00	CCI DMP65R-BU8D	3	0.80	0.000	95.70	17.871	0.63	322.10	20.326	0.63
146.00	CCI HPA-65R-BUU-H8	6	0.80	0.000	68.00	12.976	0.67	239.16	15.361	0.67
146.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	486.52	15.192	0.67
146.00	Raycap DC9-48-60-24-8C-EV	2	0.80	0.000	16.00	4.788	0.75	101.99	5.768	0.75
146.00	Ericsson RRUS12 LTE B4, B2, B5	9	0.80	0.000	49.40	3.145	0.62	103.23	3.917	0.62
146.00	Ericsson RRUS A2 B2	6	0.80	0.000	22.00	2.064	0.67	51.37	2.692	0.67
146.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.40	2.021	0.67	100.28	2.649	0.67
146.00	Ericsson RRUS 4415 B30	3	0.80	0.000	46.00	1.842	0.50	78.66	2.439	0.50
146.00	Ericsson RRUS 8843 B2, B66A	3	0.80	0.000	72.00	1.639	0.50	112.83	2.202	0.50
145.50	Chameleon 6' Pine Branch	40	1.00	0.000	45.00	3.510	1.00	103.45	4.975	1.00
135.00	Generic Sector Frame	3	0.75	0.000	800.00	20.000	0.67	1536.14	31.042	0.67
135.00	Samsung B2/B66A RRH ORAN (RF 4	3	0.80	0.000	74.70	1.875	0.50	116.90	2.469	0.50
135.00	Samsung MT6413-77A	3	0.80	0.000	57.30	3.805	0.61	113.37	4.682	0.61
135.00	Raycap RCMDC-6627-PF-48	1	0.80	0.000	32.00	4.056	1.00	115.93	4.957	1.00
135.00	Samsung RF4461d-13A	3	0.80	0.000	79.10	1.875	0.50	121.68	2.471	0.50
135.00	JMA Wireless MX06FHG865-HG	6	0.80	0.000	51.00	11.608	0.70	207.37	13.744	0.70
132.50	Chameleon 8' Pine Branch	64	1.00	0.000	75.00	3.620	1.00	178.32	5.199	1.00
115.00	Chameleon 10' Pine Branch	33	1.00	0.000	85.00	3.770	1.00	198.39	5.304	1.00
100.00	Chameleon 12' Pine Branch	32	1.00	0.000	95.00	4.420	1.00	218.06	6.197	1.00
97.00	Chameleon 12' Pine Branch	21	1.00	0.000	95.00	4.420	1.00	217.62	6.191	1.00
Totals	Row Count: 25	258			21,217.20			48,537.60		

LINEAR APPURTENANCE PROPERTIES													
Load Case Azimuth (deg): 0.00													
Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/ Row	Distance Between Rows(in)	Distance Between Cols(in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	150.00	1	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	SALISBURY VOLUNTEER
0.00	146.00	4	0.98" (25mm) Coax	0.98	0.3	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	146.00	2	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	146.00	1	0.51" (13mm) Hybrid	0.51	0.14	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	135.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS

SEGMENT PROPERTIES												
Seg Top Elev (ft)	Description	(Max Length: 5 ft)	Thick (in)	Flat Dia (in)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in³)	Z (in³)	Weight (lb)
0.00			0.5000	70.450	111.007	68,624.20	23.08	140.90	74.3	1918.6	0.0	0.0
5.00			0.5000	68.667	108.177	63,509.60	22.45	137.33	75	1821.7	0.0	1,864.6
10.00			0.5000	66.884	105.348	58,655.60	21.82	133.77	75.7	1727.3	0.0	1,816.4
15.00			0.5000	65.101	102.519	54,055.40	21.19	130.20	76.5	1635.4	0.0	1,768.3
20.00			0.5000	63.318	99.689	49,702.30	20.57	126.64	77.2	1546.1	0.0	1,720.2
25.00			0.5000	61.536	96.860	45,589.40	19.94	123.07	78	1459.2	0.0	1,672.0
30.00			0.5000	59.753	94.031	41,709.80	19.31	119.51	78.7	1374.9	0.0	1,623.9
35.00			0.5000	57.970	91.201	38,056.90	18.68	115.94	79.4	1293.0	0.0	1,575.8
40.00			0.5000	56.187	88.372	34,623.70	18.05	112.37	80.2	1213.7	0.0	1,527.6
45.00			0.5000	54.404	85.543	31,403.50	17.42	108.81	80.9	1136.9	0.0	1,479.5
45.50	Bot - Section 2		0.5000	54.226	85.260	31,092.90	17.36	108.45	81	1129.4	0.0	145.3
50.00			0.5000	52.621	82.713	28,389.40	16.79	105.24	81.6	1062.6	0.0	2,596.4
53.25	Top - Section 1		0.5000	52.462	82.461	28,130.60	16.74	104.92	81.7	1056.1	0.0	1,826.7
55.00			0.5000	51.838	81.471	27,129.20	16.52	103.68	82	1030.8	0.0	488.1
60.00			0.5000	50.055	78.642	24,399.80	15.89	100.11	82.6	960.1	0.0	1,362.1
65.00			0.5000	48.272	75.812	21,859.90	15.26	96.54	82.6	891.9	0.0	1,313.9
70.00			0.5000	46.490	72.983	19,502.60	14.63	92.98	82.6	826.3	0.0	1,265.8
75.00			0.5000	44.707	70.154	17,321.20	14.00	89.41	82.6	763.1	0.0	1,217.7
80.00			0.5000	42.924	67.324	15,308.90	13.37	85.85	82.6	702.5	0.0	1,169.5
85.00			0.5000	41.141	64.495	13,458.80	12.75	82.28	82.6	644.3	0.0	1,121.4
90.00			0.5000	39.358	61.666	11,764.10	12.12	78.72	82.6	588.7	0.0	1,073.2
93.50	Bot - Section 3		0.5000	38.110	59.685	10,666.60	11.68	76.22	82.6	551.3	0.0	722.6
95.00			0.5000	37.575	58.836	10,218.00	11.49	75.15	82.6	535.6	0.0	534.6
97.00			0.5000	36.862	57.704	9,639.60	11.24	73.72	82.6	515.1	0.0	701.1
99.00	Top - Section 2		0.3750	36.899	43.471	7,326.70	15.59	98.40	82.6	391.1	0.0	687.6
100.00			0.3750	36.542	43.047	7,114.20	15.42	97.45	82.6	383.5	0.0	147.2
105.00			0.3750	34.759	40.925	6,113.10	14.58	92.69	82.6	346.4	0.0	714.3
110.00			0.3750	32.977	38.803	5,210.60	13.74	87.94	82.6	311.2	0.0	678.2
115.00			0.3750	31.194	36.681	4,401.70	12.90	83.18	82.6	277.9	0.0	642.1
120.00			0.3750	29.411	34.559	3,681.10	12.07	78.43	82.6	246.5	0.0	606.0
125.00			0.3750	27.628	32.437	3,043.80	11.23	73.67	82.6	217.0	0.0	569.9
130.00			0.3750	25.845	30.315	2,484.60	10.39	68.92	82.6	189.4	0.0	533.8
132.50			0.3750	24.954	29.254	2,232.80	9.97	66.54	82.6	176.2	0.0	253.4
135.00			0.3750	24.062	28.193	1,998.50	9.55	64.17	82.6	163.6	0.0	244.3
139.00	Bot - Section 4		0.3750	22.636	26.495	1,658.80	8.88	60.36	82.6	144.3	0.0	372.2
140.00			0.3750	22.279	26.071	1,580.40	8.71	59.41	82.6	139.7	0.0	150.7
142.25	Top - Section 3		0.2500	21.977	17.240	1,028.20	13.74	87.91	82.6	92.1	0.0	330.4
145.00			0.2500	20.996	16.462	895.20	13.05	83.99	82.6	84.0	0.0	157.7
145.50			0.2500	20.818	16.320	872.30	12.92	83.27	82.6	82.5	0.0	27.9
146.00			0.2500	20.640	16.179	849.80	12.79	82.56	82.6	81.1	0.0	27.6
149.00			0.2500	19.570	15.330	722.90	12.04	78.28	82.6	72.8	0.0	160.8
Total:											36,890.8	

CALCULATED FORCES													
Load Case: 1.2D + 1.0W			113 mph Wind with No Ice									21 Iterations	
Gust Response Factor:		1.10											
Dead load Factor:		1.20											
Wind Load Factor:		1.00											
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-71.65	-57.58	0.00	-6,620.6	0.00	6,620.61	7,418.33	1,948.17	12,308.38	10,684.49	0	0	0.630
5.00	-69.21	-57.15	0.00	-6,332.7	0.00	6,332.71	7,301.25	1,898.51	11,689.01	10,245.93	0.07	-0.13	0.628
10.00	-66.83	-56.72	0.00	-6,047.0	0.00	6,046.97	7,180.40	1,848.86	11,085.63	9,810.88	0.29	-0.27	0.627
15.00	-64.49	-56.30	0.00	-5,763.4	0.00	5,763.36	7,055.79	1,799.20	10,498.24	9,379.76	0.65	-0.42	0.625
20.00	-62.22	-55.86	0.00	-5,481.9	0.00	5,481.86	6,927.41	1,749.55	9,926.83	8,952.99	1.17	-0.56	0.622
25.00	-60.00	-55.41	0.00	-5,202.6	0.00	5,202.55	6,795.26	1,699.89	9,371.42	8,530.99	1.84	-0.72	0.620
30.00	-57.84	-54.95	0.00	-4,925.5	0.00	4,925.50	6,659.35	1,650.24	8,831.99	8,114.16	2.68	-0.87	0.617
35.00	-55.73	-54.47	0.00	-4,650.8	0.00	4,650.78	6,519.67	1,600.58	8,308.55	7,702.94	3.68	-1.04	0.613
40.00	-53.68	-54.00	0.00	-4,378.4	0.00	4,378.41	6,376.23	1,550.93	7,801.10	7,297.74	4.86	-1.21	0.610



CALCULATED FORCES

45.00	-51.75	-53.72	0.00	-4,108.4	0.00	4,108.42	6,229.02	1,501.27	7,309.64	6,898.97	6.22	-1.38	0.605
45.50	-51.49	-53.49	0.00	-4,081.6	0.00	4,081.57	6,214.09	1,496.31	7,261.37	6,859.46	6.37	-1.4	0.605
50.00	-48.19	-53.07	0.00	-3,840.8	0.00	3,840.85	6,078.04	1,451.62	6,834.17	6,507.05	7.77	-1.56	0.600
53.25	-45.88	-52.78	0.00	-3,668.4	0.00	3,668.39	6,064.40	1,447.19	6,792.57	6,472.48	8.87	-1.69	0.576
55.00	-45.17	-52.47	0.00	-3,576.0	0.00	3,576.02	6,010.55	1,429.81	6,630.43	6,337.23	9.5	-1.75	0.573
60.00	-43.32	-51.97	0.00	-3,313.7	0.00	3,313.70	5,842.67	1,380.16	6,177.97	5,944.23	11.44	-1.93	0.566
65.00	-41.52	-51.48	0.00	-3,053.9	0.00	3,053.86	5,632.47	1,330.50	5,741.49	5,522.15	13.57	-2.12	0.562
70.00	-39.79	-50.99	0.00	-2,796.5	0.00	2,796.48	5,422.26	1,280.85	5,321.01	5,115.61	15.89	-2.31	0.556
75.00	-38.11	-50.52	0.00	-2,541.5	0.00	2,541.52	5,212.06	1,231.19	4,916.51	4,724.61	18.41	-2.5	0.547
80.00	-36.48	-50.05	0.00	-2,288.9	0.00	2,288.94	5,001.85	1,181.54	4,528.00	4,349.16	21.14	-2.7	0.535
85.00	-34.92	-49.59	0.00	-2,038.7	0.00	2,038.71	4,791.65	1,131.88	4,155.48	3,989.25	24.08	-2.9	0.520
90.00	-33.44	-49.19	0.00	-1,790.8	0.00	1,790.76	4,581.44	1,082.23	3,798.95	3,644.88	27.23	-3.11	0.501
93.50	-32.45	-48.96	0.00	-1,618.6	0.00	1,618.59	4,434.30	1,047.47	3,558.89	3,413.08	29.57	-3.25	0.484
95.00	-31.74	-48.79	0.00	-1,545.2	0.00	1,545.15	4,371.23	1,032.57	3,458.40	3,316.06	30.6	-3.31	0.475
97.00	-28.65	-44.59	0.00	-1,447.6	0.00	1,447.58	4,287.15	1,012.71	3,326.66	3,188.89	32	-3.4	0.463
99.00	-27.76	-44.43	0.00	-1,358.4	0.00	1,358.40	3,229.68	762.92	2,516.99	2,421.32	33.44	-3.48	0.573
100.00	-24.21	-38.07	0.00	-1,314.0	0.00	1,313.97	3,198.14	755.47	2,468.09	2,374.04	34.18	-3.52	0.564
105.00	-23.16	-37.65	0.00	-1,123.6	0.00	1,123.64	3,040.49	718.23	2,230.79	2,144.61	38	-3.77	0.534
110.00	-22.15	-37.25	0.00	-935.4	0.00	935.37	2,882.84	680.98	2,005.49	1,926.83	42.07	-4.01	0.496
115.00	-18.25	-31.26	0.00	-749.1	0.00	749.12	2,725.18	643.74	1,792.17	1,720.72	46.39	-4.24	0.444
120.00	-17.38	-30.87	0.00	-592.8	0.00	592.84	2,567.53	606.50	1,590.85	1,526.26	50.94	-4.45	0.398
125.00	-16.56	-30.49	0.00	-438.5	0.00	438.51	2,409.87	569.26	1,401.52	1,343.46	55.71	-4.65	0.336
130.00	-15.81	-30.19	0.00	-286.1	0.00	286.08	2,252.22	532.02	1,224.18	1,172.32	60.68	-4.82	0.254
132.50	-10.60	-19.26	0.00	-210.6	0.00	210.60	2,173.39	513.40	1,140.00	1,091.12	63.22	-4.89	0.199
135.00	-6.56	-15.02	0.00	-162.4	0.00	162.44	2,094.56	494.78	1,058.83	1,012.83	65.79	-4.95	0.164
139.00	-6.07	-14.82	0.00	-102.4	0.00	102.36	1,968.44	464.99	935.18	893.64	69.97	-5.03	0.119
140.00	-5.88	-14.71	0.00	-87.5	0.00	87.53	1,936.91	457.54	905.47	865.00	71.03	-5.04	0.105
142.25	-5.47	-14.52	0.00	-54.4	0.00	54.44	1,280.82	302.56	593.81	570.52	73.41	-5.07	0.102
145.00	-5.26	-14.41	0.00	-14.5	0.00	14.51	1,223.02	288.90	541.43	519.90	76.33	-5.09	0.035
145.50	-3.64	-7.85	0.00	-7.3	0.00	7.31	1,212.50	286.42	532.17	510.95	76.87	-5.09	0.018
146.00	-0.33	-0.77	0.00	-3.4	0.00	3.39	1,201.99	283.94	522.98	502.08	77.4	-5.09	0.007
149.00	0.00	-0.73	0.00	-1.1	0.00	1.09	1,138.93	269.04	469.55	450.48	80.6	-5.1	0.002

CALCULATED FORCES

Load Case: 0.9D + 1.0W

113 mph Wind with No Ice (Reduced DL)

21 Iterations

Gust Response Factor: 1.10  
 Dead load Factor: 0.90  
 Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-53.72	-57.56	0.00	-6,572.1	0.00	6,572.14	7,418.33	1,948.17	12,308.38	10,684.49	0	0	0.623
5.00	-51.86	-57.08	0.00	-6,284.4	0.00	6,284.35	7,301.25	1,898.51	11,689.01	10,245.93	0.07	-0.13	0.621
10.00	-50.04	-56.62	0.00	-5,998.9	0.00	5,998.93	7,180.40	1,848.86	11,085.63	9,810.88	0.29	-0.27	0.619
15.00	-48.25	-56.16	0.00	-5,715.8	0.00	5,715.83	7,055.79	1,799.20	10,498.24	9,379.76	0.65	-0.41	0.617
20.00	-46.51	-55.68	0.00	-5,435.0	0.00	5,435.05	6,927.41	1,749.55	9,926.83	8,952.99	1.16	-0.56	0.615
25.00	-44.82	-55.19	0.00	-5,156.6	0.00	5,156.64	6,795.26	1,699.89	9,371.42	8,530.99	1.83	-0.71	0.612
30.00	-43.16	-54.69	0.00	-4,880.7	0.00	4,880.68	6,659.35	1,650.24	8,831.99	8,114.16	2.66	-0.87	0.609
35.00	-41.54	-54.19	0.00	-4,607.2	0.00	4,607.21	6,519.67	1,600.58	8,308.55	7,702.94	3.65	-1.03	0.606
40.00	-39.97	-53.68	0.00	-4,336.3	0.00	4,336.27	6,376.23	1,550.93	7,801.10	7,297.74	4.82	-1.2	0.602
45.00	-38.51	-53.39	0.00	-4,067.9	0.00	4,067.87	6,229.02	1,501.27	7,309.64	6,898.97	6.17	-1.37	0.597
45.50	-38.29	-53.14	0.00	-4,041.2	0.00	4,041.18	6,214.09	1,496.31	7,261.37	6,859.46	6.31	-1.39	0.597
50.00	-35.79	-52.70	0.00	-3,802.0	0.00	3,802.04	6,078.04	1,451.62	6,834.17	6,507.05	7.7	-1.55	0.592
53.25	-34.04	-52.42	0.00	-3,630.8	0.00	3,630.76	6,064.40	1,447.19	6,792.57	6,472.48	8.8	-1.67	0.568
55.00	-33.48	-52.08	0.00	-3,539.0	0.00	3,539.03	6,010.55	1,429.81	6,630.43	6,337.23	9.42	-1.74	0.565
60.00	-32.06	-51.56	0.00	-3,278.6	0.00	3,278.64	5,842.67	1,380.16	6,177.97	5,944.23	11.34	-1.92	0.558
65.00	-30.68	-51.05	0.00	-3,020.9	0.00	3,020.86	5,632.47	1,330.50	5,741.49	5,522.15	13.45	-2.1	0.554
70.00	-29.34	-50.54	0.00	-2,765.6	0.00	2,765.63	5,422.26	1,280.85	5,321.01	5,115.61	15.75	-2.29	0.548
75.00	-28.05	-50.05	0.00	-2,512.9	0.00	2,512.93	5,212.06	1,231.19	4,916.51	4,724.61	18.25	-2.48	0.539
80.00	-26.80	-49.56	0.00	-2,262.7	0.00	2,262.71	5,001.85	1,181.54	4,528.00	4,349.16	20.95	-2.68	0.527
85.00	-25.59	-49.08	0.00	-2,014.9	0.00	2,014.92	4,791.65	1,131.88	4,155.48	3,989.25	23.86	-2.88	0.512
90.00	-24.45	-48.68	0.00	-1,769.5	0.00	1,769.50	4,581.44	1,082.23	3,798.95	3,644.88	26.98	-3.08	0.493
93.50	-23.69	-48.44	0.00	-1,599.1	0.00	1,599.13	4,434.30	1,047.47	3,558.89	3,413.08	29.29	-3.22	0.476
95.00	-23.15	-48.27	0.00	-1,526.5	0.00	1,526.47	4,371.23	1,032.57	3,458.40	3,316.06	30.31	-3.28	0.468
97.00	-20.87	-44.11	0.00	-1,429.9	0.00	1,429.93	4,287.15	1,012.71	3,326.66	3,188.89	31.71	-3.36	0.455
99.00	-20.20	-43.95	0.00	-1,341.7	0.00	1,341.71	3,229.68	762.92	2,516.99	2,421.32	33.13	-3.44	0.564
100.00	-17.60	-37.63	0.00	-1,297.8	0.00	1,297.77	3,198.14	755.47	2,468.09	2,374.04	33.86	-3.49	0.555
105.00	-16.78	-37.21	0.00	-1,109.6	0.00	1,109.60	3,040.49	718.23	2,230.79	2,144.61	37.64	-3.73	0.526
110.00	-16.00	-36.79	0.00	-923.6	0.00	923.58	2,882.84	680.98	2,005.49	1,926.83	41.67	-3.96	0.488
115.00	-13.15	-30.86	0.00	-739.6	0.00	739.61	2,725.18	643.74	1,792.17	1,720.72	45.94	-4.19	0.437
120.00	-12.47	-30.46	0.00	-585.3	0.00	585.33	2,567.53	606.50	1,590.85	1,526.26	50.45	-4.4	0.391
125.00	-11.84	-30.08	0.00	-433.0	0.00	433.02	2,409.87	569.26	1,401.52	1,343.46	55.17	-4.6	0.330
130.00	-11.28	-29.79	0.00	-282.6	0.00	282.61	2,252.22	532.02	1,224.18	1,172.32	60.08	-4.77	0.249
132.50	-7.57	-19.00	0.00	-208.1	0.00	208.13	2,173.39	513.40	1,140.00	1,091.12	62.59	-4.84	0.196
135.00	-4.62	-14.85	0.00	-160.6	0.00	160.64	2,094.56	494.78	1,058.83	1,012.83	65.14	-4.9	0.162
139.00	-4.26	-14.66	0.00	-101.3	0.00	101.26	1,968.44	464.99	935.18	893.64	69.27	-4.97	0.116
140.00	-4.12	-14.55	0.00	-86.6	0.00	86.60	1,936.91	457.54	905.47	865.00	70.32	-4.99	0.103
142.25	-3.81	-14.37	0.00	-53.9	0.00	53.87	1,280.82	302.56	593.81	570.52	72.67	-5.02	0.100
145.00	-3.65	-14.26	0.00	-14.4	0.00	14.36	1,223.02	288.90	541.43	519.90	75.56	-5.04	0.033
145.50	-2.57	-7.75	0.00	-7.2	0.00	7.23	1,212.50	286.42	532.17	510.95	76.09	-5.04	0.017
146.00	-0.23	-0.76	0.00	-3.4	0.00	3.36	1,201.99	283.94	522.98	502.08	76.62	-5.04	0.007
149.00	0.00	-0.73	0.00	-1.1	0.00	1.09	1,138.93	269.04	469.55	450.48	79.78	-5.04	0.002

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi													20 Iterations
40 mph Wind with 1" Radial Ice						Ice Dead Load Factor 1.00							Ice Importance Factor 1.00
Gust Response Factor: 1.10		Dead load Factor: 1.20		Wind Load Factor: 1.00									
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-101.74	-10.61	0.00	-1,213.1	0.00	1,213.11	7,418.33	1,948.17	12,308.38	10,684.49	0	0	0.127
5.00	-99.09	-10.52	0.00	-1,160.1	0.00	1,160.08	7,301.25	1,898.51	11,689.01	10,245.93	0.01	-0.02	0.127
10.00	-96.47	-10.44	0.00	-1,107.5	0.00	1,107.47	7,180.40	1,848.86	11,085.63	9,810.88	0.05	-0.05	0.126
15.00	-93.90	-10.36	0.00	-1,055.3	0.00	1,055.27	7,055.79	1,799.20	10,498.24	9,379.76	0.12	-0.08	0.126
20.00	-91.39	-10.28	0.00	-1,003.5	0.00	1,003.46	6,927.41	1,749.55	9,926.83	8,952.99	0.21	-0.1	0.125
25.00	-88.93	-10.19	0.00	-952.1	0.00	952.07	6,795.26	1,699.89	9,371.42	8,530.99	0.34	-0.13	0.125
30.00	-86.53	-10.10	0.00	-901.1	0.00	901.12	6,659.35	1,650.24	8,831.99	8,114.16	0.49	-0.16	0.124
35.00	-84.20	-10.01	0.00	-850.6	0.00	850.62	6,519.67	1,600.58	8,308.55	7,702.94	0.67	-0.19	0.123
40.00	-81.93	-9.92	0.00	-800.6	0.00	800.56	6,376.23	1,550.93	7,801.10	7,297.74	0.89	-0.22	0.123
45.00	-79.72	-9.87	0.00	-751.0	0.00	750.96	6,229.02	1,501.27	7,309.64	6,898.97	1.14	-0.25	0.122
45.50	-79.50	-9.82	0.00	-746.0	0.00	746.03	6,214.09	1,496.31	7,261.37	6,859.46	1.17	-0.26	0.122
50.00	-76.00	-9.74	0.00	-701.8	0.00	701.83	6,078.04	1,451.62	6,834.17	6,507.05	1.42	-0.29	0.120
53.25	-73.53	-9.69	0.00	-670.2	0.00	670.17	6,064.40	1,447.19	6,792.57	6,472.48	1.62	-0.31	0.116
55.00	-72.80	-9.63	0.00	-653.2	0.00	653.21	6,010.55	1,429.81	6,630.43	6,337.23	1.74	-0.32	0.115
60.00	-70.75	-9.53	0.00	-605.1	0.00	605.08	5,842.67	1,380.16	6,177.97	5,944.23	2.09	-0.35	0.114
65.00	-68.77	-9.44	0.00	-557.4	0.00	557.42	5,632.47	1,330.50	5,741.49	5,522.15	2.48	-0.39	0.113
70.00	-66.86	-9.35	0.00	-510.2	0.00	510.23	5,422.26	1,280.85	5,321.01	5,115.61	2.91	-0.42	0.112
75.00	-65.01	-9.25	0.00	-463.5	0.00	463.50	5,212.06	1,231.19	4,916.51	4,724.61	3.37	-0.46	0.111
80.00	-63.24	-9.17	0.00	-417.2	0.00	417.23	5,001.85	1,181.54	4,528.00	4,349.16	3.87	-0.49	0.109
85.00	-61.53	-9.08	0.00	-371.4	0.00	371.40	4,791.65	1,131.88	4,155.48	3,989.25	4.41	-0.53	0.106
90.00	-59.88	-9.00	0.00	-326.0	0.00	326.01	4,581.44	1,082.23	3,798.95	3,644.88	4.98	-0.57	0.103
93.50	-58.78	-8.96	0.00	-294.5	0.00	294.49	4,434.30	1,047.47	3,558.89	3,413.08	5.41	-0.59	0.100
95.00	-58.03	-8.93	0.00	-281.1	0.00	281.06	4,371.23	1,032.57	3,458.40	3,316.06	5.6	-0.61	0.098
97.00	-52.67	-8.16	0.00	-263.2	0.00	263.21	4,287.15	1,012.71	3,326.66	3,188.89	5.85	-0.62	0.095
99.00	-51.71	-8.13	0.00	-246.9	0.00	246.88	3,229.68	762.92	2,516.99	2,421.32	6.12	-0.64	0.118
100.00	-44.77	-6.97	0.00	-238.8	0.00	238.75	3,198.14	755.47	2,468.09	2,374.04	6.25	-0.64	0.115
105.00	-43.59	-6.89	0.00	-203.9	0.00	203.88	3,040.49	718.23	2,230.79	2,144.61	6.95	-0.69	0.109
110.00	-42.46	-6.82	0.00	-169.4	0.00	169.41	2,882.84	680.98	2,005.49	1,926.83	7.69	-0.73	0.103
115.00	-35.12	-5.71	0.00	-135.3	0.00	135.33	2,725.18	643.74	1,792.17	1,720.72	8.48	-0.77	0.092
120.00	-34.10	-5.63	0.00	-106.8	0.00	106.79	2,567.53	606.50	1,590.85	1,526.26	9.31	-0.81	0.083
125.00	-33.14	-5.55	0.00	-78.6	0.00	78.65	2,409.87	569.26	1,401.52	1,343.46	10.18	-0.85	0.072
130.00	-32.24	-5.49	0.00	-50.9	0.00	50.90	2,252.22	532.02	1,224.18	1,172.32	11.09	-0.88	0.058
132.50	-20.90	-3.43	0.00	-37.2	0.00	37.18	2,173.39	513.40	1,140.00	1,091.12	11.55	-0.89	0.044
135.00	-13.59	-2.65	0.00	-28.6	0.00	28.62	2,094.56	494.78	1,058.83	1,012.83	12.02	-0.9	0.035
139.00	-12.96	-2.61	0.00	-18.0	0.00	18.00	1,968.44	464.99	935.18	893.64	12.78	-0.91	0.027
140.00	-12.74	-2.58	0.00	-15.4	0.00	15.39	1,936.91	457.54	905.47	865.00	12.97	-0.92	0.024
142.25	-12.24	-2.54	0.00	-9.6	0.00	9.58	1,280.82	302.56	593.81	570.52	13.41	-0.92	0.026
145.00	-11.94	-2.52	0.00	-2.6	0.00	2.59	1,223.02	288.90	541.43	519.90	13.94	-0.93	0.015
145.50	-7.91	-1.31	0.00	-1.3	0.00	1.33	1,212.50	286.42	532.17	510.95	14.04	-0.93	0.009
146.00	-0.68	-0.15	0.00	-0.7	0.00	0.67	1,201.99	283.94	522.98	502.08	14.13	-0.93	0.002
149.00	0.00	-0.14	0.00	-0.2	0.00	0.22	1,138.93	269.04	469.55	450.48	14.71	-0.93	0.000

CALCULATED FORCES

Load Case: 1.0D + 1.0W

60 mph Wind with No Ice

20 Iterations

Gust Response Factor: 1.10  
 Dead load Factor: 1.00  
 Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-59.77	-14.52	0.00	-1,663.4	0.00	1,663.42	7,418.33	1,948.17	12,308.38	10,684.49	0	0	0.164
5.00	-57.83	-14.40	0.00	-1,590.8	0.00	1,590.82	7,301.25	1,898.51	11,689.01	10,245.93	0.02	-0.03	0.163
10.00	-55.95	-14.29	0.00	-1,518.8	0.00	1,518.79	7,180.40	1,848.86	11,085.63	9,810.88	0.07	-0.07	0.163
15.00	-54.12	-14.18	0.00	-1,447.3	0.00	1,447.34	7,055.79	1,799.20	10,498.24	9,379.76	0.16	-0.1	0.162
20.00	-52.33	-14.06	0.00	-1,376.4	0.00	1,376.45	6,927.41	1,749.55	9,926.83	8,952.99	0.29	-0.14	0.161
25.00	-50.59	-13.94	0.00	-1,306.1	0.00	1,306.14	6,795.26	1,699.89	9,371.42	8,530.99	0.46	-0.18	0.161
30.00	-48.90	-13.82	0.00	-1,236.4	0.00	1,236.43	6,659.35	1,650.24	8,831.99	8,114.16	0.67	-0.22	0.160
35.00	-47.26	-13.70	0.00	-1,167.3	0.00	1,167.34	6,519.67	1,600.58	8,308.55	7,702.94	0.93	-0.26	0.159
40.00	-45.66	-13.57	0.00	-1,098.9	0.00	1,098.86	6,376.23	1,550.93	7,801.10	7,297.74	1.22	-0.3	0.158
45.00	-44.12	-13.50	0.00	-1,031.0	0.00	1,031.01	6,229.02	1,501.27	7,309.64	6,898.97	1.56	-0.35	0.157
45.50	-43.96	-13.44	0.00	-1,024.3	0.00	1,024.26	6,214.09	1,496.31	7,261.37	6,859.46	1.6	-0.35	0.156
50.00	-41.31	-13.33	0.00	-963.8	0.00	963.78	6,078.04	1,451.62	6,834.17	6,507.05	1.95	-0.39	0.155
53.25	-39.44	-13.26	0.00	-920.5	0.00	920.46	6,064.40	1,447.19	6,792.57	6,472.48	2.23	-0.42	0.149
55.00	-38.92	-13.18	0.00	-897.3	0.00	897.26	6,010.55	1,429.81	6,630.43	6,337.23	2.39	-0.44	0.148
60.00	-37.49	-13.05	0.00	-831.4	0.00	831.38	5,842.67	1,380.16	6,177.97	5,944.23	2.87	-0.49	0.146
65.00	-36.11	-12.92	0.00	-766.2	0.00	766.15	5,632.47	1,330.50	5,741.49	5,522.15	3.41	-0.53	0.145
70.00	-34.78	-12.80	0.00	-701.5	0.00	701.54	5,422.26	1,280.85	5,321.01	5,115.61	3.99	-0.58	0.144
75.00	-33.50	-12.68	0.00	-637.6	0.00	637.56	5,212.06	1,231.19	4,916.51	4,724.61	4.62	-0.63	0.141
80.00	-32.26	-12.56	0.00	-574.2	0.00	574.18	5,001.85	1,181.54	4,528.00	4,349.16	5.31	-0.68	0.139
85.00	-31.07	-12.44	0.00	-511.4	0.00	511.40	4,791.65	1,131.88	4,155.48	3,989.25	6.05	-0.73	0.135
90.00	-29.93	-12.34	0.00	-449.2	0.00	449.20	4,581.44	1,082.23	3,798.95	3,644.88	6.84	-0.78	0.130
93.50	-29.16	-12.28	0.00	-406.0	0.00	406.01	4,434.30	1,047.47	3,558.89	3,413.08	7.42	-0.82	0.126
95.00	-28.61	-12.24	0.00	-387.6	0.00	387.59	4,371.23	1,032.57	3,458.40	3,316.06	7.68	-0.83	0.124
97.00	-25.90	-11.19	0.00	-363.1	0.00	363.11	4,287.15	1,012.71	3,326.66	3,188.89	8.04	-0.85	0.120
99.00	-25.19	-11.15	0.00	-340.7	0.00	340.74	3,229.68	762.92	2,516.99	2,421.32	8.4	-0.87	0.149
100.00	-22.01	-9.55	0.00	-329.6	0.00	329.60	3,198.14	755.47	2,468.09	2,374.04	8.58	-0.88	0.146
105.00	-21.23	-9.44	0.00	-281.9	0.00	281.86	3,040.49	718.23	2,230.79	2,144.61	9.54	-0.94	0.139
110.00	-20.48	-9.34	0.00	-234.6	0.00	234.65	2,882.84	680.98	2,005.49	1,926.83	10.56	-1.01	0.129
115.00	-17.00	-7.84	0.00	-187.9	0.00	187.94	2,725.18	643.74	1,792.17	1,720.72	11.65	-1.06	0.116
120.00	-16.33	-7.74	0.00	-148.8	0.00	148.76	2,567.53	606.50	1,590.85	1,526.26	12.79	-1.12	0.104
125.00	-15.70	-7.65	0.00	-110.1	0.00	110.06	2,409.87	569.26	1,401.52	1,343.46	13.99	-1.17	0.089
130.00	-15.10	-7.57	0.00	-71.8	0.00	71.83	2,252.22	532.02	1,224.18	1,172.32	15.24	-1.21	0.068
132.50	-10.08	-4.83	0.00	-52.9	0.00	52.89	2,173.39	513.40	1,140.00	1,091.12	15.88	-1.23	0.053
135.00	-6.45	-3.77	0.00	-40.8	0.00	40.82	2,094.56	494.78	1,058.83	1,012.83	16.52	-1.24	0.043
139.00	-6.04	-3.72	0.00	-25.7	0.00	25.73	1,968.44	464.99	935.18	893.64	17.57	-1.26	0.032
140.00	-5.88	-3.70	0.00	-22.0	0.00	22.00	1,936.91	457.54	905.47	865.00	17.84	-1.27	0.029
142.25	-5.53	-3.65	0.00	-13.7	0.00	13.69	1,280.82	302.56	593.81	570.52	18.44	-1.27	0.028
145.00	-5.35	-3.62	0.00	-3.6	0.00	3.65	1,223.02	288.90	541.43	519.90	19.17	-1.28	0.012
145.50	-3.56	-1.97	0.00	-1.8	0.00	1.84	1,212.50	286.42	532.17	510.95	19.3	-1.28	0.007
146.00	-0.33	-0.19	0.00	-0.8	0.00	0.85	1,201.99	283.94	522.98	502.08	19.44	-1.28	0.002
149.00	0.00	-0.18	0.00	-0.3	0.00	0.27	1,138.93	269.04	469.55	450.48	20.24	-1.28	0.001

# EQUIVALENT LATERAL FORCES METHOD ANALYSIS

(Based on ASCE7-16 Chapters 11, 12 and 15)

Spectral Response Acceleration for Short Period ( $S_S$ ):	0.165
Spectral Response Acceleration at 1.0 Second Period ( $S_1$ ):	0.054
Long-Period Transition Period ( $T_L$ - Seconds):	6
Importance Factor ( $I_e$ ):	1.000
Site Coefficient $F_a$ :	1.600
Site Coefficient $F_v$ :	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.176
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.086
Seismic Response Coefficient ( $C_s$ ):	0.031
Upper Limit $C_s$ :	0.031
Lower Limit $C_s$ :	0.030
Period based on Rayleigh Method (sec):	1.870
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.690
Total Unfactored Dead Load:	59.770 k
Seismic Base Shear (E):	1.840 k

## SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh

Seismic

Segment	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
40	147.5	162	733	0.006	11	200
39	145.75	32	143	0.001	2	40
38	145.25	32	143	0.001	2	40
37	143.625	182	790	0.007	12	225
36	141.125	351	1,475	0.012	23	433
35	139.5	160	659	0.006	10	197
34	137	408	1,633	0.014	25	504
33	133.75	273	1,050	0.009	16	338
32	131.25	282	1,051	0.009	16	349
31	127.5	592	2,097	0.018	32	731
30	122.5	628	2,080	0.017	32	775
29	117.5	664	2,050	0.017	31	820
28	112.5	700	2,009	0.017	31	865
27	107.5	736	1,957	0.016	30	909
26	102.5	772	1,895	0.016	29	954
25	99.5	159	371	0.003	6	196
24	98	711	1,617	0.014	25	878
23	96	724	1,591	0.013	24	895
22	94.25	552	1,176	0.010	18	682
21	91.75	763	1,553	0.013	24	943
20	87.5	1,131	2,125	0.018	33	1,397
19	82.5	1,179	2,007	0.017	31	1,457
18	77.5	1,227	1,880	0.016	29	1,516
17	72.5	1,276	1,746	0.015	27	1,576
16	67.5	1,324	1,606	0.013	25	1,635
15	62.5	1,372	1,462	0.012	22	1,694
14	57.5	1,420	1,315	0.011	20	1,754
13	54.125	508	425	0.004	7	628
12	51.625	1,864	1,439	0.012	22	2,303
11	47.75	2,648	1,793	0.015	28	3,271
10	45.25	151	93	0.001	1	187
9	42.5	1,537	855	0.007	13	1,899
8	37.5	1,585	714	0.006	11	1,958
7	32.5	1,634	578	0.005	9	2,018
6	27.5	1,682	449	0.004	7	2,077
5	22.5	1,730	329	0.003	5	2,137
4	17.5	1,778	222	0.002	3	2,196
3	12.5	1,826	129	0.001	2	2,256



SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh

Seismic

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
2	7.5	1,874	56	0.000	1	2,315
1	2.5	1,922	9	0.000	0	2,375
Generic 8' Omni	149	25	115	0.001	2	31
Telewave ANT150F2 (12lbs)	149	12	55	0.000	1	15
Chameleon 6' Pine Branch	149	135	622	0.005	10	167
Chameleon 6' Pine Branch	145.5	1,800	7,971	0.067	122	2,223
Ericsson RRUS 8843 B2, B66A	146	216	962	0.008	15	267
Ericsson RRUS 4415 B30	146	138	615	0.005	9	170
Ericsson RRUS 4449 B5, B12	146	213	949	0.008	15	263
Ericsson RRUS 4478 B14	146	178	794	0.007	12	220
Ericsson RRUS A2 B2	146	132	588	0.005	9	163
Ericsson RRUS12 LTE B4, B2, B5	146	445	1,980	0.016	30	549
Raycap DC9-48-60-24-8C-EV	146	32	143	0.001	2	40
Generic Round T-Arm	146	938	4,176	0.035	64	1,158
CCI HPA-65R-BUU-H8	146	408	1,817	0.015	28	504
CCI DMP65R-BU8D	146	287	1,279	0.011	20	355
CCI TPA65R-BU8D	146	248	1,102	0.009	17	306
Samsung RF4461d-13A	135	237	926	0.008	14	293
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	135	224	875	0.007	13	277
Samsung MT6413-77A	135	172	671	0.006	10	212
Raycap RCMDC-6627-PF-48	135	32	125	0.001	2	40
JMA Wireless MX06FHG865-HG	135	306	1,194	0.010	18	378
Generic Sector Frame	135	2,400	9,368	0.078	144	2,964
Chameleon 8' Pine Branch	132.5	4,800	18,154	0.152	279	5,929
Chameleon 10' Pine Branch	115	2,805	8,355	0.070	128	3,465
Chameleon 12' Pine Branch	100	3,040	7,154	0.060	110	3,755
Chameleon 12' Pine Branch	97	1,995	4,460	0.037	69	2,464
<b>Totals:</b>		<b>59,770</b>	<b>119,753</b>	<b>1.000</b>	<b>1,839</b>	<b>73,828</b>

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
40	147.5	162	733	0.006	11	140
39	145.75	32	143	0.001	2	28
38	145.25	32	143	0.001	2	28
37	143.625	182	790	0.007	12	158
36	141.125	351	1,475	0.012	23	303
35	139.5	160	659	0.006	10	138
34	137	408	1,633	0.014	25	353
33	133.75	273	1,050	0.009	16	236
32	131.25	282	1,051	0.009	16	244
31	127.5	592	2,097	0.018	32	512
30	122.5	628	2,080	0.017	32	543
29	117.5	664	2,050	0.017	31	574
28	112.5	700	2,009	0.017	31	605
27	107.5	736	1,957	0.016	30	637
26	102.5	772	1,895	0.016	29	668
25	99.5	159	371	0.003	6	137
24	98	711	1,617	0.014	25	615
23	96	724	1,591	0.013	24	626
22	94.25	552	1,176	0.010	18	477
21	91.75	763	1,553	0.013	24	660
20	87.5	1,131	2,125	0.018	33	978
19	82.5	1,179	2,007	0.017	31	1,020
18	77.5	1,227	1,880	0.016	29	1,061
17	72.5	1,276	1,746	0.015	27	1,103
16	67.5	1,324	1,606	0.013	25	1,145
15	62.5	1,372	1,462	0.012	22	1,186
14	57.5	1,420	1,315	0.011	20	1,228
13	54.125	508	425	0.004	7	440

SEISMIC FORCES							
0.9D - 1.0Ev + 1.0Eh		Seismic (Reduced DL)					
Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)	
12	51.625	1,864	1,439	0.012	22	1,612	
11	47.75	2,648	1,793	0.015	28	2,290	
10	45.25	151	93	0.001	1	131	
9	42.5	1,537	855	0.007	13	1,329	
8	37.5	1,585	714	0.006	11	1,371	
7	32.5	1,634	578	0.005	9	1,413	
6	27.5	1,682	449	0.004	7	1,454	
5	22.5	1,730	329	0.003	5	1,496	
4	17.5	1,778	222	0.002	3	1,538	
3	12.5	1,826	129	0.001	2	1,579	
2	7.5	1,874	56	0.000	1	1,621	
1	2.5	1,922	9	0.000	0	1,663	
Generic 8' Omni	149	25	115	0.001	2	22	
Telewave ANT150F2 (12lbs)	149	12	55	0.000	1	10	
Chameleon 6' Pine Branch	149	135	622	0.005	10	117	
Chameleon 6' Pine Branch	145.5	1,800	7,971	0.067	122	1,557	
Ericsson RRUS 8843 B2, B66A	146	216	962	0.008	15	187	
Ericsson RRUS 4415 B30	146	138	615	0.005	9	119	
Ericsson RRUS 4449 B5, B12	146	213	949	0.008	15	184	
Ericsson RRUS 4478 B14	146	178	794	0.007	12	154	
Ericsson RRUS A2 B2	146	132	588	0.005	9	114	
Ericsson RRUS12 LTE B4, B2, B5	146	445	1,980	0.016	30	384	
Raycap DC9-48-60-24-8C-EV	146	32	143	0.001	2	28	
Generic Round T-Arm	146	938	4,176	0.035	64	811	
CCI HPA-65R-BUU-H8	146	408	1,817	0.015	28	353	
CCI DMP65R-BU8D	146	287	1,279	0.011	20	248	
CCI TPA65R-BU8D	146	248	1,102	0.009	17	214	
Samsung RF4461d-13A	135	237	926	0.008	14	205	
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	135	224	875	0.007	13	194	
Samsung MT6413-77A	135	172	671	0.006	10	149	
Raycap RCMDC-6627-PF-48	135	32	125	0.001	2	28	
JMA Wireless MX06FHG865-HG	135	306	1,194	0.010	18	265	
Generic Sector Frame	135	2,400	9,368	0.078	144	2,076	
Chameleon 8' Pine Branch	132.5	4,800	18,154	0.152	279	4,151	
Chameleon 10' Pine Branch	115	2,805	8,355	0.070	128	2,426	
Chameleon 12' Pine Branch	100	3,040	7,154	0.060	110	2,629	
Chameleon 12' Pine Branch	97	1,995	4,460	0.037	69	1,725	
Totals:		59,770	119,753	1.000	1,839	51,689	

1.2D + 1.0Ev + 1.0Eh

Seismic

CALCULATED FORCES													
Seg Elev (ft)	P <sub>u</sub> FY (-) (kips)	V <sub>u</sub> FX (-) (kips)	T <sub>u</sub> MY (ft-kips)	M <sub>u</sub> MZ (fr-kips)	M <sub>u</sub> Mx (ft-kips)	Resultant Moment (ft-kips)	Phi P <sub>n</sub> (kips)	Phi V <sub>n</sub> (kips)	Phi T <sub>n</sub> (kips)	Phi M <sub>n</sub> (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-71.45	-1.84	0.00	-218.50	0.00	218.50	7,418.33	1,948.17	12,308	10,684.49	0.00	0.00	0.03
5.00	-69.14	-1.85	0.00	-209.29	0.00	209.29	7,301.25	1,898.51	11,689	10,245.93	0.00	0.00	0.03
10.00	-66.88	-1.85	0.00	-200.07	0.00	200.07	7,180.40	1,848.86	11,086	9,810.88	0.01	-0.01	0.03
15.00	-64.69	-1.85	0.00	-190.82	0.00	190.82	7,055.79	1,799.20	10,498	9,379.76	0.02	-0.01	0.03
20.00	-62.55	-1.85	0.00	-181.57	0.00	181.57	6,927.41	1,749.55	9,927	8,952.99	0.04	-0.02	0.03
25.00	-60.47	-1.85	0.00	-172.33	0.00	172.33	6,795.26	1,699.89	9,371	8,530.99	0.06	-0.02	0.03
30.00	-58.45	-1.84	0.00	-163.09	0.00	163.09	6,659.35	1,650.24	8,832	8,114.16	0.09	-0.03	0.03
35.00	-56.49	-1.84	0.00	-153.87	0.00	153.87	6,519.67	1,600.58	8,309	7,702.94	0.12	-0.03	0.03
40.00	-54.60	-1.83	0.00	-144.69	0.00	144.69	6,376.23	1,550.93	7,801	7,297.74	0.16	-0.04	0.03
45.00	-54.41	-1.83	0.00	-135.55	0.00	135.55	6,229.02	1,501.27	7,310	6,898.97	0.21	-0.05	0.03
45.50	-51.14	-1.80	0.00	-134.64	0.00	134.64	6,214.09	1,496.31	7,261	6,859.46	0.21	-0.05	0.03
50.00	-48.83	-1.78	0.00	-126.53	0.00	126.53	6,078.04	1,451.62	6,834	6,507.05	0.26	-0.05	0.03
53.25	-48.21	-1.78	0.00	-120.74	0.00	120.74	6,064.40	1,447.19	6,793	6,472.48	0.29	-0.06	0.03
55.00	-46.45	-1.76	0.00	-117.63	0.00	117.63	6,010.55	1,429.81	6,630	6,337.23	0.31	-0.06	0.03
60.00	-44.76	-1.74	0.00	-108.84	0.00	108.84	5,842.67	1,380.16	6,178	5,944.23	0.38	-0.06	0.03
65.00	-43.12	-1.72	0.00	-100.14	0.00	100.14	5,632.47	1,330.50	5,741	5,522.15	0.45	-0.07	0.03

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
70.00	-41.55	-1.69	0.00	-91.56	0.00	91.56	5,422.26	1,280.85	5,321	5,115.61	0.53	-0.08	0.03
75.00	-40.03	-1.67	0.00	-83.09	0.00	83.09	5,212.06	1,231.19	4,917	4,724.61	0.61	-0.08	0.03
80.00	-38.57	-1.64	0.00	-74.76	0.00	74.76	5,001.85	1,181.54	4,528	4,349.16	0.70	-0.09	0.03
85.00	-37.18	-1.61	0.00	-66.57	0.00	66.57	4,791.65	1,131.88	4,155	3,989.25	0.80	-0.10	0.02
90.00	-36.23	-1.59	0.00	-58.54	0.00	58.54	4,581.44	1,082.23	3,799	3,644.88	0.90	-0.10	0.02
93.50	-35.55	-1.57	0.00	-52.99	0.00	52.99	4,434.30	1,047.47	3,559	3,413.08	0.98	-0.11	0.02
95.00	-34.66	-1.54	0.00	-50.64	0.00	50.64	4,371.23	1,032.57	3,458	3,316.06	1.01	-0.11	0.02
97.00	-31.32	-1.45	0.00	-47.55	0.00	47.55	4,287.15	1,012.71	3,327	3,188.89	1.06	-0.11	0.02
99.00	-31.12	-1.44	0.00	-44.66	0.00	44.66	3,229.68	762.92	2,517	2,421.32	1.10	-0.11	0.03
100.00	-26.41	-1.29	0.00	-43.22	0.00	43.22	3,198.14	755.47	2,468	2,374.04	1.13	-0.12	0.03
105.00	-25.50	-1.27	0.00	-36.75	0.00	36.75	3,040.49	718.23	2,231	2,144.61	1.25	-0.12	0.03
110.00	-24.64	-1.24	0.00	-30.42	0.00	30.42	2,882.84	680.98	2,005	1,926.83	1.39	-0.13	0.02
115.00	-20.35	-1.07	0.00	-24.24	0.00	24.24	2,725.18	643.74	1,792	1,720.72	1.53	-0.14	0.02
120.00	-19.58	-1.04	0.00	-18.90	0.00	18.90	2,567.53	606.50	1,591	1,526.26	1.68	-0.15	0.02
125.00	-18.85	-1.01	0.00	-13.71	0.00	13.71	2,409.87	569.26	1,402	1,343.46	1.84	-0.15	0.02
130.00	-18.50	-0.99	0.00	-8.68	0.00	8.68	2,252.22	532.02	1,224	1,172.32	2.00	-0.16	0.02
132.50	-12.23	-0.68	0.00	-6.21	0.00	6.21	2,173.39	513.40	1,140	1,091.12	2.08	-0.16	0.01
135.00	-7.56	-0.44	0.00	-4.52	0.00	4.52	2,094.56	494.78	1,059	1,012.83	2.17	-0.16	0.01
139.00	-7.37	-0.43	0.00	-2.77	0.00	2.77	1,968.44	464.99	935	893.64	2.30	-0.16	0.01
140.00	-6.93	-0.40	0.00	-2.34	0.00	2.34	1,936.91	457.54	905	865.00	2.34	-0.16	0.01
142.25	-6.71	-0.39	0.00	-1.43	0.00	1.43	1,280.82	302.56	594	570.52	2.41	-0.16	0.01
145.00	-6.67	-0.39	0.00	-0.36	0.00	0.36	1,223.02	288.90	541	519.90	2.51	-0.17	0.01
145.50	-4.41	-0.26	0.00	-0.17	0.00	0.17	1,212.50	286.42	532	510.95	2.53	-0.17	0.00
146.00	-0.21	-0.01	0.00	-0.04	0.00	0.04	1,201.99	283.94	523	502.08	2.54	-0.17	0.00
149.00	0.00	-0.01	0.00	0.00	0.00	0.00	1,138.93	269.04	470	450.48	2.65	-0.17	0.00

0.9D - 1.0Ev + 1.0Eh Seismic (Reduced DL)

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-50.03	-1.84	0.00	-216.60	0.00	216.60	7,418.33	1,948.17	12,308	10,684.49	0.00	0.00	0.03
5.00	-48.41	-1.84	0.00	-207.40	0.00	207.40	7,301.25	1,898.51	11,689	10,245.93	0.00	0.00	0.03
10.00	-46.83	-1.84	0.00	-198.19	0.00	198.19	7,180.40	1,848.86	11,086	9,810.88	0.01	-0.01	0.03
15.00	-45.29	-1.84	0.00	-188.97	0.00	188.97	7,055.79	1,799.20	10,498	9,379.76	0.02	-0.01	0.03
20.00	-43.79	-1.84	0.00	-179.74	0.00	179.74	6,927.41	1,749.55	9,927	8,952.99	0.04	-0.02	0.03
25.00	-42.34	-1.84	0.00	-170.53	0.00	170.53	6,795.26	1,699.89	9,371	8,530.99	0.06	-0.02	0.03
30.00	-40.92	-1.83	0.00	-161.33	0.00	161.33	6,659.35	1,650.24	8,832	8,114.16	0.09	-0.03	0.03
35.00	-39.55	-1.83	0.00	-152.17	0.00	152.17	6,519.67	1,600.58	8,309	7,702.94	0.12	-0.03	0.03
40.00	-38.22	-1.82	0.00	-143.04	0.00	143.04	6,376.23	1,550.93	7,801	7,297.74	0.16	-0.04	0.03
45.00	-38.09	-1.82	0.00	-133.96	0.00	133.96	6,229.02	1,501.27	7,310	6,898.97	0.20	-0.05	0.03
45.50	-35.80	-1.79	0.00	-133.06	0.00	133.06	6,214.09	1,496.31	7,261	6,859.46	0.21	-0.05	0.03
50.00	-34.19	-1.77	0.00	-125.01	0.00	125.01	6,078.04	1,451.62	6,834	6,507.05	0.25	-0.05	0.03
53.25	-33.75	-1.76	0.00	-119.27	0.00	119.27	6,064.40	1,447.19	6,793	6,472.48	0.29	-0.06	0.02
55.00	-32.52	-1.74	0.00	-116.18	0.00	116.18	6,010.55	1,429.81	6,630	6,337.23	0.31	-0.06	0.02
60.00	-31.34	-1.72	0.00	-107.46	0.00	107.46	5,842.67	1,380.16	6,178	5,944.23	0.37	-0.06	0.02
65.00	-30.19	-1.70	0.00	-98.85	0.00	98.85	5,632.47	1,330.50	5,741	5,522.15	0.44	-0.07	0.02
70.00	-29.09	-1.68	0.00	-90.35	0.00	90.35	5,422.26	1,280.85	5,321	5,115.61	0.52	-0.08	0.02
75.00	-28.03	-1.65	0.00	-81.97	0.00	81.97	5,212.06	1,231.19	4,917	4,724.61	0.60	-0.08	0.02
80.00	-27.01	-1.62	0.00	-73.73	0.00	73.73	5,001.85	1,181.54	4,528	4,349.16	0.69	-0.09	0.02
85.00	-26.03	-1.59	0.00	-65.64	0.00	65.64	4,791.65	1,131.88	4,155	3,989.25	0.79	-0.09	0.02
90.00	-25.37	-1.56	0.00	-57.70	0.00	57.70	4,581.44	1,082.23	3,799	3,644.88	0.89	-0.10	0.02
93.50	-24.89	-1.55	0.00	-52.23	0.00	52.23	4,434.30	1,047.47	3,559	3,413.08	0.97	-0.11	0.02
95.00	-24.26	-1.52	0.00	-49.91	0.00	49.91	4,371.23	1,032.57	3,458	3,316.06	1.00	-0.11	0.02
97.00	-21.92	-1.43	0.00	-46.86	0.00	46.86	4,287.15	1,012.71	3,327	3,188.89	1.04	-0.11	0.02
99.00	-21.79	-1.42	0.00	-44.01	0.00	44.01	3,229.68	762.92	2,517	2,421.32	1.09	-0.11	0.03
100.00	-18.49	-1.28	0.00	-42.59	0.00	42.59	3,198.14	755.47	2,468	2,374.04	1.12	-0.11	0.02
105.00	-17.85	-1.25	0.00	-36.20	0.00	36.20	3,040.49	718.23	2,231	2,144.61	1.24	-0.12	0.02
110.00	-17.25	-1.22	0.00	-29.96	0.00	29.96	2,882.84	680.98	2,005	1,926.83	1.37	-0.13	0.02
115.00	-14.25	-1.05	0.00	-23.87	0.00	23.87	2,725.18	643.74	1,792	1,720.72	1.51	-0.14	0.02

CALCULATED FORCES													
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
120.00	-13.71	-1.02	0.00	-18.60	0.00	18.60	2,567.53	606.50	1,591	1,526.26	1.66	-0.14	0.02
125.00	-13.19	-0.99	0.00	-13.50	0.00	13.50	2,409.87	569.26	1,402	1,343.46	1.81	-0.15	0.02
130.00	-12.95	-0.97	0.00	-8.55	0.00	8.55	2,252.22	532.02	1,224	1,172.32	1.98	-0.16	0.01
132.50	-8.56	-0.67	0.00	-6.12	0.00	6.12	2,173.39	513.40	1,140	1,091.12	2.06	-0.16	0.01
135.00	-5.30	-0.43	0.00	-4.45	0.00	4.45	2,094.56	494.78	1,059	1,012.83	2.14	-0.16	0.01
139.00	-5.16	-0.42	0.00	-2.73	0.00	2.73	1,968.44	464.99	935	893.64	2.27	-0.16	0.01
140.00	-4.85	-0.40	0.00	-2.31	0.00	2.31	1,936.91	457.54	905	865.00	2.31	-0.16	0.01
142.25	-4.70	-0.38	0.00	-1.41	0.00	1.41	1,280.82	302.56	594	570.52	2.39	-0.16	0.01
145.00	-4.67	-0.38	0.00	-0.36	0.00	0.36	1,223.02	288.90	541	519.90	2.48	-0.16	0.01
145.50	-3.08	-0.25	0.00	-0.16	0.00	0.16	1,212.50	286.42	532	510.95	2.50	-0.16	0.00
146.00	-0.15	-0.01	0.00	-0.04	0.00	0.04	1,201.99	283.94	523	502.08	2.51	-0.16	0.00
149.00	0.00	-0.01	0.00	0.00	0.00	0.00	1,138.93	269.04	470	450.48	2.62	-0.16	0.00

ANALYSIS SUMMARY

Load Case	Base Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	57.58	0.00	71.65	0.00	0.00	6620.61	0.00	0.63
0.9D + 1.0W	57.56	0.00	53.72	0.00	0.00	6572.14	0.00	0.62
1.2D + 1.0Di + 1.0Wi	10.61	0.00	101.74	0.00	0.00	1213.11	0.00	0.13
1.2D + 1.0Ev + 1.0Eh	1.84	0.00	71.45	0.00	0.00	218.50	0.00	0.03
0.9D - 1.0Ev + 1.0Eh	1.84	0.00	50.03	0.00	0.00	216.60	0.00	0.03
1.0D + 1.0W	14.52	0.00	59.77	0.00	0.00	1663.42	0.00	0.16



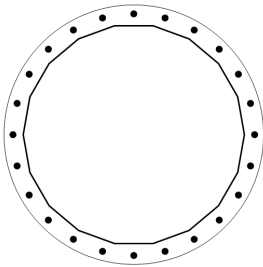
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
6620.61	71.65	57.58

PLATE PARAMETERS (ID# 30617)

Width:	83.5	in
Shape:	Round	
Thickness:	2.5	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	3.5	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	120	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F <sub>y</sub> (ksi)	F <sub>u</sub> (ksi)	Spacing (in)	Offset (°)
Original [ID#31418]	Radial	24	2.25	77.75	A615-75	75	100	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in <sup>2</sup> )	Net Area (in <sup>2</sup> )	Individual Inertia (in <sup>4</sup> )	Moment of Inertia (in <sup>4</sup> )	Threads/in
Pole	70.45"ø x 0.5" (18 Sides)	109.3202	-	-	66872.15	-
Bolt Group	Original (24) 2.25"ø	3.9761	3.2477	0.8393	55007.74	4.5

REACTION DISTRIBUTION

Component	ID	Moment M <sub>u</sub> (k-ft)	Axial Load P <sub>u</sub> (k)	Shear V <sub>u</sub> (k)	Moment Factor
Pole	70.45"ø x 0.5" (18 Sides)	6620.6	71.65	57.58	1.000
Bolt Group	Original (24) 2.25"ø	6620.6	-	57.58	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES					PLATE PROPERTIES		
Flat-to-Flat Diameter:	70.58	in	Flat Width:	12.444	in	Neutral Axis:	120 °
Point-to-Point Diameter:	71.66	in	Flat Radians:	0.349	rad	Bend Line Limits:	3.246 to 4.085 rad
Orientation Offset:	-	°					
Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in <sup>3</sup> )	Applied Moment M <sub>u</sub> (k-in)	Moment Capacity ΦM <sub>n</sub> (k-in)	Flexure Result M <sub>u</sub> /ΦM <sub>n</sub>	
Flats	40.036	0.00	62.556	752.3	2815.0	26.7%	✓
Corners	38.053	0.00	59.457	466.2	2675.6	17.4%	✓
Circumferential	45.036	0.00	70.369	909.5	3166.6	28.7%	✓

PLASTIC ANCHOR ROD ANALYSIS

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P <sub>u</sub> (k)	Applied Shear Load V <sub>u</sub> (k)	Compressive Capacity ΦP <sub>n</sub> (k)	Interaction Result
Original	24	2.25	145.2	3.8	243.6	62.7% ✓

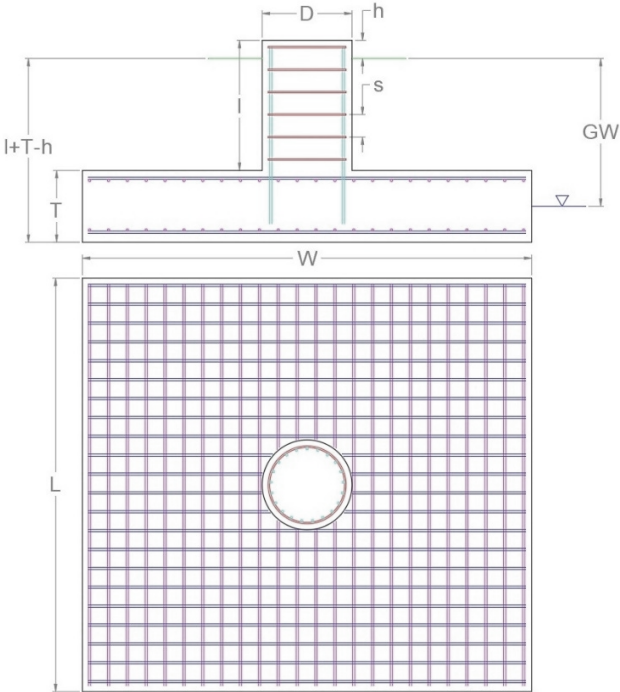
MONOLITHIC MAT & PIER FOUNDATION ANALYSIS

APPLIED GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
6,620.61	71.65	57.58

FOUNDATION PARAMETERS

Mat Length:	L	33	ft
Mat Width:	W	33	ft
Mat Thickness:	T	1.75	ft
Base Depth:	L+T-h	6	ft
Pier Shape:		Round	
Pier Diameter:	D	8	ft
Pier Height above Grade:	h	0.5	ft
Concrete Compressive Strength:		4,500	psi
Mat Top Rebar:		(78) #10 bars [60 ksi]	
Mat Bottom Rebar:		(78) #10 bars [60 ksi]	
Pier Vertical Rebar:		(48) #10 bars [60 ksi]	
Pier Rebar Ties:	s	#5 bars @ 12.0" c/c [60 ksi]	
Rebar Clear Cover:		3.0	in
Tower Eccentricity:	ecc	0	ft
Tower Leg Count		1	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	ft
Soil Unit Weight:	125	pcf
Ultimate Skin Friction:	0	psf
Ultimate Bearing Pressure:	6,000	psf
Bearing Pressure Type:	Net	
Coefficient of Shear Friction:	0.3	

SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, $\Phi_s$	Uplift Strength Reduction Factor, $\Phi_s$	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$
6,994.88	14,382.89	48.6%

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (psf)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$
1,592.00	5,062.00	Diagonal to Pad Edge	31.5%

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, $V_u$ (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s$ $V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$
57.58	279.96	640.6	37.00	237.72	24.0%

MAT REINFORCING STEEL STRENGTH ANALYSIS

Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, $\Phi_b$	Strength Shear Reduction Factor, $\Phi_v$	Strength Compression Reduction Factor, $\Phi_c$
29,000	0.9	0.75	0.65

MAT REINFORCING ONE WAY SHEAR ANALYSIS

One Way Design Shear, $V_u$ (k)	Nominal One Way Shear Capacity, $\Phi_c V_n$ (k)	One Way Shear Controlling Load Direction	Mat One Way Shear Usage, $V_u / \Phi_c V_n$
252.94	667.43	Parallel to Pad Edge	37.9%



MAT REINFORCING PUNCHING SHEAR ANALYSIS

Punching Shear Design Stress, $v_u$ (psi)	Nominal Punching Shear Capacity, $\Phi_c V_n$ (psi)	Mat Punching Shear Usage, $v_u / \Phi_c V_n$
161.2	195.8	82.4%



MAT REINFORCING MOMENT TRANSFER ANALYSIS

Moment Transfer Effective Flexural Width, $w_f$ (in)	Neutral Axis Depth (in)	Pier Moment at Joint, $M_{ut}$ (k-in)	Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in)	Mat Moment Transfer Usage, $0.6 M_{ut} / \Phi M_{sc,f}$
13.25	4.06	0.00	33,423.7	0.0%



MAT REINFORCING FLEXURE ANALYSIS - UPPER STEEL

Factored Moment, $M_u$ (k-ft)	Nominal Flexural Capacity, $\Phi M_n$ (k-ft)	Flexural Steel Controlling Load Direction	Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$
2,046.39	6,723.25	Parallel to Pad Edge	30.4%



MAT REINFORCING FLEXURE ANALYSIS - LOWER STEEL

Factored Moment, $M_u$ (k-ft)	Nominal Flexural Capacity, $\Phi M_n$ (k-ft)	Flexural Steel Controlling Load Direction	Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$
3,216.90	6,723.25	Parallel to Pad Edge	47.8%



PIER REINFORCING STEEL STRENGTH ANALYSIS

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, $\Phi_b$	Strength Shear Reduction Factor, $\Phi_v$	Strength Compression Reduction Factor, $\Phi_c$
87.50	29,000	0.9	0.75	0.65

PIER REINFORCING MOMENT ANALYSIS

Design Moment, $M_u$ (k-ft)	Nominal Moment Capacity, $\Phi_b M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u / \Phi_b M_n$
6,894.12	11,737.35	0.008	58.7%



PIER REINFORCING COMPRESSION ANALYSIS

Design Compression, $P_u$ (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$
71.65	14,315.21	0.5%



PIER REINFORCING SHEAR ANALYSIS

Design Shear, $V_u$ (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$
57.58	910.50	6.3%





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## Non-Ionizing Radiation (NIER) Study

*Site Number:*

209359

*Site Name:*

Salisbury 2

*Location:*

Salisbury, Connecticut

*Tenants:*

Salisbury Volunteer Ambulance Service,  
AT & T Mobility & Verizon Wireless

*Prepared For:*

American Tower, Inc.  
Woburn, Massachusetts

August 21<sup>st</sup>, 2024

260163 P438814

Prepared By:

Gautam J. Sopal, EIT.

Tower Engineering Professionals

Approved By:



*Handwritten signature in blue ink*  
08/22/24



**RF DESIGN & SERVICES**

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## Non-Ionizing Electromagnetic Radiation (NIER) Study

209359 Salisbury 2  
Salisbury, Connecticut

### INTRODUCTION

Tower Engineering Professionals RF Design & Services Division (TEP-RF) of Raleigh, North Carolina, has been retained by American Tower, Inc. (ATC), of Woburn, Massachusetts to evaluate the RF emissions compared to the Maximum Permissible Exposure (MPE) limit for facilities at this location. This evaluation uses compliance standards as outlined in Federal Communications Commission (FCC) document OET-65.

### SITE AND FACILITY CONSIDERATIONS

Site 209359 Salisbury 2 is located at 250 Canaan Rd. in Salisbury, Connecticut at coordinates 42.006255, -73.391456. The support structure is 150' stealth monopine. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are Salisbury Volunteer Ambulance Service (SVAS), AT&T Mobility (AT&T) & Verizon Wireless (VZW). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

### POWER DENSITY CALCULATIONS

Power densities were calculated based on FCC MPE limits for both General Population/Uncontrolled and Occupational/Controlled environments.

For the purpose of this study, a radius of 100' from the base of the tower with a height of 6' above ground level was used, beyond 100' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. Descriptions of RF signage can be found in Appendix 4, RF Hazard Signs. A discussion regarding the FCC limits may be found in Appendix 5, Information Pertaining to MPE Studies. Prediction Models used in this study may be found in Appendix 6, MPE Standards Methodology



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All data used in this study was collected from one or more of the following sources:

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at Load List at 209359 Salisbury 2. RF NIER Study 08/20/2024.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

### SITE MITIGATION & CONTROL

In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the following points:

#### Site Entrance

1. Site ID Sign (tower owner defined)
2. RF Information Sign (Green)

#### Tower Access Point

1. RF Exposure Sign (Red)

#### *Alpha Sector*

No additional mitigation is required.

#### *Beta Sector*

No additional mitigation is required.

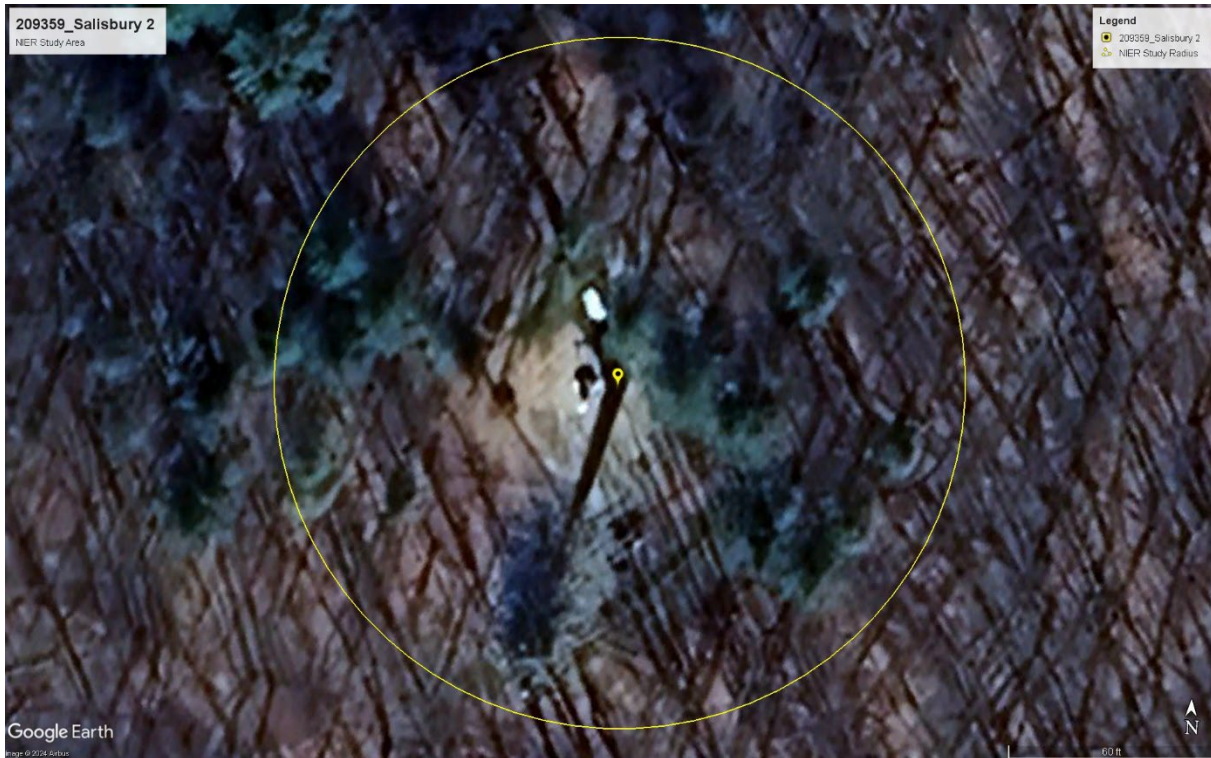
#### *Gamma Sector*

No additional mitigation is required

### COMPLIANCE DETERMINATION

With the above mitigation implemented, this installation **WILL BE** in compliance with current FCC MPE limits as described in FCC OET-65.

## Appendix 1 Site Photos



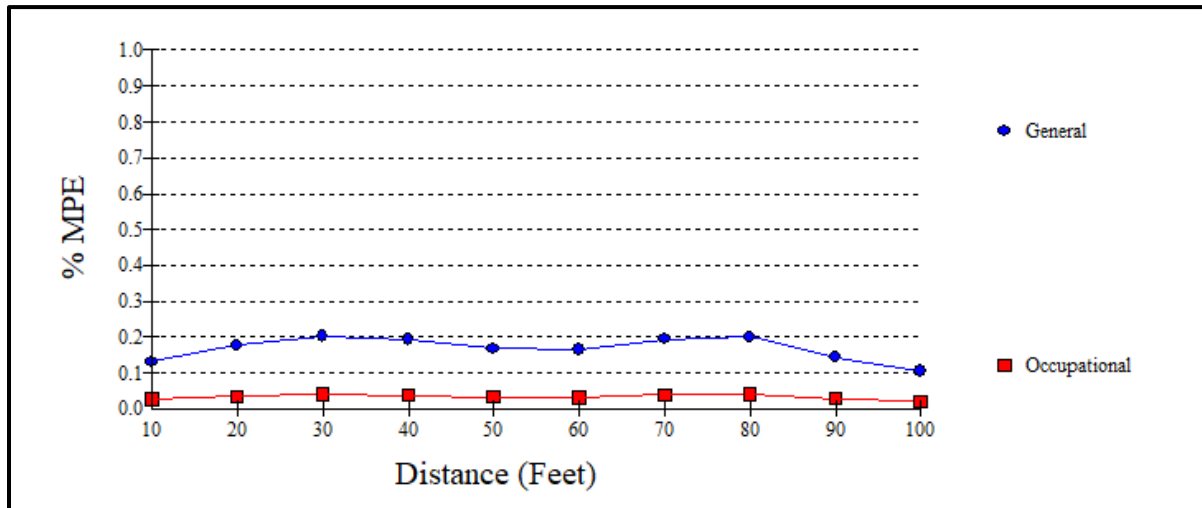
Aerial View of the Site

## Appendix 2 Antenna Inventory

209359 Salisbury 2							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azimuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	SVAS	Generic	8' Omni	800	279	2356	154.0
2	SVAS	Telewave	ANT150F2 (12lbs)	155	-	500	150.0
3	AT&T	CCI	TPA65R-BU8D	1700/1800/1900/2100	000	71127	146.0
4	AT&T	CCI	TPA65R-BU8D	1700/1800/1900/2100	120	71127	146.0
5	AT&T	CCI	TPA65R-BU8D	1700/1800/1900/2100	240	71127	146.0
6	AT&T	CCI	DMP65R-BU8D	1700/1800/1900/2100	000	69867	146.0
7	AT&T	CCI	DMP65R-BU8D	1700/1800/1900/2100	120	69867	146.0
8	AT&T	CCI	DMP65R-BU8D	1700/1800/1900/2100	240	69867	146.0
9	AT&T	CCI	HPA-65R-BUU-H8	1700/1800/1900/2100	000	55362	146.0
10	AT&T	CCI	HPA-65R-BUU-H8	1700/1800/1900/2100	120	55362	146.0
11	AT&T	CCI	HPA-65R-BUU-H8	1700/1800/1900/2100	240	55362	146.0
12	AT&T	CCI	HPA-65R-BUU-H8	1700/1800/1900/2100	000	55362	146.0
13	AT&T	CCI	HPA-65R-BUU-H8	1700/1800/1900/2100	120	55362	146.0
14	AT&T	CCI	HPA-65R-BUU-H8	1700/1800/1900/2100	240	55362	146.0
15	VZW	Samsung	MT6413-77A	3700	100	95295	135.0
16	VZW	Samsung	MT6413-77A	3700	220	95295	135.0
17	VZW	Samsung	MT6413-77A	3700	340	95295	135.0
18	VZW	JMA Wireless	MX06FHG865-HG	700/850/1900/2100	100	48939	135.0
19	VZW	JMA Wireless	MX06FHG865-HG	700/850/1900/2100	220	48939	135.0
20	VZW	JMA Wireless	MX06FHG865-HG	700/850/1900/2100	340	48939	135.0
21	VZW	JMA Wireless	MX06FHG865-HG	700/850/1900/2100	100	48939	135.0
22	VZW	JMA Wireless	MX06FHG865-HG	700/850/1900/2100	220	48939	135.0
23	VZW	JMA Wireless	MX06FHG865-HG	700/850/1900/2100	340	48939	135.0

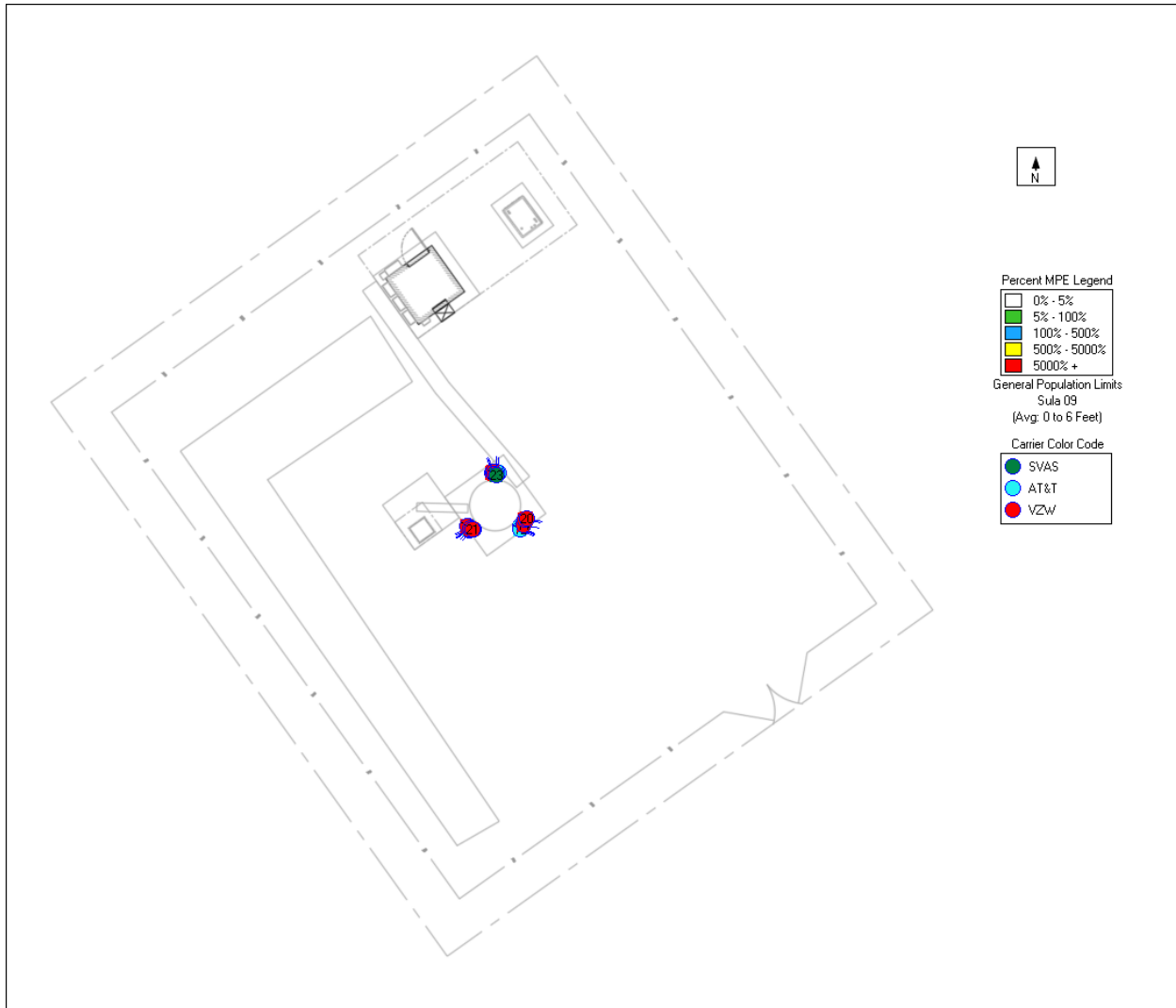


## Appendix 3.1 MPE Limit Study

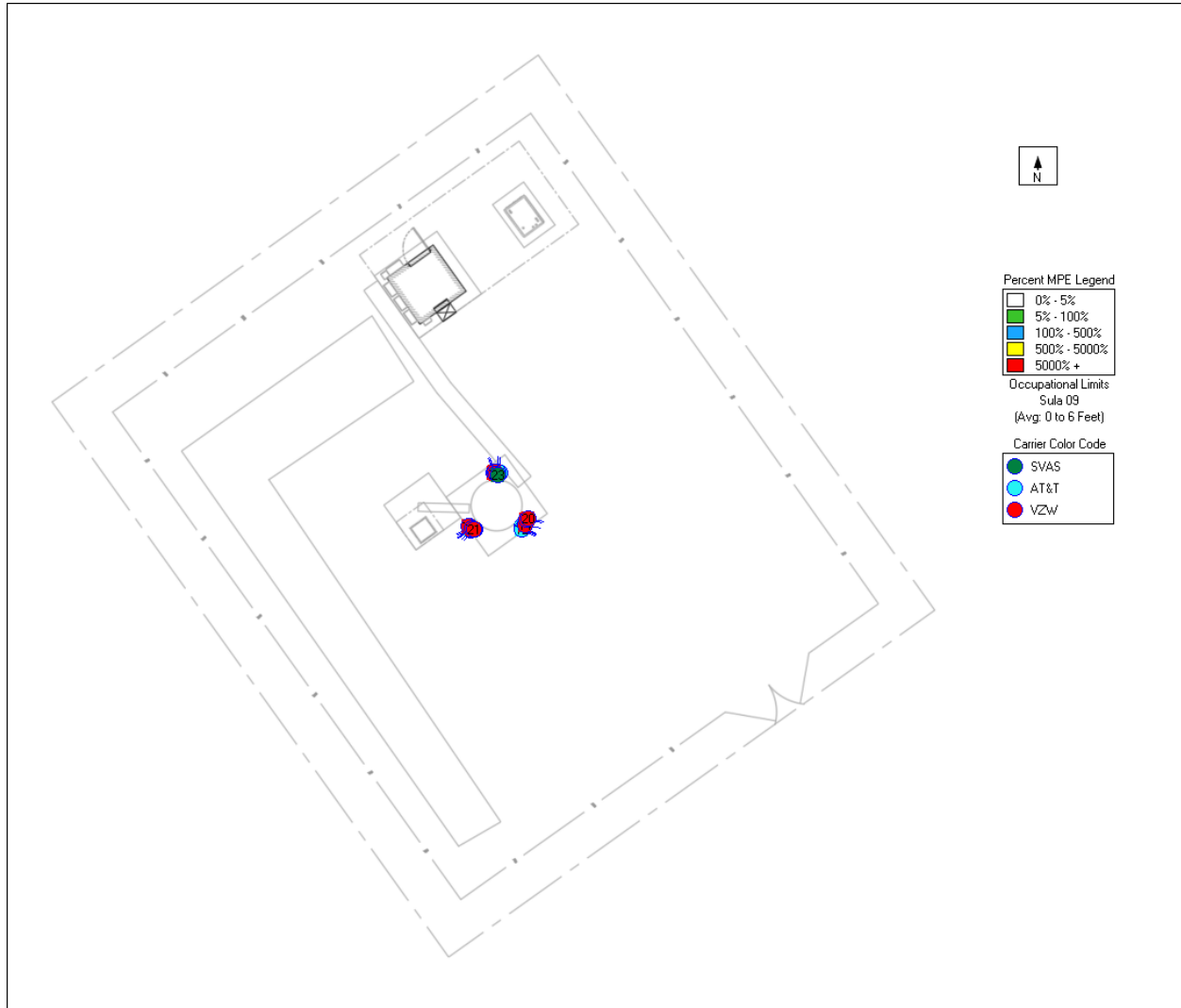


Maximum Power Density (@80'):	0.0013 mW/cm <sup>2</sup>
General Population MPE (@80'):	0.1983%
Occupational MPE (@80'):	0.0397%





## Appendix 3.2 MPE Limit Study General Population



## Appendix 3.2 MPE Limit Study Occupational Limit



## Appendix 4 RF Hazard Signs

RF Safety Exposure Categorization								
Exposure Conditions	Control Measures	Signage						
<ul style="list-style-type: none"> <li>Operational of the source(s) or locations where RF fields are too weak to cause exposures greater than General Public limit.</li> </ul> <table border="1"> <tr> <th>Cat.</th><th>Occupational Worker</th><th>General Public</th></tr> <tr> <td>1</td><td>&lt;20%</td><td>&lt;100%</td></tr> </table> <ul style="list-style-type: none"> <li>Green zone is where the time and spatial-average is below 20% of Occupational Worker limit or &lt;100% of General Public limit.</li> </ul>	Cat.	Occupational Worker	General Public	1	<20%	<100%	<ul style="list-style-type: none"> <li>RF Safety Guideline/NIER report must be submitted to RFSO for approval.</li> <li>No special EME safety practices required in these areas.</li> <li>No signage required except Information sign.</li> </ul>	 <p>*the antenna owner information and Antenna Structure Registration Number and must be displayed on the sign.</p> <p>INFORMATION sign for access to rooftop/access door.</p>
Cat.	Occupational Worker	General Public						
1	<20%	<100%						
<ul style="list-style-type: none"> <li>Operational of the source(s) or locations where RF exposure could cause exposure greater than General Public limit but not the Occupational Worker limit to be exceeded in accessible areas.</li> </ul> <table border="1"> <tr> <th>Cat.</th><th>Occupational Worker</th><th>General</th></tr> <tr> <td>2</td><td>≥20% but &lt;100%</td><td>&gt;100%</td></tr> </table> <ul style="list-style-type: none"> <li>Blue zone is where the spatial average is between 20%-100% of Occupational Worker limit. This limit MUST be less than the Occupational limit.</li> </ul>	Cat.	Occupational Worker	General	2	≥20% but <100%	>100%	<ul style="list-style-type: none"> <li>RF Safety Guideline/NIER report must be submitted to RFSO for approval.</li> <li>Recommended RF safety awareness training for all workers in this area.</li> <li>Controlled areas with barriers and/or signage required in these areas.</li> <li>Do not walk in front of the antenna face or no loitering in this controlled area.</li> <li>Individual MUST have full control over any area where the exposure levels exceed the limit.</li> </ul>	 <p>NOTICE signage shall be posted on the barriers/stanchion to prevent anyone from entering into the area (must be cordon off around the antennas - 4 posts /3 signs).</p> <p>Or must be posted in location that can be easily viewed by individuals that enter the areas of concerns.</p>
Cat.	Occupational Worker	General						
2	≥20% but <100%	>100%						
<ul style="list-style-type: none"> <li>Operational of the source(s) or locations where RF exposure exceeded the Occupational Worker limit in accessible areas.</li> </ul> <table border="1"> <tr> <th>Cat.</th><th>Occupational Worker</th><th>General Public</th></tr> <tr> <td>3</td><td>≥100%</td><td>≥500%</td></tr> </table> <ul style="list-style-type: none"> <li>Yellow zone is where the spatial average is above 100% of Occupational Worker limit.</li> </ul>	Cat.	Occupational Worker	General Public	3	≥100%	≥500%	<ul style="list-style-type: none"> <li>RF Safety Guideline/NIER report must be submitted to RFSO for approval.</li> <li>Individual <b>shall not</b> enter and work in these areas without RS approval</li> <li>Required RF safety training and access area is restricted only for authorized worker.</li> <li>Controlled areas with barriers and signage required in these areas.</li> <li>Do not walk in front of the antenna face.</li> <li>Require reduction of RF power and approval from Radiation Safety prior any work on the antennas.</li> </ul>	 <p>CAUTION signage shall be posted on the barriers/stanchion to prevent anyone from entering into the area (must be cordon off around the antennas - 4 posts /3 signs).</p>
Cat.	Occupational Worker	General Public						
3	≥100%	≥500%						
<ul style="list-style-type: none"> <li>Exposure will exceed exposure limit in accessible areas.</li> </ul> <table border="1"> <tr> <th>Cat.</th><th>Occupational Worker</th><th>General Public</th></tr> <tr> <td>4</td><td>&gt;500%</td><td>&gt;1000%</td></tr> </table> <ul style="list-style-type: none"> <li>Red zone is where the time and spatial-averaged levels fall above 500% of Occupational Worker limit or is not feasible to prevent exposures.</li> </ul>	Cat.	Occupational Worker	General Public	4	>500%	>1000%	<ul style="list-style-type: none"> <li>RF Safety Guideline/NIER report must be submitted to RFSO for approval.</li> <li>MUST re-engineer site to reduce the EME fields.</li> <li><b>No access allowed-Prohibited access!</b> There must be controls to detect any unauthorized enter and terminate the RF energy in the area.</li> <li>Lock out tag out of transmitters during the maintenance of the antenna system.</li> <li>PPE is not sufficient.</li> <li>Special RF training and PPE are required. (Applies only to individuals trained by RS).</li> </ul>	 <p>RF WARNING &amp; Pacemaker DANGER signage or appropriate DANGER sign shall be posted very near radiation RF sources or if appropriate DANGER sign.</p>
Cat.	Occupational Worker	General Public						
4	>500%	>1000%						

## Appendix 5 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.





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MPE limits are defined in terms of power density (units of milliwatts per centimeter squared:  $\text{mW}/\text{cm}^2$ ), electric field strength (units of volts per meter:  $\text{V}/\text{m}$ ) and magnetic field strength (units of amperes per meter:  $\text{A}/\text{m}$ ). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

**Occupational/controlled exposure** limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

**General population/uncontrolled exposure** limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. Additional details can be found in FCC OET 65.

## Appendix 6 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure, and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.



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The FCC's limits for exposure at different frequencies are shown in the following Tables.

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	900/F <sup>2</sup>	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

f = frequency

\* = Plane-wave equivalent power density



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Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	180/F <sup>2</sup>	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

f = frequency

\* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy



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a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex, and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature, but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65.

#### **Cylindrical Model (Near Field Predictions)**

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length





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For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

$\theta_{BW}$  = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.



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### **Spherical Model (Far Field Predictions)**

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered, and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.



**AMERICAN TOWER®**  
CORPORATION

**LETTER OF AUTHORIZATION FOR PERMITTING**

**ATC SITE#/NAME/PROJECT: 209359 / Salisbury 2 / 14869357**  
**SITE ADDRESS: 250 Canaan Rd, Salisbury, CT 06068-1603**  
**APN: SALI M:16 B:05**  
**LICENSEE: CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS**  
**SITE ACQUISITION VENDOR: PYRAMID NETWORK SERVICES LLC**

I, Margaret Robinson, Vice President, UST Legal for American Tower\*, owner of the tower facility located at the address identified above (the "Tower Facility"), do hereby authorize CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS, PYRAMID NETWORK SERVICES LLC, their successors and assigns, and/or their agent, (collectively, the "Licensee") to act as American Tower's non-exclusive agent for the sole purpose of filing and consummating any land-use, building, or electrical permit application(s) as may be required by the applicable permitting authorities for Licensee's telecommunications' installation on the Tower Facility.

I understand that these applications may be approved with conditions. The above authorization is limited to the acceptance by Licensee only of conditions related to Licensee's installation and any such conditions of approval or modifications will be Licensee's sole responsibility.

Signature: \_\_\_\_\_

Margaret Robinson, Vice President, UST Legal  
US Tower Division

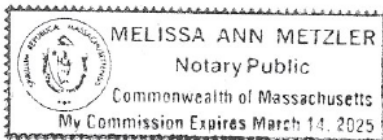
**NOTARY BLOCK**

COMMONWEALTH OF MASSACHUSETTS  
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Vice President, UST Legal for American Tower\* (Tower Facility owner and/or operator), personally known to me (or proved to me based on satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same.

WITNESS my hand and official seal, this 21st day of August 2024.

NOTARY SEAL



Notary Public   
My Commission Expires: March 14, 2025

\* American Tower is defined as American Tower Corporation and any of its affiliates or subsidiaries.

ORIGIN ID:SYRA (315) 569-9241  
CASSANDRA DARMODY  
PYRAMID NETWORK SERVICES LLC  
6615 TOWPATH RD

SHIP DATE: 20DEC24  
ACTWGT: 0.50 LB  
CAD: 114425996/INET4535

E SYRACUSE, NY 13057  
UNITED STATES US

BILL SENDER

TO CURTIS RAND, FIRST SELECTMAN  
TOWN OF SALISBURY  
TOWN HALL  
27 MAIN STREET  
PO BOX 548  
SALISBURY CT 06068

REF: ATCONY2000 SALISBURY2CT14869357  
(860) 435-5170  
INV: ATCONY2000 SALISBURY2CT14869357  
PO: ATCONY2000 SALISBURY2CT14869357

DEPT:

58CJ5/49B9/C6C4



THU - 26 DEC 5:00P

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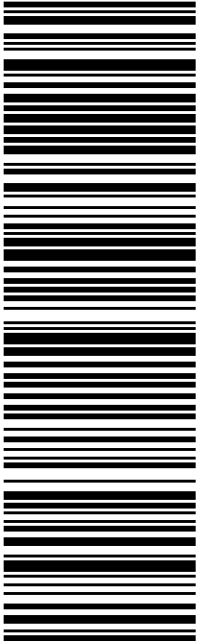
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0201

4Z WND SG

06068

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6615 TOWPATH RD

SHIP DATE: 20DEC24  
ACTWGT: 0.50 LB  
CAD: 114425996/INET4535

E SYRACUSE, NY 13057  
UNITED STATES US

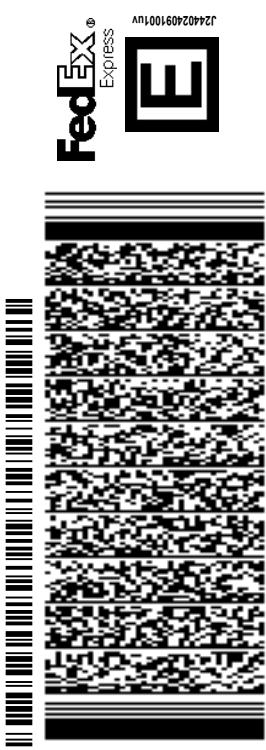
BILL SENDER

TO MICHAEL CARBONE, BUILDING OFFICIAL  
TOWN OF SALISBURY  
TOWN OF SALISBURY  
27 MAIN STREET  
PO BOX 548  
SALISBURY CT 06068

REF: ATCONY2000 SALISBURY2CT14869357  
INV: ATCONY2000 SALISBURY2CT14869357  
PO: ATCONY2000 SALISBURY2CT14869357

DEPT:

58CJ5/49B9/C6C4



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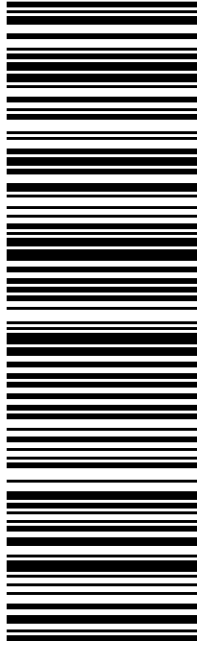
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0201

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ORIGIN ID:SYRA (315) 569-9241  
CASSANDRA DARMODY  
PYRAMID NETWORK SERVICES LLC  
6615 TOWPATH RD

SHIP DATE: 20DEC24  
ACTWGT: 0.50 LB  
CAD: 114425996/INET4535

E SYRACUSE, NY 13057  
UNITED STATES US

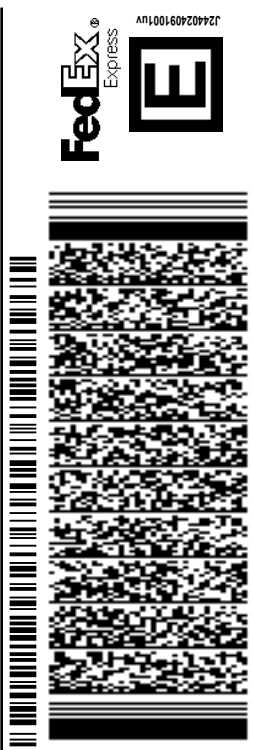
BILL SENDER

TO **PROPERTY MANAGEMENT**  
**AMERICAN TOWER CORP**  
**10 PRESIDENTIAL WAY**

**WOBURN MA 01801**

(919) 306-1512  
IN: ATCNV2000 SALISBURY2CT14869357  
PO: ATCNV2000 SALISBURY2CT14869357

REF: ATCNV2000 SALISBURY2CT14869357  
DEPT:



TRK# 7709 4626 1801

0201

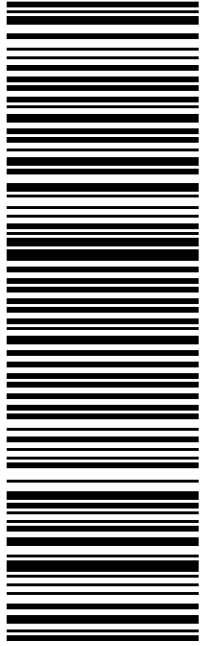
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CASSANDRA DARMODY  
PYRAMID NETWORK SERVICES LLC  
6615 TOWPATH RD

SHIP DATE: 20DEC24  
ACTWGT: 0.50 LB  
CAD: 114425996/NET:

**BILL SENDER**

E SYRACUSE, NY 13057  
UNITED STATES US

TO **SALISBURY SCHOOL INC**  
**SALISBURY SCHOLL INC**  
**251 CANAAN ROAD**

**SALISBURY CT 06068**

(860) 435-5700  
 REF: ATCNV2000 SALISBURY2CT14869357  
 INV: ATCNV2000 SALISBURY2CT14869357  
 PO: ATCNV2000 SALISBURY2CT14869357  
 DEPT:

DEPT:

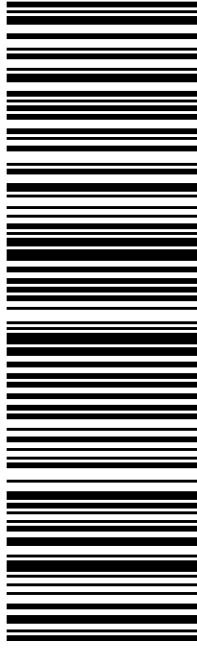


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TRK# 7709 4674 3243

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CT-US  
BDL  
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