STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

October 28, 2008

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-031-081015** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at Mohawk Mountain Road, Cornwall, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any remaining unused antenna mounts and/or platforms at the 57-foot and 65-foot levels of the tower are removed within one year of the date of this acknowledgement unless they can be utilized by another carrier within that time period;
- The proposed coax shall be double-stacked in the same location as the existing coax;
- The microwave dish shall be installed within one year of the date of this acknowledgement;
- The microwave dish shall be removed within 18 months of the installation; and
- The Council shall be notified in writing when the microwave dish is removed.

The proposed modifications are to be implemented as specified here and in your notice dated October 15, 2009, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/jb

c: The Honorable Gordon M. Ridgway, First Selectman, Town of Cornwall
Karl Nilsen, Zoning Enforcement Officer, Town of Cornwall
American Tower Corporation

cornwall

ROBINSON & COLE LLP

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
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Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

October 20, 2009

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Removal of Microwave Dish Antennas**

Dear Mr. Phelps:

This letter will serve as notice that the temporary microwave dish antennas installed on the existing Mohawk Mountain Road tower in Cornwall, Connecticut and the 113 Brush Hill Road tower in Goshen, Connecticut have been removed. The installation of the microwave dish antennas as described in filing EM-VER-031-081015 and EM-VER-055-081015 provided Cellco Partnership d/b/a Verizon Wireless with a temporary microwave connection between the two facilities until a T1 line could be installed at the Mohawk Mountain site. That installation has now been completed and, as stated above, the microwave dish antennas have been removed.

If you have any questions regarding either of these facilities please do not hesitate to contact me.

Sincerely,

Kenneth C. Baldwin

KCB/kmd
Copy to:
Tim Parks
Sandy M. Carter

ROBINSON & COLE

EM-VER-055-081015

KENNETH C. BALDWIN

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ORIGINAL

October 15, 2008

Via Hand Delivery

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification**
Antenna Swap and Temporary Microwave Installation
Mohawk Mountain Road, Cornwall, Connecticut

Dear Mr. Phelps:

Alltel Communications ("Alltel") currently maintains antennas at the 65-foot and 57-foot levels on the existing 65-foot tower off Mohawk Mountain Road in Cornwall, Connecticut. The tower is owned by American Tower Corporation.

As the Council is aware, on May 30, 2008, Cellco acquired Alltel's CT-1 RSA FCC license for Litchfield County, Connecticut. Cellco now intends to remove Alltel's antennas and install six (6) LPA 80080/6CF and six (6) LPA 185080/12CF panel antennas at the 48-foot level of the tower. In addition to the panel antennas, Cellco will install an Andrew P3F-52N7A microwave dish antenna also at the 48-foot level. Attached behind Tab 1 are the specifications for Cellco's proposed antennas.

The microwave dish antenna will connect Cellco's Mohawk Mountain cell site to its Goshen South cell site. This microwave transmission link is needed to compensate for the lack of T-1 line availability at Mohawk Mountain. Efforts to install additional T-1 service at Mohawk Mountain are underway. As soon as the additional T-1 service is available the microwave dish antenna will be removed.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Gordon M. Ridgway, First Selectman of the Town of Cornwall. Pursuant to a Council directive, a copy of this letter is also being sent to the State of Connecticut Department of Environmental Protection, the owner of the property on which the tower is located.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in the increase in the overall height of the existing structure. Cellco's replacement antennas will be located at the 48-foot level of the 65-foot tower.

2. The proposed antenna modifications will not require the extension of the site boundaries.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

4. The operation of the replacement antennas will not increase radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. Attached behind Tab 2 is a Radio Frequency Field Survey prepared by C-Squared Systems. This survey indicates that the highest total Maximum Permissible Exposure ("MPE") for actual emissions from the cell site, as measured in the field, and Cellco's proposed emissions from its panel and dish antennas will remain far below the FCC limits.

Also attached is a Structural Analysis Report confirming that the tower can support the proposed modifications. (See Tab 3).

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Gordon M. Ridgway, Cornwall First Selectman
Gina McCarthy, DEP Commissioner
Sandy M. Carter

Proposed ANTENNA

Vertically Polarized, Log Periodic 63° / 14.5 dBd

LPA-80063/6CF ___

When ordering replace "___" with connector type.

Mechanical specifications

Length	1800 mm	70.9 in
Width	380 mm	15.0 in
Depth	332 mm	13.1 in
Depth with z-bracket	372 mm	14.6 in
[4] Weight	12.3 kg	27.0 lbs
Wind Area		
Fore/Aft	0.68 m^2	7.4 ft^2
Side	0.60 m^2	6.5 ft^2
Rated Wind Velocity (Safety factor 2.0)	>219 km/hr	>136 mph
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	993 N	223 lbs
Side	872 N	196 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

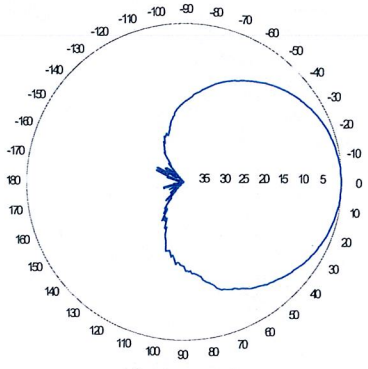
Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit #21699999

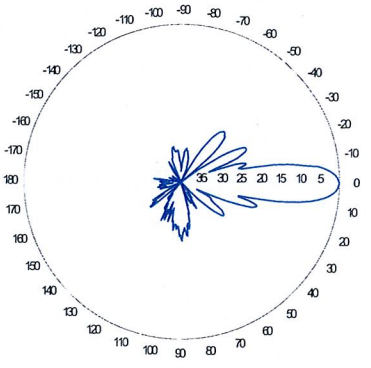
Electrical specifications

	Frequency Range	806-960 MHz
	Impedance	50Ω
[3]	Connector(s)	NE or E-DIN 1 port / center
[1]	VSWR	≤ 1.4:1
	Polarization	Vertical
[1]	Gain	14.5 dBd
[2]	Power Rating	500 W
[1]	Half Power Angle	
	H-Plane	63°
	E-Plane	10°
[1]	Electrical Downtilt	0°
[1]	Null Fill	10%
	Lightning Protection	Direct Ground

Radiation pattern[1]



Horizontal

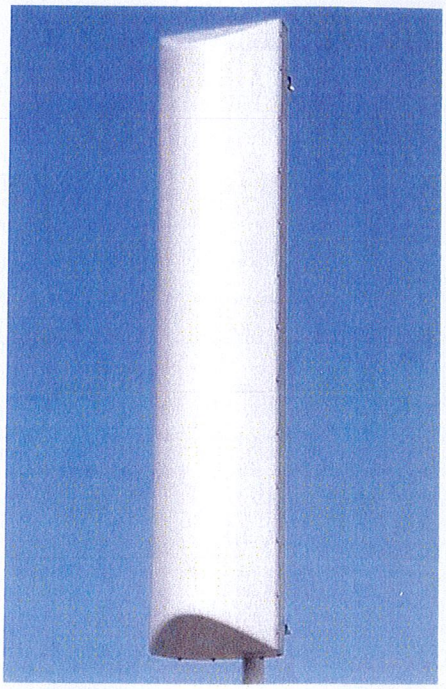


Vertical

Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

CF Denotes a Center-Fed Connector.

806-960 MHz

Amphenol Antel, Inc. 1300 Capital Drive Rockford, Illinois 61109 USA Tel. (815) 399-0001
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@antelinc.com www.antelinc.com

Amphenol Antel, Inc. The Antenna Technology Company

Revision Date: 6/17/08

Proposed Antenna

Vertically Polarized, Log Periodic 63° / 18.5 dBi

LPA-185063/12CF ___

When ordering replace "___" with connector type.

Mechanical specifications

Length	1806 mm	71.1 in
Width	167 mm	6.6 in
Depth	148 mm	5.8 in
Depth with t-bracket	176 mm	6.9 in
[4] Weight	6.1 kg	13.5 lbs
Wind Area		
Fore/Aft	0.30 m^2	3.3 ft^2
Side	0.27 m^2	2.9 ft^2
Rated Wind Velocity (Safety factor 2.0)	>224 km/hr	>139 mph
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	479 N	107.6 lbs
Side	434 N	97.6 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in).

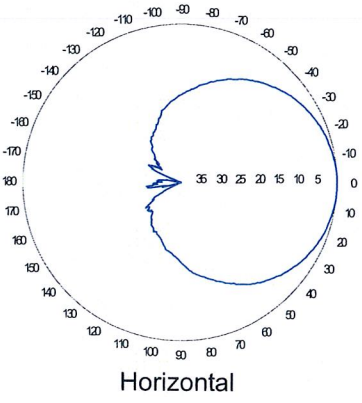
Mounting bracket kit #26799997
Downtilt bracket kit #26799999

The downtil bracket kit includes the mounting bracket kit.

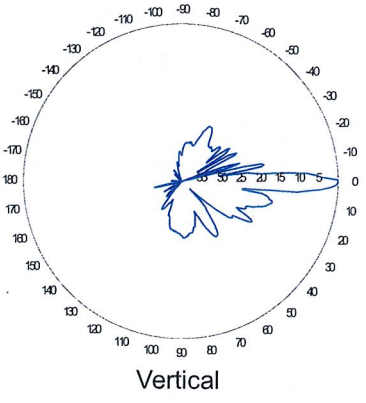
Electrical specifications

	Frequency Range	1850-1990 MHz
	Impedance	50Ω
[3]	Connector(s)	NE or E-DIN 1 port / center
[1]	VSWR	≤ 1.4:1
	Polarization	Vertical
[1]	Gain	18.5 dBi
[2]	Power Rating	250 W
[1]	Half Power Angle	
	H-Plane	63°
	E-Plane	5°
[1]	Electrical Downtilt	0°
[1]	Null Fill	10%
	Lightning Protection	Direct Ground

Radiation pattern[1]



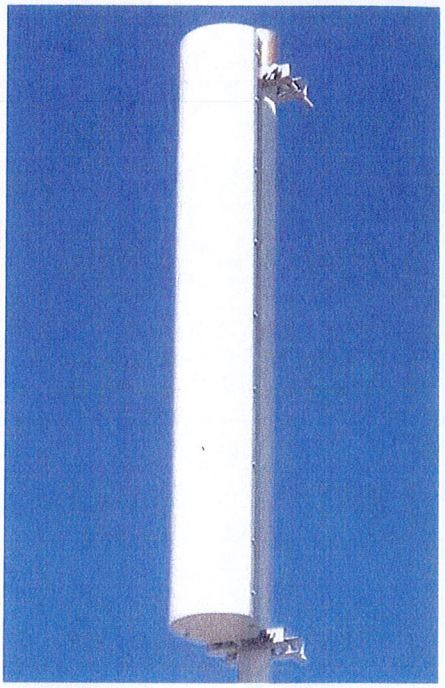
Horizontal



Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

CF Denotes a Center-Fed Connector.

1850-1990 MHz

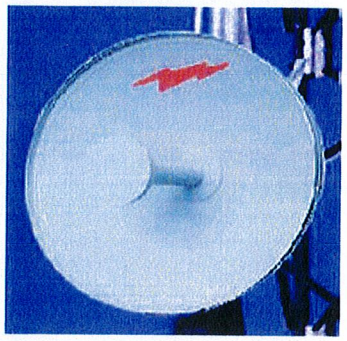
Amphenol Antel, Inc. 1300 Capital Drive Rockford, Illinois 61109 USA Tel. (815) 399-0001
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@antelinc.com www.antelinc.com

Revision Date: 712/07

Product Specifications

P3F-52-N7A

3 ft Standard Parabolic Unshielded Antenna, single-polarized, unpressurized, 5.25–5.85 GHz, type N female flange, gray antenna with flash, standard pack—one-piece reflector



CHARACTERISTICS

General Specifications

Diameter, nominal	0.9 m | 3 ft
Antenna Input	N Female
Antenna Type	PF - Standard Parabolic Unshielded Antenna, single-polarized, unpressurized
Polarization	Single
Reflector Construction	One-piece reflector
Antenna Color	Gray
Flash Included	Yes
Packing	Standard pack

Electrical Specifications

Operating Frequency Band	5.250 – 5.850 GHz
Gain, Top Band	33.5 dBi
Gain, Mid Band	33.4 dBi
Gain, Low Band	33.4 dBi
Front-to-Back Ratio	42 dB
Cross Polarization Discrimination (XPD)	30 dB
Beamwidth, Horizontal	3.8 °
Beamwidth, Vertical	3.8 °
VSWR	1.50
Return Loss	14.0 dB
Radiation Pattern Envelope Reference (RPE)	4529
Electrical Compliance	ETSI 302 217 Class 1

Mechanical Specifications

Net Weight	18 kg | 40 lb

Packed Dimensions

Gross Weight, Packed Antenna	18.0 kg | 39.7 lb

From North America, toll free
Telephone: 1-800-255-1479
Fax: 1-800-349-5444

Outside North America
Telephone: +1-708-873-2307
Fax: +1-779-435-8579

Product Specifications

P3F-52-N7A

Length	115.0 cm | 45.3 in
Width	87.0 cm | 34.3 in
Height	115.0 cm | 45.3 in

* Footnotes

Cross Polarization Discrimination (XPD)	The difference between the peak of the co-polarized main beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.
Front-to-Back Ratio	Denotes highest radiation relative to the main beam, at 180° ± 40°, across the band. Production antennas do not exceed rated values by more than 2 dB unless stated otherwise.
Gain, Mid Band	For a given frequency band, gain is primarily a function of antenna size. The gain of Andrew antennas is determined by either gain by comparison or by computer integration of the measured antenna patterns.
Operating Frequency Band	Bands correspond with CCIR recommendations or common allocations used throughout the world. Other ranges can be accommodated on special order.
Packing	Andrew standard packing is suitable for export. Antennas are shipped as standard in totally recyclable cardboard or wire-bound crates (dependent on product). For your convenience, Andrew offers heavy duty export packing options.
Radiation Pattern Envelope Reference (RPE)	Radiation patterns determine an antenna's ability to discriminate against unwanted signals under conditions of radio congestion. Radiation patterns are dependent on antenna series, size, and frequency.
Return Loss	The figure that indicates the proportion of radio waves incident upon the antenna that are rejected as a ratio of those that are accepted.
VSWR	Maximum; is the guaranteed Peak Voltage-Standing-Wave-Ratio within the operating band.

From North America, toll free
Telephone: 1-800-255-1479
Fax: 1-800-349-5444

Outside North America
Telephone: +1-708-873-2307
Fax: +1-779-435-8579

Radio Frequency Field Survey

Site Name: **Mohawk Mountain**
Site Address: **Toumey Road**
Litchfield, CT 06759

C² Systems

920 Candia Road
Manchester, NH 03109
(603) 657-9702
support@csquaredsystems.com

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Introduction

At the request of Verizon Wireless, radio frequency measurements were made in the vicinity of the wireless tower located on Toumey Road in Litchfield, CT on September 16, 2008. The coordinates of the tower as provided by Verizon Wireless are N 41° 49' 17", W 73° 17 50". The results of the measurements as well as the calculated values for the proposed Verizon Wireless antennas are presented in this report.

Survey measurements are expressed as a percentage of the Maximum Permissible Exposure (MPE) limits as listed in the FCC OET Bulletin 65. OET Bulletin 65 was prepared to provide assistance in determining whether proposed or existing transmitting facilities, operations or devices comply with limits for human exposure to radio frequency fields adopted by the Federal Communications Commission. Measurement results expressed in this report are for uncontrolled public access. The FCC's guidelines establish separate exposure limits for "general population/uncontrolled exposure," and for "occupational/controlled exposure."

FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include limits for Maximum Permissible Exposure (MPE) for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. 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.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the cellular band is 579 $\mu W/cm^2$, and the general population exposure limit for the PCS band is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population / uncontrolled exposure and for occupational / controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

Measurement Procedures

Frequencies from 300 KHz to 50 GHz were measured using the Narda A8722D probe in conjunction with the 8718B survey meter. The A8722D probe is "shaped" such that in a mixed signal environment (i.e.: more than one frequency band is used in a particular location) it accurately measures the percent of MPE.

From FCC OET Bulletin No. 65 - Edition 97-01 – "A useful characteristic of broadband probes used in multiple-frequency RF environments is a frequency-dependent response that corresponds to the variation in MPE limits with frequency. Broadband probes having such a "shaped" response permit direct assessment of compliance at sites where RF fields result from antennas transmitting over a wide range of frequencies. Such probes can express the composite RF field as a percentage of the applicable MPEs".

Probe Description – As suggested in FCC OET Bulletin No. 65 - Edition 97-01, the response of the measurement instrument should be essentially isotropic, (i.e., independent of orientation or rotation angle of the probe). For this reason, the Narda A8722 Isotropic probe was used for these measurements.

Sampling Description: At each measurement location, a spatially averaged measurement is collected over the height of an average human body. The 8718B survey meter performs a time average measurement while the user slowly moves the probe over a distance range of 0 cm to 200 cm (about 6 feet) above ground level. The results recorded at each measurement location include both average and peak values over the spatial distance.

Instrumentation Information: A summary of specifications for the equipment used is provided in the table below.

Manufacturer	Narda Microwave			
Probe	A8722D, Serial Number 07030			
Calibration Date	11/26/2007			
Calibration Interval	12 Months			
Meter	8718B, Serial Number 06028			
Calibration Date	11/26/2007			
Calibration Interval	24 Months			
Probe Specifications	**Freq Range**	**Field Measured**	**Standard**	**Measurement Range**
	300 KHz-50 GHz	E	FCC 1997	0.3 – 300 % of Controlled

Table 1: Instrumentation Information

Instrument Measurement Uncertainty: The total measurement uncertainty of the NARDA measurement probe and meter is no greater than ±3 dB. The factors which contribute to this include the probe's frequency response deviation, calibration uncertainty, ellipse ratio, and isotropic response. Every effort is taken to reduce the overall uncertainty during measurement collection including rotating the probe about the axis of the handle and pointing the probe directly at the likely highest source of emissions.

Calculations

All calculations were based on the following information supplied by Verizon Wireless.

1900 MHz PCS Site Information	Alpha	Beta	Gamma
Antenna Model	Antel LPA 185063/12CF	Antel LPA 185063/12CF	Antel LPA 185063/12CF
Downtilt	0°	0°	0°
Rad Center (AGL)	48'	48'	48'
850 MHz Cellular Site Information	**Alpha**	**Beta**	**Gamma**
Antenna Model	Antel LPA 80063/6CF	Antel LPA 80063/6CF	Antel LPA 80063/6CF
Downtilt	0°	0°	0°
Rad Center (AGL)	48'	48'	48'
5.4 GHz Micowave Site Information			
Antenna Model	P3F-52-N7A		
Rad Center (AGL)	48'		
Power Assumptions			
PCS	3 sectors	6 channels / sector	500 W EIRP / channel
Cellular	3 sectors	6 channels / sector	100 W EIRP / channel
Microwave	1 sector	1 channel / sector	1 W EIRP/channel

Table 2: Proposed Verizon Antenna Information

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{EIRP}{\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:
EIRP = Effective Isotropic Radiated Power
R = Radial Distance = $\sqrt{(H^2 + V^2)}$
H = Horizontal Distance from antenna
V = Vertical Distance to rad center of antenna
Off Beam Loss is determined by the selected antenna patterns

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished installation.

Results

Results, both measured and predicted, and a description of each survey location are detailed in the table presented below. Measurements were performed on September 16, 2008 between the hours of 12:00 PM and 2:00 PM.

Measurement locations are portrayed in the photos below. Aerial views, with measurement points, of the surrounding area are shown in Figures 1 and 2.

Predicted results were estimated by calculating the %MPE of the proposed Verizon Wireless antennas given the mounting height of the antennas, the number of transmitters, and the max ERP for each sector. This predicted %MPE value was then added to each measured value to estimate a total %MPE value at the given distance from the base of the tower. An analysis of the antenna patterns was conducted to determine whether each individual measurement point would fall within the main beam of the transmitting antenna given the mounting heights of the antennas, antenna pattern and the distance between tower and measurement point. The results are detailed in Table 3 below.

Measurement Point	Latitude	Longitude	Distance from Tower (ft)	Measured %MPE	Predicted %MPE	Total %MPE
1	N 41° 49' 17.42"	W 73° 17' 50.89"	294	5.35%	2.59%	7.94%
2	N 41° 49' 17.28"	W 73° 17' 50.69"	276	9.40%	2.93%	12.33%
3	N 41° 49' 16.95"	W 73° 17' 50.75"	274	6.40%	2.97%	9.37%
4	N 41° 49' 16.82"	W 73° 17' 50.62"	262	2.45%	3.24%	5.69%
5	N 41° 49' 16.69"	W 73° 17' 50.49"	252	7.30%	3.49%	10.79%
6	N 41° 49' 16.47"	W 73° 17' 50.36"	242	3.80%	3.78%	7.58%
7	N 41° 49' 16.56"	W 73° 17' 50.18"	228	3.45%	4.24%	7.69%
8	N 41° 49' 16.70"	W 73° 17' 49.95"	211	3.20%	4.93%	8.13%
9	N 41° 49' 16.92"	W 73° 17' 50.20"	232	4.95%	4.10%	9.05%
10	N 41° 49' 17.05"	W 73° 17' 50.46"	254	6.30%	3.44%	9.74%
11	N 41° 49' 16.27"	W 73° 17' 50.79"	276	1.90%	2.93%	4.83%
12	N 41° 49' 16.55"	W 73° 17' 50.86"	280	0.95%	2.85%	3.80%
13	N 41° 49' 16.63"	W 73° 17' 51.25"	309	2.40%	2.35%	4.75%
14	N 41° 49' 16.98"	W 73° 17' 51.01"	293	1.80%	2.60%	4.40%
15	N 41° 49' 16.88"	W 73° 17' 50.48"	252	1.05%	3.49%	4.54%
16	N 41° 49' 17.98"	W 73° 17' 50.41"	283	4.55%	2.79%	7.34%
17	N 41° 49' 17.05"	W 73° 17' 48.99"	146	2.35%	0.99%	3.34%
18	N 41° 49' 16.02"	W 73° 17' 48.53"	118	1.05%	1.45%	2.50%
19	N 41° 49' 16.78"	W 73° 17' 48.18"	79	1.20%	2.85%	4.05%
20	N 41° 49' 16.70"	W 73° 17' 47.68"	41	1.70%	6.62%	8.32%
21	N 41° 49' 16.44"	W 73° 17' 47.38"	22	2.35%	10.15%	12.50%
22	N 41° 49' 16.29"	W 73° 17' 46.84"	40	2.20%	6.78%	8.98%
23	N 41° 49' 16.85"	W 73° 17' 46.70"	45	1.70%	6.02%	7.72%
24	N 41° 49' 17.07"	W 73° 17' 47.07"	50	1.70%	5.35%	7.05%
25	N 41° 49' 17.11"	W 73° 17' 47.63"	64	2.05%	3.89%	5.94%
26	N 41° 49' 17.58"	W 73° 17' 48.27"	131	1.15%	1.21%	2.36%
27	N 41° 49' 18.15"	W 73° 17' 48.61"	193	1.80%	5.85%	7.65%
28	N 41° 49' 18.95"	W 73° 17' 48.85"	272	1.70%	3.01%	4.71%
29	N 41° 49' 18.56"	W 73° 17' 47.03"	201	1.05%	5.41%	6.46%
30	N 41° 49' 19.74"	W 73° 17' 43.66"	416	3.20%	1.30%	4.50%
31	N 41° 49' 20.80"	W 73° 17' 46.27"	433	0.45%	1.21%	1.66%
32	N 41° 49' 20.99"	W 73° 17' 50.38"	509	0.50%	0.87%	1.37%
33	N 41° 49' 21.36"	W 73° 17' 54.87"	758	1.05%	0.40%	1.45%
34	N 41° 49' 21.11"	W 73° 18' 0.50"	1108	1.25%	0.19%	1.44%

Table 3: Measured and Calculated Results

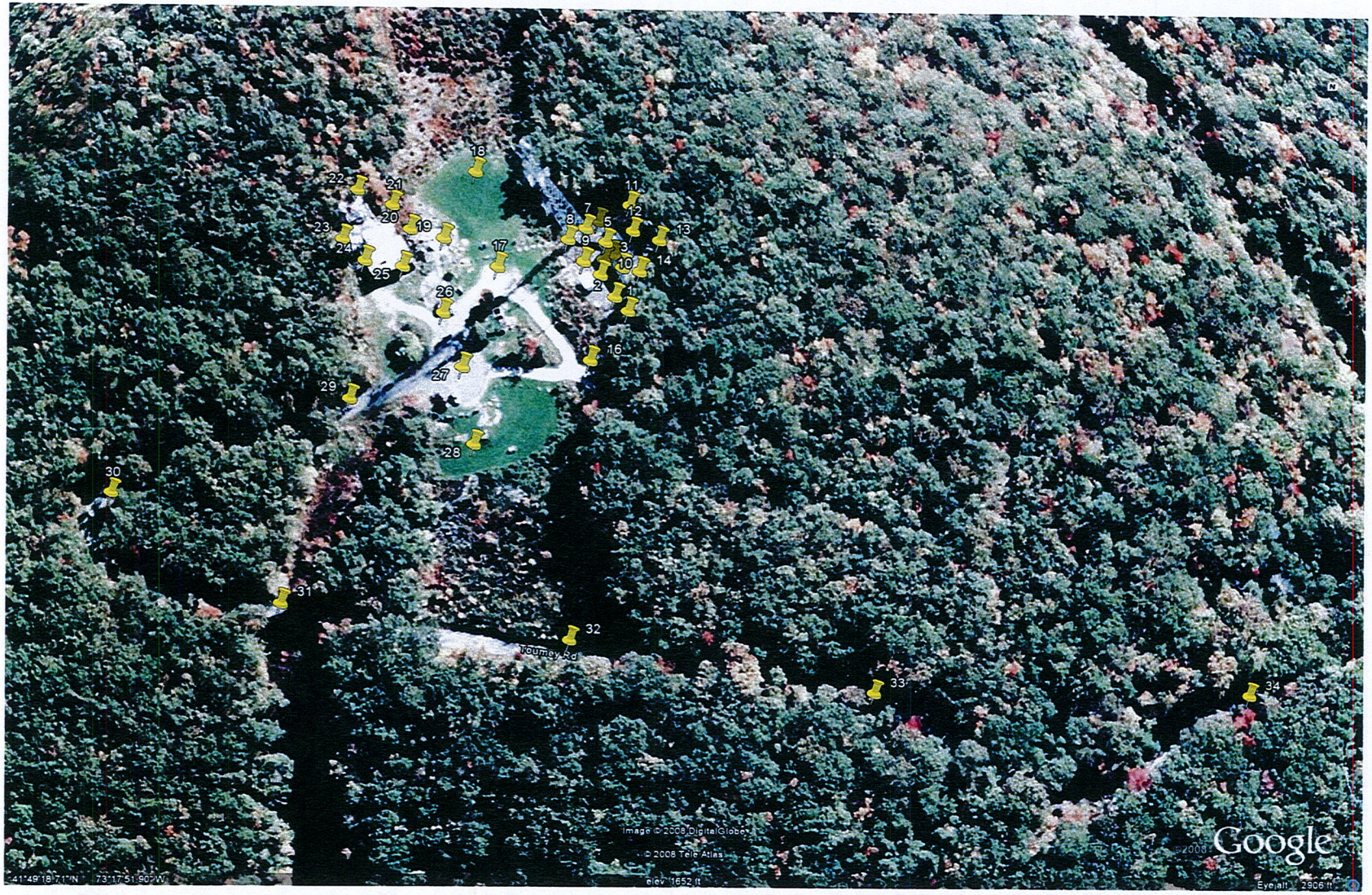


Figure 1: Aerial View with Measurement Locations

Figure 2: Aerial View with Measurement Locations within Compound

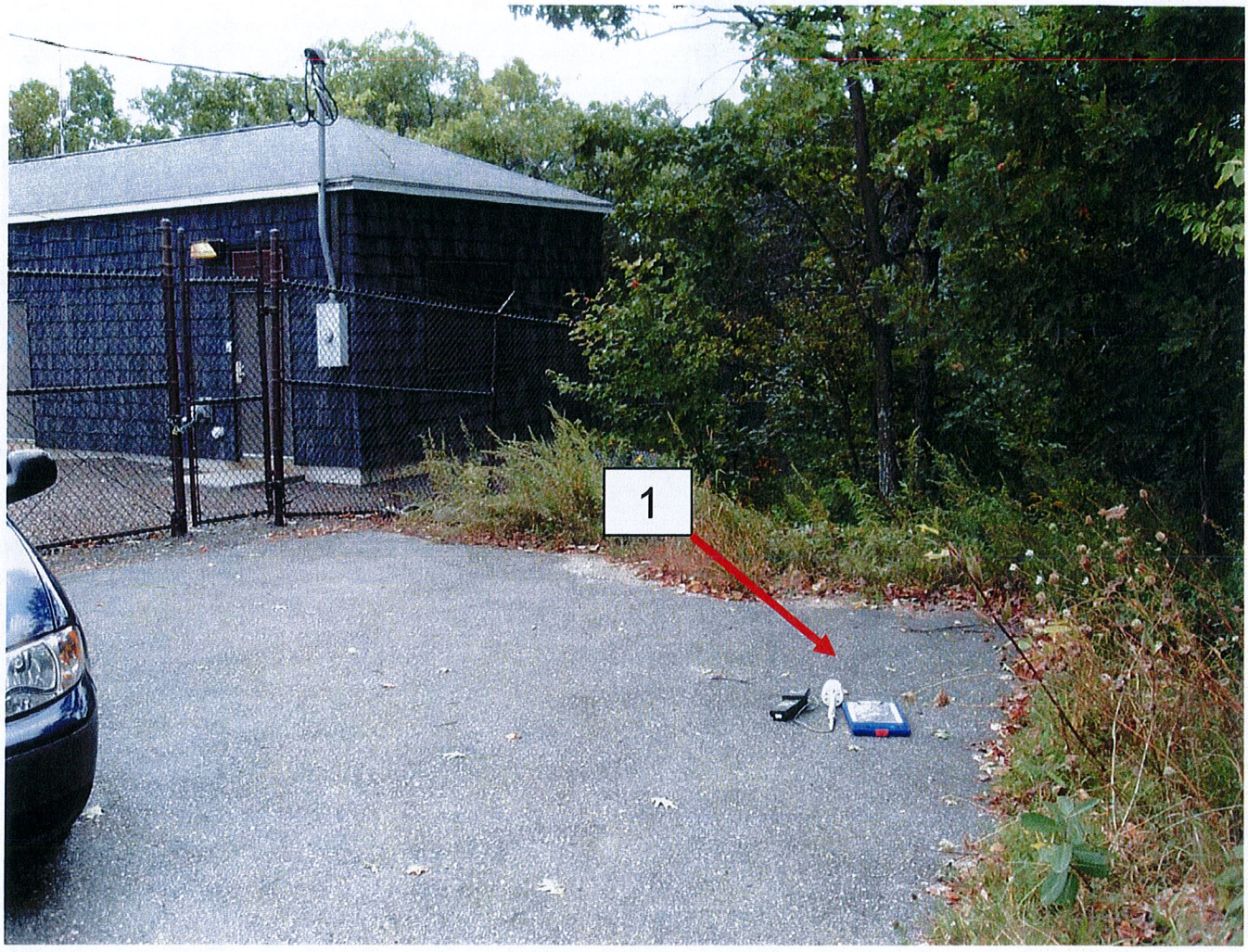


Figure 3: Measurement Location 1

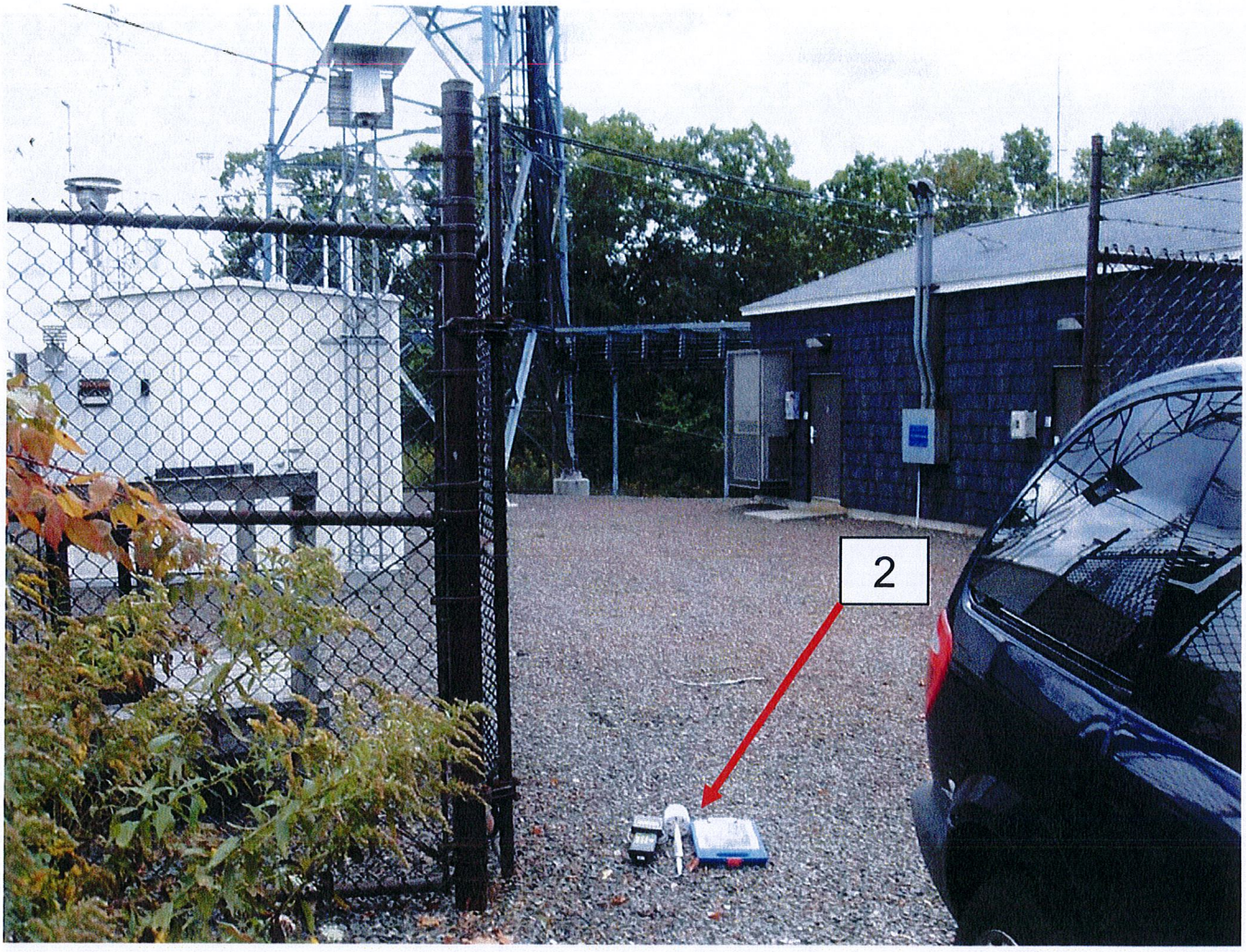


Figure 4: Measurement Location 2

Figure 5: Measurement Location 3

Figure 6: Measurement Location 4

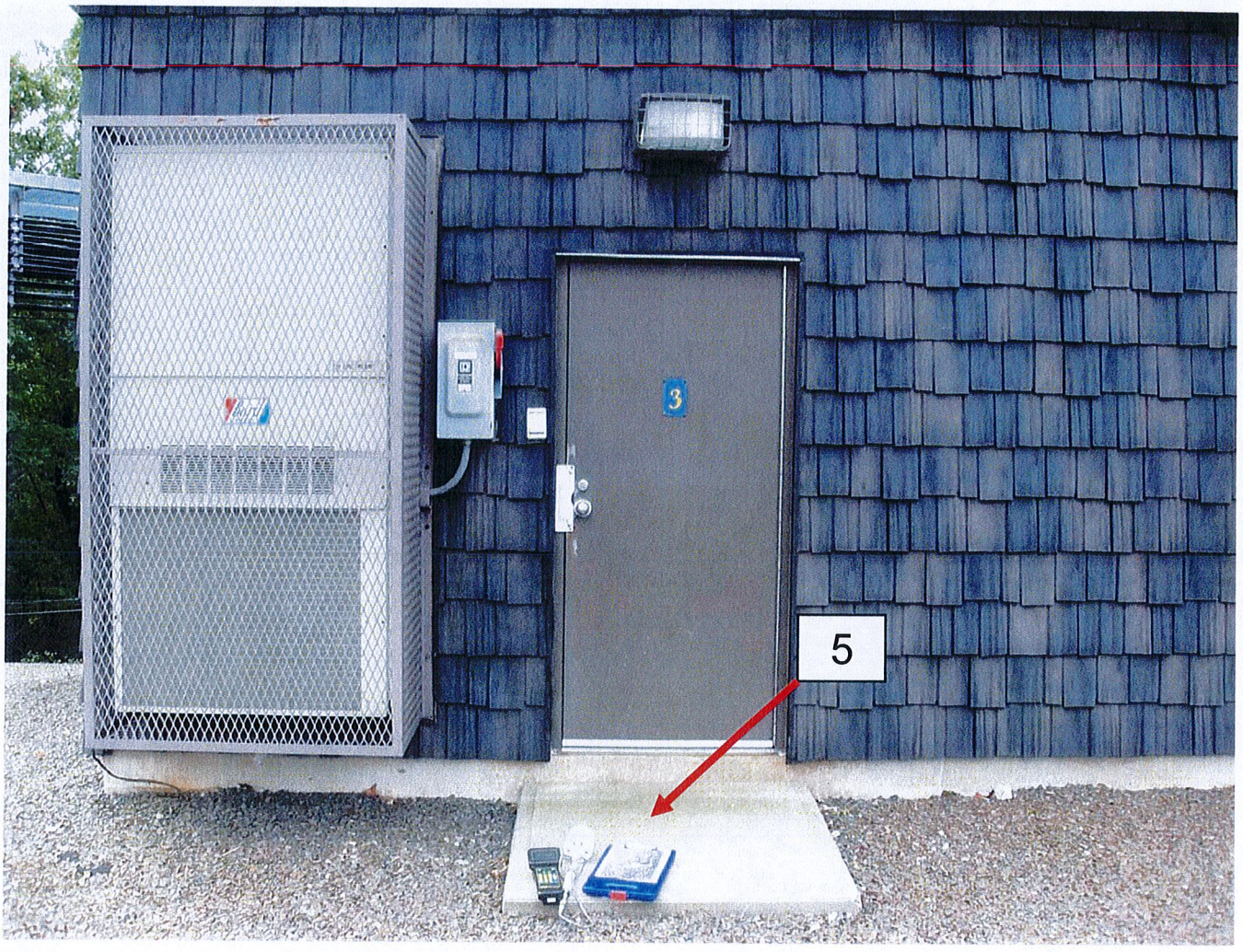


Figure 7: Measurement Location 5

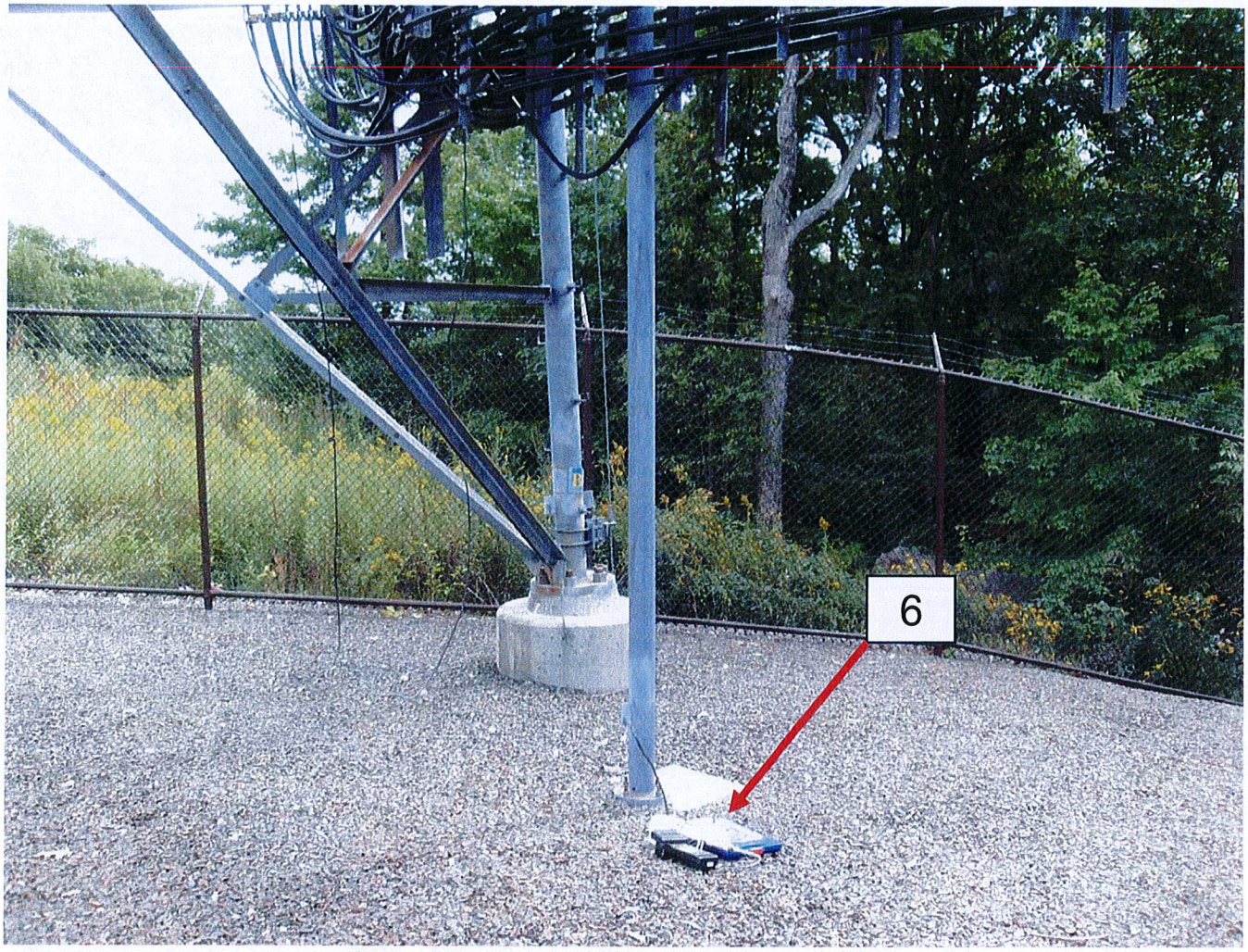


Figure 8: Measurement Location 6

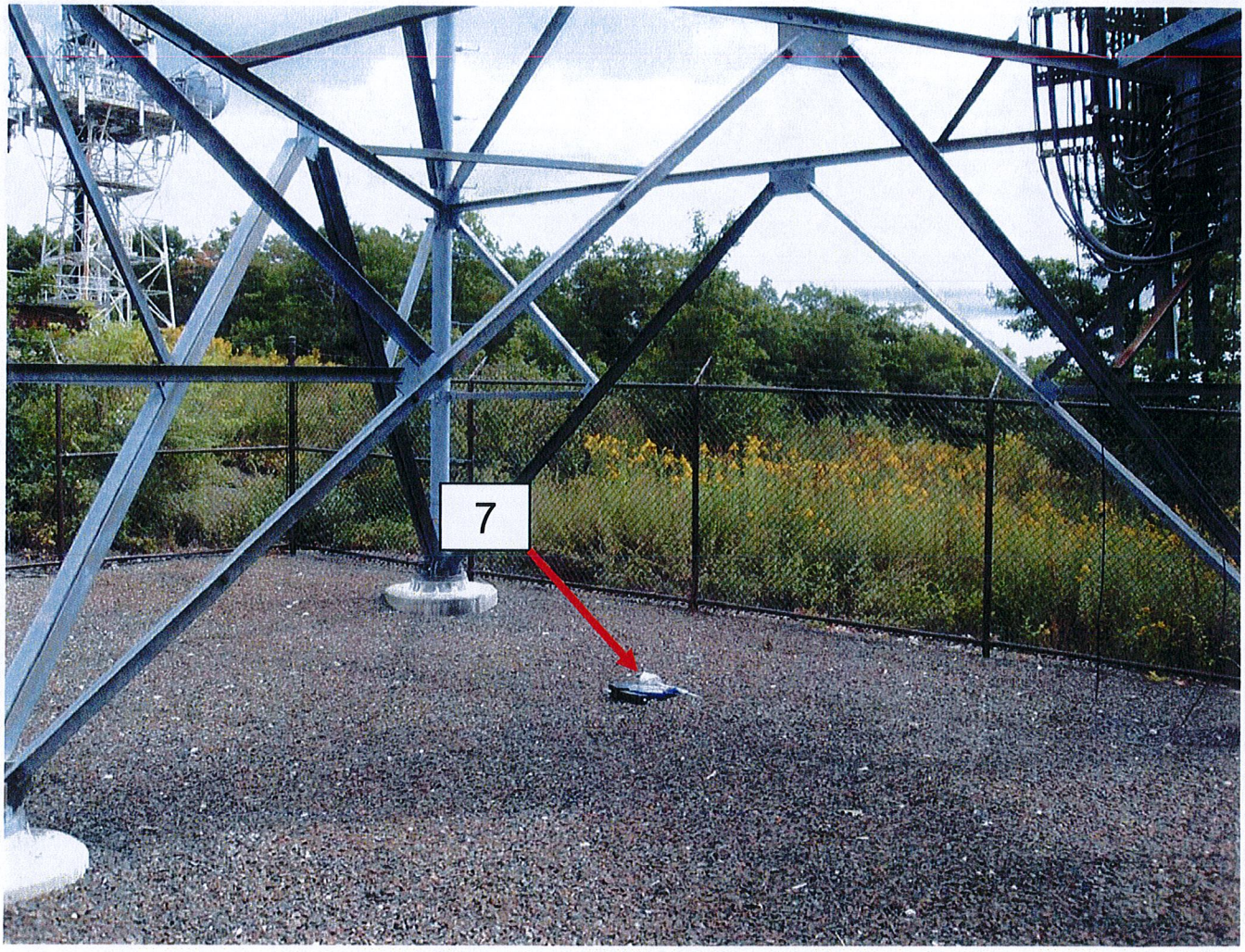


Figure 9: Measurement Location 7

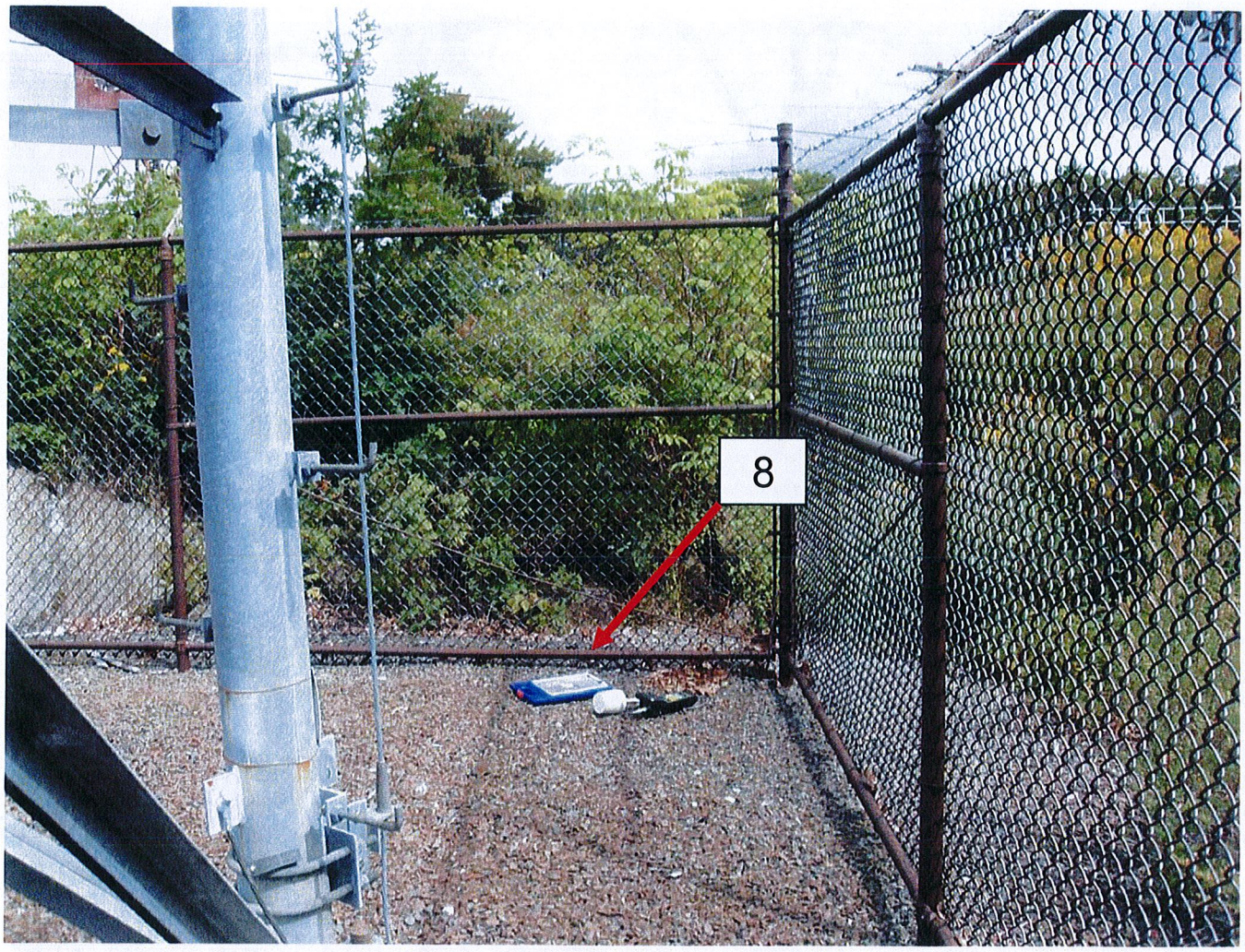


Figure 10: Measurement Location 8

Figure 11: Measurement Location 9

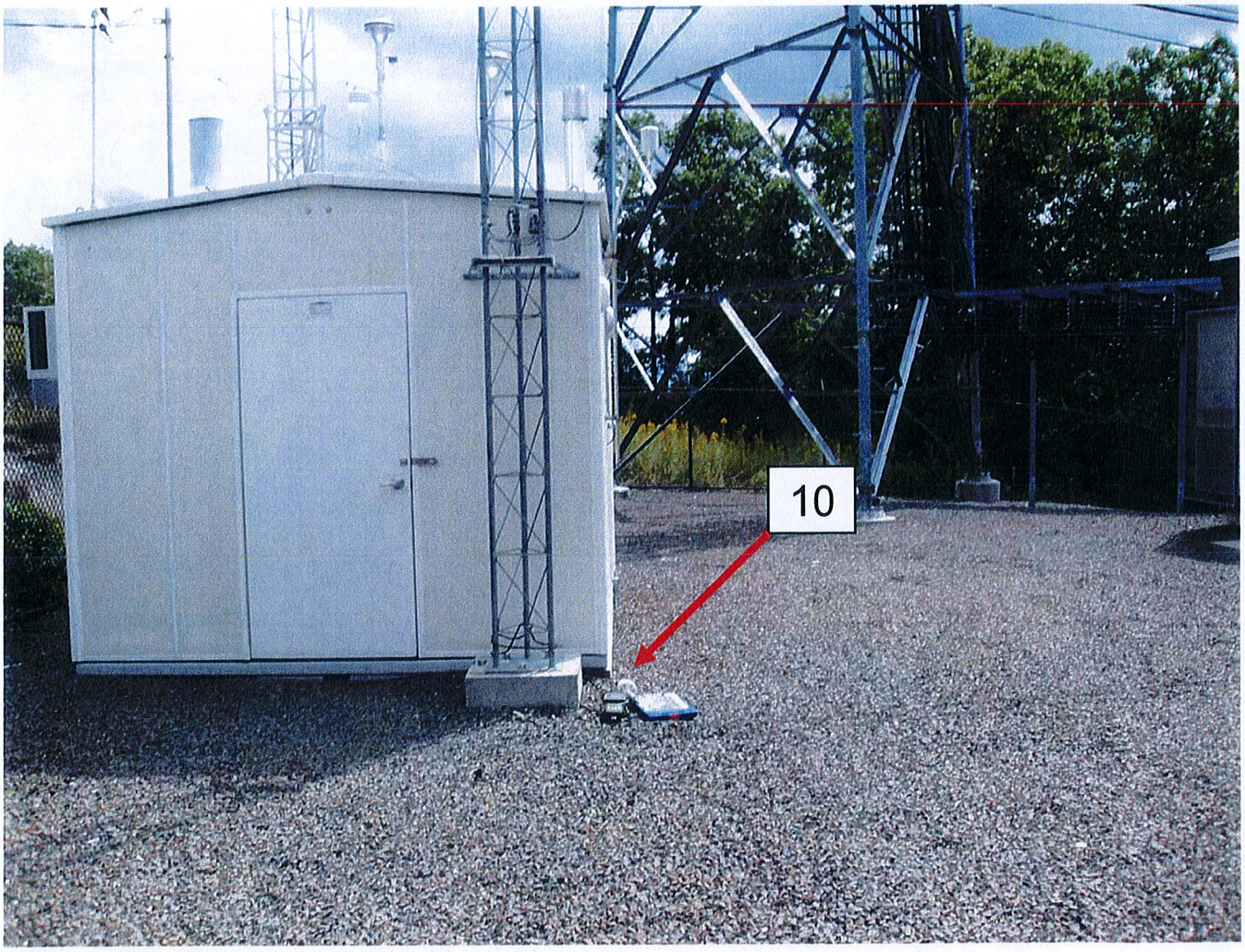


Figure 12: Measurement Location 10

Figure 13: Measurement Location 11

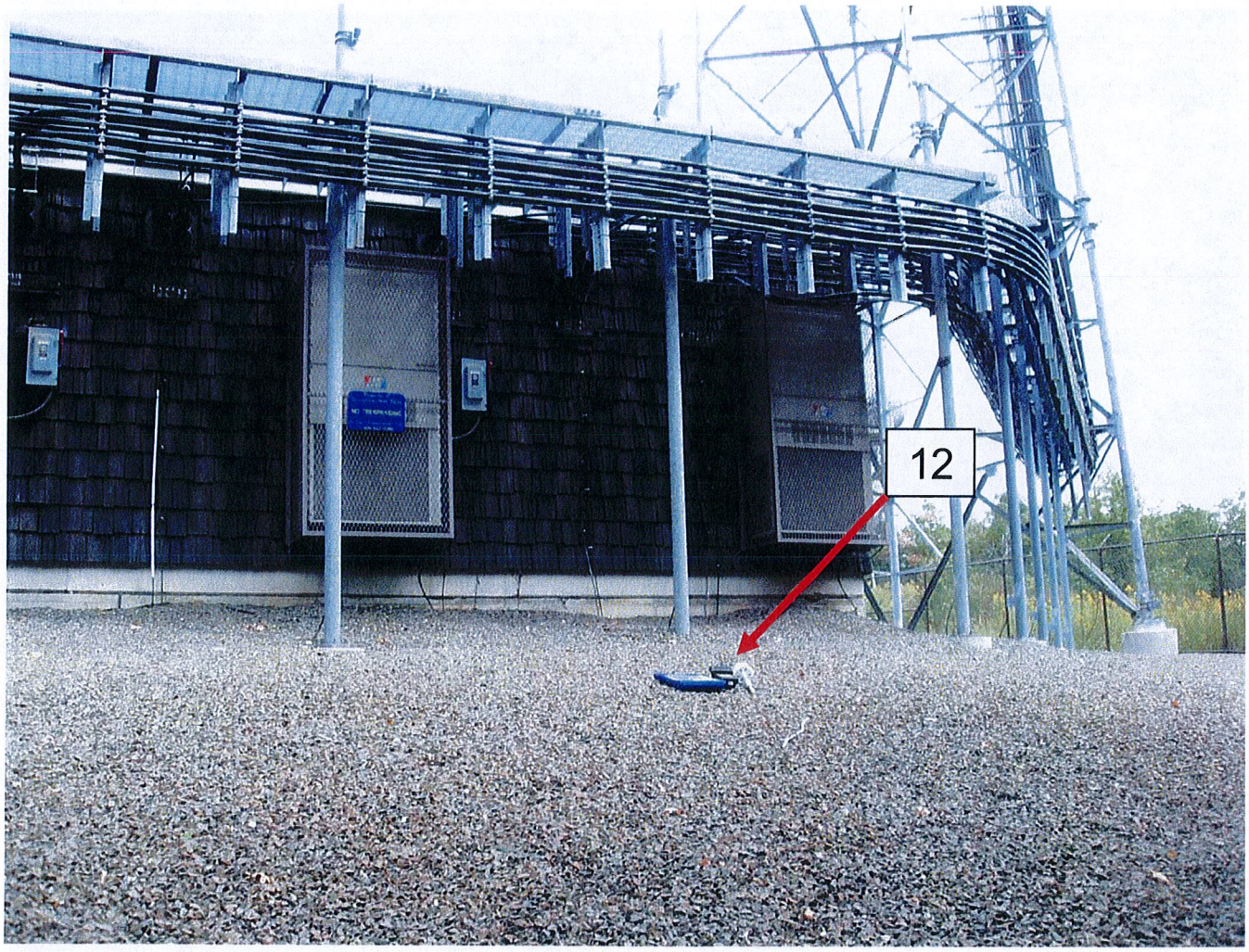


Figure 14: Measurement Location 12

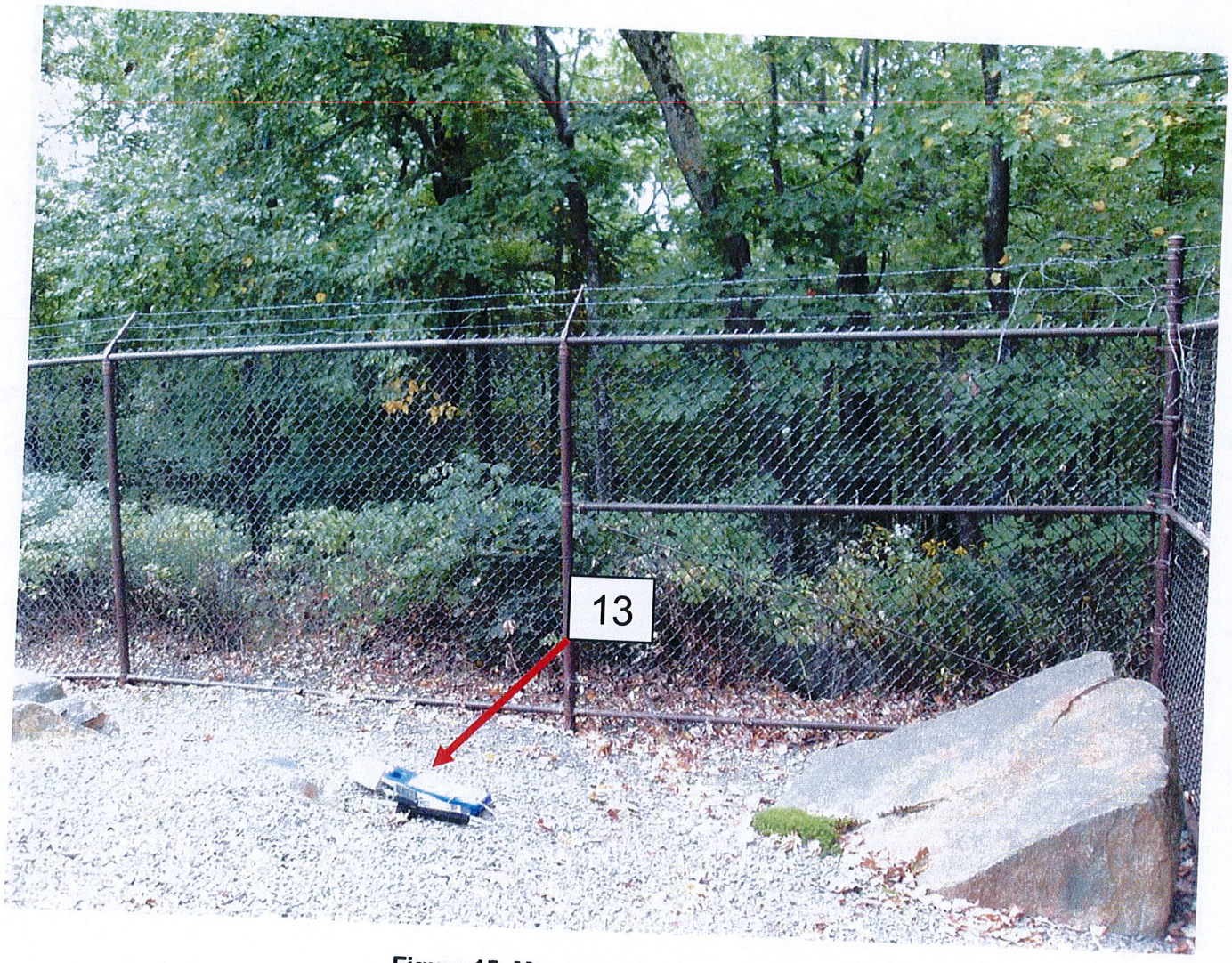


Figure 15: Measurement Location 13

Figure 16: Measurement Location 14

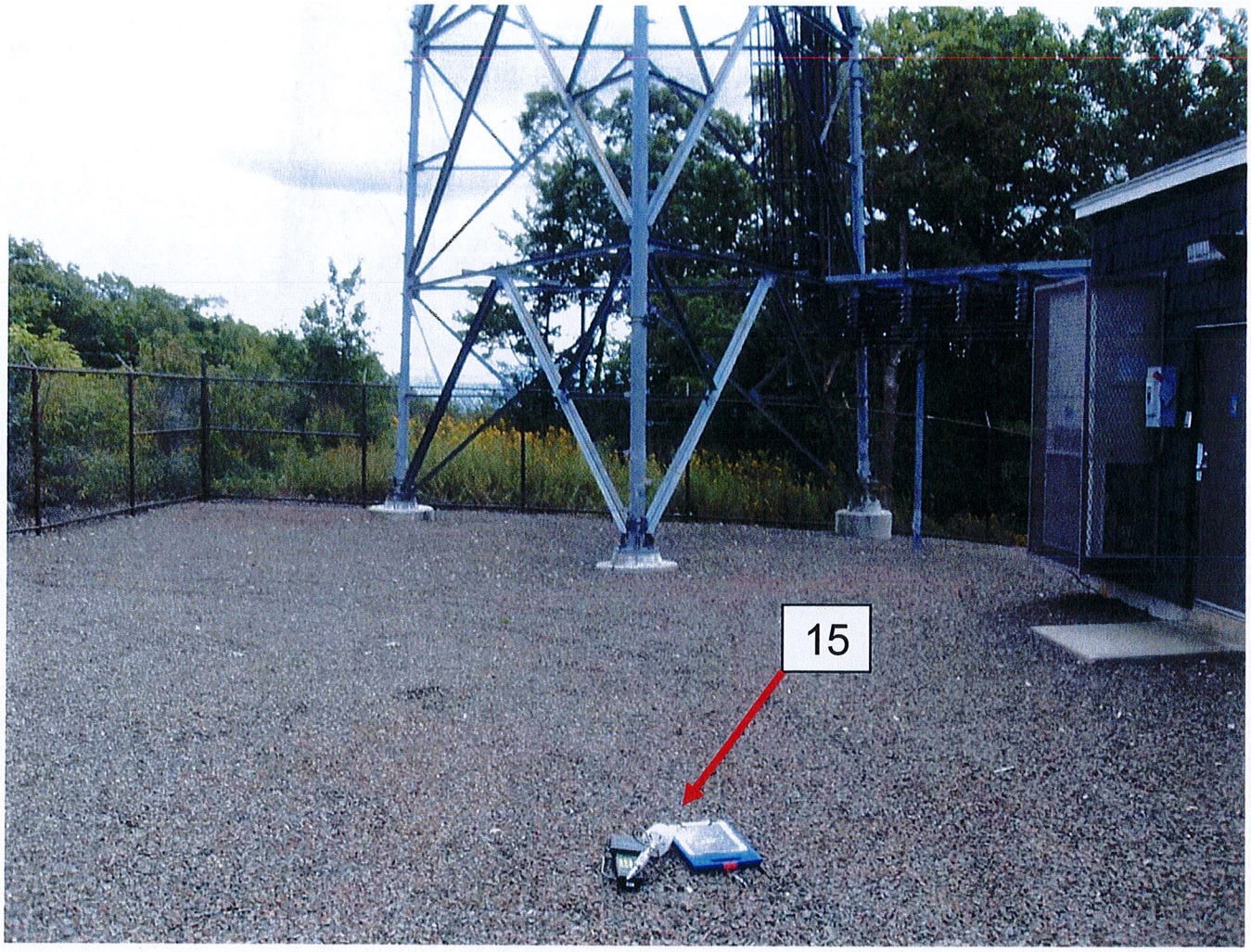


Figure 17: Measurement Location 15

Figure 18: Measurement Location 16

Figure 19: Measurement Location 17

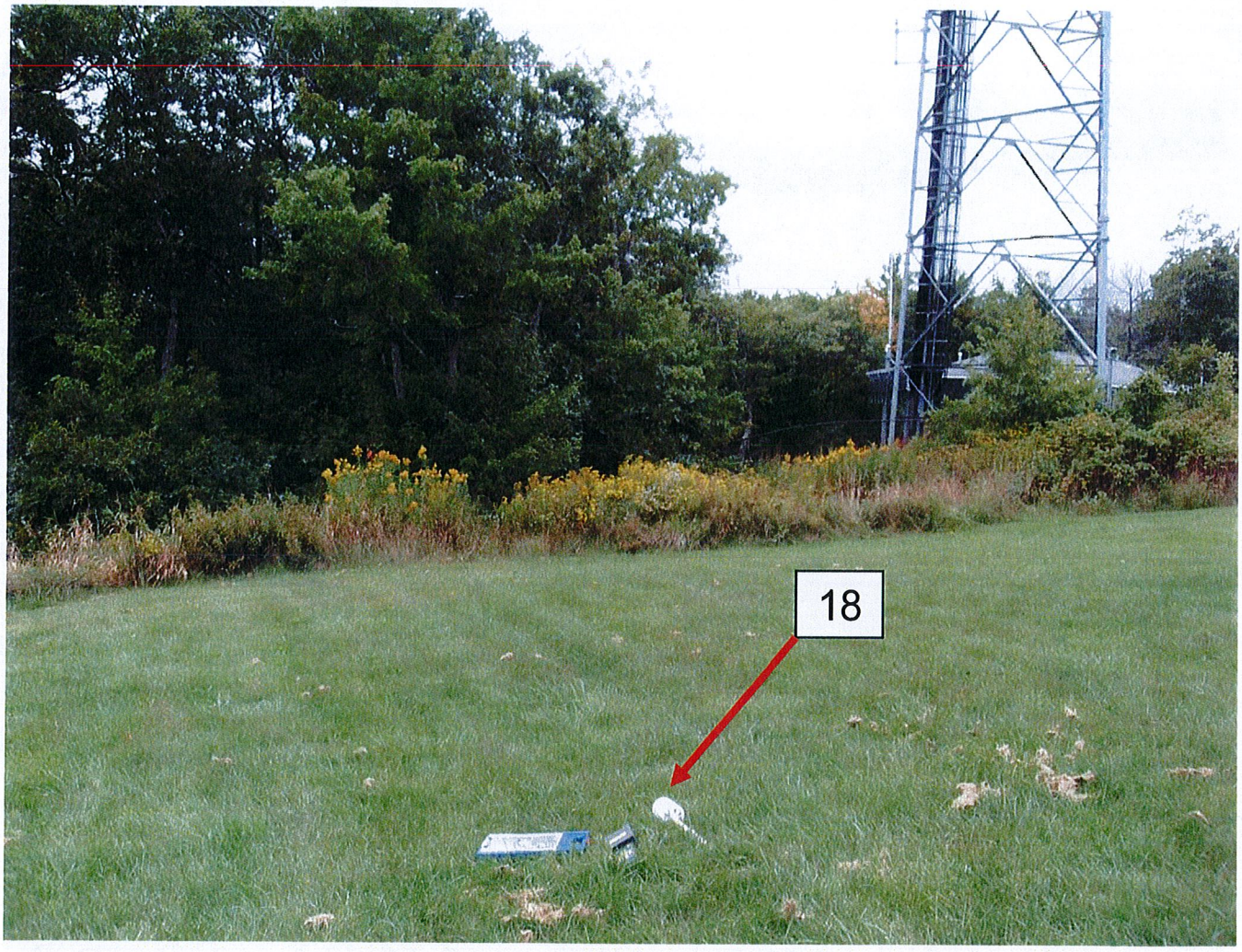


Figure 20: Measurement Location 18

Figure 21: Measurement Location 19

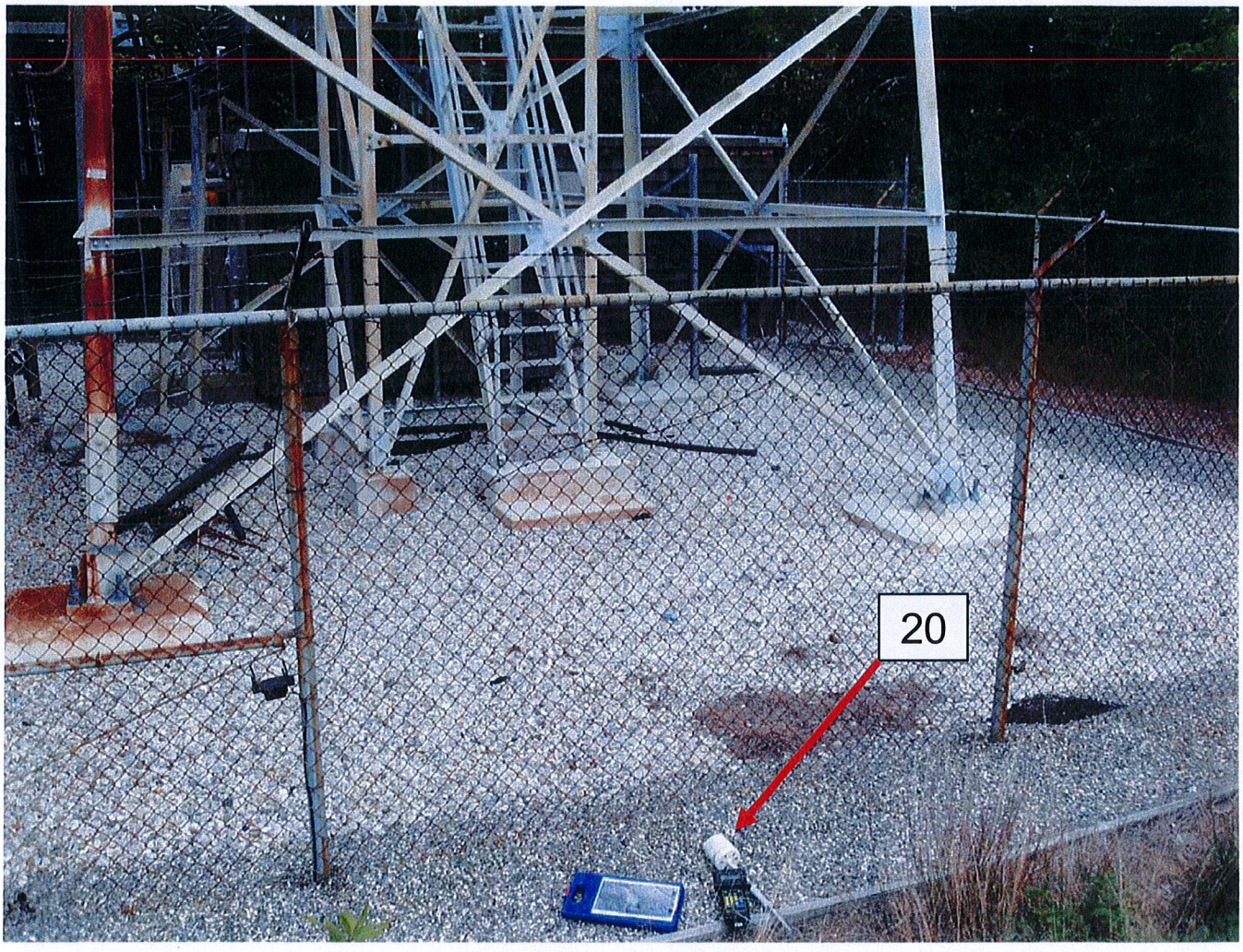


Figure 22: Measurement Location 20

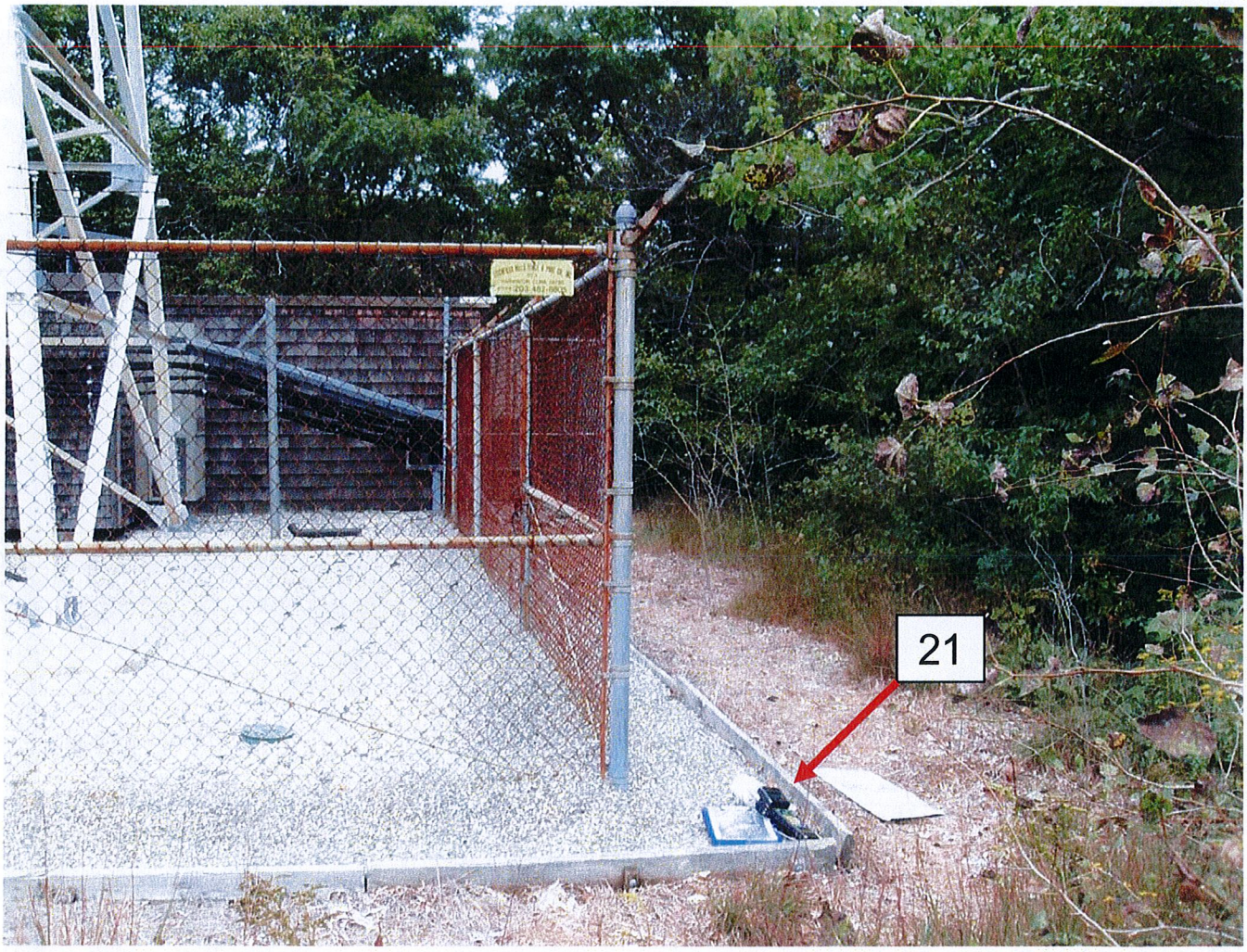


Figure 23: Measurement Location 21

Figure 24: Measurement Location 22

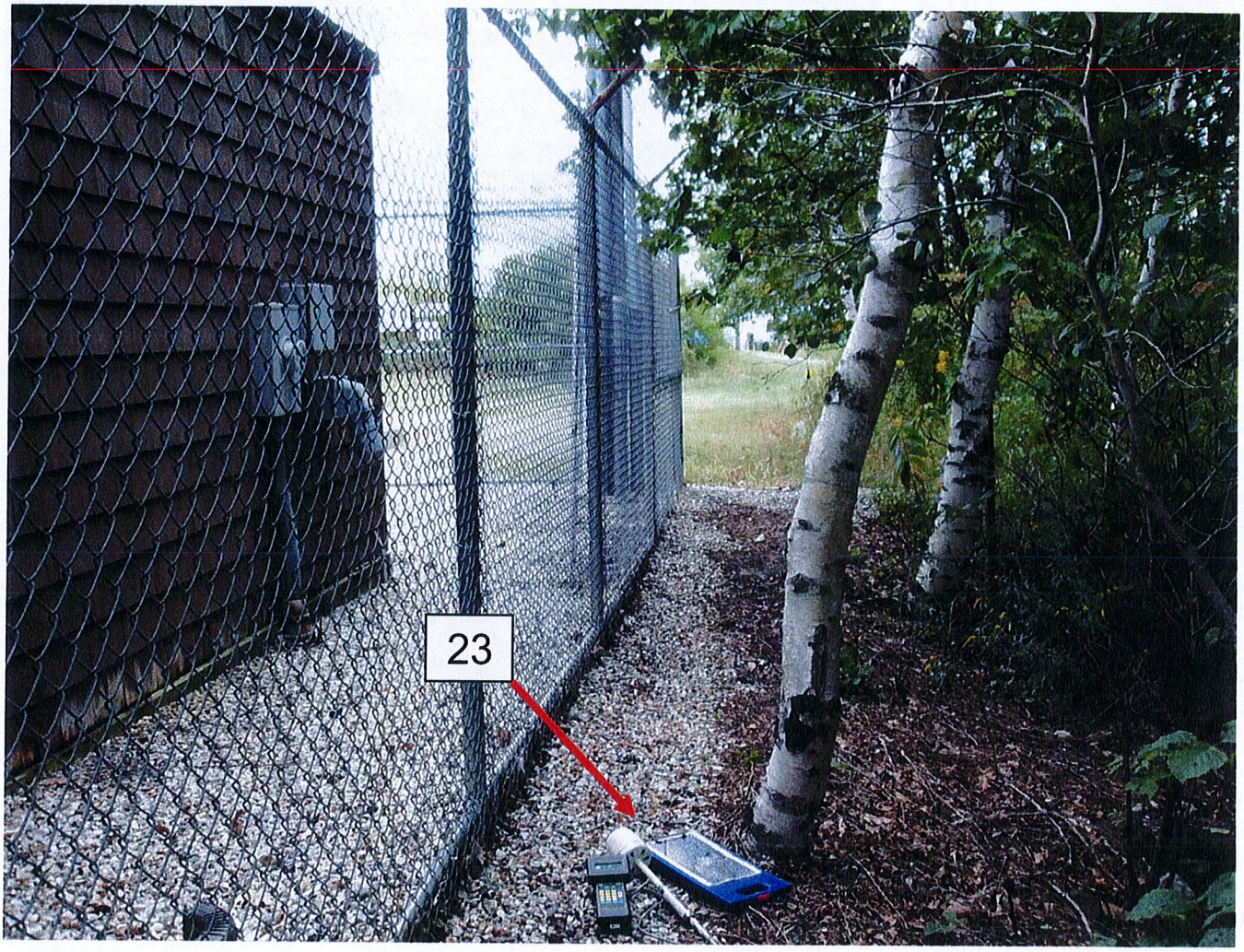


Figure 25: Measurement Location 23

Figure 26: Measurement Location 24

Figure 27: Measurement Location 25

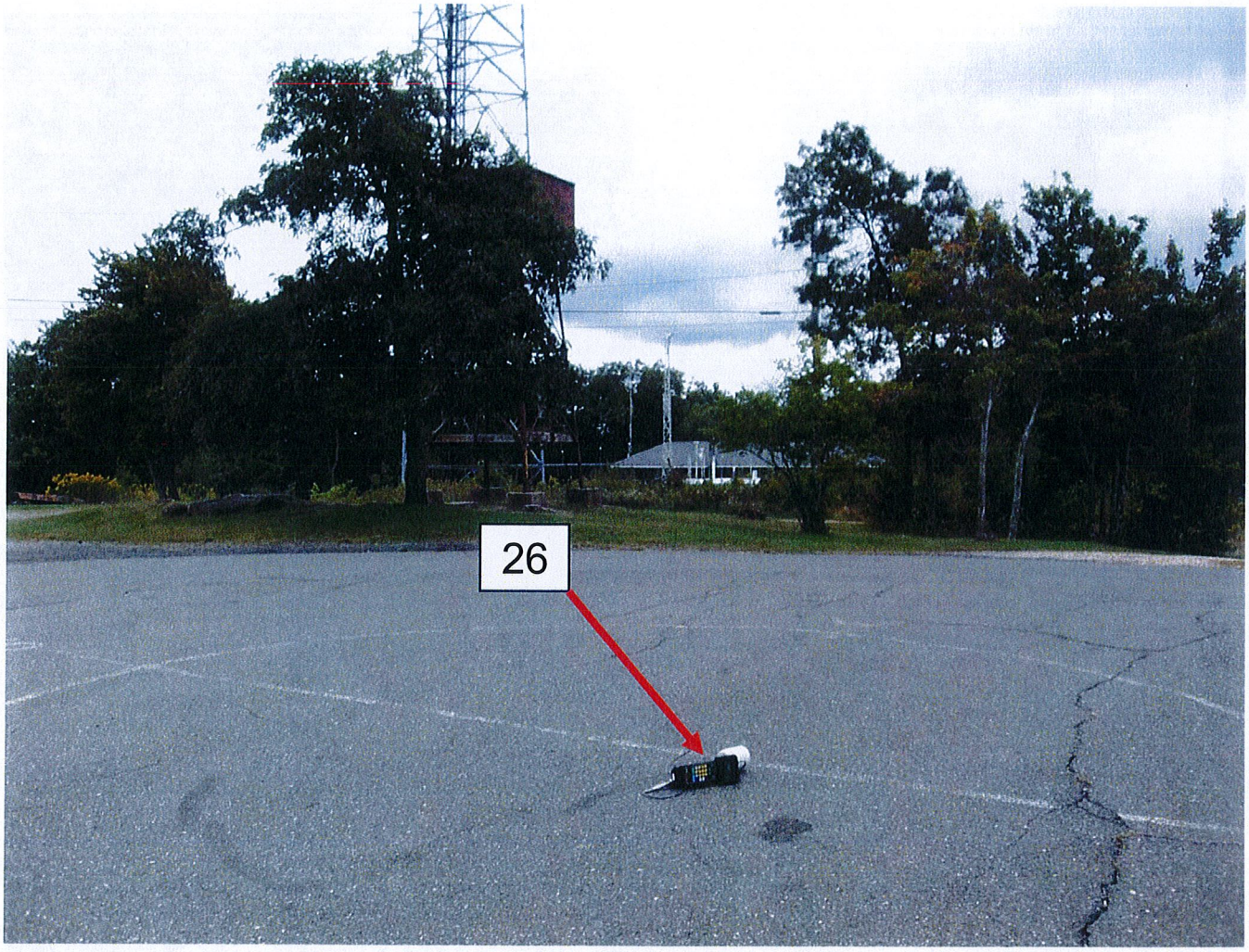


Figure 28: Measurement Location 26

Figure 29: Measurement Location 27

Figure 30: Measurement Location 28

Figure 31: Measurement Location 29

Figure 32: Measurement Location 30

Figure 33: Measurement Location 31

Figure 34: Measurement Location 32

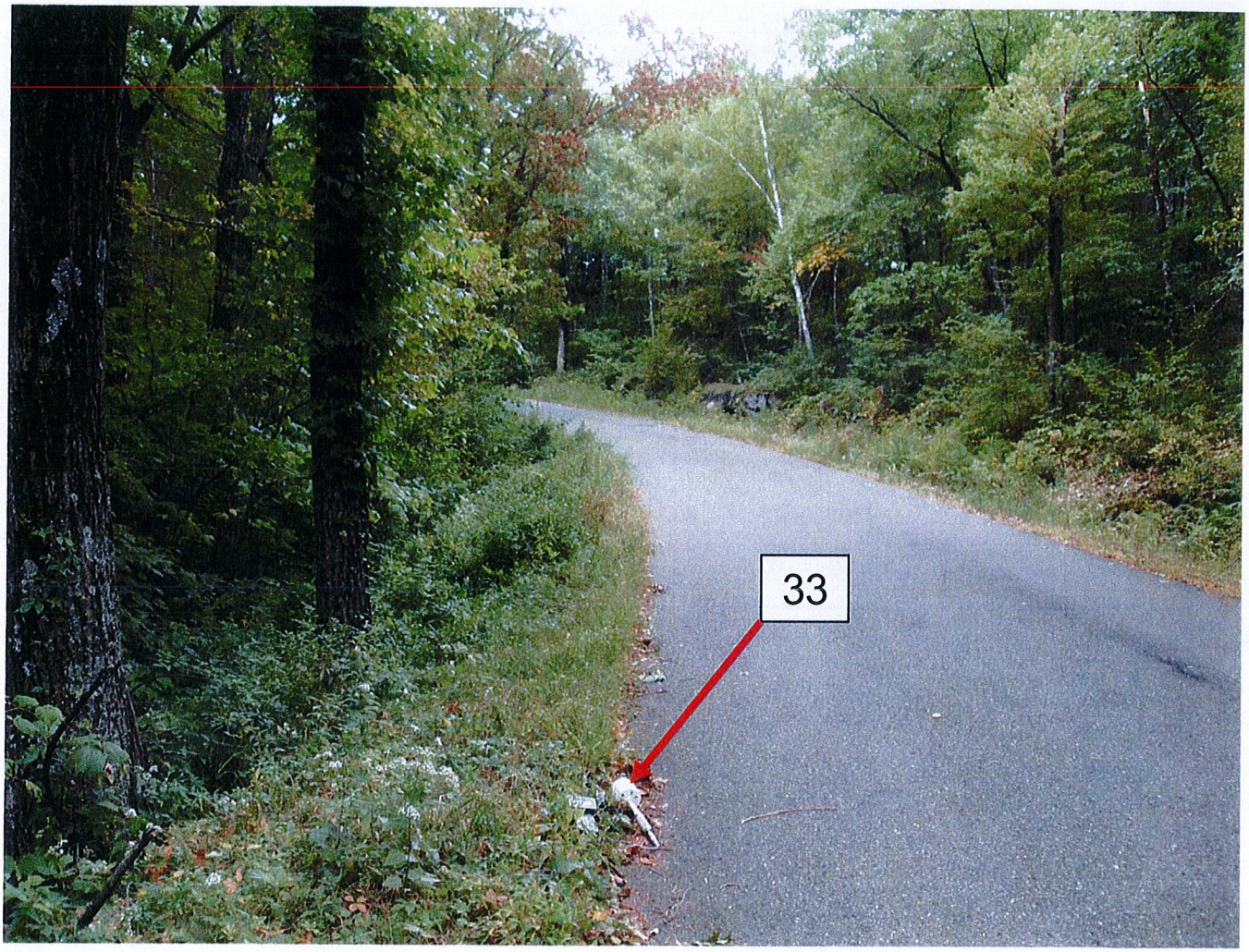


Figure 35: Measurement Location 33

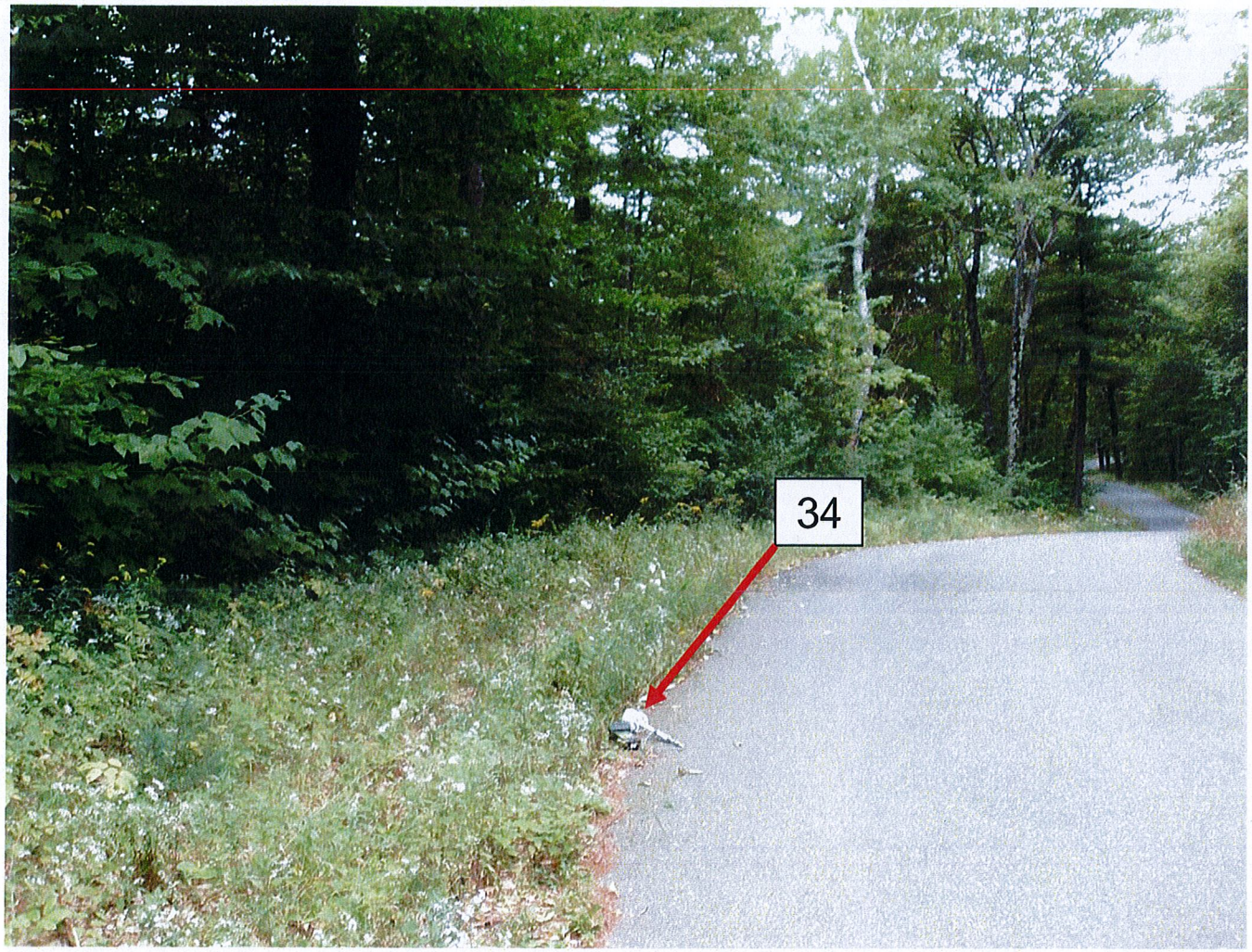


Figure 36: Measurement Location 34

Figure 37: Tower

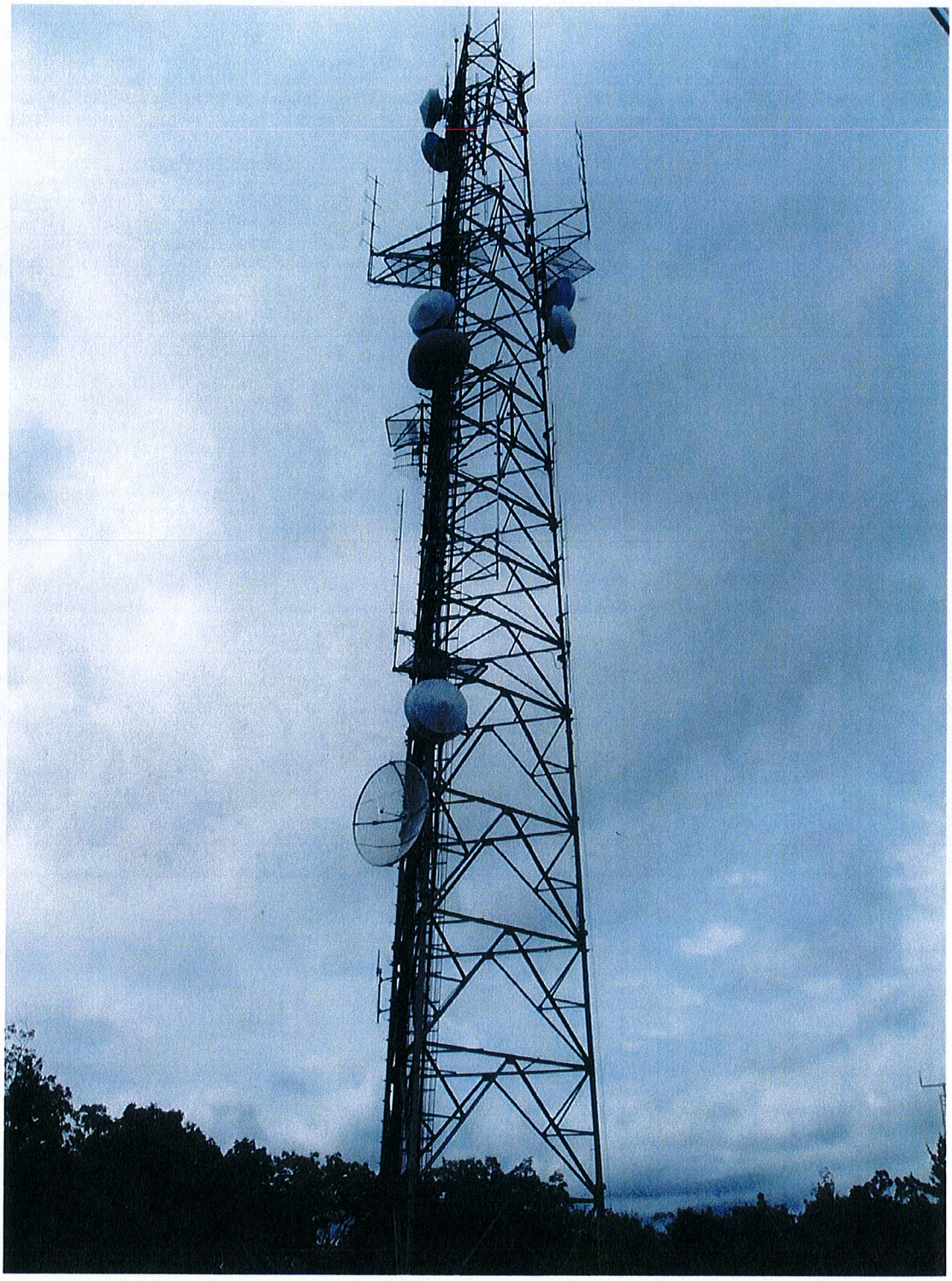


Figure 38: Nearby Tower

Conclusion

Public accessible areas in the vicinity of proposed wireless tower to be located on Mohawk Mountain in Litchfield, CT were surveyed and found to be within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3).

The maximum power density at the locations measured was predicted to be 12.50% MPE after the addition of the proposed Verizon Wireless antennas.

The above analysis shows that the proposed configuration will not substantially increase power density in the vicinity and that the site will be well within FCC limits.

Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The measurements were obtained with properly calibrated equipment using techniques in compliance with ANSI/IEEE Std. C95.3, ANSI/IEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Tony Wells
C Squared Systems

September 23, 2008
Date

References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

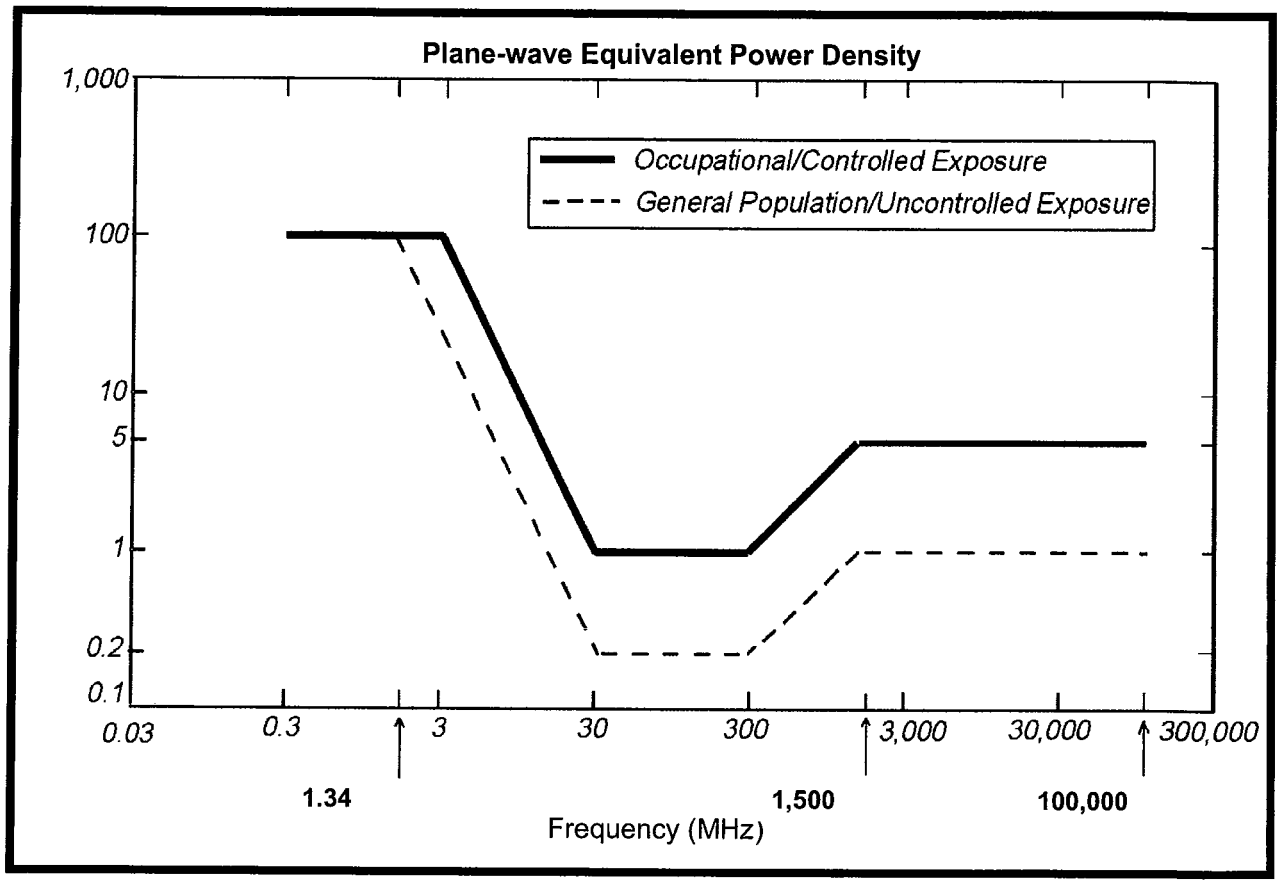
(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

NOTE 1: 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.

NOTE 2: 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 can not exercise control over their exposure.



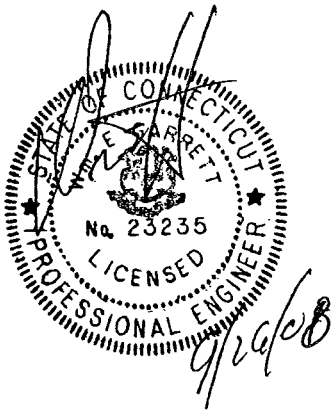
FCC Limits for Maximum Permissible Exposure (MPE)

AMERICAN TOWER

Structural Analysis Report

Structure	:	**65 ft Self Supported Tower**
ATC Site Name	:	**Cornwall CT, CT**
ATC Site Number	:	**88009**
Proposed Carrier	:	**Verizon Wireless**
Carrier Site Name	:	**Mohawk Mtn Alltel**
Carrier Site Number	:	**Mohawk Mtn Alltel**
County	:	**Litchfield**
Eng. Number	:	**42335322**
Date	:	**September 25, 2008***
Usage	:	**48% Legs, 71% Diagonals, 55% Horizontals**

Submitted by:
Christina Minor
Design Engineer



American Tower Engineering Services
400 Regency Forest Drive
Cary, NC 27518
Phone: 919-468-0112

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 65 ft Self Supported Tower located at the end of Mohawk Mountain Road, Cornwall, CT 06759, Litchfield County (ATC site #88009). Tower dimensions and member sizes are based on a previous structural by CSEI (ATC Eng #26472221, dated September 19, 2006).

Analysis

The tower was analyzed using Semaan Engineering Solutions, Inc., Software. The analysis assumes that the tower is in good, undamaged, and non-corroded condition.

Basic Wind Speed:	80 mph (Fastest Mile) / 100 mph (3-Second Gust)
Radial Ice:	69 mph (Fastest Mile) w/ ½" ice
Code:	TIA/EIA-222-F / 2003 International Building Code with 2005 Connecticut Supplement and 2008 Connecticut Amendments

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
75.0	3	Decibel ASP-950	Platform with Pipe Extensions	(3) 7/8"	Sprint Nextel
72.0	1	8' Yagi		(2) 7/8"	State of CT
	1	10' Dipole			
70.0	12	EMS RR65-19-02DP		(12) 1 5/8"	Sprint Nextel
	6	14" x 9" TTA			
65.0	9	ADC DD1900		(9) 1 ¼"	AT&T Mobility
	9	CSS DUO1417-8686			
57.0	4	10' HP Dish	Dish	--	Alltel
37.5	--	--	Platform	--	--

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
48.0	6	Antel LPA-185063/12CF	Platform with Pipe Extensions	(12) 1 5/8"	Verizon Wireless
	6	Antel LPA-80063/6CF			
	1	Andrew P3F-52-N7A	Dish	(1) 1 5/8"	

Double stack proposed coax in same place as existing.

Results

The maximum structure usage is: 71%

Leg Forces	Original Design Reactions	Current Analysis Reactions	% Of Design
Uplift (Kips)	60.0	54.3	90
Axial (Kips)	113.9	69.9	61

The structure base reactions resulting from this analysis are acceptable when compared to the reactions shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Conclusion

Based on the analysis results, the structure meets the requirements per TIA/EIA-222-F and 2003 IBC standards with 2005 Connecticut Supplement and 2008 Connecticut Amendments.

The tower and foundation can support the existing and proposed antennas with the TX line distribution as described in this report.

If you have any questions or require additional information, please call 919-466-5619.

Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

-- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Engineering Services and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated; and we, therefore, assume that their capacity has not significantly changed from the "as new" condition.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

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

Loads: 80 mph no ice
69 mph w/ 1/2" radial ice

Job Information

Tower : 88009	Location : Cornwall CT, CT	
Code: TIA/EIA-222 Rev F	Shape : Square	Base Width : 19.72 ft
Client : VERIZON WIRELESS		Top Width : 8.00 ft

Sections Properties

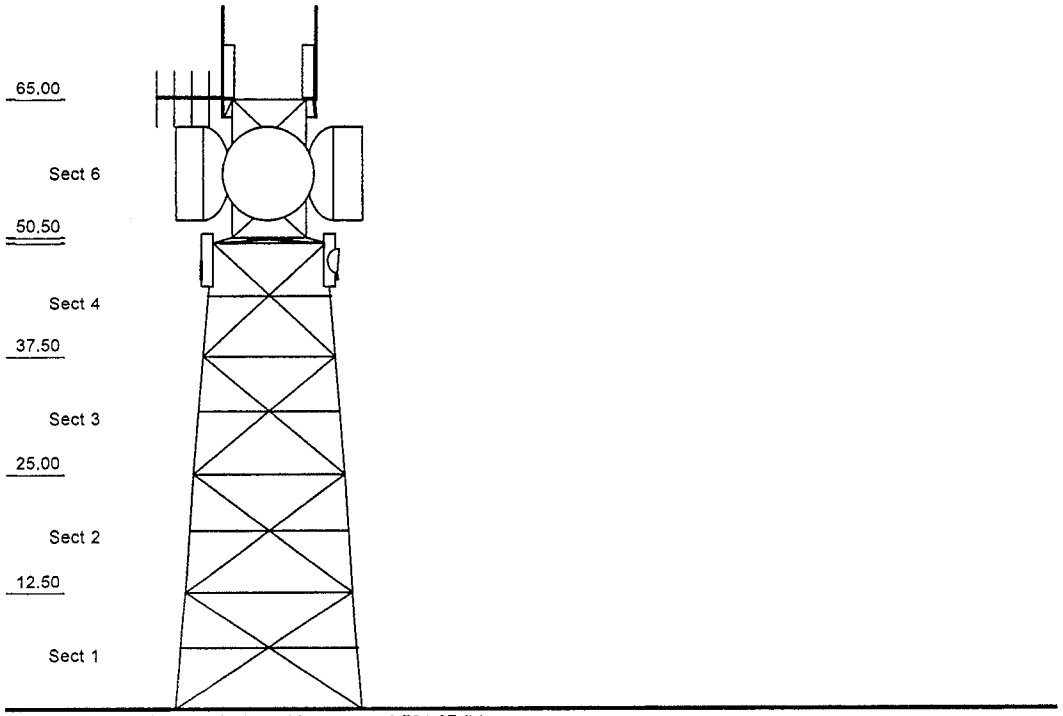
Section	Leg Members		Diagonal Members	Horizontal Members
1 - 2	SAE 33ksi	6X6X0.625	SAU 36ksi 3X4X0.25	DAL 36ksi 3X2.5X0.25
3	SAE 33ksi	6X6X0.5	SAU 36ksi 3.5X3X0.25	DAL 36ksi 3.5X3X0.3125
4	SAE 33ksi	6X6X0.5	SAE 36ksi 3.5X3.5X0.25	DAL 36ksi 3.5X3X0.3125
5	SAE 33ksi	6X6X0.5	SAE 36ksi 5X5X.25	SAE 36ksi 5X5X.25
6	SAE 33ksi	5X5X0.5	SAE 36ksi 3X3X0.25	SAE 36ksi 3.5X3.5X0.25

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
65.00		9	ADC DD1900
65.00	Panel	9	CSS DUO1417-8686
65.00		6	14" x 9" TTA
65.00	Panel	12	EMS RV65-19-02DP
65.00	Whip	1	10' Dipole
65.00	Yagi	1	8' Yagi
65.00	Whip	3	Decibel DB ASP-950
65.00	Panel	1	Fire Warden Cab
57.00	Dish	4	10' HP Dish
50.00	Platform	1	Large Flat Platform
48.00	Panel	6	Antel LPA-185063/12CF
48.00	Panel	6	Antel LPA-80063/6CF
48.00	Dish	1	Andrew P3F-52-N7A
37.50	Platform	1	Platform

Linear Appurtenance

Elev (ft) From	To	Qty	Description
0.000	65.000	1	Wave Guide
0.000	65.000	1	Climbing Ladder
0.000	65.000	12	7/8" Coax
0.000	65.000	3	7/8" Coax
0.000	65.000	3	7/8" Coax
0.000	65.000	9	1 1/4" Coax
0.000	48.000	12	1 5/8" Coax
0.000	48.000	1	1 5/8" Coax

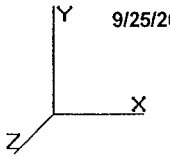


Uplift 54.25 k Moment 1,731.07 ft-k
Vert 69.89 k Total Down 31.33 k
Horiz 15.22 k Total Shear 35.94 k

Site Number: 88009
Location: Cornwall CT, CT

Code: TIA/EIA-222 Rev F

9/25/2008 4:22:33 PM



Gh : 1.19

Section Forces

LoadCase Normal No Ice — 80.00 mph Wind Normal To Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
6	57.75	19.22	33.32	11.89	0.00	0.39	2.31	1.00	1.00	0.65	41.02	3.02	0.00	2,671.8	0.0	2,174.40	138.75	2,313.15	1	
5	50.25	18.48	3.42	13.54	0.00	1.00	2.10	1.00	1.00	1.00	16.96	0.10	0.00	1,392.2	0.0	786.17	4.60	222.92	1	**
4	43.75	17.76	35.59	20.64	0.00	0.34	2.45	1.00	1.00	0.63	48.60	2.60	0.00	3,872.0	0.0	2,524.62	110.49	2,635.11	1	
3	31.25	16.38	37.62	22.63	0.00	0.32	2.52	1.00	1.00	0.62	51.70	2.60	0.00	4,123.2	0.0	2,548.78	101.94	2,650.72	1	
2	18.75	16.38	37.03	22.63	0.00	0.28	2.65	1.00	1.00	0.61	50.84	2.60	0.00	4,236.2	0.0	2,640.02	101.94	2,741.96	1	
1	6.25	16.38	38.91	22.63	0.00	0.26	2.73	1.00	1.00	0.61	52.60	2.60	0.00	4,481.8	0.0	2,808.69	101.94	2,910.64	1	
														20,777.2	0.0			13,474.50		

** = 2QzGhAg Controls

LoadCase Normal Ice — 69.28 mph Wind Normal To Face with Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
6	57.75	14.42	33.32	35.68	23.06	0.59	1.91	1.00	1.00	0.75	60.10	3.02	1.21	4,186.3	1,514.5	1,972.73	129.03	2,101.77	1	
5	50.25	13.86	3.42	17.27	3.43	1.00	2.10	1.00	1.00	1.00	20.68	0.10	0.04	1,899.9	507.7	718.92	4.28	167.18	1	**
4	43.75	13.32	35.59	46.19	24.93	0.50	2.05	1.00	1.00	0.70	67.76	2.60	1.04	5,861.9	1,989.9	2,214.41	102.75	2,317.16	1	
3	31.25	12.29	37.62	49.60	26.32	0.46	2.12	1.00	1.00	0.68	71.35	2.60	1.04	6,240.3	2,117.1	2,222.76	94.80	2,317.56	1	
2	18.75	12.29	37.03	50.04	26.72	0.41	2.25	1.00	1.00	0.66	69.89	2.60	1.04	6,436.2	2,200.0	2,305.83	94.80	2,400.63	1	
1	6.25	12.29	38.91	50.50	27.14	0.38	2.33	1.00	1.00	0.64	71.43	2.60	1.04	6,794.3	2,312.6	2,446.19	94.80	2,540.99	1	
														31,419.0	10,641.7			11,845.29		

** = 2QzGhAg Controls

LoadCase 45 deg No Ice — 80.00 mph Wind at 45 deg From Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
6	57.75	19.22	33.32	11.89	0.00	0.39	2.31	1.20	1.20	0.65	49.22	3.02	0.00	2,671.8	0.0	2,609.28	138.75	2,748.03	1	
5	50.25	18.48	3.42	13.54	0.00	1.00	2.10	1.20	1.20	1.00	20.35	0.10	0.00	1,392.2	0.0	943.40	4.60	222.92	1	**
4	43.75	17.76	35.59	20.64	0.00	0.34	2.45	1.20	1.20	0.63	58.32	2.60	0.00	3,872.0	0.0	3,029.54	110.49	3,140.04	1	
3	31.25	16.38	37.62	22.63	0.00	0.32	2.52	1.20	1.20	0.62	62.04	2.60	0.00	4,123.2	0.0	3,058.53	101.94	3,160.47	1	
2	18.75	16.38	37.03	22.63	0.00	0.28	2.65	1.20	1.20	0.61	61.01	2.60	0.00	4,236.2	0.0	3,168.03	101.94	3,269.97	1	
1	6.25	16.38	38.91	22.63	0.00	0.26	2.73	1.20	1.20	0.61	62.94	2.60	0.00	4,481.8	0.0	3,360.86	101.94	3,462.80	1	
														20,777.2	0.0			16,004.23		

** = 2QzGhAg Controls

Site Number: 88009
Location: Cornwall CT, CT

Code: TIA/EIA-222 Rev F

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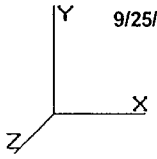


Gh : 1.19

Section Forces

LoadCase 45 deg Ice — **69.28 mph Wind at 45 deg From Face with Ice**

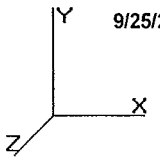
Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
6	57.75	14.42	33.32	35.68	23.06	0.59	1.91	1.20	1.20	0.75	72.12	3.02	1.21	4,186.3	1,514.5	2,367.28	129.03	2,496.31	1	
5	50.25	13.86	3.42	17.27	3.43	1.00	2.10	1.20	1.20	1.00	24.82	0.10	0.04	1,899.9	507.7	862.71	4.28	167.18	1	**
4	43.75	13.32	35.59	46.19	24.93	0.50	2.05	1.20	1.20	0.70	81.31	2.60	1.04	5,861.9	1,989.9	2,657.29	102.75	2,760.05	1	
3	31.25	12.29	37.62	49.60	26.32	0.46	2.12	1.20	1.20	0.68	85.62	2.60	1.04	6,240.3	2,117.1	2,667.31	94.80	2,762.11	1	
2	18.75	12.29	37.03	50.04	26.72	0.41	2.25	1.20	1.20	0.66	83.86	2.60	1.04	6,436.2	2,200.0	2,766.99	94.80	2,861.79	1	
1	6.25	12.29	38.91	50.50	27.14	0.38	2.33	1.20	1.20	0.64	85.71	2.60	1.04	6,794.3	2,312.6	2,935.42	94.80	3,030.22	1	
														31,419.0	10,641.7			14,077.67		

** = 2QzGhAg Controls

Site Number: 88009
Location: Cornwall CT, CT

Code: TIA/EIA-222 Rev F



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Tower Loading

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	X Angle (deg)	Vert Ecc (ft)
65.00	ADC DD1900	9	12.10	1.270	0.50	19.21	1.510	0.50	0.000	0.00	0.000
65.00	CSS DUO1417-8686	9	20.30	6.530	0.82	62.49	7.150	0.82	0.000	0.00	0.000
65.00	14" x 9" TTA	6	10.00	1.230	0.50	18.36	1.460	0.50	0.000	0.00	5.000
65.00	EMS RV65-19-02DP	12	23.00	5.867	0.73	51.51	6.692	0.73	0.000	0.00	5.000
65.00	10' Dipole	1	30.00	3.760	1.00	62.00	5.480	1.00	0.000	0.00	7.000
65.00	8' Yagi	1	30.00	12.000	1.00	127.20	21.590	1.00	0.000	0.00	7.000
65.00	Decibel DB ASP-950	3	14.00	2.520	1.00	32.50	3.450	1.00	0.000	0.00	14.500
65.00	Fire Warden Cab	1	1500.00	218.40	1.00	2000.00	320.00	1.00	0.000	0.00	0.000
57.00	10' HP Dish	4	705.00	99.100	0.80	1310.00	100.75	0.80	0.000	0.00	0.000
50.00	Large Flat Platform	1	4000.00	75.000	1.00	4700.00	95.000	1.00	0.000	0.00	0.000
48.00	Antel LPA-185063/12CF	6	17.00	4.970	0.95	49.58	5.650	0.95	0.000	0.00	0.000
48.00	Antel LPA-80063/6CF	6	27.00	10.280	0.94	100.77	11.120	0.94	0.000	0.00	0.000
48.00	Andrew P3F-52-N7A	1	40.00	11.760	1.00	74.84	12.430	1.00	0.000	0.00	0.000
37.50	Platform	1	1200.00	25.000	1.00	1500.00	32.000	1.00	0.000	0.00	0.000
	Totals	61	10553.60			16167.22			Number of Appurtenances : 14		

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Wind	Spread On Faces	Bundling Arrangement
0.00	65.00	1 1/4" Coax	9	1.55	0.63	0.00	1	Separate
0.00	65.00	7/8" Coax	3	1.09	0.33	0.00	1	Separate
0.00	65.00	7/8" Coax	3	1.09	0.33	0.00	1	Separate
0.00	65.00	7/8" Coax	12	0.82	0.33	100.00	1	Separate
0.00	65.00	Climbing Ladder	1	2.50	4.00	100.00	Lin App	Separate
0.00	65.00	Wave Guide	1	2.50	5.00	100.00	1	Separate
0.00	48.00	1 5/8" Coax	1	1.98	0.82	0.00	1	Separate
0.00	48.00	1 5/8" Coax	12	1.98	0.82	50.00	1	Separate

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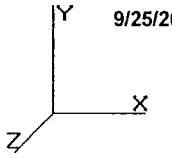

Force/Stress Summary

Section: 1 1 Bot Elev (ft): 0.00 Height (ft): 12.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.625	-63.23	45 deg Ice	12.57	50	50	50	63.9	21.2	150.45	0	0	0.00	0.00	42	Member Z
HORIZ DAL - 3X2.5X0.25	-3.38	Normal Ice	17.84	50	50	25	113.3	15.0	39.37	0	0	0.00	0.00	8	Member X
DIAG SAU - 3X4X0.25	-6.63	45 deg No Ice	22.57	50	50	50	190.2	5.5	9.31	0	0	0.00	0.00	71	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.625	48.65	45 deg No Ice	33	187.69	0	0	0.00	0.00	25	Member
HORIZ DAL - 3X2.5X0.25	3.39	Normal No Ice	36	75.74	0	0	0.00	0.00	4	Member
DIAG SAU - 3X4X0.25	7.35	Normal Ice	36	48.67	0	0	0.00	0.00	15	Member

Section: 2 1 Bot Elev (ft): 12.50 Height (ft): 12.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.625	-51.00	45 deg No Ice	12.57	50	50	50	63.9	21.2	150.45	0	0	0.00	0.00	33	Member Z
HORIZ DAL - 3X2.5X0.25	-2.10	Normal No Ice	15.96	50	50	25	101.3	17.1	44.91	0	0	0.00	0.00	4	Member X
DIAG SAU - 3X4X0.25	-6.95	Normal No Ice	21.04	50	50	50	179.2	6.2	10.48	0	0	0.00	0.00	66	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.625	38.47	45 deg No Ice	33	187.69	0	0	0.00	0.00	20	Member
HORIZ DAL - 3X2.5X0.25	2.75	Normal No Ice	36	75.74	0	0	0.00	0.00	3	Member
DIAG SAU - 3X4X0.25	6.17	Normal No Ice	36	48.67	0	0	0.00	0.00	12	Member

Section: 3 1 Bot Elev (ft): 25.00 Height (ft): 12.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	-36.70	45 deg No Ice	12.57	50	50	50	63.9	21.2	121.67	0	0	0.00	0.00	30	Member Z
HORIZ DAL - 3.5X3X0.3125	-1.23	Normal No Ice	14.08	50	50	25	76.8	20.9	81.04	0	0	0.00	0.00	1	Member X
DIAG SAU - 3.5X3X0.25	-7.30	Normal No Ice	19.56	50	50	50	170.4	6.9	10.70	0	0	0.00	0.00	68	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	26.66	45 deg No Ice	33	151.78	0	0	0.00	0.00	17	Member
HORIZ DAL - 3.5X3X0.3125	1.72	Normal No Ice	36	111.44	0	0	0.00	0.00	1	Member
DIAG SAU - 3.5X3X0.25	6.33	Normal No Ice	36	44.92	0	0	0.00	0.00	14	Member

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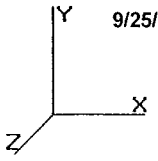

Force/Stress Summary

Section: 4 1 Bot Elev (ft): 37.50 Height (ft): 12.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	-26.07	45 deg Ice	12.57	50	50	50	63.9	21.2	121.67	0	0	0.00	0.00	21	Member Z
HORIZ DAL - 3.5X3X0.3125	-20.03	Normal No Ice	12.20	50	50	25	66.5	22.4	86.60	0	0	0.00	0.00	23	Member X
DIAG SAE - 3.5X3.5X0.25	-6.88	Normal No Ice	18.16	50	50	50	148.2	9.1	15.31	0	0	0.00	0.00	44	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	16.52	45 deg No Ice	33	151.78	0	0	0.00	0.00	10	Member
HORIZ DAL - 3.5X3X0.3125	32.08	Normal Ice	36	111.44	0	0	0.00	0.00	28	Member
DIAG SAE - 3.5X3.5X0.25	6.94	Normal No Ice	36	48.67	0	0	0.00	0.00	14	Member

Section: 5 1 Bot Elev (ft): 50.00 Height (ft): 0.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	-71.25	45 deg Ice	3.01	50	50	50	15.3	25.6	146.93	0	0	0.00	0.00	48	Member Z
HORIZ SAE - 5X5X.25	-31.34	Normal Ice	8.000	100	100	100	61.0	23.1	56.34	0	0	0.00	0.00	55	Member X
DIAG SAE - 5X5X.25	-26.20	Normal No Ice	10.32	50	50	50	39.4	25.7	62.53	0	0	0.00	0.00	41	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	45.09	45 deg No Ice	33	151.78	0	0	0.00	0.00	29	Member
HORIZ SAE - 5X5X.25	17.96	Normal No Ice	36	70.19	0	0	0.00	0.00	25	Member
DIAG SAE - 5X5X.25	22.42	Normal No Ice	36	70.19	0	0	0.00	0.00	31	Member

Section: 6 1 Bot Elev (ft): 50.50 Height (ft): 14.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 5X5X0.5	-8.15	45 deg No Ice	7.25	100	100	100	88.5	18.1	86.03	0	0	0.00	0.00	9	Member Z
HORIZ SAE - 3.5X3.5X0.25	-1.71	Normal No Ice	8.000	100	100	100	134.0	11.1	18.74	0	0	0.00	0.00	9	Member Z
DIAG SAE - 3X3X0.25	-7.55	45 deg No Ice	10.79	50	75	50	112.1	15.2	21.87	0	0	0.00	0.00	34	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 5X5X0.5	6.85	45 deg No Ice	33	125.39	0	0	0.00	0.00	5	Member
HORIZ SAE - 3.5X3.5X0.25	2.93	Normal Ice	36	48.67	0	0	0.00	0.00	6	Member
DIAG SAE - 3X3X0.25	5.95	45 deg No Ice	36	41.47	0	0	0.00	0.00	14	Member

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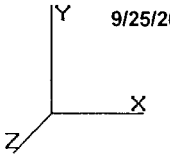

Support Forces Summary

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)
45 deg Ice	1c	-3.17	12.34	-1.76
	1b	-9.62	-43.95	-9.58
	1a	-1.71	11.48	-3.21
	1	-8.14	67.72	-8.10
45 deg No Ice	1c	-1.90	8.28	-3.71
	1b	-9.06	-54.25	-9.02
	1a	-3.66	7.41	-1.94
	1	-10.79	69.89	-10.74
Normal Ice	1c	3.60	49.71	-6.71
	1b	-5.06	-25.92	-8.18
	1a	5.06	-25.92	-8.18
	1	-3.60	49.71	-6.71
Normal No Ice	1c	5.68	49.81	-9.22
	1b	-3.92	-34.14	-7.49
	1a	3.92	-34.14	-7.49
	1	-5.68	49.81	-9.22

(-) = Uplift (+) = Down

Max Uplift:	54.25 (kip)	Moment:	1,731.07 (ft-kip)	45 deg No Ice
Max Down:	69.89 (kip)	Total Down:	31.33 (kip)	
Max Shear:	15.22 (kip)	Total Shear:	35.94 (kip)	

Site Number: 88009
Location: Cornwall CT, CT

Code: TIA/EIA-222 Rev F

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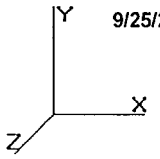

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
69.28 mph Wind Normal To Face with Ice	37.50	0.0212	0.0362	0.2135
	50.00	0.0312	0.0307	0.6588
	57.75	0.0809	0.0366	0.5256
	65.00	0.1332	0.0383	0.5397
69.28 mph Wind at 45 deg From Face with Ice	37.50	0.0227	0.0237	0.2899
	50.00	0.0340	0.0214	0.8497
	57.75	0.0846	0.0355	0.7867
	65.00	0.1404	0.0397	0.4370
80.00 mph Wind Normal To Face with No Ice	37.50	0.0221	0.0363	0.2060
	50.00	0.0342	0.0312	0.6151
	57.75	0.0859	0.0411	0.5344
	65.00	0.1403	0.0395	0.5522
80.00 mph Wind at 45 deg From Face with No Ice	37.50	0.0234	0.0269	0.2876
	50.00	0.0371	0.0249	0.8145
	57.75	0.0920	0.0402	0.8028
	65.00	0.1504	0.0439	0.4458
		0.0000	0.0000	0.0000