



# 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@po.state.ct.us](mailto:siting.council@po.state.ct.us)

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

September 15, 2004

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

RE: **EM-VER-086-040907** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 57 Cook Road, Montville, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on September 14, 2004, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the condition that the coaxial cables are oriented as depicted on Structure Sheet SK-1 of the structural analysis report.

The proposed modifications are to be implemented as specified here and in your notice dated September 7, 2004, 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. 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,

Pamela B. Katz, P.E.  
Chairman

PBK/cm

c: Honorable Joseph W. Jaskiewicz, Mayor, Town of Montville  
Marcia Vlaun, Town Planner, Town of Montville  
Christopher B. Fisher, Esq., Cuddy & Feder, LLC  
Michele G. Briggs, Southwestern Bell Mobile Systems, LLC  
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP  
Thomas F. Flynn III, Nextel Communications Inc.  
Ken Thomas, Wireless Solutions



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Phone: (860) 827-2935 Fax: (860) 827-2950  
E-Mail: [siting.council@po.state.ct.us](mailto:siting.council@po.state.ct.us)  
[www.ct.gov/csc](http://www.ct.gov/csc)

September 8, 2004

The Honorable Joseph W. Jaskiewicz  
Mayor  
Town of Montville  
310 Norwich New London Turnpike  
Uncasville, CT 06382

RE: **EM-VER-086-040907** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 57 Cook Road, Montville, Connecticut.

Dear Mayor Jaskiewicz:

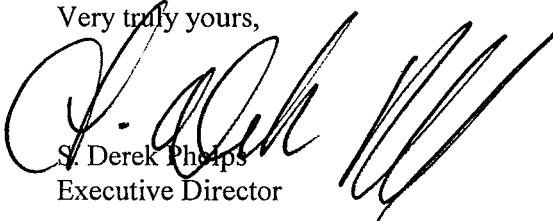
The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for September 14, 2004 at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,



S. Derek Phelps  
Executive Director

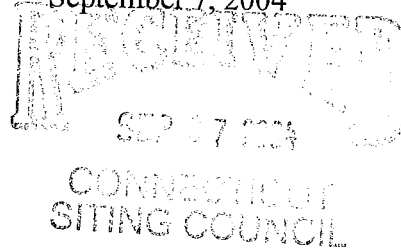
SDP/cm

Enclosure: Notice of Intent

c: Marcia Vlaun, Town Planner, Town of Montville

umbull Street  
ard, CT 06103-3597  
Main (860) 275-8200  
Fax (860) 275-8299  
kbaldwin@rc.com  
Direct (860) 275-8345

September 7, 2004



*Via Hand Delivery*

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

Re: **Notice of Exempt Modification – Addition of Paging Antennas  
57 Cook Road Telecommunications Facility  
Montville, Connecticut**

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains a wireless telecommunications facility, on an existing tower, owned by Wireless Solutions, at 57 Cook Road in Montville, Connecticut. This facility consists of twelve (12) panel-type cellular antennas at the 168-foot level of the 190-foot tower. Equipment associated with the antenna is located in an equipment shelter near the base of the tower.

The Connecticut Siting Council (“the Council”) approved Cellco’s shared use of the Cook Road facility on September 1, 1998 (EM-BAM-086-980821). Cellco now intends to modify its facility by adding two (2) whip-type paging antennas at the 100-foot level on the tower. Attached behind Tab 1 are specifications for the proposed antennas.

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 Montville Mayor, Joseph W. Jaskiewicz.

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



Law Offices

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HART1-1203240-1

# ROBINSON & COLE<sup>LLP</sup>

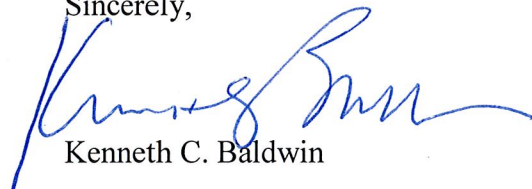
S. Derek Phelps  
September 7, 2004  
Page 2

1. The proposed modifications will not result in any increase in the height of the existing structure. Cellco's paging antennas will be mounted at the same 100-foot level on the 190-foot tower.
2. The proposed modifications will not affect associated equipment and 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 proposed modifications will not result in radio frequency (RF) power density levels at the facility that exceed the Federal Communications Commission (FCC) adopted safety standard. (See Power Density Calculation Table included behind Tab 2).

Also attached, behind Tab 3, is a Structural Analysis which concludes that the existing tower can support the additional two (2) paging antennas.

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

Sincerely,



Kenneth C. Baldwin

Enclosures

cc: Joseph W. Jaskiewicz, Mayor  
Sandy M. Carter



## Product Data Sheet for 220-3B

### Super Stationmaster™ Omni Fiberglass Antenna

Super Stationmaster VHF base station antennas incorporate the design features of 9 MHz broadband capability, improved lightning protection and true omnidirectional gain in excess of 5 dBd. Note: Below 150 MHz, rated gain is 4.8 dBd due to length constraints. Side mounting hardware is available for the 220 to achieve special radiation patterns. Vertical Beam Downtilt: the 220-DT may be ordered with 3° or 6° downtilt. Note: Operational gain and bandwidth are lessened with downtilt. The 220-DT is both reduced to 5.0 dBd gain and 1.5 MHz bandwidth. When downtilt antennas are ordered, exact frequency must be specified.



Product Specifications	
Frequency Band	VHF (25-299.9 MHz)
Horizontal Pattern	Omnidirectional
Antenna Type	Fiberglass Omni
Electrical Down Tilt Option	Fixed
Gain, dBi (dBd)	7.39 (5.25)
Frequency Range, MHz	151.5-159.5
Connector Type	UHF Female
Connector Location	Bottom
Mount Type	Fixed
Electrical Downtilt, deg	0
Orientation	Upright
Mounting Hardware	46 Clamp set
Rated Wind Speed, km/h (mph)	160 (100)
Gain (Omni), dBi (dBd)	7.39 (5.25)
VSWR	< 1.5:1
Vertical Beamwidth, deg	18
Polarization	Vertical
Maximum Power Input, W	500
Lightning protection	Direct Ground
Flexible Extensions	18" RG8 N-Male - UHF-Male

**RADIO FREQUENCY SYSTEMS**



[www.rfsworld.com](http://www.rfsworld.com)

## Product Data Sheet for 220-3B (Cont.)

### Super Stationmaster™ Omni Fiberglass Antenna

Overall Length, m (ft)	6.34 (20.8)
Element Housing Length, m (ft)	5.67 (18.6)
Support Pipe Diameter, m (in)	0.07 (2.75)
Support Pipe Length, m (ft)	0.69 (2.25)
Weight, kg (lb)	11 (24)
Radiating Element Material	Copper
Element Housing Material	Fiberglass
Support Pipe Material	Aluminum Alloy
Max Wind Loading Area, m <sup>2</sup> (ft <sup>2</sup> )	0.217 (2.34)
Bend Mom @ Rated Wind 1" Below Top of Mt Pipe, N m (ft lbf)	1196 (882)
Side Thrust @ Rated Wind, N (lbf)	418 (94)
Shipping Weight, kg (lb)	25 (55)
Packing Dimensions - HxWxD, m (ft)	6.4 x 0.1 x 0.1 (21 x 0.33 x 0.33)
Shipping Dimensions of Accessory - HxWxD, m (ft)	Packed w/antenna
Shipping Mode	Common Carrier
Survival Wind Speed, km/h (mph)	200 (125)

#### Features/Benefits

- Fiberglass construction protects radiating elements in corrosive environments.
- DC grounded – affords lightning protection.
- Copper radiating elements minimize possibility of intermod generation.

**RADIO FREQUENCY SYSTEMS**



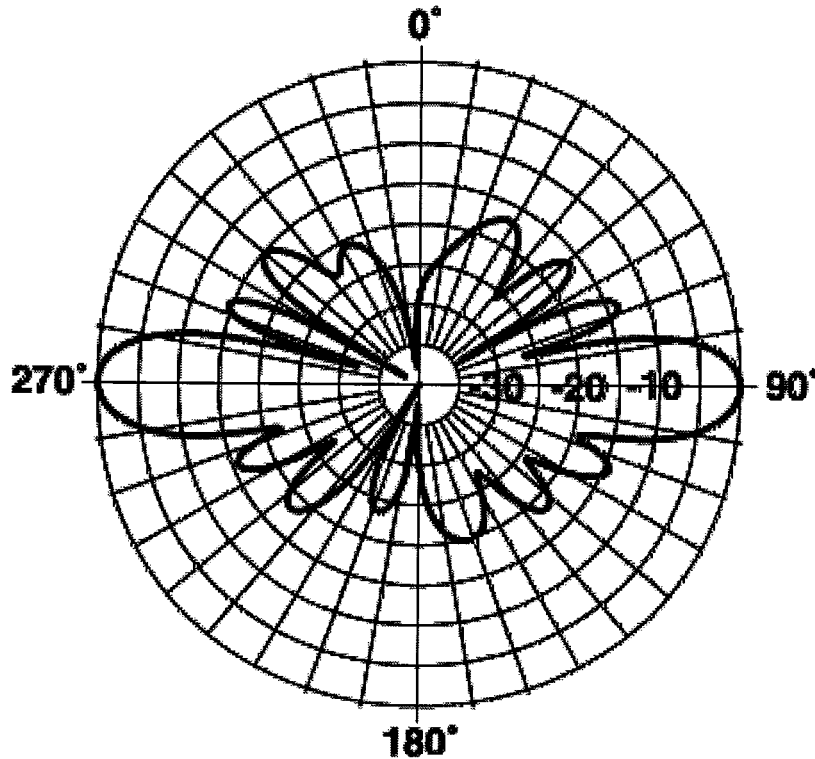
[www.rfsworld.com](http://www.rfsworld.com)

## Product Data Sheet for 220-3B (Cont.)

### Super Stationmaster™ Omni Fiberglass Antenna

#### Vertical Pattern

(This is a general representation of the antenna family pattern. For the latest detailed pattern contact Applications Engineering. You may also download the CELplot(TM) pattern reader and antenna pattern data fields from our website.)



**RADIO FREQUENCY SYSTEMS**



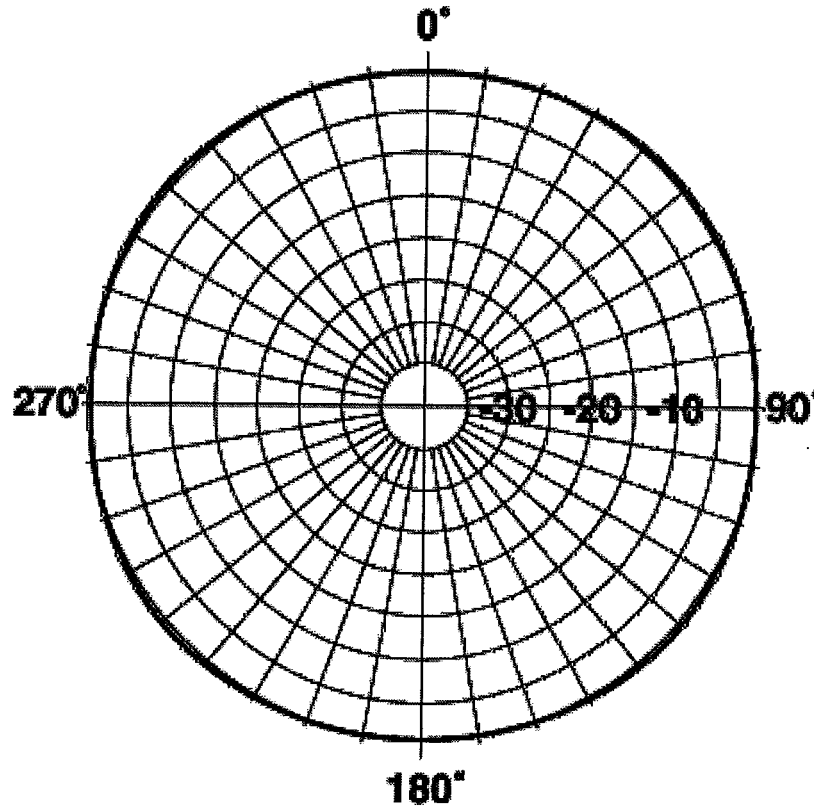
[www.rfsworld.com](http://www.rfsworld.com)

## Product Data Sheet for 220-3B (Cont.)

### Super Stationmaster™ Omni Fiberglass Antenna

#### Horizontal Pattern

(This is a general representation of the antenna family pattern. For the latest detailed pattern contact Applications Engineering. You may also download the CELplot(TM) pattern reader and antenna pattern data fields from our website.)



**RADIO FREQUENCY SYSTEMS**



[www.rfsworld.com](http://www.rfsworld.com)



General Power Density

Site Name: Montville, CT  
 Tower Height: 100 ft rad center

Operator	Operating Frequency (MHz)	Number of Trans.	ERP Per Trans. (watts)	Total ERP (watts)	Distance to Target (feet)	Calculated Power Density (mW/cm <sup>2</sup> )	Maximum Permissible Exposure* (mW/cm <sup>2</sup> )	Fraction of MPE (%)
Verizon Messaging	152.48	1	250	250	100	0.0090	0.10165	8.84%
Verizon Messaging	158.7	1	125	125	100	0.0045	0.1058	4.25%

**Total Percentage of Maximum Permissible Exposure**

13.09%

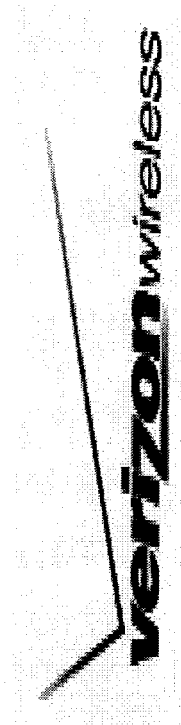
\*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz

mW/cm<sup>2</sup> = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case scenario, maximum values used.



1. EXECUTIVE SUMMARY

This report summarizes the structural analysis of the 190' (180' + 10' extension) guyed lattice tower located at 57 Cook Road in Montville, Connecticut. The analysis was conducted in accordance with the TIA/EIA-222 requirements for wind velocity of 85 mph and 74 mph concurrent with 1/2" ice design wind load. The loading considered in the analysis consists of all proposed antennas and existing antennas, transmission lines, and ancillary items as outlined on the following page of this report. The proposed Verizon Wireless modification is to add the following antennas:

ANTENNA & MOUNT DESCRIPTION	CARRIER	CENTERLINE ELEVATION
(2) RFS 220-3B antennas on stand-off mounts with (2) 7/8" coax cables	Verizon Wireless	@ 100' elevation

The results of the analysis indicate that the tower structure is in compliance with the proposed loading conditions. The tower is considered structurally feasible with the TIA/EIA-222 wind load classification specified above and all the existing and proposed antenna loading.


This analysis is based on:

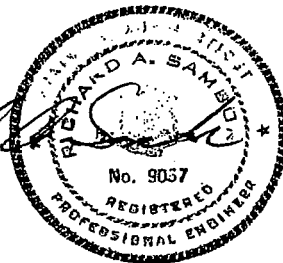
- 1) The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- 2) All coaxial cables placed within the tower face between support legs as detailed on Structure Sheet SK-1 in Section 6 of this report.
- 3) Original 180' tower design prepared by Rohn Industries, Inc., file number 35489PH signed and sealed March 20, 1997. 10' tower extension supplied by Rohn Industries, Inc., drawing number C020301 dated May 5, 2002 and tower re-evaluation prepared by Walker Engineering Inc., for Natcomm / AT&T Wireless signed and sealed July 9, 2002.
- 4) Existing antenna inventory taken from Walker Engineering evaluation prepared for Natcomm / AT&T Wireless signed and sealed July 9, 2002.
- 5) TIA/EIA-222 wind load classification.

This report is only valid per the assumptions and data utilized in this report for the structural member sizing, antenna inventory, mounting, and coaxial cable sizes and locations. The user of this report shall field verify the assumption of the structural member sizes, antennas, mount configurations, and cable sizes and locations. Notify the engineer in writing immediately if any of the assumptions in this report are found to be other than specified.

If you should have any questions, please call.

Sincerely,  
URS Corporation AES

  
Richard A. Sambor, P.E.  
Manager Facilities Design



RAS/ddm

cc: Mark Gauger – Verizon Wireless  
Douglas Roberts, AIA – URS  
CF/Book

2. INTRODUCTION

The subject tower is located at 57 Cook Road in Montville, Connecticut. The structure is a 190' (180' + 10' extension) guyed lattice tower. The original 180' tower design was prepared by Rohn Industries, Inc., file number 35489PH signed and sealed March 20, 1997. The 10' tower extension was supplied by Rohn Industries, Inc., drawing number C020301 dated May 5, 2002 and the tower re-evaluation was prepared by Walker Engineering Inc., for Natcomm / AT&T Wireless signed and sealed July 9, 2002.

The tower is constructed of solid pipe legs, diagonals, and horizontal members. The tower sections are bolted together. The width of the face is 3'-5". The existing antenna inventory was taken from Walker Engineering evaluation prepared for Natcomm / AT&T Wireless signed and sealed July 9, 2002.

The antenna and mount configuration used in this report is as follows:

ANTENNA & MOUNT DESCRIPTION	CARRIER	ANTENNA CENTERLINE
(6) Allgon 7250 antennas on (3) T-frame mounts with (12) 1 5/8" coaxial cables	AT&T Wireless (existing)	@ 194'-0"
(9) ALP 11011-N antennas on (3) boom mounts with (9) 1 5/8" coaxial cables	Cingular Wireless (existing)	@ 180'-0"
(12) ALP 11011-N antennas on (3) boom mounts with (12) 1 5/8" coaxial cables	Verizon Wireless (existing)	@ 170'-0"
(12) Decibel DB980H65 antennas on (3) boom mounts with (12) 1 5/8" coaxial cables	Sprint PCS (existing)	@ 160'-0"
(9) Decibel DB844H90 antennas on (3) boom mounts with (9) 1 5/8" coaxial cables	Nextel (existing)	@ 140'-0"
(2) RFS 220-3B antennas on stand-off mounts with (2) 7/8" coax cables	Verizon Wireless (proposed)	@ 100'-0"

**Note: Coaxial cables shall be oriented as detailed on Structure Sheet SK-1 in Section 6 of this report. Any changes shall be brought to the engineer's attention immediately in writing.**

This structural analysis of the communications tower was performed by URS Corporation (URS) for Verizon Wireless. The purpose of this analysis was to investigate the structural integrity of the existing tower with its existing and proposed antenna loads. This analysis was conducted to evaluate twist (rotation), sway (deflection) and stress on the tower, and the effect of forces to the foundation of the tower resulting from existing antenna arrangements.

3. ANALYSIS METHODOLOGY AND LOADING CONDITIONS

Methodology:

The structural analysis was done in accordance with the TIA/EIA-222, the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Allowable Stress Design (ASD).

The analysis was conducted using ERI Tower 3.0. The load conditions were evaluated as shown below which were compared to allowable stresses according to AISC and the TIA/EIA. The load combinations were investigated in ERI Tower 3.0 to determine the stress, sway and rotation.

- Load Condition 1 = 85 mph Wind Load + Tower Dead Load
- Load Condition 2 = 74 mph Wind Load (with ice) + Ice Load + Tower Dead Load

The TIA/EIA standard permits one-third increase in allowable stresses for towers and monopoles less than 700 feet tall. For purposes of this analysis, the allowable stresses of the tower members were increased by one-third in computing the load capacity; in addition, the appropriate "k" factors were assigned to each member.

4. **FINDINGS AND EVALUATION**

The combined axial and bending stresses on the tower structure were evaluated to compare with the allowable stress in accordance with AISC. The tower legs, diagonal and horizontal members, guys, and foundations have sufficient capacity to carry the loads applied.

**The tower base reaction:**

Compression (kips)	133
--------------------	-----

For detailed reactions, see drawing no. E-6 in section 6 of this report

**Guy anchor reactions with factors of safety:**

Condition	Force (kips)	Factor of Safety
Uplift	48	2.47
Shear	50	2.64

For detailed reactions, see drawing no. E-6 in section 6 of this report

**Guy forces with factors of safety:**

Elevation (A.G.L.)	Guy Force (kips)	Factor of Safety
162'-6"	21.94	2.66
102'-6"	14.10	3.01

For details, see drawing no. E-6 in section 6 of this report

**Member Usage Summary:**

Elevation Range (from base)	Member Description	Member Force (kips)	Member Usage (%)	Member Description	Member Force (kips)	Member Usage (%)
190 - 180	Leg	11.82	14.6	Diagonal	1.53	7.7
180 - 160	Leg	63.51	78.3	Diagonal	7.28	36.6
160 - 140	Leg	59.17	74.3	Diagonal	2.90	22.6
140 - 120	Leg	61.06	76.9	Diagonal	2.33	18.1
120 - 100	Leg	95.10	87.1	Diagonal	5.76	28.8
100 - 80	Leg	87.57	88.0	Diagonal	4.50	68.4
80 - 60	Leg	72.37	80.8	Diagonal	5.45	57.1
60 - 40	Leg	80.56	89.5	Diagonal	2.53	50.8
40 - 20	Leg	80.56	89.5	Diagonal	2.95	59.3
20 - 0	Leg	69.11	77.9	Diagonal	3.96	41.4

For detailed member analysis, see ERI tower output data in section 6 of this report

## 5. CONCLUSIONS AND RECOMMENDATIONS

The results of the analysis indicate that the structure is in compliance with the loading conditions and the materials and member sizes for the tower. The tower is not considered structurally feasible with the TIA/EIA-222-E wind load classification specified above for the entire existing and proposed antenna loading conditions.

### Limitations/Assumptions:

This report is based on the following:

- A. Tower is properly installed and maintained.
- B. Original 180' tower design prepared by Rohn Industries, Inc., file number 35489PH signed and sealed March 20, 1997. 10' tower extension supplied by Rohn Industries, Inc., drawing number C020301 dated May 5, 2002 and tower re-evaluation prepared by Walker Engineering Inc., for Natcomm / AT&T Wireless signed and sealed July 9, 2002.
- C. Existing antenna inventory taken from Walker Engineering evaluation prepared for Natcomm / AT&T Wireless signed and sealed July 9, 2002.
- D. All coaxial cables shall be placed within the tower face between support legs as detailed on Structure Sheet SK-1 in Section 6 of this report.
- E. All required members are in place.
- F. All bolts are in place and are properly tightened.
- G. Tower is in plumb condition.
- H. All member coatings are in good condition.
- I. All tower members were properly designed, detailed, fabricated, installed, and have been properly maintained since erection.

URS is not responsible for any modifications completed prior to or hereafter in which URS is not or was not directly involved. Modifications include but are not limited to:

- A. Adding antennas
- B. Adding coaxial cables

URS hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact URS. URS disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

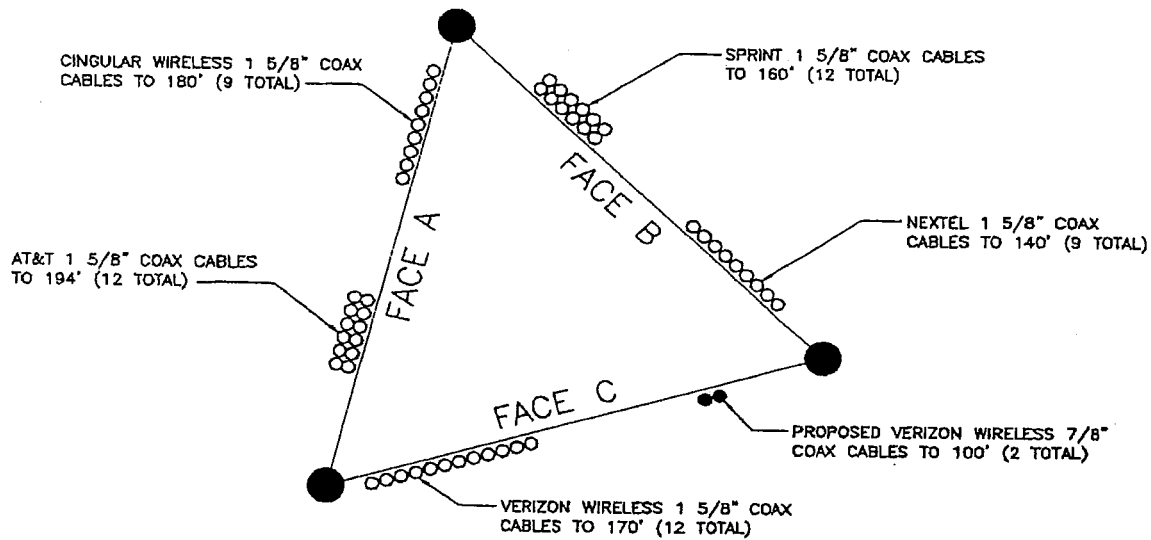
**STRUCTURE SHEET SK-1: COAXIAL TRANSMISSION LINES MOUNTING  
CONFIGURATION**

36929208  
VZ1 075

190' Guyed Lattice Tower  
Montville, Connecticut

8/10/2004

190 FT. GUYED TOWER, MONTVILLE, CT.  
COAX TRANSMISSION LINES MOUNTING CONFIGURATION



1 TOWER AND CABLE RUNS  
 SK-1 SCALE: N.T.S.

PROJECT NO.  
38929100  
 Designed by:  
 Drawn by: CRS  
 Checked by:  
 Approved by:

**URS CORPORATION AES**  
 795 BROOK STREET, BLDG 5  
 ROCKY HILL, CONNECTICUT  
 1-(860)-629-8882

**VERIZON WIRELESS MESSAGING SERVICES, LLC**  
 d/b/a VERIZON WIRELESS  
 WIRELESS COMMUNICATIONS FACILITY

SITE ADDRESS:  
 57 Cook Road  
 Montville, Connecticut

REV.	DATE	DESCRIPTION

Scale: AS NOTED      Date: 08-09-04  
 Job No. VZ1-075      File No. SK-1

Dwg. No.  
**SK-1**  
 Dwg. 1 of 1

**ERI TOWER INPUT / OUTPUT DATA FOR TOWER WITH PROPOSED  
ANTENNA LOADING**

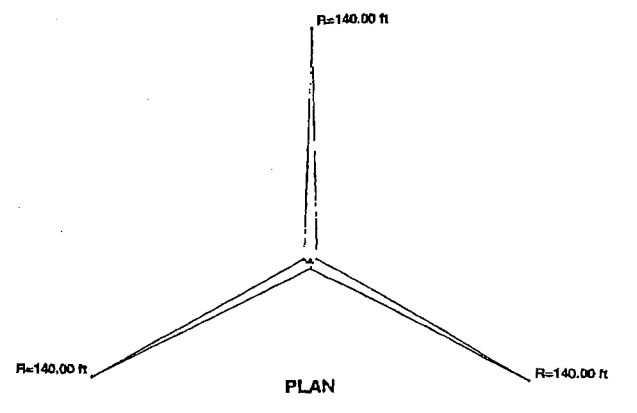
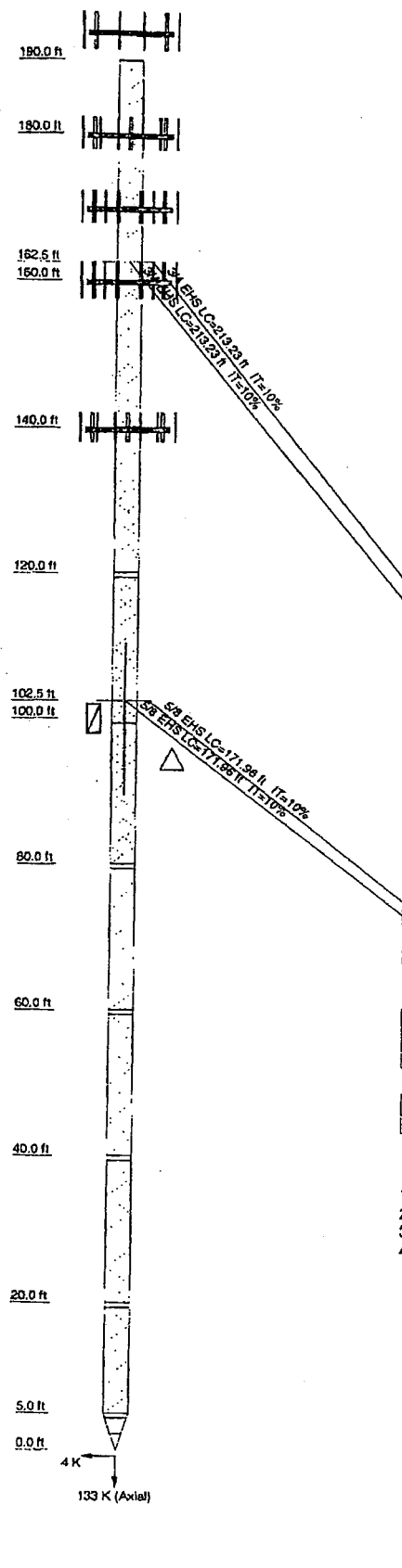
36929208  
VZ1 075

190' Guyed Lattice Tower  
Montville, Connecticut

8/10/2004



Part	Quantity	Description	Grade	Material	Weight (K)
Legs	4	AS72-50	A	ROHN TSI.5x11 ga	10.4
Diagonals	4	L2x2x1/4	N.A.	ROHN TSI.5x16 ga	0.3
Diagonal Grade	4	L2x2x1/4	N.A.	ROHN TSI.5x16 ga	0.3
Top Girts	4	L2x2x1/4	B	ROHN TSI.5x11 ga	0.3
Mid Girts	4	L2x2x1/4	B	ROHN TSI.5x11 ga	0.3
Bottom Girts	4	L2x2x1/4	N.A.	ROHN TSI.5x11 ga	0.3
Face Width (ft)	6				
# Panels @ (ft)	6				
Weight (K)	4				



**APPURTENANCES**

TYPE	ELEVATION	TYPE	ELEVATION
(2) 7250.xx (ATI WS)	194	(4) DB980H65 (Sprint)	160
(2) 7250.xx (ATI WS)	194	(4) DB980H65 (Sprint)	160
(2) 7250.xx (ATI WS)	194	(4) DB980H65 (Sprint)	160
Prod 12' PCS T-Frame (1) 104569 (ATI WS)	194	Prod 12' PCS T-Frame (1) 104569 (Sprint)	160
Prod 12' PCS T-Frame (1) 104569 (ATI WS)	184	Prod 12' PCS T-Frame (1) 104569 (Sprint)	160
Prod 12' PCS T-Frame (1) 104569 (ATI WS)	194	Prod 12' PCS T-Frame (1) 104569 (Sprint)	160
(3) ALP 11011-N (Cingular)	180	(3) DB844H90 (Nextel)	140
(3) ALP 11011-N (Cingular)	180	(3) DB844H90 (Nextel)	140
(3) ALP 11011-N (Cingular)	180	(3) DB844H90 (Nextel)	140
Prod 15' T-Frame Sector Mount (1) (Cingular)	180	Prod 15' T-Frame Sector Mount (1) (Nextel)	140
Prod 15' T-Frame Sector Mount (1) (Cingular)	180	Prod 15' T-Frame Sector Mount (1) (Nextel)	140
Prod 15' T-Frame Sector Mount (1) (Cingular)	180	Prod 15' T-Frame Sector Mount (1) (Nextel)	140
(4) ALP 11011-N (Verizon)	170	RFS 220-3B w/ Pipe Mount (Verizon)	100
(4) ALP 11011-N (Verizon)	170	RFS 220-3B w/ Pipe Mount (Verizon)	100
(4) ALP 11011-N (Verizon)	170	Prod 6' Side Mount Standoff (1) (Verizon)	100
Prod 15' T-Frame Sector Mount (1) (Verizon)	170	Prod 6' Side Mount Standoff (1) (Verizon)	100
Prod 15' T-Frame Sector Mount (1) (Verizon)	170		

**SYMBOL LIST**

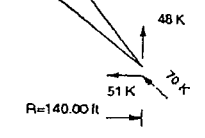
MARK	SIZE	MARK	SIZE
A	ROHN TSI.5x11 ga	C	5 @ 1.07562
B	L3x3x1/2		

**MATERIAL STRENGTH**

GRADE	Fy	Fu	GRADE	Fy	Fu
AS72-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

**TOWER DESIGN NOTES**

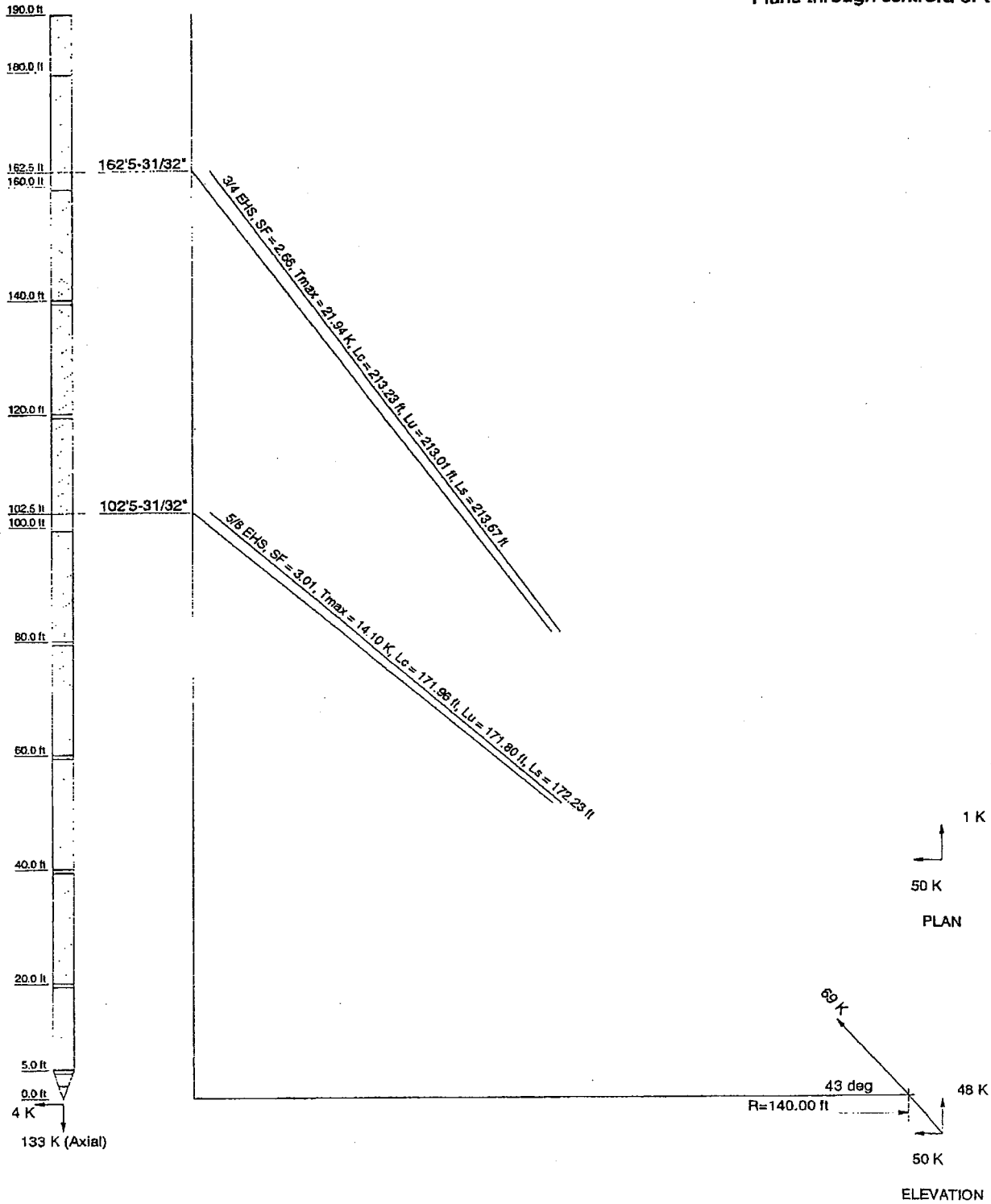
1. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
2. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
3. Deflections are based upon a 50 mph wind.
4. TOWER RATING: 89.5%



<b>URS Corp. AES</b> 795 Brook Street Rocky Hill, CT 06067 Phone: (860) 529-8882 FAX: (860) 529-5566	<b>Job: 190' Guyed Rohn Tower</b> Project: 57 Cook Road, Montville, CT Client: Verizon WS Code: TIA/EIA-222-F Path: P:\Telcom\F12\ERI\F464190' Guyed Rohn Tower on	Drawn by: Daniel D. McClure Date: 08/09/04 Scale: N Dwg No:
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**Guy Tensions and Tower Reactions**  
 TIA/EIA-222-F - 85 mph/74 mph 0.5000 in Ice

Maximum Values  
 Anchor 'A' @ 140 ft Azimuth 0 deg Elev 0 ft  
 Plane through centroid of tower



<b>URS Corp. AES</b>		Job: <b>190' Guyed Rohn Tower</b>	
795 Brook Street		Project: <b>57 Cook Road, Montville, CT</b>	
Rocky Hill, CT 06067		Client: <b>Verizon WS</b>	Drawn by: <b>Daniel D. McClure</b>
Phone: (860) 529-8882		Code: <b>TIA/EIA-222-F</b>	Date: <b>08/09/04</b>
FAX: (860) 529-5566		Path: <b>P:\Telecom\F\2\ERI Files\190' Guyed Rohn Tower.dwg</b>	Scale: <b>N</b>
			Dwg No. <b>[ ]</b>

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**5. CONCLUSIONS AND RECOMMENDATIONS**

The results of the analysis indicate that the structure is in compliance with the loading conditions and the materials and member sizes for the tower. The tower is considered structurally feasible with the TIA/EIA-222-E wind load classification specified above for the entire existing and proposed antenna loading conditions.

**Limitations/Assumptions:**

This report is based on the following:

- A. Tower is properly installed and maintained.
- B. Original 180' tower design prepared by Rohn Industries, Inc., file number 35489PH signed and sealed March 20, 1997. 10' tower extension supplied by Rohn Industries, Inc., drawing number C020301 dated May 5, 2002 and tower re-evaluation prepared by Walker Engineering Inc., for Natcomm / AT&T Wireless signed and sealed July 9, 2002.
- C. Existing antenna inventory taken from Walker Engineering evaluation prepared for Natcomm / AT&T Wireless signed and sealed July 9, 2002.
- D. All coaxial cables shall be placed within the tower face between support legs as detailed on Structure Sheet SK-1 in Section 6 of this report.
- E. All required members are in place.
- F. All bolts are in place and are properly tightened.
- G. Tower is in plumb condition.
- H. All member coatings are in good condition.
- I. All tower members were properly designed, detailed, fabricated, installed, and have been properly maintained since erection.

URS is not responsible for any modifications completed prior to or hereafter in which URS is not or was not directly involved. Modifications include but are not limited to:

- A. Adding antennas
- B. Adding coaxial cables

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