

Structural Analysis Report

140' Existing ROHN SSV Lattice Tower

*Proposed Verizon Wireless
Antenna Installation*

Verizon Site Ref: South Woodstock

*87 West Quassett Road
Woodstock, CT*

Centek Project No. 09122

Date: September 13, 2011



Prepared for:
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Table of Contents

SECTION 1 - REPORT

- INTRODUCTION.
- ANTENNA AND APPURTENANCE SUMMARY.
- PRIMARY ASSUMPTIONS USED IN THE ANALYSIS.
- ANALYSIS.
- TOWER LOADING.
- TOWER CAPACITY.
- CONCLUSION.

SECTION 2 – CONDITIONS & SOFTWARE

- STANDARD ENGINEERING CONDITIONS.
- GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM.

SECTION 3 – CALCULATIONS – LOAD CONDITION #1

- RISATower INPUT/OUTPUT SUMMARY.
- RISATower FEED LINE PLAN.
- RISATower FEED LINE DISTRIBUTION.
- RISATower LEG COMPRESSION DIAGRAM.
- RISATower GLOBAL MAST SHEAR AND MOMENT DIAGRAMS.
- RISATower DEFLECTION DIAGRAMS.
- RISATower STRESS DIAGRAMS.
- RISATower WIND PRESSURE AND ICE THICKNESS.
- RISATower DETAILED OUTPUT.
- RISA-3D DEFLECTED SHAPE GRAPHIC.

SECTION 4 – REFERENCE MATERIALS

- JWB TOWER MAPPING AND INVENTORY REPORT, DATED 08.19.11 WITH STANDRAD ROHN SSV TOWER DESIGN DRAWINGS.

Introduction

The purpose of this report is to summarize the results of the non-linear, P- Δ structural analysis of the existing self supporting lattice tower owned by American Tower Corporation (ATC), located in Woodstock, Connecticut for utilization by Verizon Wireless for a proposed typical panel antenna array installation.

The host tower is a 140-ft three legged, tapered steel lattice tower originally designed and manufactured by UNR-ROHN. The tower geometry and structure member sizes were obtained from standard UNR-ROHN self support tower design drawings with N series tower sections. Foundation information was also taken from UNR-ROHN standard design drawings with plan dimensions verified in the field.

The existing antenna and appurtenance inventory were obtained from a tower mapping and inventory report prepared by JWB tower Services, dated August 18, 2011.

The tower is consists of six (6) tapered and one (1) straight vertical leg sections consisting of steel pipe conforming to ASTM A572-50 and solid round steel conforming to ASTM A36. Diagonal lateral support bracing consists of equal angle and solid round steel conforming to ASTM A36. All lateral bracing and flange plate connections are bolted with A325 bolts. The tower face width is 6.56-ft at the bottom tapering to 1.17-ft at the top.

Antenna and Appurtenance Summary

The existing loads considered in the analysis consist of the following:

Load Condition #1 - Existing Verizon equipment.

▪ VERIZON (Existing):

Antenna: Two (2) 11-ft Omni-directional whip antennas (one up, one inverted) mounted on a 6-ft stand-off frame with respective RAD center elevations of ± 142.83 -ft and 126.5-ft above the tower base.

Coax Cable: Two (2) 7/8" \varnothing coax cables running on the East leg of the existing tower as specified in Section 3 of this report.

Load Condition #2 – PROPOSED VERIZON EQUIPMENT.

▪ VERIZON (Typical LTE Equipment Configuration):

Antenna: Fifteen (15) 5-ft x1-ft panel antennas mounted on three (3) 13-ft T-Frames with a RAD center elevation of ± 140 -ft above the tower base.

Coax Cables: Eighteen (18) 1-5/8" \varnothing coax cables running on the leg/face of the existing tower.