EXHIBIT 15- STRUCTURAL ENGINEERING REPORT

February 2, 2018

Md7
c/o Verizon
Attn: Michell Butler, Site Acquisition Mgr.
6645 NE 78th Ct., Suite C-4
Portland, OR 97218

Subject: **Design Criteria and Failure Modes for Proposed 100'–0" Monopole**
Site: **POR Whitford**
Address: **7400 SW Scholls Ferry Rd.**
Beaverton, OR 97008

Dear Ms. Butler,

The following is our design criteria for communications structures, along with the predicted failure for the above proposed monopole:

Design Criteria

Communication monopine structures designed by Western Utility Telecom, Inc. (Western UT) are sized in accordance with the latest revision of the ANSI/TIA 222 Standard entitled "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures." This standard has been approved by ANSI, who has generated the standard for "Minimum Design Loads for Buildings and Other Structures." The standard, which is the basis for design loading for practically every building code and standard in country, has dealt with the design of antenna support structures for over 50 years. The TIA standard, based on provisions of this nationally known specification, has a long history of reliability. At its core philosophy is its first and foremost priority to safeguard and maintain the health and welfare of the public.

The TIA standard dictates minimum wind loading (the predominate loading on an antenna supporting structure) for each county in the United States. It is Western UT's policy to use the wind loading listed in the latest TIA standard as a minimum loading unless the customer specifies a larger value. Statistically, the wind speed listed in the TIA standard has been determined to be that wind which has an average reoccurrence of 50 years (i.e. the magnitude that has a 2% chance of occurring, or being exceeded, in any one year). This wind is also a "3-second gust" wind, which by definition, is the average velocity of wind over a period of three seconds passing a fixed point, at an elevation of 33 feet above ground level. This "3-second gust" wind is then modified with factors based on the structure height, and terrain, or exposure, conditions at the actual project site. Note that these factors, in all cases, increase the design load applied to the structure.

The loads generated by this wind speed, along with the weight of the pole sections, all appurtenances, and any ice loading, if considered, are used to design the structural system. To fail the tower structure, the wind must exceed all estimates for magnitude and duration, as well as overcome the factor of safety determined from the design.

The design criteria used for this monopole will be as follows (unless superceded by local jurisdiction):

V_{ult} Wind:	120 mph (3-second gust) per 2014 OSSC
V_{asd} Wind:	93 mph (3-second gust) per 2009 ANSI/TIA 222-G Addendum 2
Ice:	1¼" Escalating @ 30 mph (3-second gust) wind
Seismic:	Per 2014 OSSC
Loading:	As specified by customer.

The monopole structure will be designed by, or under the direct supervision of, a Civil Engineer licensed in the state of Oregon.

Failure Modes

The failure modes for monopole structures are dependent on many factors, but due to their simplistic design, and limited number of components, the "weakest link" is not difficult determine.

Single section monopoles would typically fail near the base. Considering a "catastrophic failure", the fall radius would be nearly equal to the height of the monopole. With multiple section monopoles, failure would tend to occur at a splice or near the base, and likewise, the worst-case fall radius would be equal to the height of the monopole. The multiple section monopole could also produce fall radii equal to the distance from the top of the monopole to any splice or point where the pole shaft is discontinuous.

Note that rarely does a "structural failure" of a monopole include any part of the structure actually striking or falling to the ground. As with most structural systems, the onset of material deformation (i.e. bending, warping, twisting, etc.) relieves the localized overstress condition by transferring load to adjacent, or nearby, structural elements. Unless the duration of the "overstress" (or conditions causing it) becomes nearly continuous, a "catastrophic failure" (i.e. the monopole actually falling over) would never occur. It is highly unlikely that a "structural failure" would include anything more than a visible bending, or warping, of the base or pole section.

If you have any questions regarding the above information, please contact me at (503) 587-0101.

Sincere Regards,

REGISTERED PROFESSIONAL ENGINEER
18,573
OREGON
JULY 10, 1996
ADRIAN McJUNKIN
2/2/18
EXPIRES: 12/31/2018

Adrian McJunkin, PE
President

ENGINEERING EXPERIENCE:

For: Adrian McJunkin, P.E., President
Wireless Structures Consulting, Inc. DBA Western Utility Telecom, Inc.
5032 Salem Dallas Hwy NW
Salem, OR 97304

May 2001 to Present

Position Title: Company President

Employer/Company: Wireless Structures Consulting, Inc. DBA Western Utility Telecom, Inc.

A manufacturing company that provides structural engineering services, along with engineered steel structures and related components manufactured for both the Telecommunications and Utilities Industries.

Company services specialize in the analysis, design, and manufacture of microwave and cellular antenna supporting structures (lattice towers, monopoles, rooftop frames, etc.) along with utility structures (transmission poles and substation structures).

As the president, my responsibilities include overseeing the engineering, design, and manufacturing efforts of a 38-person company that include 3 engineers, 7 designer drafters, 18 steel fabricators, 3 inside salespersons, and other office personnel. I personally have 28 years of experience in this industry performing structural design and providing consultation as a professional civil engineer with a structural emphasis. I practice engineering in the following capacity:

1. Structural design and analysis of lattice towers and frame structures used primarily for telecommunications. These structures are analyzed using commercially available finite element analysis programs (SAPS for towers, Risa3D for frames). Wind pressures are applied to the antennas and tower members, member forces are determined, and the structural members are selected using readily available steel sections. All connections are designed to adequately transfer forces between structural member components, and finally down into the foundation.
2. Structural design of reinforcements for retrofitting existing structures. For overloaded lattice structures, reducing the unbraced length may increase the capacity of the member to safely accommodate the calculated forces.
3. Analyze antenna-mounting components, such as rooftop antenna mounting frames for given wind and antenna loading configurations.
4. Interface design for rooftop antenna structures.
5. Foundation designs based on structure reactions and anticipated soil conditions.

Samples of my projects that I am fully responsible for, are:

1. Over 1,000 foundation designs for new tower and monopole structures located in various sites throughout the United States.

2. Designed and detailed a 75' tall, twelve (12) station military rappel tower for Camp Rilea, OR. It is the nation's largest military rappelling tower to date. The detailing of the structure consisted of only bolt-together members, and no field welding was required. The contractor had no field problem issues relating to our design or detailing with the installation of the structure.
3. Analysis of existing 505' guyed tower located at Lino Lakes, MN. This is the tallest tower structure that I have analyzed.
4. Analysis of existing 200' tall converted oil derrick tower located on Catalina Island, CA.
5. Analysis and design of many other existing self-supporting and guyed towers, along with polygon-shaped tapered monopoles.
6. Design of a 65' Clock Tower located at Bennion Care Center, Salt Lake City, UT. This structure is a four-leg space frame, camouflaged as a clock tower.
7. Provided independent response to the Department of the State Architect (DSA – California) structural review for a 60' Monopole located at Grapevine Elementary, San Diego, CA.

January 1999 to May 2001

Position Title: Pole Engineering Team Leader

Employer: Valmont/Microflect - 3575 25th St. SE, Salem, OR 97302

Immediate Supervisor: Jeff Grassman, P.E. - 3575 25th St. SE, Salem, OR 97302

The first quarter of 1999, I trained to design and analyzed polygonal tapered monopole structures used for the Telecommunication Industry. After which, I was required to understand the sales, marketing, manufacturing and construction of these structures. Most of my time was designing

Since this time, I have been responsible for the team of engineers (currently three other individuals) who design monopole structures for Valmont/Microflect. I have personally engineered and designed over 80 various communication structures. I have also created efficient structure designs to help increase the efficiency of raw material usage and standardizing component products.

Design time constituted 60% of time. Balance 40% of time is spent assigning, reviewing and certifying work, and providing technical assistance to customers and internal personnel.

June 1998 to December 1998

Position Title: Chief Engineer

Employer: US Tower Corporation, 1220 N. Marcin St., Visalia, CA 93291

Immediate Supervisor: Bruce Kopitar - Company Owner

As the Chief Engineer, I was responsible for the development of the design program used to analyze telescoping and self-supporting lattice structures. I was also responsible for a wide range of engineering and product sales activities. Design time constituted 30% of time. Balance 70% of time was spent on program development.

Jan, 1993 to May 1998

Position Title: Project Engineer

Employer: Microflect Co, Inc. - 3575 25th St. SE, Salem, OR 97302

Immediate Supervisor: Jeff Grassman, P.E.

As a Project engineer, I was assigned larger, increasingly complex projects that involved advanced analysis methods.

In 1993, I was part of a design team of engineers involved with designing and analyzing lattice structures used in a NASA Launch Pad Lightning Mitigation project aimed at protecting rockets from being damaged during lightning strikes.

In 1994, I personally designed and analyzed a 110' custom lattice structure which included a 60' monopole nested at the top. I modeled and analyzed this structure for dynamics forces for proper design of the members and connections.

In 1995, I personally designed and analyzed a custom lattice structure specifically for the use of supporting essential 911 telecommunications equipment. My design worked was not only checked by a Senior Engineer within my company, but also reviewed by the Department of the State Architect (DSA), CA.

In 1996, I was tasked with managing a special project to facilitate the Telecommunication Industry's move to free the 2GHz frequency band for PCS phones. In this project, my tasks involved site visits and evaluations of existing structures. Where retrofit was applicable, I made recommendations for replacement structural members and or foundation modification. During this time, I personally inspected over 20 existing structures. This project lasted for approximately six months.

From Mid. 1996 to May 1998, I was promoted to an inside sales engineering position where I was responsible for the preliminary design of lattice structures and price estimating for bidding purposes. I personally designed and bid over 100 structures. Also during this time, I became Licensed as a Professional Engineer in the state of Oregon and California, at which time I became responsible for many projects by reviewing and certifying engineering documents and drawings. I personally reviewed and certified over 20 projects.

June 1990 to Jan. 1993

Position Title: Staff Engineer

Employer: Microflect Co, Inc. - 3575 25th St. SE, Salem, OR 97302

Immediate Supervisor: James Robert Callaway, P.E.

As a Staff engineer, I personally analyzed and designed over 150 various communication structures as well as their associated foundations. These structures were primarily designed to support transmitting and receiving microwave antennas used in the Telecommunications Industry. During this time, I had the opportunity to work closely with Marketing, Sales, Manufacturing, and Construction personnel who provided a great deal of feedback to help enhance my experience and knowledge.

In 1992 and 1993, I traveled to Alaska, Montana, and other western states to remote locations to evaluate the conditions of existing structures for the purpose of installing additional microwave antenna equipment. Field measurements were taken on existing structures so that custom microwave antenna mounts could be fabricated to accommodate the proposed application.

Experience (Cont.):

I was also the engineer responsible for the review of raw steel material certifications for compliance with ASTM material standards. A great deal of my work was overseen and/or reviewed by James Robert Callaway, P.E., Jimmy Jarrett, P.E., Jeff Grassman P.E., and Michael Deines, P.E.