

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Implementation of Section 224 of the Act	)	WC Docket No. 07-245
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51

**DECLARATION OF MARK WHITLOCK**

I, Mark Whitlock, hereby declare the following:

1. This Declaration provides information related to my experience with wireless pole attachments on utility distribution poles and my knowledge of how such attachments will assist T-Mobile USA, Inc. (“T-Mobile”) in its continuing efforts to effectively expand mobile broadband infrastructure and wireless coverage (including 3G and 4G services) throughout the United States. In addition, this declaration contains information responsive to comments submitted by various pole owners and other parties in this proceeding.

2. I am a Development Manager, in the Salt Lake City Market for T-Mobile and have served in that capacity since 2000. I am currently responsible for the development and implementation of policies and procedures utilized by the Engineering and Operation organization to deploy the T-Mobile wireless network in both the state of Utah and portions of Idaho. This includes leasing, zoning and construction work in accordance with applicable standards for all sites, including the location of Base Station Subsystem and Mobile Station Subsystem operations, as well as the coordination of RF engineering requirements, zoning approvals and building permit guidelines for all types

of cell site locations, including but not limited to new tower location and construction, attachment of wireless facilities to utility distribution poles (including pole top attachments) and transmission towers, collocations on existing structures (e.g. water towers, roof tops, etc.), and more.

3. I have 13 years experience in the telecommunications industry, primarily in the area of wireless communications networks. I hold a Bachelor of Science in finance from the University of Utah.

4. I have been directly involved in the provisioning of dozens of wireless facility attachments on utility distribution poles in Utah over the past decade. These attachments have typically included placing some of the following types of equipment on utility distribution poles: antennas, radio cabinets, coaxial cables and power cables.

5. Prior to my current role, for 15 years I served as a Senior Right of Way Agent for PacifiCorp (d/b/a Utah Power & Light in the state of Utah, now known as Rocky Mountain Power "RMP"). In that role, I secured right-of-way easements for RMP for the construction of distribution and transmission power lines. I was responsible for leasing and zoning of property for substations and power plants as well as other properties required by the company such as call centers and service centers. I was directly involved in the evaluation of site candidates, applications to local zoning jurisdictions, public hearings and appeals, and project conformance with conditions of approval. In this role, I also engaged in the negotiation and sale of excess properties throughout RMPs' service area. I also negotiated pole attachment agreements between RMP and wireless carriers.

6. T-Mobile competes in a fiercely competitive communications marketplace in the United States. Coverage and quality of service are elements of that competitive marketplace as consumers increasingly use mobile devices as their primary mode of communications. T-Mobile provides wireless voice and data services to nearly 34 million customers throughout the United States.

7. T-Mobile is actively deploying HSPA+ wireless broadband technology throughout the country; its HSPA+ network reaches more than 100 major metropolitan areas and more than 200 million people nationwide – providing customers access to the fastest and largest 4G network in the country.

8. In order to increase capacity and improve coverage, T-Mobile must increase the number of cell sites. Siting antennas on utility distribution poles, including pole tops, has significantly helped T-Mobile increase capacity and improve coverage in Utah residential areas where customers increasingly demand our services. Such attachments will continue to help ensure ongoing continuous communications (i.e., fewer dropped calls) and assist in the further deployment of both 3G and 4G wireless services, which will mean improved voice quality and mobile broadband access for T-Mobile customers.

9. In some instances, utility distribution poles are the *only* practical means of siting new communications antennas. For instance, new tower siting can be extraordinarily difficult in residential areas, and roads covered by dense trees are technically very difficult to serve using antennas located above the canopy of leaves, as would typically be the case with a monopole. In addition, certain terrain conditions make utility distribution poles the only technically feasible infrastructure option. For

example, in rolling terrain, where a tower cannot be tall enough to allow for line-of-site signal penetration to both the hilltops and the valleys between them, utility distribution poles are the only way to provide coverage. There are Utah neighborhoods in which T-Mobile lacked or had extremely limited coverage before it was able to locate antennas on utility distribution poles. This is not limited to situations in which T-Mobile seeks to deploy coverage where it does not currently exist. As user demand for bandwidth increases, T-Mobile must subdivide its cell sites to increase the effective throughput available to subscribers located in a given area. Antennas attached to utility distribution poles, including on pole tops, will be critical to T-Mobile's ability to augment wireless broadband capacity in its service areas.

10. In Utah, in which the Utah Public Service Commission ("Utah PSC") has established timelines to govern all pole attachments, I have seen the benefit of such timelines. The Utah PSC's timelines do not distinguish between wireline and wireless attachments. Before the Utah PSC adopted timelines, it was difficult even to get the utility to set up initial discussions regarding a wireless pole attachment. Since the PSC established timelines, the process for requesting and licensing a wireless pole attachment has become much more routine. Before the PSC adopted timelines, it was common for wireless pole attachments to take 12 months to be licensed and installed. Today, T-Mobile in Utah can go from requesting a wireless pole attachment (including pole tops) to a completed installation within three to four months, including changing out the existing pole, when necessary.

11. Wireless pole top antenna attachments are not categorically unsafe: indeed, in my experience, wireless pole top attachments have been deployed in a manner

that is safe to the general public, to the electric infrastructure, and to the workers that install and maintain the attachments. In the pole attachment projects that I have been involved with, including the attachment of pole top antennas, the attachments complied with the National Electric Safety Code (“NESC”), the National Electrical Code (“NEC”), the Telcordia Blue Book – Manual of Construction Procedures, as well as other applicable engineering and construction standards for the attachment of wireless equipment. In addition, governing Occupational Safety and Health Administration (“OSHA”) requirements were satisfied.

12. T-Mobile policy requires compliance with all relevant FCC, OSHA, and other requirements. Placement of T-Mobile equipment on utility distribution poles is no exception to this policy.

13. Procedures, timelines, and construction standards utilized by T-Mobile for the placement of antennas on the sides or tops of utility poles in the State of Utah are governed by rules adopted by the Utah PSC; and those standards do not distinguish between the attachment of wireline or wireless equipment. On behalf of T-Mobile, I actively engaged in the Utah PSC rulemaking efforts that established these requirements.

14. I have collaborated on the requisite pole attachment construction standards with RMP in order to implement and advance such applications in their service territory. These standards have been applied to panel-mounted antennas mounted on the pole tops and in the communications space of replaced and extended utility distribution poles. In addition, I have also worked on several custom designed poles in collaboration with RMP (e.g. pole top attachments on replaced and extended utility distribution poles with street lights).

15. In many cases, replacement and extended-height distribution poles mutually benefit both T-Mobile and RMP. For T-Mobile, the increased height improves the coverage area served by a particular sight and minimizes the need for additional sites. For the utility, the installation of newer and more robust distribution poles as part of placing a wireless attachment occurs at a significantly lesser cost to ratepayers than otherwise because T-Mobile pays for the new poles and associated costs of replacing them. When a pole is replaced, typically the old pole remains until lines have been transferred over from it to the new pole. As a result, the impact on customers as a result of pole replacements is minimal, if any.

16. T-Mobile and utilities, including RMP, work collaboratively throughout the entire process to attach wireless facilities including any necessary local approvals in a given jurisdiction.

17. As noted in paragraph 10 above, typically, in Utah, the entire coordinated process between T-Mobile and RMP, which begins with T-Mobile contacting utility regarding a certain utility distribution pole and concluding with an operational site, is completed within a three to four month period. As a result of this expedited process, T-Mobile has been able to deploy our wireless services to customers in residential areas much more quickly than if we were using traditional cell sites.

18. T-Mobile has not applied to attach to hundreds of poles at a time, as wireline third party attachers often do. Rather, applications from T-Mobile usually cover only a single pole (for macro-, micro or pico-cell sites) and no more than 50 poles in a given electric utility service area.

19. Utility poles come in different forms (wood, concrete, steel) and sizes, with different equipment and cable attached. For example, power conductors may be located at or near the pole top, or the pole may have cross-arms or, in some cases, a “tripod mount.” T-Mobile can and has adjusted its attachment designs to accommodate different pole characteristics in a manner that complies with governing standards, including the NESC. Although some poles may be better candidates for wireless attachments, no engineering challenge truly is insurmountable such that all poles, or any major category of poles, should categorically be declared “off limits” to wireless carriers. T-Mobile engineers, working in cooperation with engineers from utility pole owners, can and in my personal experience do generally find a safe and effective way to attach antennas to utility poles.

20. In addition to use of utility distribution poles in Utah, I am also familiar with T-Mobile’s attachments of wireless antennas and related equipment to utility poles in some or all of the following states: Oregon, California, New York, Massachusetts, Pennsylvania, Virginia, and Florida. I have also collaborated with and shared best practices with peers at T-Mobile regarding pole attachments in these other parts of the country including the design, construction, operation and maintenance of wireless pole attachments. These attachments are similar to T-Mobile’s use of utility distribution poles in Utah and more importantly, adhere to the same construction and engineering standards utilized by T-Mobile and RMP in Utah, including applicable safety standards.

21. T-Mobile routinely inspects and maintains the attachment of wireless equipment and the corresponding telecommunications and power installations on utility distribution poles consistent with the maintenance processes and procedures for all cell

sites. Remote monitoring of all sites occurs twenty four hours a day, seven days a week via T-Mobile's Network Operations Center.

22. In my 13 years' experience deploying wireless facilities on utility distribution poles, I am aware of no instances of antennas falling onto power lines or causing any other safety concerns.

23. Antennas and equipment cabinets are securely mounted and affixed to utility poles using the same mounting techniques used and approved by electric utilities for their own equipment. T-Mobile mounts antennas and equipment boxes in accordance with engineering specifications that take into account the weather conditions prevalent in the area, including local wind and snow conditions.

24. Because antennas are vertically aligned to poles, they generally do not accumulate significant amounts of snow or ice. The impact of antennas and associated equipment on a pole's strength and loading is significantly less than that created by overhead power lines and related power equipment.

25. Pole owners typically agree to allow T-Mobile to hire and coordinate supervision of electric-qualified third-party contractors to perform work on T-Mobile's attachments in the supply space. In addition, T-Mobile's technicians and contractors are well informed about the hazards of working near electric supply lines and are trained to maintain a safe working distance from such lines when they work in the communications space on utility poles. T-Mobile uses only highly-qualified, professional technicians and contractors to construct and maintain its attached facilities, and T-Mobile has an adequate number of qualified workers to safely maintain its attached facilities.

26. Cables running between an equipment box and antenna mounted on a utility distribution pole do not make exclusive use of vertical pole space. Such cables are placed in a manner that allows sufficient climbing space for workers on the poles and the attachment of other cables and equipment.

I declare under penalty of perjury that the foregoing is true and correct.



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