April 24, 2015

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Notice of Ex Parte – Use of Spectrum Bands Above 24 GHz for Mobile Radio Services
GN Docket No. 14-177

Dear Ms. Dortch:

On April 22, 2015, Joseph Sandri of FiberTower Spectrum Holdings, LLC (“FiberTower”), and FiberTower’s counsel, the undersigned and Benjamin Bartlett, met with the following Commission staff: John Leibovitz, Blaise Scinto, John Schauble, Stephen Buenzow (via telephone), Brian Regan, Charles Oliver, Tim Hilfiger, and Matthew Pearl from the Wireless Telecommunications Bureau; Michael Ha and Bahman Badipour from the Office of Engineering and Technology; and Howard Griboff and Robert Nelson (both via telephone) from the International Bureau. The discussions focused on the Commission’s Notice of Inquiry (“NOI”) exploring the use of spectrum bands above 24 GHz for mobile radio services.1

FiberTower discussed the points raised in its initial and reply comments in this proceeding, and also addressed a number of related questions from Commission staff.2 In particular, FiberTower expressed its support for the NOI and the Commission’s focus on driving innovation and the development of next-generation mobile services in bands above 24 GHz. FiberTower urged the Commission to move expeditiously to permit mobile use of these bands, which will be critical to driving the research and development, and the resulting technological innovation, needed to fuel the creation of next-generation mobile services in the U.S.

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FiberTower discussed the industry and research community emphasis on continuing to promote the development of existing fixed, wireless services in the bands above 24 GHz as an integral element in facilitating the successful development and deployment of next-generation mobile services. Incumbent fixed, wireless services in these bands provide the fundamental infrastructure from which 5G networks will be deployed. FiberTower mentioned that many manufacturers and researchers believe that existing and next-generation point-to-multipoint ("PMP") systems in the mmWave bands (including 24 and 39 GHz) share essentially many of the same core technology concepts that will ultimately be utilized by 5G mobile mmWave networks. Moreover, tests conducted by FiberTower have demonstrated that the same equipment used for existing PMP fixed, wireless equipment can be used to provide mobile services in these bands. Both in-band backhaul and access capabilities in this equipment provide a critical stepping stone for the development and deployment of 5G mobile mmWave services.

In response to questions from staff, FiberTower also addressed a number of technical issues regarding the coexistence of different services within the bands. In particular, FiberTower discussed how fixed, wireless and mobile services will technologically be able to coexist in the 24 and 39 GHz bands as long as the services within the same geographically-licensed area are controlled by the same licensee or its designated manager. The licensee is best suited to manage the various deployments while optimizing efficiencies and growth opportunities represented by ongoing (i) technology developments, (ii) equipment testing and operation, (iii) customer requirement assessments, including request for proposal (RFP) responses, (iv) staff and partner training, (v) spectrum management and harmonization, and (vi) capital outlay requirements. With respect to staff questions regarding whether it would be technically possible for satellite services also to coexist to some degree in these bands, FiberTower discussed how it currently uses coordination agreements with satellite providers in order to facilitate the use of satellite services inside or bordering a geographic area while ensuring FiberTower’s fixed, wireless services are not subjected to harmful interference. Those coordination agreements stem from rules and procedures established in both domestic rulemakings and in International Telecommunications Union ("ITU") and World Radiocommunication Conference ("WRC") proceedings.

Furthermore, FiberTower explained that existing portable, fixed point-to-point, and point-to-multipoint technology deployments largely mirror projected mmWave mobile deployments with regard to base station signal propagation and remote node beam lengths, and other related criteria. Technical rules in the 24 and 39 GHz bands, including interference protection and power limits, appear to be sufficiently flexible to facilitate the deployment of mobile services by the licensee while also maintaining existing internal and neighboring fixed, wireless services, although some refinements would be necessary. As FiberTower emphasized in its initial comments, the Commission should permit incumbent licensees in these bands to provide mobile services pursuant to their existing geographic licenses using as guidance the same border interference and coordination standards that are currently in place. Doing so will act as a catalyst to drive early use and investment in the bands, leading to faster development and deployment of next-generation mobile services.
April 24, 2015
Page 3

Finally, FiberTower addressed a number of staff questions regarding the characteristics of different bands above 24 GHz and the equipment used in those bands. FiberTower emphasized that the 24 GHz DEMS and 39 GHz bands contain physical characteristics that enable more efficient, higher-capacity spectrum use compared to lower bands. FiberTower further explained (based on PMP equipment trends) that, although the 24 GHz band will likely have a somewhat lower cost of entry than the 39 GHz band due to pre-existing equipment availability, both the 24 and 39 GHz are global bands with ideal technical characteristics – including more directional antennas, low profile form factors, superior spectrum re-use, higher signal gain, and lower latency – to provide both next-generation mobile and existing fixed, wireless services. FiberTower also addressed issues regarding the geographic radius of mobile services, sector antenna dynamics, and the number of portable and mobile users that can be supported by each base station in these bands.

FiberTower commends the Commission for its focus on these issues and looks forward to serving as a resource of information for Commission staff as they continue to explore the use of bands above 24 GHz for next-generation mobile services. Moving expeditiously to permit mobile use, while continuing to develop the necessary existing and future fixed, wireless services in the bands, will serve to unlock tremendous investment and innovation, and will ensure the U.S. is a global leader in the development of next-generation mobile services in the small cell and 5G markets.

Respectfully submitted,

/s/
Tom W. Davidson

cc: Bahman Badipour
Stephen Buenzow
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