Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
Use of Spectrum Bands Above 24 GHz For Mobile Radio Services	)	GN Docket No. 14-177
Establishing a More Flexible Framework to Facilitate Satellite Operations in the 27.5-28.35 GHz and 37.5-40 GHz Bands	)	IB Docket No. 15-256
Petition for Rulemaking of the Fixed Wireless Communications Coalition to Create Service Rules for the 42-43.5 GHz Band	)	RM-11664
Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services	)	WT Docket No. 10-112
Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations	)	IB Docket No. 97-95

REPLY COMMENTS OF THE JOINT LMDS LICENSEES

Sunshine LMDS Network, Inc., Broadband One of California, Inc., Broadband One of the Midwest, Inc., Broadband One North, Inc., Broadband One of the Southeast, Inc. and Verso

LMDS, LLC[1] (collectively, the "Joint LMDS Licensees") submit these Reply Comments in response to the Notice of Proposed Rulemaking ("NPRM") in the above captioned proceeding.[2] The Joint LMDS Licensees hold LMDS A block licenses across the United States.

The Joint LMDS Licensees join the many commenters supporting the Commission's proposal to permit terrestrial mobile use of the 27.5 – 28.35 GHz band (the "28 GHz band") by issuing flexible use licenses to existing LMDS licensees, and the Joint LMDS Licensees support most aspects of the Commission's proposal to implement that change. The Joint LMDS Licensees also agree with various commenters that several modifications to the Commission's proposals are necessary in order to better recognize the technical characteristics of the 28 GHz band, protect the fixed wireless operations of incumbent LMDS licensees, and reflect marketplace realities. Specifically, the Joint LMDS Licensees support the following modifications to the Commission's proposals:

- The geographic scope of the license area should be BTAs, not counties.
- Separate performance requirements should be established for fixed services and mobile services. Geographic area or population coverage metrics are inappropriate for point-to-point services.
- For fixed services, the Commission should retain the current safe harbor performance standard of four links per million population.
- The initial license term should be 15 years, not 10 years.

I. FLEXIBLE USE OF THE 28 GHZ BAND

The Joint LMDS Licensees support the vast majority of commenters who enthusiastically support the Commission's proposal to permit terrestrial mobile use of the 28 GHz band by the

[1] The Broadband One entities and Verso LMDS, LLC are commonly owned.
[2] *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, GN Docket No. 14–177, *et al.*, Notice of Proposed Rulemaking, FCC 15-138 (rel. Oct. 23, 2015).

incumbent licensees. The Joint LMDS Licensees agree with XO Communications, Inc. that:

> The assignment of flexible use rights to existing licensees is the most straightforward and expeditious way to make spectrum above 24 GHz available for 5G mobile use. This approach will minimize transaction costs and provide the fastest transition to expanded use of the LMDS … band[], thereby accelerating the enormous consumer benefits of 5G mobile technologies and services."[3]

The Joint LMDS Licensees also support the Commission's proposal to auction the 28 GHz band spectrum by geographic area if there is no existing LMDS licensee.

At the same time, and as explained further below, the technical rules and performance requirements must truly preserve the rights of the incumbents, and must recognize that some incumbents may not seek to provide mobile services. The Commission must avoid a situation where fixed wireless services become regulated under a model designed for mobile services.

II. GEOGRAPHIC SCOPE OF LICENSE AREA

The Joint LMDS Licensees agree with the vast majority of commenters who oppose the adoption of county-wide licenses, and instead support retention of BTAs for 28 GHz band licenses.[4] As many commenters explained, counties are too small. Licensing on a county basis will impose unnecessary inefficiencies on operators and could, perversely, result in a reduction of service to certain rural areas. For example, if a licensee recognizes that market demand is insufficient for it to satisfy the performance standard in any given county, the licensee might not deploy any facilities in that county.[5] The Joint LMDS Licensees also agree with Skyriver that "using counties as geographic licensing units will impose substantial burdens on licensees as they seek to coordinate their co-channel operations to avoid interference."[6]

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[3] Comments of XO Communications, Inc. ("XO") at 8.
[4] *See e.g.* Comments of Fixed Wireless Communications Coalition ("FWCC") at 4 – 5 and Comments of XO at 20 – 22.
[5] *See* Comments of Skyriver Communications, Inc. ("Skyriver") at 9.
[6] Id.

III. PERFORMANCE AND BUILD-OUT REQUIREMENTS

The Joint LMDS Licensees submit that it is not possible, as the Commission proposes, to adopt a "universal performance metric [that] could work across various types of services"[7] or "to assign some sort of population-based metric or area-based metric to a fixed point-to-point link".[8] Thus, the Joint LMDS Licensees agree with the commenters who urge the Commission to adopt appropriate -- and separate -- build-out requirements for fixed service operators.

The Commission has proposed that the spectrum be made available for "flexible" use. However, the Commission's proposed build-out requirements appear to be based on performance concepts applicable to mobile services. The Joint LMDS Licensees submit that use of the spectrum is not really "flexible" if, for all practical purposes, a licensee must deploy mobile services in order to meet the performance requirements.

The Joint LMDS Licensees submit that the current safe harbor standard of four links per million population should be maintained.[9] The best way to evaluate performance of a fixed, point-to-point service is by measuring the number of fixed links.[10] By contrast, geographic or population coverage metrics are wholly inappropriate to measure performance of a fixed, point-to-point service. Coverage of a percentage of the population within the service area is meaningless because the location and path of the fixed links have no correlation to population. In some cases, fixed links may connect office buildings or other facilities (e.g. stadiums, retail

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[7] NPRM at para. 204.
[8] Id. at para. 209.
[9] *See* Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5 GHz Frequency Band, to Reallocate the 29.5 – 30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and For Fixed Satellite Services, CC Docket No. 92-297, Second Report and Order, Order on Reconsideration and Fifth Notice of Proposed Rulemaking, 12 FCC Rcd 12545, 12660 (para. 270)("Second LMDS Report and Order").
[10] The Joint LMDS Licensees fundamentally disagree with the assertion of FWCC that the fixed link safe harbor requirement was a "conspicuous failure" (Comments of FWCC at 5 – 6). In fact, many LMDS licensees were not able to meet the safe harbor requirement, and lost their licenses.

centers, and hotels) with high daytime populations, but few, if any, permanent residents. In other cases, fixed links may connect cell towers or small cells to each other, or to backhaul points of presence. The cell towers, or small cells, connected by fixed point-to-point wireless links may collectively serve thousands or even millions of subscribers, with almost zero coverage footprint, providing critical infrastructure for mobile broadband services, including upcoming 5G service. For a company seeking to partner with a major mobile wireless carrier to serve such a market, it will be incredibly burdensome to configure a network and design geographic coverage footprints to meet a requirement that is essentially tailored for a mobile service provider. Such a standard is akin to requiring a geographic footprint showing for a fiber provider.

For the reasons set forth above, measuring the population in a "keyhole" coverage area should be a non-starter for the Commission. Further, the "keyhole" coverage metric would be an invitation to deploy links designed to meet a build requirement, rather than meet a customer's needs.

IV. LICENSE TERM

The Joint LMDS Licensees agree with XO that the Commission should adopt an initial license term of 15 years for 28 GHz band licensees rather than the standard 10-year term for commercial wireless licensees.[11] It is widely recognized that 5G mobile technology is still being developed, and is a long way from commercial deployment. As the Commission notes:

> We recognize that current licensees will have a difficult choice – to try to acquire new equipment and deploy right at the potential launch of mobile mmW services (expected around 2020), or to provide innovative fixed services.[12]

[11] XO at 22.
[12] NPRM at para. 219.

The Joint LMDS Licensees intend to participate in the 5G revolution. They hold LMDS A Band licenses in markets across the United States. This week, Verizon announced that it has entered into an option to acquire LMDS licenses from XO Communications, a signal that 28 GHz band spectrum is going to play a significant role in 5G networks deployed by major carriers. Given that the equipment ecosystem has yet to develop, and that the World Radio Conference did not put the 28 GHz band on the table for study at its recent conference, a longer initial license term will assist small companies such as the Joint LMDS Licensees in making smart deployment choices and not require the deployment of equipment before it is widely available.

V. CONCLUSION

The Joint LMDS Licensees support the Commission's proposal to permit terrestrial mobile use of the 28 GHz band by issuing flexible use licenses to existing LMDS licensees. However, the Joint LMDS Licensees agree with various commenters that several modifications to the Commission's proposals are necessary in order to better recognize the technical characteristics of the 28 GHz band, protect the fixed wireless operations of incumbent LMDS licensees, and reflect marketplace realities. Specifically, the Joint LMDS Licensees support the following modifications to the Commission's proposals: (1) the geographic scope of the license area should be BTAs, not counties; (2) separate performance requirements should be established for fixed services and mobile services; (3) for fixed services, the Commission should retain the current safe harbor performance standard of four links per million population; and (4) the initial license term should be 15 years, not 10 years.

Respectfully submitted,

SUNSHINE LMDS NETWORK, INC.
BROADBAND ONE OF CALIFORNIA, INC.
BROADBAND ONE OF THE MIDWEST, INC.
BROADBAND ONE NORTH, INC.
BROADBAND ONE OF THE SOUTHEAST, INC.
VERSO LMDS, LLC

By: */s/ David A. LaFuria*

David A. LaFuria
Lukas Nace Gutierrez & Sachs, LLP
8300 Greensboro Drive, Suite 1200
McLean, VA 22102

Counsel to the Joint LMDS Licensees

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