

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

In the Matter of )  
 )  
Updating the Commission’s Rule for Over-the-Air ) WT Docket No. 19-71  
Reception Devices )

**REPORT AND ORDER**

**Adopted: January 6, 2021**

**Released: January 7, 2021**

By the Commission: Chairman Pai and Commissioner Carr issuing separate statements; Commissioners Rosenworcel and Starks concurring

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**I. INTRODUCTION**

1. Today, we update the Commission’s rule for over-the-air reception devices (OTARD) to expand its coverage to include hub and relay antennas that are used for the distribution of broadband-only fixed wireless services to multiple customer locations, regardless of whether they are primarily used for this purpose, provided the antennas satisfy other conditions of the rule.<sup>1</sup> By making this modest adjustment to our rule while maintaining the other existing OTARD restrictions, we place fixed wireless broadband-only service providers on similar competitive footing with other service providers. This rule change should allow fixed wireless service providers to bring faster Internet speeds, lower latency, and advanced applications—like the Internet of Things, telehealth, and remote learning—to all areas of the country, and to rural and underserved communities in particular.

**II. BACKGROUND**

2. The Commission’s OTARD rule prohibits laws, regulations, or restrictions imposed by State or local governments or private entities that impair the ability of antenna users to install, maintain,

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<sup>1</sup> We note that the scope of the revisions in this *Report and Order* is limited and that we decline to adopt at this time any of the other proposals submitted by commenters or advanced by the Commission in its *Notice of Proposed Rulemaking*. See, e.g., Letter from Claude Aiken, President and CEO, WISPA, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79 (filed Aug. 27, 2018) (WISPA Aug. 27, 2018 *Ex Parte* Letter); *Updating the Commission’s Rule for Over-the-Air Reception Devices*, WT Docket No. 19-71, Notice of Proposed Rulemaking, 34 FCC Red 2695 (2019) (*Notice*).

or use over-the-air reception devices.<sup>2</sup> The Commission adopted the rule as directed by Section 207 of the Telecommunications Act of 1996, pursuant to the Commission's authority under Section 303 of the Communications Act of 1934.<sup>3</sup> The rule prohibits restrictions that unreasonably delay or prevent installation, maintenance, or use of an antenna; unreasonably increase the cost of installation, maintenance, or use of an antenna; or preclude reception of an acceptable quality signal.<sup>4</sup> For the OTARD rule to apply, the antenna must be installed "on property within the exclusive use or control of the antenna user where the user has a direct or indirect ownership or leasehold interest in the property" upon which the antenna is located.<sup>5</sup>

3. The original OTARD rule applied only to antennas used to receive video programming signals, but in the *2000 Competitive Networks First Report and Order* the Commission expanded the rule to apply to "customer-end antennas used for transmitting or receiving fixed wireless signals."<sup>6</sup> The Commission found that unreasonable restrictions on the placement of customer premises antennas disadvantage providers of fixed wireless services as compared to their wireline competitors and unreasonably discriminated among providers of functionally equivalent services.<sup>7</sup> The Commission defined fixed wireless signals as "any commercial non-broadcast communications signals transmitted via wireless technology to and/or from a fixed customer location."<sup>8</sup> The Commission stated that the extension of the OTARD rule would apply "only to antennas at the customer end of the wireless transmission, i.e., to antennas placed at the customer location for the purpose of providing fixed wireless service . . . to one or more customers at that location."<sup>9</sup> The Commission reasoned that these antennas were customer premises equipment and that Section 332 of the Communications Act did not act as a bar to OTARD protection because the antennas were not used to provide personal wireless services.<sup>10</sup> The

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<sup>2</sup> 47 CFR § 1.4000. Specifically, the OTARD rule applies to "any restriction, including but not limited to any State or local law or regulation, including zoning, land-use, or building regulations, or any private covenant, contract provision, lease provision, homeowners' association rule, or similar restriction . . ." *Id.* § 1.4000(a)(1).

<sup>3</sup> Telecommunications Act of 1996, Pub. L. No. 104-104, § 207, 110 Stat. 56, 114 (1996) (1996 Act). Section 207 of the 1996 Act states that, "[w]ithin 180 days after the date of enactment of this Act, the Commission shall, pursuant to Section 303 of the Communications Act of 1934, promulgate regulations to prohibit restrictions that impair a viewer's ability to receive video programming services through devices designed for over-the-air reception of television broadcast signals, multichannel multipoint distribution service, or direct broadcast satellite services." *Id.* Multichannel multipoint distribution service in the 2.5 GHz band is now known as Broadband Radio Service. See *Transforming the 2.5 GHz Band*, WT Docket No. 18-120, Report and Order, 34 FCC Rcd 5446, 5447, para. 4 (2019).

<sup>4</sup> 47 CFR § 1.4000(a)(3).

<sup>5</sup> 47 CFR § 1.4000(a)(1). The rule provides an exception for State, local, or private restrictions that are necessary to accomplish a clearly defined, legitimate safety objective or to preserve prehistoric or historic places that are eligible for inclusion on the National Register of Historic Places, provided such restrictions impose as little burden as necessary to achieve the foregoing objectives and apply in a nondiscriminatory manner throughout the regulated area. 47 CFR § 1.4000(b).

<sup>6</sup> *Promotion of Competitive Networks in Local Telecommunications Markets et al.*, WT Docket No. 99-217 et al., First Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 22983, 23027-28, paras. 97-100 (2000) (*2000 Competitive Networks First Report and Order*).

<sup>7</sup> *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23034, para. 114.

<sup>8</sup> *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23027, para. 97 (footnotes omitted); 47 CFR § 1.4000(a)(2).

<sup>9</sup> *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23028, para. 99.

<sup>10</sup> *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23032-34, paras. 109-115. Section 332(c)(7) of the Act states that "[e]xcept as provided in this paragraph, nothing in this chapter shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities." 47 U.S.C. § 332(c)(7). Section 332(c)(7)(C)(ii) defines the

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Commission concluded that it did “not intend the rules to cover hub or relay antennas used to transmit signals to and/or receive signals from multiple customer locations.”<sup>11</sup>

4. In its *2004 Competitive Networks Reconsideration Order*, the Commission revised its previous finding and determined that the OTARD rule applies to hub and relay antennas that are “installed in order to serve the customer on such premises,” but that it does not apply to hub and relay antennas designed “*primarily*” for use as hubs for distribution of service to multiple customer locations.<sup>12</sup> The Commission’s reconsideration responded to a petition from a licensee that “deploy[ed] its networks using a ‘point-to-point-to-point’ architecture in which each customer device also serv[ed] as a relay device.”<sup>13</sup> The Commission, noting that it had not considered “those network configurations and technologies in which customer-end equipment performs both functions” and offered “advanced services,”<sup>14</sup> found that, “[f]or the purposes of the OTARD protections, the equipment deployed in such networks shares the same physical characteristics of other customer-end equipment, distinguished only by the additional functionality of routing service to additional users.”<sup>15</sup> The Commission “[did] not believe that [the Commission’s] rules should serve to disadvantage more efficient technologies.”<sup>16</sup> The Commission consequently found that “the OTARD protections would apply to installations serving the premises customer that also relays signals to other customers, such as is typical in mesh networks, but would not apply to installations that are designed primarily for use as hubs for distribution of service.”<sup>17</sup>

5. In 2018, the Wireless Internet Service Providers Association (WISPA) asked the Commission to update the OTARD rule to apply to “all fixed wireless transmitters and receivers, regardless of whether the equipment is used for reception, transmission, or both, so long as the equipment meets the existing size restrictions for customer-end equipment.”<sup>18</sup> WISPA argues that extending the OTARD rule to all fixed wireless equipment “would be consistent with the original intent of OTARD, will accelerate the deployment of competitive broadband services in markets across the country, and will empower consumers to help bring competitive wireless broadband to their communities by hosting hub sites.”<sup>19</sup>

6. WISPA asserts that updating the OTARD rule is necessary to accommodate changes in fixed wireless architecture. While fixed wireless systems historically relied on relatively large coverage areas with fewer hub sites per customer, “over time, as both the cost of technology fell and subscriber data increased, fixed wireless providers began to reduce the size of the area covered per base station.”<sup>20</sup> Because of these changes in technology and network design, WISPA contends, “fixed wireless providers

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term “personal wireless service facilities” as “facilities for the provision of personal wireless services.” *Id.* § 332(c)(7)(C)(ii).

<sup>11</sup> *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23028, para. 99.

<sup>12</sup> *Promotion of Competitive Networks in Local Telecommunications Markets*, WT Docket No. 99-217, Order on Reconsideration, 19 FCC Rcd 5637, 5643-44, paras. 16-17 & n.42 (2004) (*2004 Competitive Networks Reconsideration Order*).

<sup>13</sup> *2004 Competitive Networks Reconsideration Order*, 19 FCC Rcd at 5643, para. 13.

<sup>14</sup> *See 2004 Competitive Networks Reconsideration Order*, 19 FCC Rcd at 5643, para. 16.

<sup>15</sup> *2004 Competitive Networks Reconsideration Order*, 19 FCC Rcd at 5643, para. 16.

<sup>16</sup> *2004 Competitive Networks Reconsideration Order*, 19 FCC Rcd at 5644, para. 17.

<sup>17</sup> *2004 Competitive Networks Reconsideration Order*, 19 FCC Rcd at 5644, para. 17 & n.42. This clarification was not included in the codified rule.

<sup>18</sup> WISPA Aug. 27, 2018 *Ex Parte* Letter at 1.

<sup>19</sup> WISPA Aug. 27, 2018 *Ex Parte* Letter at 1.

<sup>20</sup> WISPA Aug. 27, 2018 *Ex Parte* Letter at 3.

have much less choice in where they can locate hub sites.”<sup>21</sup> WISPA further contends that, “in the absence of Commission action to modernize the OTARD rules, fixed wireless operators will continue to face significant hurdles to siting, perpetuating barriers to new investment and employment.”<sup>22</sup> WISPA further argues that the Commission originally declined to extend OTARD protections to hub sites based on “its opinion at the time that fixed wireless hubs were covered under Section 332” of the Communications Act—an opinion that WISPA says does not apply to modern networks because hub sites used for fixed wireless broadband do not necessarily include an offering of telecommunications service.<sup>23</sup>

7. In response to WISPA’s letter, the Commission issued a Notice of Proposed Rulemaking (*Notice*) seeking comment on extending the OTARD protections to fixed wireless facilities that operate primarily as hub and relay antennas, but do not qualify as personal wireless service facilities under Section 332(c)(7) because they are not used to provide telecommunications services.<sup>24</sup> The *Notice* observed that when the Commission excluded hub and relay facilities from the scope of the OTARD rule, wireless technologies relied on larger antennas spread over greater distances to provide service. Since that decision, the shift toward the development of 5G networks requires dense deployment of smaller antennas across provider networks in locations closer to customers. The *Notice* asked whether fixed wireless providers face a competitive disadvantage with respect to network deployment as compared to other providers, such as carriers whose deployments are subject to Section 253 or mobile operators whose deployments are subject to Section 332. It asked whether the Commission should interpret “antenna users” to include fixed wireless service providers, and whether we should delete the word “customer.” It further asked whether to define the term “hub or relay” antenna. The *Notice* proposed to retain current antenna size limitations and the exception for restrictions necessary for safety and historic preservation, but sought comment on other possible rule changes necessary to implement the Commission’s proposal, including whether to maintain our approach to the size-limitation in rural or underserved areas. Finally, the *Notice* asked commenters to identify any legal authority other than those previously relied on by the Commission, that may be relevant.

### III. DISCUSSION

8. In this *Report and Order*, we update the OTARD rule to reflect the current technological landscape by eliminating the restriction that excludes some hub and relay antennas from the scope of the OTARD protections if they are used primarily for the distribution of service to multiple customer locations. In the *2004 Competitive Networks Reconsideration Order*, the Commission determined that customer-end equipment possessing “the additional functionality of routing service to additional users” (such as a node in a mesh network) would not lose OTARD protection, so long as the equipment was “installed in order to serve the customer on [its] premises,” but that it “would not apply to installations that are designed primarily for use as hubs for distribution of service.”<sup>25</sup>

9. The revised OTARD rule we adopt today applies to all hub and relay antennas that are used for the distribution of fixed wireless services to multiple customer locations, regardless of whether they are “primarily” used for this purpose, as long as: (1) the antenna serves a customer on whose premises it is located, and (2) the service provided over the antenna is broadband-only.<sup>26</sup> Our order here does not modify any other aspects of the current OTARD rule. Thus, the rule’s requirements that

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<sup>21</sup> WISPA Aug. 27, 2018 *Ex Parte* Letter at 3.

<sup>22</sup> WISPA Aug. 27, 2018 *Ex Parte* Letter at 4.

<sup>23</sup> See Letter from Claude Aiken, President and CEO, WISPA to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79, at 5 (filed Mar. 14, 2019) (WISPA Mar. 14, 2019 *Ex Parte* Letter).

<sup>24</sup> *Notice*, 34 FCC Rcd 2695-68, paras. 2-12 (2019).

<sup>25</sup> *2004 Competitive Networks Reconsideration Order*, 19 FCC Rcd at 5643-44, paras. 16-17 & n.42.

<sup>26</sup> Accordingly, we amend 47 CFR § 1.4000 by revision subparagraph (a)(1) and adding subparagraph (a)(5) to reflect our clarification to the definition of hub and relay antennas.

antennas must be less than one meter in diameter or diagonal measurement,<sup>27</sup> that they apply to property “where the user has a direct or indirect ownership or leasehold interest,”<sup>28</sup> and that restrictions necessary for safety and historic preservation are excepted, remain in place.<sup>29</sup>

10. *Policy Considerations.* We find that this limited expansion of the OTARD rule to fixed wireless hub and relay antennas will align the Commission’s rules with the current fixed wireless technological landscape and accelerate the deployment of competitive fixed wireless services to consumers. The record supports the conclusion that the fixed wireless technologies have shifted from using larger antennas that transmit over greater distances—that were in use at the time the Commission adopted the hub and relay antenna restriction—to the use of smaller antennas that are located much closer to each other.<sup>30</sup> As numerous commenters emphasize, today’s fixed wireless networks rely on smaller antennas located in close proximity to each other.<sup>31</sup> Even in rural areas, these networks are deployed in this way so as to increase broadband capacity. These smaller antennas meet the OTARD size restriction, but some are excluded from OTARD protection due to their “primary” function as fixed wireless hub and relay antennas.<sup>32</sup> If these antennas continue to be excluded from OTARD protection, this could prevent fixed wireless service providers from maintaining or expanding service, particularly broadband-only service, as changes in technology require more dense deployments.

11. Our updated rule will help spur the rapid deployment of fixed wireless networks needed for 5G and other fixed wireless high-speed Internet services. This will benefit consumers by offering faster access to advanced communications services and greater competition among service providers.<sup>33</sup> These fixed wireless networks rely on the installation of hub and relay antennas to transmit and receive signals from multiple customer locations to overcome propagation distance limitations and signal obstructions in delivering fixed wireless high-speed Internet services.<sup>34</sup> Further, modern fixed wireless antennas are multi-purpose, and can function as receivers, repeaters, and transmitters, thereby eliminating the distinction between fixed wireless hub and relay antennas that the Commission previously relied on in deciding to exclude some of these antennas from OTARD protection.<sup>35</sup> As long as the antennas meet the other requirements of the Commission’s rule, our revised rule applies equally to all fixed wireless antennas, no matter whether they operate primarily as receivers, hubs, or relays, or whether they operate

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<sup>27</sup> 47 CFR § 1.4000(a)(1)(i)(B), (ii)(B).

<sup>28</sup> 47 CFR § 1.4000(a)(1).

<sup>29</sup> 47 CFR § 1.4000(b).

<sup>30</sup> *See, e.g.*, CTIA Comments at 2 (“To accommodate the rapid expansion in wireless services . . . infrastructure must be densified”); Starry Comments at 4 (noting that its sites are optimized to provide a signal that passes a minimum of 12,000 to 15,000 households per three-to-six sector sites); WISPA Comments at 6 (stating that siting fixed wireless base stations closer to consumers’ residences is critical for modern fixed wireless networks); *see also* OUTFRONT Reply at 1 (claiming that the proposed revision would spur the rapid deployment of fixed wireless 5G broadband services).

<sup>31</sup> *See, e.g.*, CTIA Comments at 1-2 (arguing that densified and expanded facilities are critical to achieving the national priority for the rapid deployment of wireless networks, including 5G); Google Comments at 1 (noting that providers have shifted toward dense deployment of smaller hub and relay antennas sited closer to consumer residences to account for the infrastructure needs of next-generation wireless technologies); CTA Reply at 2, 6 (contending that innovators are deploying current and next generation facilities primarily through small antennas).

<sup>32</sup> INCOMPAS Reply at 5.

<sup>33</sup> OUTFRONT at 1; WISPA Comments at 6.

<sup>34</sup> Google Comments at 2-3. For instance, a common model for the 57-71 GHz band relies on siting both customer premises equipment and hub sites directly on customers’ homes, wherein some locations serve both as hub and customer reception sites. WISPA Aug. 27, 2018 *Ex Parte* Letter at 3.

<sup>35</sup> Common Reply at 7; CTA Reply at 7; Starry Comments at 9; WISPA Reply at 7.

on licensed or unlicensed spectrum.<sup>36</sup> There is no longer any reason to maintain the definitional distinction in our rule between these types of antennas and, accordingly, we eliminate it.<sup>37</sup>

12. Our revision will increase competitive parity among fixed wireless service providers and other service providers. Specifically, broadband-only fixed wireless service providers that use this equipment will now be on similar footing as service providers whose services and facilities (specifically those offering telecommunications services and commingled services) qualify for protections under Sections 253 and 332.<sup>38</sup> And it will facilitate the offering of advanced services to consumers by expanding deployment options and reducing costs for fixed wireless service providers. Without this change, broadband-only fixed wireless service providers will continue to face significant hurdles to siting, perpetuating barriers to new investment and deployment.<sup>39</sup> In taking this action, the Commission embraces its longstanding policy objective of promoting competition among broadband and video providers and giving consumers, including those in rural and remote areas, more choices among wireless providers, products, and services.<sup>40</sup>

13. The record illustrates that fixed wireless service providers face unreasonable barriers to deployment. We are not persuaded by the claim of Local Governments and Municipal Organizations that there is no evidence that zoning or private restrictive covenants have hindered the deployment of fixed wireless hub and relay antennas, nor by their argument that WISPA has offered only anecdotal examples of zoning restrictions and private restrictive covenants that have impacted the installation of hub and relay antennas.<sup>41</sup> Rather, based on the totality of the record, we find that local zoning laws and reviews have discouraged the deployment of modern hub and relay antennas and that extending OTARD to cover this equipment will significantly advance deployment.

14. Our expanded application of the OTARD rule to additional fixed wireless hub and relay antennas protects against restrictions that result in unreasonable delays or prevent the installation, maintenance or use of this equipment.<sup>42</sup> Starry, a fixed wireless broadband-only provider, estimates that, if its base stations are covered by OTARD, it can activate 25% to 30% more sites in the coming year, which should enable it to pass more than one million additional homes.<sup>43</sup> Starry asserts that across all its

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<sup>36</sup> See, e.g., Starry Reply at 4.

<sup>37</sup> Today's decision is an extension of long-standing Commission precedent to apply to antennas used to supply unlicensed services so long as the antenna is placed on property within the exclusive use or control of the antenna user where the user has a direct or indirect ownership or leasehold interest in the property. *Continental Airlines*, ET Docket No. 05-247, Memorandum Opinion and Order, 21 FCC Rcd 13201, 13203, 13204, 13206-13207, paras. 5, 8, 13-15 (2006).

<sup>38</sup> OUTFRONT Reply at 1-2.

<sup>39</sup> WISPA Aug. 27, 2018 *Ex Parte* Letter at 4.

<sup>40</sup> CTIA Comments at 5 (claiming that updates to the OTARD rule “has the potential to promote the national policy priority of ubiquitous, robust broadband, video, and 5G services.”); Starry Reply at 2 (arguing that updates to the OTARD rule are consistent with the Commission’s broadband and infrastructure policies).

<sup>41</sup> Local Governments Comments at 8; Municipal Organization Reply at 3 (claiming that providers are asking for inclusion in the OTARD rule because they “do not want to follow local zoning requirements or honor lease or homeowner associations’ covenants and restrictions.”); see also CAI Reply at 1-3 (arguing that the assertion that OTARD needs to be modernized is unproven); Letter from Matthew C. Ames, Counsel to National Multifamily Housing Council to Marlene H. Dortch, Secretary, FCC, WT Docket No. 19-71 at 2 (filed Dec. 3, 2020) (NMHC Dec. 3, 2020 *Ex Parte* Letter) (arguing that the record does not support that fixed wireless providers “are facing undue difficulties in deploying hub facilities.”).

<sup>42</sup> 47 CFR § 1.4000(a)(3)(i).

<sup>43</sup> Starry Comments at 6. Starry asserts that it currently offers a gigabit-capable service at a cost of under \$20 per home as compared to approximately \$1,500 for a fiber network. *Id.* at 3-4. Starry states that, in order to access its

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markets it takes on average 100 days to complete the permitting process for a single base station, which accounts for about 80% of the time that it spends in activating a site.<sup>44</sup> Another fixed wireless Internet service provider, Wisp.net, initially provided service only to tenants in the building where its antenna was located.<sup>45</sup> It subsequently was denied a permit to operate a wireless hub and relay facility to provide fixed wireless service to customers outside the range of Wisp.net's original footprint.<sup>46</sup> Many consumers filed comments with the Commission claiming that Wisp.net was their only option for receiving service and urging the Commission to grant Wisp.net's petition to expand the OTARD rule for hub and relay antennas.<sup>47</sup> Similarly, WISPA provides several examples of where zoning or private homeowner restrictive covenants have hindered the deployment of fixed wireless hub and relay antennas.<sup>48</sup> By updating OTARD, we provide fixed wireless broadband providers protection from unreasonable delays in the installation of fixed wireless hub and relay antennas or the unreasonable prevention of such installations or deployments.

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service, a subscriber must live in a building that has its service and that these residents are able to subscribe to a 30 Mbps symmetrical service for only \$15 per month, with no data caps, long-term contracts, or extra fees. *Id.*

<sup>44</sup> Starry Comments at 1, 4-5, 9.

<sup>45</sup> See Petition of Rodecker Slater, LLC and Wisp.net for Declaratory Ruling Regarding Over-the-Air Reception Devices Rule, WT Docket No. 19-270 (filed Aug. 15, 2010) (Wisp.net Petition). Wisp.net's Petition seeks relief from a local ruling that prohibits it from providing service to customers in the nearby area who are not tenants or owners of the building that it initially served. Wisp.net's Petition is still pending. *Wireless Telecommunications Bureau Seeks Comment on Petition Requesting Declaratory Ruling That Zoning Decision Is Preempted By The Commission's Over-The-Air Reception Devices Rule*, WT Docket No. 19-270, Public Notice, 34 FCC Rcd 8128 (2019).

<sup>46</sup> Wisp.net Petition at 8, Exh. N.

<sup>47</sup> Joseph Kahn Comments, WT Docket No. 19-270, at 1, Kim Gallaher and Salon Dharma Comments, WT Docket No. 19-270, at 1, Nicola Weiss Comments, WT Docket No. 19-270, at 1, Wayne B. Warthen Comments, WT Docket No. 19-270, at 1, Susan Castellanos Comments, WT Docket No. 19-270, at 1, Jim Kato Comments, WT Docket No. 19-270, at 1, Michael Ramirez Comments, WT Docket No. 19-270, at 1, Donald Bayne Comments, WT Docket No. 19-270, at 1, Carol and Duane Potter Comments, WT Docket No. 19-270, at 1, James Groff Comments, WT Docket No. 19-270, at 1, Dave Van Lieshout Comments, WT Docket No. 19-270, at 1, Thomas Liu Comments, WT Docket No. 19-270, at 1, Phillip Barcnas Comments, WT Docket No. 19-270, at 1, Arnold Beryl Comments, WT Docket No. 19-270, at 1, Deborah, Brett, and Brooke Ballard Comments, WT Docket No. 19-270, at 1, Alan Marcum Comments, WT Docket No. 19-270, at 1, Bernard and Judy Watanabe Comments, WT Docket No. 19-270, at 1, Kene Panas Comments, WT Docket No. 19-270, at 1, Stephanie Roske Comments, WT Docket No. 19-270, at 1, Brian Roberts Comments, WT Docket No. 19-270, at 1, Linda J. Raab Comments, WT Docket No. 19-270, at 1, Jean Howard Comments, WT Docket No. 19-270, at 1, Boon Wee Comments, WT Docket No. 19-270, at 1, Mike Mi Randall Comments, WT Docket No. 19-270, at 1, Buuloc Luu Comments, WT Docket No. 19-270, at 1, Alexander Chavez Comments, WT Docket No. 19-270, at 1, Eric Lessenger Comments, WT Docket No. 19-270, at 1, William Cameron Comments, WT Docket No. 19-270, at 1, Edward, Martha, and Katherine Quo Comments, WT Docket No. 19-270, at 1, Sensonetics, Inc. Comments, WT Docket No. 19-270, at 1.

<sup>48</sup> WISPA Comments at 3-4. WISPA asserts that a homeowners' association restrictive covenants prevented a wireless Internet service provider located in Texas from entering into an agreement with a homeowner to place an antenna and tower on the homeowner's lot in a rural subdivision, where the antenna would be used both receive fixed wireless Internet service and to provide coverage to other residents. *Id.* at 4. WISPA also claims that a homeowner in California built a tower on his own property in accordance with the local zoning ordinance to receive service, but was later denied a permit when he requested to use the same tower as a "hub" to deliver broadband service to nearby homes. *Id.* According to WISPA, the county concluded that the OTARD rule did not apply to the use of the tower as a point-to-point relay or hub site to transmit to other locations. *Id.* As a final example, WISPA points to a provider in Michigan that was forced to tear down a tower built on private property and incur significant legal fees and construction costs to find an alternate site after the local Zoning Board of Appeals denied a permit request without citing any of the public safety or historic preservation reasons permitted by the OTARD rule. *Id.*

15. The record also shows that restrictions in the application of the current rule to hub and relay antennas have raised costs for fixed wireless providers, which incur excessive permitting costs. Az Airtel, a wireless Internet service provider in Arizona, asserts that in some jurisdictions the same permit fee applies to both a major cellular tower and a small Internet relay site.<sup>49</sup> New Wave, a wireless Internet service provider operating in rural Illinois, claims that unreasonably high permit fees prohibit it from expanding its service.<sup>50</sup> Az Airtel, New Wave, and other fixed wireless service providers will now be protected from unreasonable fees. Section 1.4000(a)(3)(ii) provides that a law, regulation, or restriction impairs installation, maintenance, or use of fixed wireless hub and relay antennas if it unreasonably increases the cost of installation, maintenance, or use of the equipment.<sup>51</sup> Further, Section 1.4000(a)(4) provides that “[a]ny fee or cost imposed on a user by a rule, law, regulation or restriction must be reasonable in light of the cost of the equipment or services and the rule, law, regulation or restriction’s treatment of comparable devices.”<sup>52</sup> Our expanded application of the OTARD rule extends these protections against unreasonable fees to the installation of all covered customer premises equipment, even equipment whose primary purpose is to serve as hub and relay antennas. The expanded application of this rule will allow fixed wireless service providers to install such equipment more quickly, efficiently, and at reduced cost, which should reduce construction timelines.<sup>53</sup>

16. The revised OTARD rule provides fixed wireless service providers with greater certainty and predictability because it prohibits restrictions that impair the installation, maintenance, or use of covered antennas.<sup>54</sup> Google states that municipal zoning laws and community association rules not only have the potential to delay or impede antenna installation, but also have the potential to discourage service expansion due to a lack of certainty and predictability.<sup>55</sup> Likewise, OUTFRONT asserts that fixed wireless service providers face uncertain delays and costs due to local regulations that impact their ability to deploy networks efficiently by using all available sites.<sup>56</sup> The protections we adopt today provide broadband-only service providers with the certainty and predictability they need to build out and deploy fixed wireless networks.

17. Our revised rule also enhances the ability of fixed wireless service providers to deliver reliable high speed Internet access to a greater number of unserved or underserved customers.<sup>57</sup> WISPA cites a number of examples where the limits of the existing OTARD rule have precluded the provision of fixed wireless broadband service to areas where access is limited or non-existent.<sup>58</sup> Common, a wireless Internet service provider offering service in the San Francisco Bay Area, maintains that expanding the OTARD rule will enable it to deploy more quickly on residential rooftops to serve more people in

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<sup>49</sup> Az Airtel Comments at 3 (stating that a wireless permit for a new site is \$3,830).

<sup>50</sup> New Wave Comments at 1.

<sup>51</sup> 47 CFR § 1.4000(a)(3)(ii).

<sup>52</sup> *Id.* § 1.4000(a)(4).

<sup>53</sup> Common Reply at 1-2; GMU Reply at 6; Google Comments at 3; INCOMPAS Reply at 3-4; OUTFRONT Reply at 1.

<sup>54</sup> *Id.* § 1.4000(a)(1).

<sup>55</sup> Google Comments at 3; *see also* GMU Reply at 6 (“Most WISPs are small operations and a significant delay in processing a permit or a surprise fee can derail a project.”).

<sup>56</sup> OUTFRONT Reply at 1-2.

<sup>57</sup> *See, e.g.*, Ionia Comments at 1; New Wave Comments at 1; WISPA Comments at 10; CTA Reply at 2 (connecting those on the other side of the digital divide will require more cost-efficient, appropriately-sized, densified, and rapidly deployed infrastructure); Common Reply at 1 (extending OTARD will increase consumer choice and new broadband offerings to underserved communities); GMU Reply at 7, 10.

<sup>58</sup> WISPA Comments at 3-4.



suburban neighborhoods that do not otherwise have service.<sup>59</sup> Wav Speed, a wireless Internet service provider, claims that extending the OTARD rule to cover all fixed wireless hub and relay antennas will allow it to serve customers in areas where reliable high speed Internet is unavailable or inconsistent, providing customers with the educational, vocational, and entertainment benefits that a modern Internet connection permits.<sup>60</sup> Az Airtel asserts that there “is a vast public need, especially in rural areas, for the use of small rooftops, or towers to bring Internet service to those that cannot currently get it, or can only get substandard service.”<sup>61</sup> Ionia, a wireless Internet service provider serving rural Ionia County, Michigan and surrounding areas, observes that “[z]oning and landlord restrictions prevent the installation of equipment that would allow the relay of fixed wireless signals to nearby residents.”<sup>62</sup> Ionia indicates that modifying the OTARD rule to allow the placement of antennas at a customer’s property “would allow WISPs to provide high speed broadband services to customers that currently cannot be reached by other means due to terrain or vegetation.”<sup>63</sup> MJM Telecom states that it is hampered by current state and local regulations and has “turned down thousands of potential customers due to the fact that [it] cannot put up a small relay hub site allowing them to receive these services.”<sup>64</sup> By extending the protections of the OTARD rule to fixed wireless hub and relay antennas, we promote rural prosperity by enabling efficient, modern communications among rural households, businesses, schools, libraries, healthcare centers, and other important community institutions.<sup>65</sup>

18. The record also indicates that updating the OTARD rule will enable consumers to access competing video programming providers.<sup>66</sup> Consumers increasingly stream video services over the Internet, instead of consuming such programming through traditional video programming services such as cable or broadcast.<sup>67</sup> As WISPA indicates, the primary benefit of fixed wireless antennas is to secure viewers’ access to broadband service, which is the world’s largest distributor of video programming

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<sup>59</sup> Common Reply at 2 (“To accelerate deployments, Common often utilizes tall commercial or private buildings on the outskirts of residential communities to host hubs and/or relays, then transmits data into nearby residential areas.”).

<sup>60</sup> Wav Speed Comments at 1.

<sup>61</sup> Az Airtel Comments at 1. Az Airtel also states that updating the OTARD rule will allow it to construct and install the needed infrastructure to provide service to these customers. *Id.* at 2, 5 (stating that it can deliver standard 25/3 high speed Internet to end customers, with even higher speeds to businesses and schools).

<sup>62</sup> Ionia Comments at 1.

<sup>63</sup> *Id.* Ionia explains that the proposed rule change “would improve the ability of service providers to provide affordable high speed Internet access to a greater number of under-served customers,” a result that would be consistent with congressional and Commission policy. *Id.*

<sup>64</sup> MJM Telecom Comments at 1. The company explains that being able to install hub or relay antennas on customer supplied towers and homes “would give greater coverage and accessibility to many needed things such as . . . remote medical services in rural areas surrounding our cities.” *Id.* See also, NETEO Internet Comments at 1 (encouraging Commission to “approve the proposed changes to the OTARD rules to allow Wireless ISPs to utilize customer supplied towers and homes for the purpose of expanding service to consumers by way of relay sites” and asserting the proposed rule change “will enable a cost-effective means for companies to provide high speed service to consumers [who] in many cases have no viable alternatives and where large commercial towers or sites are not possible”); New Wave Comments at 1 (arguing that updating OTARD to include hub and relay sites “can be a major help in expanding coverage to unserved rural areas”); Cherry Capital Connection Comments at 1 (commenting that “updat[ing] . . . the OTARD laws to include hub and relay sites for fixed wireless service is desperately needed”).

<sup>65</sup> See, e.g., WISPA Comments at 5.

<sup>66</sup> CTIA Comments at 5; INCOMPAS Reply at 5-6; WISPA Comments at 14-15.

<sup>67</sup> CTIA Comments at 5; Starry Reply at 2.

services, including those of traditional television stations and networks.<sup>68</sup> INCOMPAS agrees that updating OTARD to take into account the need for hub and relay antennas for broadband via fixed wireless networks will benefit consumers with better online video distribution.<sup>69</sup> CTIA provides additional evidence that consumers are increasingly relying on wireless services for video streaming, citing an NTIA Internet Use Survey indicating that the proportion of Internet users watching video online has grown from 45% in 2013 to 70% in 2017.<sup>70</sup> CTIA explains that video streaming across wireless networks requires multiple antennas to receive programming, including antennas that connect to other antennas or serve other customer locations.<sup>71</sup> Reducing restrictions on the use of fixed wireless hub and relay equipment is therefore consistent with the OTARD rule's original goal of increasing consumer access to video programming services.<sup>72</sup>

19. We emphasize that our revision is narrow in scope and that we maintain the other existing OTARD restrictions.<sup>73</sup> For the OTARD rule to apply, the antenna must be installed “on property within the exclusive use or control of the antenna user where the user has a direct or indirect ownership or leasehold interest in the property” upon which the antenna is located.<sup>74</sup> The OTARD provisions also apply only to those antennas measuring one meter or less in diameter or diagonal measurement.<sup>75</sup> In addition, the OTARD rule is subject to an exception for State, local, or private restrictions that are necessary to accomplish a clearly defined, legitimate safety objective, or to preserve prehistoric or historic places that are eligible for inclusion on the National Register of Historic Places, provided such restrictions impose as little burden as necessary to achieve the foregoing objectives, and apply in a nondiscriminatory

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<sup>68</sup> WISPA cites data indicating that 81 percent of U.S. online users access digital video content. WISPA Reply at 11 (citing statista, *Digital video penetration in the United States from 2013 to 2021*, <https://www.statista.com/statistics/271612/percentage-of-digital-video-viewers-in-the-united-states>) (last visited Oct. 30, 2020).

<sup>69</sup> INCOMPAS Reply at 5-6.

<sup>70</sup> CTIA Comments at 4. CTIA states that “programming is increasingly being delivered via the Internet over wireless networks” and cites data from an NTIA Internet Use Survey indicating that the proportion of Internet users watching videos online has grown from 45 percent in 2013 to 70 percent in 2017. *Id.* (citing Edward Carlson, *Cutting the Cord: NTIA Data Show Shift to Streaming Video as Consumer Drop Pay-TV*, NTIA BLOG (May 21, 2019), <https://www.ntia.doc.gov/blog/2019/cutting-cord-ntia-data-show-shift-streaming-video-consumers-drop-pay-tv>).

<sup>71</sup> CTIA Comments at 4.

<sup>72</sup> 47 U.S.C. § 303 note. *Preemption of Local Zoning Regulation of Satellite Earth Stations*, IB Docket No. 95-59, Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, 11 FCC Rcd 19276 (1996).

<sup>73</sup> We also note that installations under the OTARD rule may not constitute an “existing wireless tower or base station” for purposes of Section 6409(a) of the Spectrum Act of 2012. *See* Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, Title VI, § 6409(a), 126 Stat. 156, 232-33 (Feb. 22, 2012) (codified at 47 U.S.C. § 1455(a)); 47 C.F.R. § 1.6100(b)(5). Such installations may not have been reviewed and approved under the local zoning or siting process, or under another state or local regulatory review process, and therefore future modifications of these installations may not qualify for Section 6409(a) streamlined treatment. *See* 47 C.F.R. § 1.6100(b)(5); *Acceleration of Broadband Deployment By Improving Wireless Facilities Siting Policies, Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting 2012 Biennial Review of Telecommunications Regulations*, WT Docket Nos. 13-238, 11-59, 13-32, Report and Order, 29 FCC Rcd 12865, 12937, para. 174 (2014), *aff'd*, *Montgomery County, Md. v. FCC*, 811 F.3d 121 (4th Cir. 2015) (determining that a locality “is not obligated to grant a collocation application under Section 6409(a)” if “a tower or base station was constructed or deployed without proper review, was not required to undergo siting review, or does not support transmission equipment that received another form of affirmative State or local regulatory approval[.]”).

<sup>74</sup> 47 CFR § 1.4000(a)(1).

<sup>75</sup> *Id.* § 1.4000(a)(1)(ii)(B).

manner throughout the regulated area.<sup>76</sup> Given that the OTARD rule only applies to antennas meeting the rule's size restriction and only to antennas placed in areas where the antennas' user has exclusive use or control,<sup>77</sup> our rule revisions will minimize any potential visual impact on properties, which some commenters raise.<sup>78</sup>

20. We find the opponents' arguments unpersuasive. First, we continue to recognize property owners' rights under the OTARD rule. Because we maintain the "exclusive use or control" and "direct or indirect ownership or leasehold interest" restrictions, fixed wireless service providers will still need to negotiate agreements with appropriate parties for the placement of their antennas in areas where the property owner or lessee has exclusive use or control.<sup>79</sup> Contrary to the assertion of MBC and Real Estate Associations, this change does not undermine access negotiations.<sup>80</sup> Rather, the revision expands OTARD protections to a larger class of agreements negotiated by property owners and lessees, in that the rule will cover more fixed wireless equipment than was previously allowed.<sup>81</sup> For example, the new rule would not apply to the placement of hub and relay antennas on a building rooftop unless the building owner is a customer of the provider, or unless a customer other than the building owner already has a leasehold right to rooftop space and the placement is within that customer's exclusive use and control. In the former circumstance, to the extent that the concern is that application of the rule would prevent a building owner from charging a market-based rate for placement of a hub antenna on the rooftop, we note that will not be the case.<sup>82</sup> The revised rule will not treat service providers as "antenna users," and their agreements with building owners therefore would be subject to OTARD protection only if the building owner is itself a customer. Further, in that case, OTARD would serve to protect the antenna placement from third-party restrictions and would not limit the right of a provider and building owner customer to freely negotiate the terms of antenna placement in an area within the building owner's exclusive use or control. If the provider wishes to place a device within the leasehold premises of a rooftop tenant, the placement would not intrude on the building owner's property rights since the placement would be located within an area the building owner has already provided the tenant with a contractual right to occupy. In addition, fixed wireless hub and relay antenna manufacturers and service providers that use

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<sup>76</sup> *Id.* § 1.4000(a)(3).

<sup>77</sup> *Id.* § 1.4000(a)(1)(i)-(ii).

<sup>78</sup> *See, e.g.*, LMC Comments at 2-3. LMC states that many cities in Minnesota have adopted zoning regulations that limit the installation of antennas used to transmit signals off site. It asserts that in these instances the cities have determined that the installation of such antennas is not appropriate in certain areas or on certain buildings. LMC expresses concern that the Commission will take away local control of a city's land use plan and substitute the Commission's judgement for the local community. *Id.*

<sup>79</sup> 47 CFR § 1.4000(a)(1).

<sup>80</sup> MBC Comments at 7-8 (claiming that the proposed rule revisions would "effectively prevent property owners from working with telecom carriers at all"); Real Estate Associations Comments at 22 (claiming that if "the proposed changes to the Rule are adopted, all mobile wireless carriers would be permitted to install fixed wireless antennas at every one of those sites, regardless of the terms of their leases").

<sup>81</sup> *See, e.g.*, Starry Reply at 5-6 (revising OTARD would not change the need to negotiate access agreements nor undermine the ability of property owners to monetize their buildings); WISPA Reply at 8-9 (explaining how property owners will continue to have the right to choose to place base stations on their buildings and there is nothing in the modernization of OTARD that inhibits this right or infringes on property owners' right to control their property).

<sup>82</sup> We therefore disagree with the National Multifamily Housing Council's claim that the "proposed amendments would grant wireless carriers and any other entity that leases rooftop space the right to install fixed wireless equipment without paying any more in rent or amending any other lease terms." NMHC Dec. 3, 2020 *Ex Parte* Letter at 2. The *Report and Order* continues to recognize property owners' rights under the OTARD rule, and rooftop deployments remain unaffected in most circumstances.

this equipment must continue to comply with other applicable Commission regulations, such as RF emissions requirements.<sup>83</sup>

21. We find that potential economic costs of our rule change raised by commenters are both speculative and negligible. LMC claims that the installation of the new antennas contemplated in the *Notice* “would dramatically change the aesthetic of a neighborhood and be in contrast with their established character.”<sup>84</sup> First, although there is no “aesthetics exception” under the OTARD rule,<sup>85</sup> commenters have not provided factual support explaining how our update to the rule would cause these harms. Further, we maintain the existing restrictions in the OTARD rule that impose limits on the dimensions and location of equipment, so the visual appearance of the hub and relay equipment and antennas are the same as those deployments already covered under the OTARD rule. Relatedly, NATOA claims that, “[f]reed from the current obligation that the antenna be used for the owner or tenant to receive services, a property owner or tenant could affix an unlimited number of antennas anywhere on its property.”<sup>86</sup> That claim is misplaced, as our rule revision requires that an antenna must be deployed in a location where the customer has exclusive use or control. Moreover, the customer fixed wireless devices, including the antennas, are small, and a provider may only need a few additional units to relay the signals in different directions, if and where applicable.<sup>87</sup> In addition, our revision leaves unchanged the OTARD rule’s exemption and waiver frameworks, which permit limiting antenna installations for specific reasons.<sup>88</sup> Finally, we maintain the historical preservation exception in the OTARD rule, which limits installations of fixed wireless hubs and relays antennas under certain circumstances.<sup>89</sup> In these circumstances, we determine that the limited adjustment adopted here is appropriate.

22. We also find that other arguments raised by commenters are unfounded. MBC argues that any revision to the OTARD rule would cast uncertainty on “tens of thousands” of existing rooftop antenna leases.<sup>90</sup> Our revision is narrowly focused on hub and relay antennas that presently are not

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<sup>83</sup> See *Implementation of Section 207 of the Telecommunications Act of 1996*, CS Docket No. 96-83, Order on Reconsideration, 13 FCC Rcd 18962, 18979-80, paras. 34-36 (1998) (recognizing that masts that exceed twelve feet in height represent a public safety hazard and stating that local mast height restrictions must be reasonable and must be applied in a nondiscriminatory manner); 47 CFR § 1.1307(b) (RF emission limits). Fixed wireless providers are subject to equipment authorization rules that require radio frequency (RF) devices to operate effectively without causing harmful interference. RF devices must be properly authorized under 47 CFR Part 2 prior to being marketed or imported in the United States. Fixed wireless providers that use unlicensed spectrum are subject to Part 15 rules governing unlicensed operation. Part 15 of the Rules allows devices employing low-level RF signals to operate without individual licenses, provided that their operation causes no harmful interference to licensed services and the devices do not generate emissions or field strength levels greater than a specified limit. See *Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices Without an Individual License*, GN Docket No. 87-389, First Report and Order, 4 FCC Rcd 3493 (1989). See also 47 CFR § 15.5(b), (c).

<sup>84</sup> LMC Comments at 4. We note that LMC raises this argument under the premise that “property owners would be allowed to install OTARD for services they do not use.” *Id.* Our decision, however, restricts the installation of an antenna to a customer location where the antenna serves a customer on whose premises it is located.

<sup>85</sup> 47 CFR § 1.4000(a)(3), (b).

<sup>86</sup> NATOA Comments at 5; see also USCMO Comments at 14 (claiming that “[t]he beneficiary under the [*Notice*] would no longer be a viewer or a user present at the site enjoying the service that the antenna makes possible”).

<sup>87</sup> See, e.g., Starry Comments at 4 (“In most cases, fixed wireless networks are optimized for near-line-of-sight connectivity between transmitters and receivers, . . . [which] necessarily limits the locations at which fixed transmitters can be constructed . . . .”); GMU Reply at 9 (“A large number of small outdoor antennas on a property is likely to remain rare because few neighborhoods could provide the economic base to support several wireless broadband operators.”).

<sup>88</sup> 47 CFR § 1.4000(b)(2).

<sup>89</sup> 47 CFR § 1.4000(b), (d).

<sup>90</sup> MBC Comments at 6-7.

covered by OTARD and, therefore, rather than disrupting commercial and residential lease transactions, it should encourage parties to negotiate more lease transactions in the future. The rule will not affect existing rooftop leases unless the antenna placement is located in an area within the exclusive use and control of a customer, in which case the parties to the placement agreement would be the provider and the customer. The OTARD rule does not affect the provider-customer relationship; rather, it prohibits certain public and third-party restrictions on placements located at the customer's premises. If a property owner is the customer, then the terms of the placement will be freely negotiable without limitation by the OTARD rule. Similarly, contrary to Oklahoma Cities' claims, it is implausible that our changes today will spur such a large increase in exploitative contracts between service providers and homeowners and renters that new consumer protections are necessary, especially because providers might be enticed to offer consumers discounts to meet the new wording of the OTARD rule.<sup>91</sup> Local jurisdictions, however, can rely on the provisions of sections 1.4000(a)(3) and (4) and the safety provisions of subsection (b)(1) to protect the public as long as their rules meet the standards of these sections.<sup>92</sup> Taking into consideration all of the above, we find that the clear economic benefits of the rule change outweigh the negligible, and in some cases unfounded, economic costs.

23. *Legal Authority.* In the *Notice*, we proposed to rely on the legal authority the Commission originally relied on in the *2000 Competitive Networks First Report and Order* in extending the application of the OTARD rule to antennas used in connection with fixed wireless services.<sup>93</sup> We noted that the Commission in 2000 assumed all hub sites were "personal wireless service facilities" covered by Section 332(c)(7) of the Act—defined by the Act to include only facilities that provide "telecommunications services"<sup>94</sup>—and therefore beyond the scope of our OTARD provisions. We indicated that this assumption no longer appeared accurate.<sup>95</sup> We therefore sought comment on extending relief to those relay antennas and hub sites that are not "telecommunications services" and/or "personal wireless service facilities"—i.e., those that fall into the gap between our current OTARD provisions and the protections of Sections 253 and/or 332(c)(7) of the Act, and those that WISPA claims are needed for modern high-speed broadband wireless networks.<sup>96</sup>

24. We find that modifying the OTARD rule is necessary for the effective exercise of our spectrum management authority under Title III of the Communications Act. Specifically, we find that Section 303 of the Act provides authority for the Commission to modify the OTARD rule as it applies to fixed wireless devices.

25. Congress has specifically recognized that Section 303 provides authority to the Commission to adopt OTARD rules. While the directive in Section 207 of the 1996 Act mandated the exercise of the Commission's Title III authority only to certain kinds of video programming, Section 207 directed the Commission to address such video programming using its existing authority under Section 303.<sup>97</sup> Specifically, Section 207 states that "[w]ithin 180 days after the date of enactment of this Act, the Commission shall, pursuant to Section 303 of the Communications Act of 1934, promulgate regulations to prohibit restrictions that impair a viewer's ability to receive video programming services through

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<sup>91</sup> Oklahoma Cities Reply Comments at 11 (claiming that "many renters and homeowners [] will be the targets of wireless providers seeking to site facilities on their premises").

<sup>92</sup> 47 CFR § 1.4000(a)(3), (a)(4), (b)(1).

<sup>93</sup> *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23028-35, paras. 101-16.

<sup>94</sup> See 47 U.S.C. § 332(c)(7)(C) (defining "personal wireless services" to include only "commercial mobile services," "common carrier wireless exchange access services" and "unlicensed wireless services," with the last term in turn defined to include only "offering[s] of telecommunications services").

<sup>95</sup> *Notice*, 34 FCC Rcd at 2699, para. 12.

<sup>96</sup> *Notice*, 34 FCC Rcd at 2698-99, paras. 9, 12; WISPA Mar. 14, 2019 *Ex Parte* Letter at 5.

<sup>97</sup> 47 U.S.C. § 303 note.

devices designed for over-the-air reception . . . .”<sup>98</sup> As the Commission recognized in extending the OTARD rule to fixed wireless services in the *2000 Competitive Networks First Report and Order*, “this statutory language reflects Congress’ recognition that, pursuant to section 303, the Commission has always possessed authority to promulgate rules addressing OTARDs.”<sup>99</sup> The Commission has used its Section 303 authority to limit State and local regulation of the placement of antennas both before and after Section 207 was enacted.<sup>100</sup>

26. Courts have held that the Commission’s statutory authority pursuant to Title III is broad.<sup>101</sup> Our authority under Section 303 allows us, when necessary to serve the public interest, to allocate spectrum for specific uses, adopt rules governing services that use spectrum as well as rules applicable to antennas and other apparatus,<sup>102</sup> and take action to encourage the larger and more effective

<sup>98</sup> 1996 Act § 207, 110 Stat. at 114.

<sup>99</sup> *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23031, para. 106. Starry and WISPA express support for relying on Section 303 for authority to modify the OTARD rule. WISPA Comments at 13 (“the Commission has general powers to regulate radio transmissions under Section 303, which provides ample authority to extend the OTARD rule, as proposed in this proceeding”); Starry Reply at 3 (contending that “[S]ection 303 stands as an independent source of authority to regulate radio transmissions and can serve as the basis for adopting the rule changes proposed” in the *Notice*).

<sup>100</sup> *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23031, para. 106, citing *New York State Commission v. FCC*, 749 F.2d 804 (D.C. Cir. 1984) and *Preemption of Local Zoning Regulation of Satellite Earth Stations, Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 5809 (1996).

<sup>101</sup> See, e.g., *CellCo P’ship v. FCC*, 700 F.3d 534, 541-49 (D.C. Cir. 2012) (affirming the Commission’s data roaming rules as an exercise of the Commission’s spectrum management authority under Section 316 and 303(r)); *New York State Comm’n on Cable Television v. FCC*, 669 F.2d 58, 65-66 (2d Cir. 1982) (holding that Congress gave the Commission broad authority over radio transmission, citing sections 301, 303(g), and 303(r) of the Act, noting that MDS operators “are subject to the licensing requirement of Title III because MDS uses radio signals[,]” and finding that “[t]o allow each State to impose regulations, which, like New York’s, effectively reduce the number of MDS receive points would impose an impermissible burden on interstate MDS service.”); *Mobile Comm’n Corp. of America v. FCC*, 77 F.3d 1399, 1404-06 (D.C. Cir. 1996) (affirming Commission authority under Sections 4(i) and 309 of the Communications Act to require a discounted price, rather than no payment, in exchange for a license); *Comcast v. FCC*, 600 F.3d 642, 656-57 (D.C. Cir. 2010) (*Comcast*) (characterizing Section 303(a), (b), and (c) provisions included among as “express delegations of authority” under Title III to, among other things, “classify radio stations,” “prescribe the nature of the service to be rendered,” and “assign bands of frequencies” and found these authorities to be sufficient to support the exercise of ancillary authority).

<sup>102</sup> See, e.g., 47 U.S.C. § 303(d) (Commission may “[d]etermine the location of classes of stations or individual stations.”); 47 U.S.C. § 303(e) (Commission may “[r]egulate the kind of apparatus to be used with respect to its external effects and the purity and sharpness of the emissions from each station and from the apparatus therein.”); *id.* § 303(f) (Commission may “[m]ake such regulations not inconsistent with law as it may deem necessary to prevent interference between stations and to carry out the provisions of this chapter.”); *Continental Airlines; Petition for Declaratory Ruling Regarding the Over-the-Air Reception Devices (OTARD) Rules*, ET Docket No. 05-247, Memorandum Opinion and Order, 21 FCC Rcd 13201, 13216-17, para. 38 (2006) (antennas are “stations” for purposes of section 303(d)); *Authorization of Spread Spectrum and other Wideband Emissions Not Presently Provided for in the FCC Rules and Regulations*, GN Docket No. 81-413, First Report and Order, 101 FCC 2d 419 (1985) (allocating spectrum for unlicensed use); *Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices Without an Individual License*, GN Docket No. 87-389, First Report and Order, 4 FCC Rcd 3493 (1989) (revising technical and operational rules to provide for the expanded operation of non-licensed RF devices); *Revision of Part 15 of the Commission’s Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, ET Docket No. 13-49, First Report and Order, 29 FCC Rcd 11599 (2014) (increasing the utility of the 5GHz band by revising Part 15 rules applicable to U-NII devices); *Unlicensed Use of the 6 GHz Band; Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, ET Docket No. 18-295, Report and Order, 35 FCC Rcd 3852 (2020) (adopting rules to make 1200 MHz of spectrum available for unlicensed use in the 6 GHz band (5.925-7.125 GHz)); *Unlicensed White Space Device Operation in the Television Bands*, ET Docket No. 20-36, Report and Order and Further Notice of Proposed Rulemaking, FCC 20-156 (rel. Oct. 28, 2020) (revising

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use of spectrum.<sup>103</sup> More generally, the Commission may “[m]ake such rules and regulations and prescribe such restrictions and conditions, not inconsistent with law, as may be necessary to carry out the provisions of” the Act.<sup>104</sup> Fixed wireless service providers offer services using spectrum and are subject to the Commission’s rules governing the use of spectrum.<sup>105</sup> Evidence in the record shows that fixed wireless service providers seek to broaden their offerings of competitive broadband Internet access services but are subject to State, local and private restrictions that increase the costs associated with deploying service and dampen investment.<sup>106</sup> The record shows that modifying the OTARD rule to allow wireless Internet service providers to deploy necessary infrastructure more readily will serve the public interest and promote larger and more efficient use of spectrum by increasing siting opportunities for wireless Internet service providers, decreasing costs associated with deploying needed infrastructure, and encouraging wireless Internet service providers to deploy broadband Internet access services in additional areas across the country.<sup>107</sup>

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Part 15 rules to expand ability of unlicensed white space devices to deliver wireless broadband services in rural areas and areas where fewer broadcast television stations are on the air).

<sup>103</sup> *Id.* § 303(g). *See also id.* § 303(y) (authorizing the Commission to “allocate electromagnetic spectrum so as to provide flexibility of use”).

<sup>104</sup> 47 U.S.C. § 303(r). *See also id.* § 154(i) (“The Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this chapter, as may be necessary in the execution of its functions.”).

<sup>105</sup> For example, among other requirements, fixed wireless providers, are subject to equipment authorization rules that require radio frequency (RF) devices to operate effectively without causing harmful interference. RF devices must be properly authorized under 47 CFR Part 2 prior to being marketed or imported in the United States. Fixed wireless providers that use unlicensed spectrum are subject to Part 15 rules governing unlicensed operation. Part 15 of the Rules allows devices employing low-level RF signals to operate without individual licenses, provided that their operation causes no harmful interference to licensed services and the devices do not generate emissions or field strength levels greater than a specified limit. *See Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices Without an Individual License*, First Report and Order, GN Docket No. 87-389, 4 FCC Rcd 3493 (1989). *See also* 47 CFR § 15.5(b), (c). Fixed wireless providers also are subject to the Commission spectrum allocation decisions. *See, e.g., Unlicensed Use of the 6 GHz Band; Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Report and Order, ET Docket No. 18-295, GN Docket No. 17-183, 35 FCC Rcd 3852 (2020) (adopting rules to make 1200 MHz of spectrum available for unlicensed use in the 6 GHz band (5.925-7.125 GHz)). Fixed wireless providers also are subject to current OTARD requirements. *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23027-28, paras. 97-100.

<sup>106</sup> *See, e.g.,* Starry Comments at 6 (estimating that if its base stations are covered by OTARD, it can activate 25% to 30% more sites in the coming year, enabling it to pass more than one million additional households); MJM Telecom Corp. Comments at 1 (stating that it is hampered by current state and local regulations and has “turned down thousands of potential customers due to the fact that [it] cannot put up a small relay hub site allowing them to receive these services”).

<sup>107</sup> This exercise of the Commission’s Title III authority will thus further promote the Commission’s statutory mission of “mak[ing] available, so far as possible, to all of the people of the United States . . . a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges,” and “encourag[ing] the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans . . . by utilizing, in a manner consistent with the public interest, convenience, and necessity . . . measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.” 47 U.S.C. §§ 151, 1302(a). Based on our findings regarding our authority under Title III of the Act, we reject National Multifamily Housing Council’s argument that the Commission has no statutory authority to revise the OTARD rule. NMHC Dec. 3, 2020 *Ex Parte* Letter at 2; *see also* Letter from Matthew C. Ames, Counsel to National Multifamily Housing Council to Marlene H. Dortch, Secretary, FCC, WT Docket No. 19-71 at 3 (filed Dec. 16, 2020).

27. Several commenters argue that the Commission cannot rely on the authority it relied on previously to modify the OTARD rule because the Commission's determinations regarding its authority in the *2000 Competitive Networks First Report and Order* were based on an "outdated ancillary jurisdiction analysis."<sup>108</sup> We acknowledge that the Commission's *Competitive Networks Order* was issued prior to the D.C. Circuit's decision in *Comcast*, which rejected the Commission's reliance on ancillary authority in the absence of any express delegation of authority.<sup>109</sup> Nevertheless, our action here is based on the Commission's well recognized broad authority under Title III (most specifically Section 303).<sup>110</sup>

28. Our action also is consistent with the requirements imposed upon the Commission in RAY BAUM'S Act.<sup>111</sup> RAY BAUM'S Act requires the Commission, in the Communications Marketplace Report, to assess the state of competition in the communications marketplace, assess the state of deployment of communications capabilities, and to assess whether laws, regulations, regulatory practices or demonstrated marketplace practices pose a barrier to competitive entry into the communications marketplace or to the competitive expansion of existing providers of communications services.<sup>112</sup> It also requires the Commission to describe how it will address "the challenges and opportunities in the communications marketplace that were identified through the assessments."<sup>113</sup>

29. We also disagree with commenters who argue that the Commission lacks authority to modify the OTARD rule because hub and relay antennas are already governed by Section 332 of the Act.<sup>114</sup> Commenters such as the Municipal Organizations and Local Governments point out that, in the *2000 Competitive Networks First Report and Order*, the Commission found that hub and relay antennas were outside the scope of customer-end equipment covered by the OTARD rule.<sup>115</sup> The Municipal Organizations argue that because hub and relay antennas are covered under Section 332(c)(7), no other provision of the Act may "support an action that 'limit[s] or affect[s] the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and

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<sup>108</sup> See, e.g., Local Government Comments at 15-17; Real Estate Associations Comments at 38.

<sup>109</sup> *Comcast v. FCC*, 600 F.3d at 656-58.

<sup>110</sup> Moreover, our action is reasonably ancillary to our express authority to manage the radio spectrum and related apparatus. 47 U.S.C. §§ 154(i), 303(r). Section 4(i) provides that "[t]he Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this Act, as may be necessary in the execution of its functions." Section 303(r) authorizes the Commission to "[m]ake such rules . . . as may be necessary to carry out the provisions of this the Act." As noted above, our modest expansion of the existing application of the OTARD rules to additional hub and relay antennas is necessary to address the kinds of substantial obstacles to deployment of Title III services described above. See *United States v. Southwestern Cable Co.*, 392 U.S. 157, 172-78, 180-81 (1968) (relying on Sections 4(i) and 303(r) to impose restrictions on cable operators, together with Commission's broad authority under Title III, where the Commission concluded doing so was "imperative if it is to perform with appropriate effectiveness" its statutory responsibilities over Title III licensees). This decision will also provide a level-playing field for broadband-only fixed wireless providers which lack the regulatory protections in this regard available only to their competitors under Sections 253 and 332. See *Mobile Communications Corp. of America v. FCC*, 77 F.3d 1399 (D.C. Cir. 1996) (citing *Southwestern Cable*) (relying on Section 4(i) to authorize requirement of payment into U.S. Treasury for Title III licensee to avoid unjust enrichment vis a vis other licensees required to pay at auction for their licenses).

<sup>111</sup> WISPA argues that Ray Baum's Act provides the Commission with authority to modify the rule. WISPA Reply at 15-16.

<sup>112</sup> 47 U.S.C. § 163(b)(1)-(3).

<sup>113</sup> 47 U.S.C. § 163(b)(4)-(5).

<sup>114</sup> See, e.g., Local Governments Comments at 12; Real Estate Associations Comments at 40; Local Governments Reply at 9-11; Municipal Organizations Reply at 2-3.

<sup>115</sup> Municipal Organizations Comments at 3.



modification of these facilities.”<sup>116</sup> To the contrary, we find that Section 332(c)(7) does not bar us from modifying the OTARD rule because it does not apply to antennas used in connection with the broadband-only services many fixed wireless providers offer.

30. Evidence in the record shows that wireless Internet service providers use hub and relay antennas to provide services that do not fall within the scope of services covered under Section 332(c)(7).<sup>117</sup> With certain exceptions, Section 332(c)(7) provides for limited federal preemption of State and local zoning restrictions “that prohibit or have the effect of prohibiting” “the provision of ‘personal wireless service.’”<sup>118</sup> “Personal wireless service” is defined under Section 332(c)(7) to mean “commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services.”<sup>119</sup> “Unlicensed wireless service” in turn, is defined under Section 332(c)(7) to mean “the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services . . . .”<sup>120</sup> Section 253 similarly provides for limited federal preemption of state and local statute or regulations that “prohibit or have the effect of prohibiting” “the ability of any entity to provide any interstate or intrastate telecommunications service.”

31. Many fixed wireless providers offer broadband-only services that are outside the scope of these provisions.<sup>121</sup> In this *Report and Order*, we take action to address those hub and relay antennas that are used in connection with the provision of broadband-only services that fall into the gap between our current OTARD provisions and the protections of Sections 332(c)(7) and 253 of the Act. In response to the request from WISPA for clarification about whether the Commission’s prior Sections 253 and 332 interpretations cover their offering of commingled services, we reiterate what the Commission already decided and the Ninth Circuit Court of Appeals affirmed: the scope of Commission preemption over commingled services is covered by Sections 253 and 332 of the Act and our implementing regulations.<sup>122</sup> Expansion of the OTARD rule to cover commingled services thus is unnecessary. Accordingly, this *Report and Order* does not address hub or relay antennas that are used for such commingled services,

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<sup>116</sup> Municipal Organizations Reply at 2.

<sup>117</sup> See, e.g., Az Airtel Comments at 2, 4 (indicating that it provides fixed wireless internet access service); Ionia Unlimited Comments at 1 (indicating that it provides wireless internet access service); Google Comments at 2-3 (noting that, through its affiliate Webpass Inc., it provides point-to-point high speed wireless broadband service).

<sup>118</sup> 47 U.S.C. §§ 253(a), 332(c)(7).

<sup>119</sup> 47 U.S.C. § 332(c)(7)(C)(i).

<sup>120</sup> 47 U.S.C. § 332(c)(7)(C)(iii).

<sup>121</sup> See, e.g., Az Airtel Comments at 2, 4 (indicating that it provides fixed wireless internet access service); Ionia Unlimited Comments at 1 (indicating that it provides wireless internet access service); Google Comments at 2-3 (noting that, through its affiliate Webpass Inc., it provides point-to-point high speed wireless broadband service).

<sup>122</sup> See *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment et al.*, WT Docket No. 17-79, WC Docket No. 17-84, Declaratory Ruling and Third Report and Order, 33 FCC Rcd 9088, 9103, para. 36 (2018), *affirmed in pertinent part*, *City of Portland v. U.S.*, 969 F.3d 1020, 1036-49 (9th Cir. Aug 12, 2020), *en banc review denied*, *City of Portland v. U.S.*, No. 18-72689 (9th Cir. Oct. 22, 2020). See also 47 C.F.R. § 1.6001-1.6003 (requiring siting applications subject to Section 332 to be acted on within a reasonable period of time). Sections 253 and 332(c)(7) of the Communications Act provide for federal preemption of state and local zoning restrictions that “prohibit or have the effect of prohibiting” “the ability of any entity to provide any interstate or intrastate telecommunications service” and “the provision of personal wireless services.” See 47 U.S.C. §§ 253, 332(c)(7). For purposes of Section 332(c)(7), “the term ‘personal wireless services’ means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services” and “the term ‘unlicensed wireless service’ means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services . . . .” 47 U.S.C. § 332(c)(7)(C)(i), (iii).

other than to point out that they are covered for preemption purposes under Sections 253 and 332 of the Act.

32. We also reject arguments that revising the OTARD rule as described herein would constitute a taking. The Community Associations Institute (CAI) argues that “a rule allowing commercial communications equipment to be sited on common property without the association’s explicit consent is a compelled physical occupation of such property” and that such a rule “would constitute a taking for which compensation must be made.”<sup>123</sup> The Real Estate Associations contend that while the revised rule would not say so on its face, its practical effect would be to “give fixed wireless providers the ability to install and operate equipment without the consent of the owner of the property.”<sup>124</sup> They contend that, even though the hub or relay antenna might serve the needs of the end-user customer, it would “also have other features that meet only the needs of the third-party service provider” and argue that requiring property owners to accept the installation of such equipment would potentially equate to forced acquiescence to subleasing to fixed wireless service providers and would therefore violate the Fifth Amendment’s prohibition on takings.<sup>125</sup> We disagree that the revision to the OTARD rule that we adopt in this *Report and Order* would cause such results. The OTARD rule does not permit service providers to install hub and relay antennas on common property without a property owner’s consent. The modification we adopt is narrow and eliminates only the restriction that currently excludes some hub and relay antennas from the scope of the existing OTARD provisions. It does not change any other aspect of the current OTARD rule, including the requirement that, for the OTARD rule to apply, the antenna must be installed “on property within the exclusive use or control of the antenna user where the user has a direct or indirect ownership or leasehold interest in the property.”<sup>126</sup> A tenant may allow a wireless service provider to place a hub or relay antenna on property that is within the tenant’s exclusive use or control where the tenant has a direct or indirect ownership or leasehold interest in the property.

33. In originally extending the OTARD rule to fixed wireless services, the Commission considered and rejected similar arguments that the OTARD rule would constitute a taking and concluded that, “there is no constitutional impediment to our forbidding restrictions on the placement of antennas on property within the tenant user’s exclusive use, where that user has an interest in the property.”<sup>127</sup> The Commission reiterated its explanation from the *OTARD Second Report and Order* that the OTARD rule “did not effect a taking of the premises owner’s property within the meaning of the Fifth Amendment because by leasing his or her property to a tenant, the property owner voluntarily and temporarily relinquishes the rights to possess and use the property and retains the right to dispose of the property.”<sup>128</sup> In *Building Owners and Managers Ass’n Inter. v. FCC (BOMA)*, the D.C. Circuit upheld the

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<sup>123</sup> CAI Comments at 8 (citing *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982)).

<sup>124</sup> Real Estate Association Comments at 35.

<sup>125</sup> *Id.* at 34-36 (citing *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982)). See also NMHC Dec. 3, 2020 Ex Parte Letter at 2 (“[o]ne goal of the change seems to be to promote mesh networks that rely on equipment that serves both the end user and extends the provider’s network by relaying signals to other end users. In other words, the mesh network operators seek to extend their network capabilities by using property they do not own, without paying the property owner for that right.”).

<sup>126</sup> 47 CFR § 1.4000(a)(1). WISPA notes that, under the proposed revision of the OTARD rules, “property owners should continue to have the right to determine access to common areas and restricted areas such as building rooftops.” Letter from Louis Peraertz, Vice Pres. of Policy, WISPA to Marlene H. Dortch, Secretary, FCC, WT Docket No. 19-71 at 2 (filed Dec. 7, 2020).

<sup>127</sup> *2000 Competitive Networks First Report and Order*, 15 FCC Rcd at 23034, para. 116.

<sup>128</sup> *Id.* (citing *Implementation of Section 207 of the Telecommunications Act of 1996 and Restrictions on Over-the-Air Reception Devices: Television Broadcast, Multichannel Multipoint Distribution and Direct Broadcast Satellite Services*, CS Docket No. 96-83, Second Report and Order, 13 FCC Rcd 23874, 23883-85, paras. 19-20 (1998) (*Second Report and Order*)).

Commission's extension of OTARD protection to the placement of antennas on leased premises, rejecting the claim that the action effected a per se taking "because it enlarges the tenant's rights beyond the contractual provisions of the lease, thereby stripping landowners of property rights that they rightfully reserved . . . ." <sup>129</sup> The court held that "the landlord affected by the amended OTARD rule will have voluntarily ceded control of an interest in his or her property to a tenant" and having done so "thereby submits to the Commission's rightful regulation of a term of that occupation." <sup>130</sup> We are not convinced that our decision today creates a Fifth Amendment takings issue, or that the broad categories of covered activities cited in *BOMA* should be restricted, simply because installation of the hub and relay equipment might result in the end user receiving money or other compensation in exchange for installation of the equipment on the premises. Consistent with and for the reasons outlined in our previous determinations, we conclude that revising the OTARD rule as described herein does not constitute a taking. A taking does not occur in such cases because, by leasing property to the tenant, the property owner has voluntarily and temporarily relinquished the right to possess and use the property and has instead given those rights to the tenant.

34. We also reject arguments premised on the generalized concerns about the Commission's RF safety limits and that incrementally revising the OTARD rule would somehow violate people's right to bodily autonomy or their property-based right to "exclude" wireless radiation emitted by third parties from their home or would violate the Americans with Disabilities Act or the Fair Housing Act by imposing radiation on individuals in their homes.<sup>131</sup> Revising the OTARD rule does not change the applicability of the Commission's radio frequency exposure requirements, and fixed wireless providers must ensure that their equipment remains within the applicable exposure limits.<sup>132</sup> What's more, in 2019, the Commission declined to initiate a rulemaking to revise its RF emission exposure limits.<sup>133</sup> We therefore reject certain commenters' concerns that the OTARD rule revisions will generally lead to unsafe RF exposure levels.

#### IV. PROCEDURAL MATTERS

35. *Regulatory Flexibility Act.* The Regulatory Flexibility Act of 1980, as amended (RFA),<sup>134</sup> requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."<sup>135</sup> Accordingly, the Commission has

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<sup>129</sup> *Building Owners and Managers Ass'n Inter. v. FCC*, 254 F.3d 89, 97 (D.C. Cir. 2001).

<sup>130</sup> *Id.* at 98; *see also id.* at 94-95 (discussing the Commission's broad statutory mandate).

<sup>131</sup> *See* Letter from Scott McCollough, Counsel to Children's Health Defense, WT Docket No. 19-71 at 1-2, 14-15 (filed May 19, 2020); *id.* at 17-19 (asking the Commission to establish a judicial remedy for individuals opposed to antenna placements they consider to be harmful and require service providers to notify individuals of possible exposure to antenna emissions). *See also, e.g.*, Comments of Susan Jennings at 1; Comments of Elizabeth Kelley at 1-2; Comments of Nina Beety at 2; Comments of Dan Kleiber. We note that other commenters raised general health-related RF exposure issues, which are outside the scope of this proceeding. *See, e.g.*, Comments of Lora Chamberlain; Comments of Kimberly Modesitt; Comments of Judy Kosovich.

<sup>132</sup> 47 CFR § 1.1310.

<sup>133</sup> *See Proposed Changes in the Commission's Rule Regarding Human Exposure to Radiofrequency Electromagnetic Fields; Reassessment of Federal Communication Commission Radiofrequency Exposure Limits and Policies*, ET Docket No. 19-226, Report and Order, Notice of Proposed Rulemaking, Memorandum Opinion and Order, 34 FCC Rcd 11687 (2019). Other comments raise more general concerns regarding the Commission's RF regulations; these concerns are more appropriately directed to the Commission's other rulemaking and we reject them as outside the scope of this proceeding.

<sup>134</sup> *See* 5 U.S.C. § 604. The RFA, 5 U.S.C. §§ 601-612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>135</sup> 5 U.S.C. § 605(b).

prepared a Final Regulatory Flexibility Analysis (FRFA) concerning the possible impact of the rule changes contained in this *Report and Order* on small entities. The FRFA is set forth in Appendix C.

36. *Paperwork Reduction Act.* This document does not contain an information collection subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. Therefore, it does not contain any new or modified “information collection burden for small business concerns with fewer than 25 employees,” pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198.<sup>136</sup>

37. *Congressional Review Act.* The Commission has determined, and the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, concurs, that this rule is non-major under the Congressional Review Act, 5 U.S.C. § 804(2). The Commission will send a copy of this *Report and Order* to Congress and the Government Accountability Office pursuant to 5 U.S.C. § 801(a)(1)(A).

38. *People with Disabilities.* To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY).

## V. ORDERING CLAUSES

39. Accordingly, IT IS ORDERED, pursuant to Sections 1, 4(i), 201(b), 202(a), 205, 251, 253, 303, 316, 332, and 1302 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 201(b), 202(a), 205(a), 251, 253, 303, 316, 332, and 1302 and Section 207 of the Telecommunications Act of 1996, Pub. L. No. 104-104, § 207, 110 Stat. 56, 114 that this *Report and Order* IS ADOPTED.

40. IT IS FURTHER ORDERED THAT Section 1.4000 of the Commission’s rules IS AMENDED as specified in Appendix B, and such rule amendments shall be effective 30 days after the date of publication of the text thereof in the Federal Register.

41. IT IS FURTHER ORDERED that the Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Report and Order*, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

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<sup>136</sup> 44 U.S.C. § 3506(c)(4).

**APPENDIX A****Parties Filing Comments****Comments**

Community Associations Institute (CAI)  
City of Costa Mesa (Costa Mesa)  
CTIA – The Wireless Association® (CTIA)  
Google Fiber Inc. (Google)  
Interstate Wireless, Inc. D/b/a Az Airnet (Az Airnet)  
Ionia Unlimited, LLC (Ionia)  
League of Minnesota Cities (LMC)  
Multifamily Broadband Counsel (MBC)  
National Association of Telecommunications Officers and Advisors (NATOA); National League of Cities (NLC); National Association of Regional Councils (NARC) (collectively, Municipal Organizations)  
City of Nevada City (Nevada City)  
National Multifamily Housing Council; National Apartment Association; Building Owners and Managers Association International; Institute of Real Estate Management; Nareit; National Association of Realtors; National Real Estate Investors Association; Real Estate Roundtable (collectively, Real Estate Associations)  
New Wave Net Corp. (New Wave)  
Starry, Inc. (Starry)  
United States Conference of Mayors; Texas Coalition of Cities for Utility Issues; City of Dallas, Texas; City of Boston, Massachusetts; City of Los Angeles, California; City of Fountain Valley, California; City of Piedmont, California; Montgomery County, Maryland (collectively, Local Governments)  
Washington Association of Telecommunications Officers and Advisors (WATOA)  
Wireless Internet Service Providers Association (WISPA)

**Reply Comments**

CAI  
Colorado Communications and Utility Alliance (CCUA)  
Common Networks, Inc. (Common)  
Consumer Technology Association (CTA)  
Environmental Health Trust (EHT)  
EMFScientist.org (EMF)  
Brent Skorup, Senior Research Fellow, Fourth Branch Project, Mercatus Center at George Mason University (GMU)  
INCOMPAS  
Local Governments  
City of Oklahoma City, Oklahoma; City of Sioux Falls, South Dakota; North Metro Telecommunications Commission; Ramsey Washington Suburban Cable Commission; North Suburban Communications Commission; South Washington County Telecommunications Commission; City of Edmond, Oklahoma; Northern Dakota County Cable Communications Commission; City of Coon Rapids, Minnesota (collectively, Municipal Commenters)  
OUTFRONT Media Inc. (OUTFRONT)  
City and County of San Francisco (San Francisco)  
Real Estate Associations  
Starry  
WATOA  
Wav Speed  
WISPA

## APPENDIX B

### Final Rules

The Federal Communications Commission amends Section 1.4000 of Title 47 of the Code of Federal Regulations as follows:

#### PART 1 – PRACTICE AND PROCEDURE

##### **Subpart S – Preemption of Restrictions That “Impair” the Ability To Receive Television Broadcast Signals, Direct Broadcast Satellite Services, or Multichannel Multipoint Distribution Services or the Ability To Receive or Transmit Fixed Wireless Communications Signals**

1. The authority citation for part 1 continues to read as follows:

**Authority:** [[To be inserted]]

2. Amend § 1.4000 by revising paragraph (a)(1) as follows:

##### **§ 1.4000 Restrictions impairing reception of television broadcast signals, direct broadcast satellite services or multichannel multipoint distribution services.**

\* \* \* \* \*

(a)(1)(i)(A) Used to receive direct broadcast satellite service, including direct-to-home satellite service, or to receive or transmit fixed wireless signals via satellite, including a hub or relay antenna used to receive or transmit fixed wireless services that are not classified as telecommunications services, and

\* \* \* \* \*

(a)(1)(ii)(A) Used to receive video programming services via multipoint distribution services, including multichannel multipoint distribution services, instructional television fixed services, and local multipoint distribution services, or to receive or transmit fixed wireless signals other than via satellite, including a hub or relay antenna used to receive or transmit fixed wireless services that are not classified as telecommunications services, and

\* \* \* \* \*

3. Amend § 1.4000 by adding paragraph (a)(5) to read as follows:

(a)(5) For purposes of this section, “hub or relay antenna” means any antenna that is used to receive or transmit fixed wireless signals for the distribution of fixed wireless services to multiple customer locations as long as the antenna serves a customer on whose premises it is located, but excludes any hub or relay antenna that is used to provide any telecommunications services or services that are provided on a commingled basis with telecommunications services.

## APPENDIX C

**Final Regulatory Flexibility Act Analysis**

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>1</sup> an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rulemaking (Notice)* released in April 2019.<sup>2</sup> The Commission sought written public comment on the proposals in the *Notice*, including comment on the IRFA. No comments were filed addressing the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.<sup>3</sup>

**A. Need for, and Objectives of, the Report and Order**

2. In the *Report and Order*, the Commission updates its rule for over-the-air reception devices (OTARD) to include hub and relay antennas that are used for the distribution of fixed wireless services to multiple customer locations, regardless of whether they are primarily used for this purpose, so long as the antennas serve a customer on whose premises they are located. This change is necessitated by the shift away from larger antennas spread over greater distances to 5G wireless networks with dense deployment requirements. Today's fixed wireless networks rely on smaller antennas located in close proximity to each other. These smaller antennas meet the OTARD size restriction but are excluded from OTARD protection due to their function. By updating the OTARD rule to include these antennas, the Commission recognizes the shift in the fixed wireless infrastructure landscape.

3. The shift in the types of service provided by fixed wireless service providers also prompts the need for this rule change. Specifically, these service providers' offerings are no longer commingled with telecommunications services and therefore would not otherwise receive protection from one of the Commission's preemption schemes. In this regard, the Commission's actions level the playing field for fixed wireless broadband service providers so that they are better able to compete with other service providers that already receive protection from the Commission's OTARD rule or other preemption scheme. By making this modification, the Commission places fixed wireless broadband providers on similar footing with other service providers and expands siting options for fixed wireless hub and relay antennas. These changes will reduce costs and construction timelines for new fixed wireless sites. They will also provide for alternative locations for fixed wireless hub and relay antennas to be installed and remove market barriers for fixed wireless services that otherwise would exist. Additionally, the changes adopted in the *Report and Order* will enhance the development of broadband services and further the Commission's efforts to address the digital divide by helping to bring faster Internet speeds, lower latency, and advanced applications like the Internet of Things (IoT), telehealth, and remote learning to rural and underserved areas, as well as throughout the United States.

**B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA**

4. There were no comments filed that specifically addressed the proposed rules and policies presented in the IRFA.

**C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration**

5. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the

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<sup>1</sup> See 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601 – 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>2</sup> *Updating the Commission's Rule for Over-the-Air Reception Devices*, WT Docket No. 19-71, Notice of Proposed Rulemaking, 34 FCC Rcd 2695 (2019) (*Notice*).

<sup>3</sup> See 5 U.S.C. § 604.

Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.<sup>4</sup>

6. The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

**D. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply**

7. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the rules and adopted herein.<sup>5</sup> The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>6</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.<sup>7</sup> A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.<sup>8</sup>

8. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein.<sup>9</sup> First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the Small Business Administration’s (SBA) Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.<sup>10</sup> These types of small businesses represent 99.9% of all businesses in the United States, which translates to 30.7 million businesses.<sup>11</sup>

9. Next, the type of small entity described as a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”<sup>12</sup> The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations.<sup>13</sup> Nationwide, for tax year 2018, there

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<sup>4</sup> 5 U.S.C. § 604(a)(3).

<sup>5</sup> 5 U.S.C. § 604(a)(4).

<sup>6</sup> 5 U.S.C. § 601(6).

<sup>7</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

<sup>8</sup> 15 U.S.C. § 632.

<sup>9</sup> See 5 U.S.C. § 601(3)-(6).

<sup>10</sup> See SBA, Office of Advocacy, “What’s New With Small Business?”, <https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/23172859/Whats-New-With-Small-Business-2019.pdf> (Sept 2019).

<sup>11</sup> *Id.*

<sup>12</sup> 5 U.S.C. § 601(4).

<sup>13</sup> The IRS benchmark is similar to the population of less than 50,000 benchmark in 5 U.S.C § 601(5) that is used to define a small governmental jurisdiction. Therefore, the IRS benchmark has been used to estimate the number small organizations in this small entity description. See Annual Electronic Filing Requirement for Small Exempt Organizations — Form 990-N (e-Postcard), “Who must file,” <https://www.irs.gov/charities-non-profits/annual-electronic-filing-requirement-for-small-exempt-organizations-form-990-n-e-postcard>. We note that the IRS data does not provide information on whether a small exempt organization is independently owned and operated or dominant in its field.



were approximately 571,709 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.<sup>14</sup>

10. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”<sup>15</sup> U.S. Census Bureau data from the 2017 Census of Governments<sup>16</sup> indicate that there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.<sup>17</sup> Of this number there were 36,931 general purpose governments (county<sup>18</sup>, municipal and town or township<sup>19</sup>) with populations of less than 50,000 and 12,040 special purpose governments - independent school districts<sup>20</sup> with enrollment populations of less than 50,000.<sup>21</sup> Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at least 48,971 entities fall into the category of “small governmental jurisdictions.”<sup>22</sup>

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<sup>14</sup> See Exempt Organizations Business Master File Extract (EO BMF), “CSV Files by Region,” <https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-eo-bmf>. The IRS Exempt Organization Business Master File (EO BMF) Extract provides information on all registered tax-exempt/non-profit organizations. The data utilized for purposes of this description was extracted from the IRS EO BMF data for Region 1-Northeast Area (76,886), Region 2-Mid-Atlantic and Great Lakes Areas (221,121), and Region 3-Gulf Coast and Pacific Coast Areas (273,702) which includes the continental U.S., Alaska, and Hawaii. This data does not include information for Puerto Rico.

<sup>15</sup> 5 U.S.C. § 601(5).

<sup>16</sup> See 13 U.S.C. § 161. The Census of Governments survey is conducted every five (5) years compiling data for years ending with “2” and “7.” See also Census of Governments, <https://www.census.gov/programs-surveys/cog/about.html>.

<sup>17</sup> See U.S. Census Bureau, 2017 Census of Governments – Organization Table 2. Local Governments by Type and State: 2017 [CG1700ORG02]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. Local governmental jurisdictions are made up of general-purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). See also Table 2. CG1700ORG02 Table Notes\_Local Governments by Type and State\_2017.

<sup>18</sup> See U.S. Census Bureau, 2017 Census of Governments - Organization, Table 5. County Governments by Population-Size Group and State: 2017 [CG1700ORG05]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 2,105 county governments with populations less than 50,000. This category does not include subcounty (municipal and township) governments.

<sup>19</sup> See U.S. Census Bureau, 2017 Census of Governments - Organization, Table 6. Subcounty General-Purpose Governments by Population-Size Group and State: 2017 [CG1700ORG06]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 18,729 municipal and 16,097 town and township governments with populations less than 50,000.

<sup>20</sup> See U.S. Census Bureau, 2017 Census of Governments - Organization, Table 10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2017 [CG1700ORG10]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 12,040 independent school districts with enrollment populations less than 50,000. See also Table 4. Special-Purpose Local Governments by State Census Years 1942 to 2017 [CG1700ORG04], CG1700ORG04 Table Notes\_Special Purpose Local Governments by State\_Census Years 1942 to 2017.

<sup>21</sup> While the special purpose governments category also includes local special district governments, the 2017 Census of Governments data does not provide data aggregated based on population size for the special purpose governments category. Therefore, only data from independent school districts is included in the special purpose governments category.

<sup>22</sup> This total is derived from the sum of the number of general purpose governments (county, municipal and town or township) with populations of less than 50,000 (36,931) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (12,040), from the 2017 Census of Governments - Organizations Tables 5, 6, and 10.

11. *Local Exchange Carriers.* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. The closest applicable NAICS Code category is Wired Telecommunications Carriers.<sup>23</sup> Under the applicable SBA size standard, such a business is small if it has 1,500 or fewer employees.<sup>24</sup> U.S. Census Bureau data for 2012 show that there were 3,117 firms that operated for the entire year.<sup>25</sup> Of that total, 3,083 operated with fewer than 1,000 employees.<sup>26</sup> Thus, under this category and the associated size standard, the Commission estimates that the majority of local exchange carriers are small entities.

12. *Wireless Telecommunications Carriers (except Satellite).* This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless internet access, and wireless video services.<sup>27</sup> The appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees.<sup>28</sup> For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.<sup>29</sup> Of this total, 955 firms employed fewer than 1,000 employees and 12 firms employed 1000 employees or more.<sup>30</sup> Thus under this category and the associated size standard, the Commission estimates that the majority of Wireless Telecommunications Carriers (except Satellite) are small entities.

13. The Commission's own data—available in its Universal Licensing System—indicate that, as of August 31, 2018 there are 265 Cellular licensees that will be affected by our actions.<sup>31</sup> The Commission does not know how many of these licensees are small, as the Commission does not collect that information for these types of entities. Similarly, according to internally developed Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) Telephony services.<sup>32</sup> Of this total, an estimated 261 have 1,500 or fewer employees, and 152 have more

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<sup>23</sup> See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers"*, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

<sup>24</sup> 13 CFR § 121.201, NAICS Code 517311 (previously 517110).

<sup>25</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517110, <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517110&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false>.

<sup>26</sup> *Id.*

<sup>27</sup> See U.S. Census Bureau, *2017 NAICS Definition, "517312 Wireless Telecommunications Carriers (except Satellite)"*, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517312&search=2017%20NAICS%20Search>.

<sup>28</sup> See 13 CFR § 121.201, NAICS Code 517312 (previously 517210).

<sup>29</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series: Estab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517210, <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false&vintage=2012>.

<sup>30</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>31</sup> See Federal Communications Commission, *Universal Licensing System*, <http://wireless.fcc.gov/uls>. For the purposes of this FRFA, consistent with Commission practice for wireless services, the Commission estimates the number of licensees based on the number of unique FCC Registration Numbers.

<sup>32</sup> See Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, *Trends in Telephone Service at Table 5.3 (Sept. 2010) (Trends in Telephone Service)*, [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-301823A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf).

than 1,500 employees.<sup>33</sup> Thus, using available data, we estimate that the majority of wireless firms can be considered small.

14. *Non-Licensee Owners of Towers and Other Infrastructure.* Although at one time most communications towers were owned by the licensee using the tower to provide communications service, many towers are now owned by third-party businesses that do not provide communications services themselves but lease space on their towers to other companies that provide communications services. The Commission's rules require that any entity, including a non-licensee, proposing to construct a tower over 200 feet in height or within the glide slope of an airport must register the tower with the Commission's Antenna Structure Registration (ASR) system and comply with applicable rules regarding review for impact on the environment and historic properties.

15. As of March 1, 2017, the ASR database includes approximately 122,157 registration records reflecting a "Constructed" status and 13,987 registration records reflecting a "Granted, Not Constructed" status. These figures include both towers registered to licensees and towers registered to non-licensee tower owners. The Commission does not keep information from which we can easily determine how many of these towers are registered to non-licensees or how many non-licensees have registered towers.<sup>34</sup> Regarding towers that do not require ASR registration, we do not collect information as to the number of such towers in use and therefore cannot estimate the number of tower owners that would be subject to the rules on which we seek comment. Moreover, the SBA has not developed a size standard for small businesses in the category "Tower Owners." Therefore, we are unable to determine the number of non-licensee tower owners that are small entities. We believe, however, that when all entities owning 10 or fewer towers and leasing space for collocation are included, non-licensee tower owners number in the thousands. In addition, there may be other non-licensee owners of other wireless infrastructure, including Distributed Antenna Systems (DAS) and small cells that might be affected by the measures on which we seek comment. We do not have any basis for estimating the number of such non-licensee owners that are small entities.

16. The closest applicable SBA category is All Other Telecommunications,<sup>35</sup> and the appropriate size standard consists of all such firms with gross annual receipts of \$3 million or less.<sup>36</sup> For this category, U.S. Census Bureau data for 2012 show that there were 1,442 firms that operated for the entire year.<sup>37</sup> Of these firms, a total of 1,400 had gross annual receipts of less than \$25 million and 15 firms had annual receipts of \$25 million to \$49,999,999.<sup>38</sup> Thus, under this SBA size standard a majority of the firms potentially affected by our action can be considered small.

17. *Lessors of Residential Buildings and Dwellings.*<sup>39</sup> This industry comprises establishments primarily engaged in acting as lessors of buildings used as residences or dwellings, such as

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<sup>33</sup> See *id.*

<sup>34</sup> We note, however, that approximately 13,000 towers are registered to 10 cellular carriers with 1,000 or more employees.

<sup>35</sup> See U.S. Census Bureau, *2017 NAICS Definition*, "517919 All Other Telecommunications", <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517919&search=2017+NAICS+Search&search=2017>.

<sup>36</sup> See 13 CFR § 121.201, NAICS Code 517919.

<sup>37</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1251SSSZ4, *Information: Subject Series - Estab and Firm Size: Receipts Size of Firms for the United States: 2012*, NAICS code 517919, [https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012\\_US/51SSSZ4//naics~517919](https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ4//naics~517919).

<sup>38</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>39</sup> Leasing of building space to the Federal Government by Owners: For Government procurement, a size standard of \$38.5 million in gross receipts applies to the owners of building space leased to the Federal Government. The standard does not apply to an agent.

single-family homes, apartment buildings, and town homes. Included in this industry are owner-lessors and establishments renting real estate and then acting as lessors in subleasing it to others.<sup>40</sup> The establishments in this industry may manage the property themselves or have another establishment manage it for them. The appropriate SBA size standard for this industry classifies a business as small if it has \$27.5 million or less in annual receipts.<sup>41</sup> U.S. Census Bureau 2012 data for Lessors of Residential Buildings and Dwellings show that there were 42,911 firms that operated for the entire year.<sup>42</sup> Of that number, 42,618 firms operated with annual receipts of less than \$25 million per year, while 142 firms operated with annual receipts between \$25 million and \$49,999,999 million.<sup>43</sup> Therefore, based on the SBA's size standard the majority of Lessors of Residential Buildings and Dwellings are small entities.

18. *Property Owners' Associations.* This industry comprises establishments formed on the behalf of individual property owners, to make collective decisions based on the wishes of a majority of owners. This includes associations formed on behalf of individual residential condominium owners or homeowners. These associations may provide overall management, publish a telephone directory of the owners, sponsor seasonal events for the owners, establish and collect funds to operate the project, enforce rules and regulations, settle differences of opinion among residents, and make other decisions that are vital to the owners. Associations formed on behalf of individual real estate owners or tenants that provide no property management, but which arrange and organize civic and social functions are included here as well. This industry falls within the category of, "*Other Similar Organizations (except Business, Professional, Labor, and Political Organizations)*" under the U.S. Census Bureau's NAICS classification system.<sup>44</sup> The SBA small business size standard for this industry classifies a business as small if it has \$8 million or less in annual receipts.<sup>45</sup> U.S. Census Bureau 2012 data for this industry show that there were 18,347 firms that operated for the entire year.<sup>46</sup> Of that number, 17,818 firms operated with annual receipts of less than \$5 million per year, while 382 firms operated with annual receipts between \$5 million and \$9,999,999 million.<sup>47</sup> Therefore, based on the SBA's size standard the majority of Property Owners' Associations are small firms in this industry.

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<sup>40</sup> See U.S. Census Bureau, *2017cDefinitionc* <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=531110&search=2017+NAICS+Search&search=2017>.

<sup>41</sup> See 13 CFR § 121.201; NAICS Code 531110.

<sup>42</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1253SSSZ4, *Real Estate and Rental and Leasing: Subject Series - Estab & Firm Size: Summary Statistics by Revenue Size of Firms for the U.S.: 2012*, NAICS Code 531110, <https://data.census.gov/cedsci/table?text=EC1253SSSZ4&n=531110&tid=ECNSIZE2012.EC1253SSSZ4&hidePreview=false&vintage=2012>. This data includes only firms and establishments of firms with payroll. In addition, data for corporate, subsidiary, and regional managing offices and establishments of these firms that are classified in other categories is excluded.

<sup>43</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>44</sup> See U.S. Census Bureau, *2017 NAICS Definition*, "*813990 Property Association Owners*," <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=813990&search=2017+NAICS+Search&search=2017>.

<sup>45</sup> 13 CFR § 121.201; NAICS code 813990.

<sup>46</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1281SSSZ4, *Other Services (Except Public Administration): Subject Series: Estab and Firm Size: Receipts/Revenue Size of Firms for the U.S.: 2012*, NAICS Code 813990, See <https://data.census.gov/cedsci/table?text=EC1281SSSZ4&n=813990&tid=ECNSIZE2012.EC1281SSSZ4&hidePreview=false>. This data includes only firms and establishments of firms with payroll. In addition, data for corporate, subsidiary, and regional managing offices and establishments of these firms that are classified in other categories is excluded.

<sup>47</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

### **E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

19. The revisions to the OTARD rule do not impose any new or additional reporting, recordkeeping, or other compliance obligations. However, the number of entities subject to the rule's protections may expand because of the Commission's actions. The revisions also will not require small entities to hire attorneys, engineers, consultants, or other professionals to comply with the rule changes. Instead, we expect the changes adopted in the *Report and Order* will have a beneficial impact on small entities. More specifically, the revisions will allow small fixed wireless providers to install fixed wireless hub and relay antennas more quickly and efficiently and at lower cost by expanding the class of providers whose antennas are subject to regulatory protections, although the Commission cannot quantify the magnitude of these cost savings. Further, the OTARD rule revisions will reduce construction timelines for new fixed wireless sites and reduce barriers to entry, which may result in more small entities utilizing the OTARD rule's protections and installing fixed wireless equipment.

20. By ensuring that State, local, and private restrictions do not delay or impede the installation of fixed wireless hub or relay antennas, the Commission's actions will benefit small as well as other fixed wireless providers by creating more siting opportunities and spurring investment in and deployment of wireless infrastructure. Communications services will become more readily available in unserved, underserved and rural areas furthering the Commission's efforts to address the digital divide.

### **F. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

21. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for such small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”<sup>48</sup>

22. In the *Report and Order*, the Commission revises its OTARD rule to expand its coverage to include hub and relay antennas that are used for the distribution of fixed wireless services to multiple customer locations, regardless of whether they are primarily used for this purpose, so long as the antennas serve a customer on whose premises they are located. By revising the OTARD rule to reflect the current technological landscape, the Commission's actions should reduce the economic impact for small entities that deploy fixed hub and relay antennas by reducing the costs and time associated with the deployment of such infrastructure.

23. Comments filed by the Wireless Internet Service Providers Association (WISPA) which represents fixed wireless providers –including small providers serving rural and underserved areas, supports the Commission's revision of the OTARD rule stating that, “[e]xtending the OTARD rules to fixed wireless hub and relay antennas would spur infrastructure deployment, including deployment of networks that involve local relaying in rural and other underserved areas and deployment by small providers.”<sup>49</sup> MJM Telecom a small Internet service provider and WISPA member indicated that under the current OTARD rules, “[w]e have had to turn down thousands of potential customers due to the fact that we cannot put up a small relay hub site[,]” and requested that the Commission adopted the revision to the OTARD rules proposed in the *Notice* and adopted in the *Report and Order*.<sup>50</sup> With the OTARD rule change, the Commission has removed hurdles to siting which imposed barriers to entry, investment and

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<sup>48</sup> See 5 U.S.C. § 604(a)(6).

<sup>49</sup> WISPA Comments at 3.

<sup>50</sup> MJM Telecom Comments at 1.

deployment for fixed wireless providers which is a major step to level the playing field for these providers. Reduced costs and removal of barriers to entry coupled with the opportunity for expansion into unserved and underserved service areas and increased customer revenues for fixed wireless providers hold the promise of a beneficial economic impact for small entities.

24. Some commenters have concerns about an increase in certain costs—such as aesthetics (*e.g.*, too many antennas on a property)<sup>51</sup> and disruption of existing contracts between wireless providers and property owners.<sup>52</sup> These commenters argued that the current OTARD rule should be maintained. In considering these arguments, the Commission determined that the demonstrable economic benefits of the rule outweigh the economic costs, which are negligible to the extent such costs can be substantiated. First, the revision will enhance the ability of small and other fixed wireless service providers to deliver reliable high speed Internet access to a greater number of unserved or underserved customers. And there will be fewer restrictions on the antennas that customers nationwide will be able to place on a property they control. The OTARD rule revision will also protect small and other fixed wireless broadband providers from unreasonable delays in the installation of fixed wireless hub and relay antennas or the unreasonable prevention of such installations or deployments. It will also provide small and other fixed wireless service providers with protections against unreasonable fees for the installation of hub and relay antennas. Further, the prohibition against restrictions that impair the installation, maintenance or use of covered antennas will provide small and other fixed wireless providers certainty and predictability. In addition, the Commission determined that the revision will promote competition by allowing more small and other fixed wireless providers to deploy in areas where it would not otherwise be economically feasible and to serve underserved communities such as rural areas, which is consistent with Commission policy and in the public interest.

25. The National Association of Telecommunications Officers and Advisors (“NATOA”), the National League of Cities (“NLC”), and the National Association of Regional Councils (“NARC”), jointly (the “Municipal Organizations”) who members include small local governments, cities and towns, opposed the OTARD rule change and provided some alternative suggestions, which they claim will “help achieve [the Commission’s] goal of improved broadband availability.”<sup>53</sup> However, these alternatives—which the Municipal Organizations provide in the context of arguing that the Commission lacks authority to promulgate its revisions—are beyond the scope of this proceeding. In addition, these alternatives are not mutually exclusive with the actions that the Commission takes in the *Report and Order*.

26. Moreover, with regard to some of the concerns raised by the Municipal Organizations, the Commission emphasizes that, while the *Report and Order* removes the primary use restriction on fixed wireless hub and relay antennas, it maintains the other existing OTARD restrictions. For the OTARD rule to apply, the antenna must be installed “on property within the exclusive use or control of the antenna user where the user has a direct or indirect ownership or leasehold interest in the property” upon which the antenna is located.<sup>54</sup> Further, the OTARD provisions apply only to those antennas measuring one meter or less in diameter or diagonal measurement.<sup>55</sup> In addition, the OTARD rule is subject to an exception for State, local, or private restrictions that are necessary to accomplish a clearly defined, legitimate safety objective, or to preserve prehistoric or historic places that are eligible for inclusion on the National Register of Historic Places, provided such restrictions impose as little burden as necessary to achieve the foregoing objectives, and apply in a nondiscriminatory manner throughout the regulated area. Given that the Report and Order preserves the restrictions on the physical dimensions and

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<sup>51</sup> LMC Comments at 4.

<sup>52</sup> MBC Comments at 7-8.

<sup>53</sup> Municipal Organizations Comments at 7.

<sup>54</sup> 47 CFR § 1.4000(a)(1).

<sup>55</sup> 47 CFR § 1.4000(a)(1)(ii)(B).

location of equipment, the rule revisions will minimize any potential visual impact on properties, which some commenters raise. The hub and relay equipment installed will resemble the equipment already covered under the OTARD rule.

27. Finally, the Report and Order continues to recognize property owners' rights under the OTARD rule. Because it maintains the "exclusive use or control" and "direct or indirect ownership or leasehold interest" restrictions, fixed wireless service providers will still need to negotiate agreements with appropriate parties for the placement of their antennas.<sup>56</sup> In addition, fixed wireless hub and relay antenna manufacturers and service providers that use this equipment must continue to comply with other applicable Commission regulations, such as mast and RF emissions requirements.<sup>57</sup> This places hub and relay antennas under the same kinds of restrictions as other equipment subject to OTARD protections. Localities and property owners can continue to rely on these provisions for their protection. Accordingly, the Commission's actions in the *Report and Order* removing the restriction on fixed wireless hub and relay antennas while retaining the other existing OTARD restrictions, strikes the appropriate balance to minimize the economic impact for fixed wireless providers, localities and property owners who are small entities.

### Report to Congress

28. The Commission will send a copy of the *Report and Order*, including this FRFA, in a report to Congress pursuant to the Congressional Review Act.<sup>58</sup> In addition, the Commission will send a copy of the *Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Report and Order*, and FRFA (or summaries thereof) will also be published in the Federal Register.<sup>59</sup>

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<sup>56</sup> 47 CFR § 1.4000(a)(1).

<sup>57</sup> See *Implementation of Section 207 of the Telecommunications Act of 1996*, Order on Reconsideration, CS Docket No. 96-83, 13 FCC Rcd 18962, 18979-80, paras. 34-36 (1998) (recognizing that masts that exceed twelve feet in height represent a public safety hazard); 47 CFR § 1.1307(b) (RF emission limits). Fixed wireless providers, are subject to equipment authorization rules that require radio frequency (RF) devices to operate effectively without causing harmful interference. RF devices must be properly authorized under 47 CFR Part 2 prior to being marketed or imported in the United States. Fixed wireless providers that use unlicensed spectrum are subject to Part 15 rules governing unlicensed operation. Part 15 of the Rules allows devices employing low-level RF signals to operate without individual licenses, provided that their operation causes no harmful interference to licensed services and the devices do not generate emissions or field strength levels greater than a specified limit. See *Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices Without an Individual License*, First Report and Order, GN Docket No. 87-389, 4 FCC Rcd 3493 (1989). See also 47 CFR §§15.5(b), (c).

<sup>58</sup> See 5 U.S.C. § 801(a)(1)(A).

<sup>59</sup> See 5 U.S.C. § 604(b).

**STATEMENT OF  
CHAIRMAN AJIT PAI**

Re: *Updating the Commission's Rule for Over-the-Air Reception Devices*, WT Docket No. 19-71

In rural and underserved parts of America, fixed wireless Internet service providers are helping to close the digital divide. According to the Wireless Internet Service Providers Association, its more than 700 service-provider members provision last-mile broadband and voice services to more than six million consumers. Wireless Internet service providers have invested in spectrum, such as through their participation in the Commission's recent auction of Priority Access Licenses in the 3.5 GHz band, and have responded to the growing demand on their networks resulting from the COVID-19 pandemic, with more than 100 WISPs receiving Special Temporary Authority from the Commission to use 5.9 GHz band spectrum to expand network capacity. And WISPs aren't just helping to close the digital divide in rural America. Starry, a fixed wireless broadband provider, offers a gigabit-capable service in several major metropolitan cities, including providing 30 Mbps symmetrical speed broadband service to 29,000 units of public and affordable housing for only \$15 per month through its Starry Connect program.

As I have set out in the Commission's 5G FAST Plan, updating the Commission's infrastructure policies is a key component of accelerating deployment of next-generation networks (along with expanding access to spectrum and modernizing regulations to promote fiber deployment). This Report and Order advances this aspect of the 5G FAST Plan in that it provides regulatory parity between the facilities of wireless Internet service providers and those of other service providers. Specifically, we extend the protections afforded to over-the-air reception devices to certain categories of "hub and relay" antennas used for the distribution of broadband-only service to multiple customer locations, so long as the antenna is installed on property within the exclusive use or control of the antenna user where the user has a direct or indirect ownership or leasehold interest in the property.

Our rule change reflects the realities of modern network architecture, including densification of transmission equipment and siting of infrastructure closer to end users, while preserving the rights of property owners or lessees to freely negotiate the terms of antenna placements. Extending OTARD protection to qualifying broadband-only antennas will remove unreasonable barriers to deployment erected by third parties, such as local zoning laws and private restrictive covenants as well as excessive permitting fees. This is common-sense reform that is well within the Commission's legal authority to enact, and it therefore has my full support.

I would like to thank the Commission staff that worked on this item. From the Wireless Telecommunications Bureau: Paul D'Ari, Garnet Hanly, Kari Hicks, Eli Johnson, Georgios Leris, Charles Mathias, Jennifer Salhus, Dana Shaffer, Don Stockdale, and Cecilia Sulhoff; from the Office of Economics and Analytics: Catherine Matraves, Giulia McHenry, and Patrick Sun; from the Office of General Counsel: Mike Carlson, David Horowitz, David Konczal, Thomas Johnson, Bill Richardson, Royce Sherlock, and Anjali Singh; from the Enforcement Bureau: Jason Koslofsky and Janet Moran; from the Consumer and Governmental Affairs Bureau: Gregory Cooke and Barbara Esbin; and from the Office of Communications Business Opportunities: Chana Wilkerson.



**STATEMENT OF  
COMMISSIONER BRENDAN CARR**

Re: *Updating the Commission's Rule for Over-the-Air Reception Devices*, WT Docket No. 19-71

Today's item notches yet another win in the FCC's work to accelerate the buildout of Internet infrastructure. It does so by making it easier for fixed wireless providers to install the antennas needed to expand their networks and thus extend high-speed services to even more Americans.

Over the last three years, I have worked closely with FCC staff on reforms like these, and the Commission's efforts have delivered results. The private sector has been building out high-speed infrastructure at an unprecedented pace, and this has helped bring families across the digital divide and extend America's leadership in 5G. I am hopeful that we can continue to build upon this progress in the months and years ahead.