



# PUBLIC NOTICE

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## WIRELESS TELECOMMUNICATIONS BUREAU AND PUBLIC SAFETY AND HOMELAND SECURITY BUREAU PROVIDE GUIDANCE FOR WAIVER PROCESS TO PERMIT INTELLIGENT TRANSPORTATION SYSTEM LICENSEES TO USE C- V2X TECHNOLOGY IN THE 5.895-5.925 GHZ BAND

### ET Docket No. 19-138

By this *Public Notice*, the Wireless Telecommunications Bureau and the Public Safety and Homeland Security Bureau (Bureaus) provide guidance to intelligent transportation system (ITS) licensees seeking waivers of the Commission's rules to operate roadside units with cellular vehicle to everything (C-V2X)-based technology in the upper 30 megahertz (5.895-5.925 GHz) portion of the 5.850-5.925 GHz (5.9 GHz) band, prior to adoption of final rules providing for such use, as well as guidance for waivers associated with equipment certifications and on-board units.

On November 20, 2020, the Commission released the *5.9 GHz First Report and Order* adopting new rules for the 5.850-5.925 GHz (5.9 GHz) band to make spectrum available for unlicensed uses, while retaining a portion of the band for ITS operations.<sup>1</sup> Specifically, the new band plan designates the lower 45 megahertz (5.850-5.895 GHz) for unlicensed operations, while designating the upper 30 megahertz (5.895-5.925 GHz) for ITS services that the Commission ordered to ultimately transition from dedicated short-range communications (DSRC)-based technology to cellular vehicle to everything (C-V2X)-based technology.<sup>2</sup> In the *Further Notice of Proposed Rulemaking*, the Commission sought comment on the technical rules for the use of C-V2X-based technologies as well as various other issues required to appropriately transition all ITS operations to C-V2X-based technology.<sup>3</sup>

Based on the decisions in the *5.9 GHz First Report and Order*, and until the Commission renders a decision on the rule changes proposed in the *Further Notice of Proposed Rulemaking*, the Commission stated that it will permit any existing or future part 90 ITS licensees to operate C-V2X-based roadside units in the 5.895-5.925 GHz band within their geographic licensing areas by requesting and obtaining a waiver of the Commission's rules, subject to specific conditions, and directed the Bureaus to provide guidance to such waiver applicants.<sup>4</sup> This guidance is detailed herein, as well as additional guidance

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<sup>1</sup> *Use of the 5.850-5.925 GHz Band*, ET Docket No. 19-138, First Report and Order, Further Notice of Proposed Rulemaking, and Order of Proposed Modification, 35 FCC Rcd 13440 (2020). We herein may refer to each individually as the *5.9 GHz First Report and Order*, the *Further Notice of Proposed Rulemaking*, and the *5.9 GHz Order of Proposed Modification*.

<sup>2</sup> *Id.* at 13446, para. 13, and 13465, para. 58. In the *Further Notice of Proposed Rulemaking*, the Commission sought comment on a proposal to require all ITS operations in the 5.895-5.925 GHz band to either convert to C-V2X or cease operating two years after the effective date of a future rulemaking adopted in response to the *Further Notice of Proposed Rulemaking*. See 35 FCC Rcd at 13500, para. 147.

<sup>3</sup> *Further Notice of Proposed Rulemaking* at 13501-08, paras. 151-168.

<sup>4</sup> *5.9 GHz First Report and Order* at 13464-65, para. 55.

regarding further waivers that may be required for requesting early deployment of certain other C-V2X operations, and the equipment certification process for C-V2X equipment.

*Part 90 Licensee Guidance.* Part 90 ITS licensees and new ITS applicants requesting early deployment of C-V2X-based technology in the 5.895-5.925 GHz band, prior to the adoption of any final rules governing the use of such technology, should include a waiver request, pursuant to Section 1.925 of the Commission's rules, with their electronically filed application for a new or modified ITS license via the Commission's Universal Licensing System.<sup>5</sup> In order to streamline the Bureaus' consideration of such waiver requests under the standard established under Section 1.925, consistent with the Commission's directive,<sup>6</sup> the Bureaus identify the following certifications as factors relevant in this context: (1) a certification that there are no existing ITS licensees authorized to operate within the same geographic area in which the waiver applicant seeks to operate, OR certification that the waiver applicant has coordinated with every existing ITS licensee licensed (in whole or part) within that same geographic area to ensure that the waiver applicant's C-V2X-based roadside unit operations will not interfere with any DSRC-based roadside units operating in the 5.895-5.925 GHz band;<sup>7</sup> (2) a certification that the waiver applicant's C-V2X operations will comply with the existing technical rules (e.g., including, but not limited to, power and out-of-band emission limits) for DSRC-based technologies<sup>8</sup> other than the portion of the current rules requiring use of DSRC-based technologies; (3) a certification that the applicant's operations will be revised to the extent necessary to comply with any final rules that the Commission adopts for C-V2X operations; and (4) a certification that the applicant's C-V2X operations will be limited to transportation and vehicle safety-related communications.

We note that the 5G Automotive Association (5GAA) has indicated that additional flexibility, including technical flexibility, may be appropriate to accelerate the development and deployment of the C-V2X equipment and application ecosystem before final rules are adopted.<sup>9</sup> While waiver requests proposing such flexibility are welcome, we believe that the Commission's directive to provide for a streamlined waiver process only contemplated those that comply with the specific conditions set out above. Waiver requests that do not meet these conditions cannot be processed under the streamlined approach, but will be evaluated by the same Section 1.925 waiver standard in the general review process afforded to all licensees and applicants.<sup>10</sup>

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<sup>5</sup> Under Section 1.925(b)(3), a request for waiver may be granted upon a showing that "(i) [t]he underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) [i]n view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative." 47 CFR § 1.925(b)(3).

<sup>6</sup> *5.9 GHz First Report and Order*, 35 FCC at 13464-65, para. 55.

<sup>7</sup> We note that applicants will need to consider location, antenna pointing direction, power, and distance when determining if another licensee's operations might be affected.

<sup>8</sup> *5.9 GHz First Report and Order*, 35 FCC at 13464-65, para. 55.

<sup>9</sup> Letter from Sean T. Conway, Counsel to 5GAA, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 19-138 (filed July 26, 2021).

<sup>10</sup> If an ITS waiver applicant that seeks authority to operate C-V2X-based roadside units or on-board units in the 5.895-5.925 GHz band is unable to comply with the existing ITS technical rules found in 47 CFR §§ 90.371 – 90.383 or 47 CFR §§ 95.3167-95.3189, respectively, they should include in their general waiver request the certifications from the streamlined waiver process outlined in this PN that they are unable to meet, the specific existing rules that they are unable to comply with, along with a specific proposal of the technical specifications they seek to use instead, and an explanation of why a waiver is warranted under Section 1.925. To facilitate granting of qualifying waiver requests, and in light of the alternate technical specifications proposed in their waiver, we would generally expect the ITS waiver applicant to include a demonstration showing that their requested waiver would not cause a greater potential for interference to other users operating in the 5.895-5.925 GHz band than DSRC-based operations in this band, and otherwise to address how the public interest would be served by such a waiver under

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*Equipment Certification Guidance.* To operate C-V2X-based ITS systems, additional waivers of the Commission's equipment authorization rules would be needed with respect to both roadside units and on-board units. Pursuant to the Commission's Part 2 rules,<sup>11</sup> certification of C-V2X-based equipment must be obtained prior to marketing, sale, or operation of this equipment for use under any waiver authorizing operation of C-V2X-based equipment. An equipment manufacturer (or other entity requesting certification of C-V2X equipment) will need a waiver to obtain equipment certification of C-V2X-based equipment (whether roadside units or on-board units) as well as a waiver to permit operation of such equipment prior to the Commission's adoption of final C-V2X rules. The applicant for certification of C-V2X-based equipment should make clear that the equipment would be authorized in accordance with either the waiver(s) that permit specified Part 90 ITS licensee(s) to operate C-V2X systems within licensed geographic areas or, if applicable, the operational waiver for Part 95 on-board units licensed by rule, prior to establishment of final C-V2X technical rules.<sup>12</sup> We encourage parties interested in pursuing development, installation, and use of C-V2X-based roadside units and on-board units in advance of the Commission's final rules to discuss their equipment, and the particular technical requirements that must be met by the C-V2X-related equipment, with the Bureaus and the Office of Engineering and Technology.<sup>13</sup> We further note that any party obtaining waiver of equipment authorization rules to authorize C-V2X roadside units or on-board units pursuant to Part 90 and/or Part 95 waiver(s) would need to have such equipment re-certified to comply with any final C-V2X rules established by the Commission.

Action by the Acting Chief, Wireless Telecommunications Bureau and Chief, Public Safety and Homeland Security Bureau.

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Section 1.925. Based on the proposed change in technical parameters, the waiver request should also address any conditions (e.g., coordination zone radius, per 47 CFR § 90.371(b)) necessary to protect Federal Government Relocation Services.

<sup>11</sup> See generally 47 CFR §§ 2.901 et seq. (Subpart J—Equipment Authorization Procedures).

<sup>12</sup> The applicant for equipment certification should identify the specific technical requirements that the C-V2X equipment would meet, and explain how those specific technical requirements would be consistent with the associated waiver(s) granted for operation of C-V2X systems in the 5.895-5.925 GHz band. To the extent that the request for waiver of equipment authorization rules to authorize C-V2X-based roadside units or on-board units differs in any respect from the technical rules specified in the Part 90 or Part 95 waiver(s), the application for waiver may require more extensive review, consistent with current practice relating to waiver of equipment authorization rules.

<sup>13</sup> 5.9 GHz *First Report and Order, Further Notice, and Order of Proposed Modification*, 35 FCC Rcd at 13465, para. 56.