

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

In the Matter of	)	
	)	
Sierra Nevada Company, LLC Request for Waiver	)	
of Part 87 Rules	)	
	)	
Amendment of the Commission's Rules to Promote	)	WT Docket No. 19-140
Aviation Safety	)	
	)	
Petition of Sierra Nevada Corporation for	)	RM-11799
Amendment of the Commission's Rules to Allow	)	
for Enhanced Flight Vision System Radar under	)	
Part 87	)	

ORDER

Adopted: August 12, 2026

Released: August 12, 2026

By the Chief, Wireless Telecommunications Bureau and the Chief, Office of Engineering and Technology:

I. INTRODUCTION

1. This *Order* addresses a request filed by Sierra Nevada Company, LLC (SNC) for a waiver of the Commission's rules to allow for the operation of Enhanced Flight Vision System (EFVS) radar in the 92-95.5 GHz band.¹ We grant the request, subject to the specific conditions set forth below and the outcome of the pending rulemaking proceeding.²

II. BACKGROUND

2. As defined by the Federal Aviation Administration (FAA), an Enhanced Flight Vision System (EFVS) is "an installed aircraft system which uses an electronic means to provide a display of the forward external scene topography (the natural or manmade features of a place or region especially in a way to show their relative positions and elevation) through the use of imaging sensors, including but not limited to forward-looking infrared, millimeter wave radiometry, millimeter wave radar, or low-light level image intensification."³ SNC's EFVS product draws on various data sources including data from aircraft sensors to provide the pilot with a computer-generated image of the terrain and obstacles ahead of the aircraft, which assists the pilot in airport approach, landing, and rollout during low visibility or Instrument Meteorological Conditions.⁴

¹ See Letter from Laura Stefani, Counsel to Sierra Nevada Company, to Joel Taubenblatt, Chief, Wireless Telecommunications Bureau, FCC, WT Docket No. 19-140 (filed Feb. 25, 2026) (SNC Waiver Request). SNC was formerly known as Sierra Nevada Corporation. See SNC Waiver Request at 1.

² See *Amendment of the Commission's Rules to Promote Aviation Safety*, WT Docket No. 19-140, Notice of Proposed Rulemaking, 34 FCC Rcd 4984, 4987-88, paras. 11-13 (2019) (*Aviation Safety NPRM*).

³ See 14 CFR § 1.1.

⁴ See SNC Waiver Request at 2; see also Letter from Laura Stefani, Counsel to Sierra Nevada Company, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 19-140 (filed Aug. 7, 2024), Attachment (Updated Technical Analysis) (continued....)

3. The primary sensor in SNC's system is a millimeter-wave radar operating in the 92-95.5 GHz band, which scans a "pencil beam" transmission across the field of view ahead of the aircraft, generating position information regarding the range, azimuth, and elevation position of the terrain and any obstacles within the field of view.⁵ The Commission's Table of Allocations and service rules do not authorize EFVS in the 92-95.5 GHz band.⁶ As a service to support navigation of aircraft, EFVS would require an allocation for the Radionavigation Service, which is a radiodetermination service used for the purposes of navigation, including obstruction warning.⁷ The Table of Allocations does not currently include a Radionavigation Service allocation for any part of the 92-95.5 GHz band except the 95-95.5 GHz portion.⁸ In addition, the part 87 service rules, which govern stations in the aeronautical radionavigation service,⁹ do not currently authorize any use of the 92-95.5 GHz band.¹⁰

4. Accordingly, SNC filed a petition for rulemaking in 2018, seeking rule changes to authorize EFVS in the 92-95.5 GHz band.¹¹ On June 7, 2019, the Commission released the *Aviation Safety NPRM*, which, *inter alia*, sought comment on rule changes consistent with SNC's petition.¹² Most commenters on the issue supported authorization of EFVS in the 92-95.5 GHz band.¹³ One commenter, the National Academy of Sciences' Committee on Radio Frequencies (CORF), supported the sharing of spectrum but urged the Commission to address the protection of radio astronomy in the band.¹⁴ In addition, Moog Inc. (Moog), a designer/manufacturer that has developed a ground-based radar system

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at 8-9. Instrument Meteorological Conditions are "weather conditions below the minimums prescribed for flight under Visual Flight Rules." 14 CFR § 170.3. Visual flight rules are those "rules that govern the procedures for conducting flight under visual conditions." *Id.*

⁵ See SNC Waiver Request at 2.

⁶ See generally 47 CFR § 2.106.

⁷ See 47 CFR § 2.1. Radiodetermination is the "determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves." *Id.*

⁸ See 47 CFR § 2.106.

⁹ See 47 CFR subpart Q.

¹⁰ See 47 CFR § 87.173(a) (listing "assignable carrier frequencies or frequency bands" for part 87 services), (b) (providing no entries for frequencies higher than 32300-33400 MHz); see also 47 CFR § 87.187 (describing frequencies available for aircraft stations).

¹¹ See Petition of Sierra Nevada Corporation for Rulemaking, Amendment of the Commission's Rules to Allow for Enhanced Flight Vision System Radar Under Part 87, RM-11799, at 2 (filed Feb. 16, 2018).

¹² See *Amendment of the Commission's Rules to Promote Aviation Safety*, WT Docket No. 19-140, Notice of Proposed Rulemaking, 34 FCC Rcd 4984, 4987-88, paras. 11-13 (2019) (*Aviation Safety NPRM*). The Commission specifically proposed to amend the Table of Allocations, 47 CFR § 2.106, to add a Radionavigation Service allocation to the 92-95 GHz band; and to amend part 87 by adding service rules listing the 92-95.5 GHz band as an authorized band for EFVS radar, defining EFVS in accord with the FAA definition (see 14 CFR § 1.1), and exempting EFVS from the station identification requirement in section 87.107, 47 CFR § 87.107. See *Aviation Safety NPRM*, 34 FCC Rcd at 4988, para. 13.

¹³ See, e.g., Airbus Commercial Aircraft (Airbus) Comments, WT Docket No. 19-140, 4 (filed Sept. 3, 2019) (Airbus Comments); Air Line Pilots Association, Int'l (ALPA) Comments, WT Docket No. 19-140, 2 (filed Sept. 3, 2019) (ALPA Comments); Aviation Spectrum Resources, Inc. (ASRI) Comments, WT Docket No. 19-140, 13 (filed Sept. 3, 2019) (ASRI Comments); The Boeing Company (Boeing) Comments, WT Docket No. 19-140, 3 (filed Sept. 3, 2019) (Boeing Comments); Collins Aerospace (Collins) Comments, WT Docket No. 19-140, 7 (filed Sept. 3, 2019) (Collins Comments).

¹⁴ See National Academy of Sciences' Committee on Radio Frequencies (CORF) Comments, WT Docket No. 19-140 (filed Aug. 30, 2019) (CORF Comments).

operating in a portion of the 92-95.5 GHz band that automatically scans airport and airfield runways for Foreign Object Debris (FOD) detection, urged the Commission to ensure that the operation of EFVS in the band would be compatible with Moog's system.¹⁵ That rulemaking proceeding remains pending.

5. On February 25, 2026, SNC filed a request seeking a waiver of certain rules to allow for the operation of EFVS in the 92-95.5 GHz band.¹⁶ In its request, SNC states that it continues to seek its requested rule changes, but now seeks a waiver in the interim to allow its EFVS product to be marketed pending Commission action on the rulemaking.¹⁷ Specifically, SNC seeks a waiver of section 2.106, the Table of Allocations rule, to authorize Radio Navigation throughout the 92-95.5 GHz band, section 87.107 (station identification) to exempt its EFVS radar from part 87 station identification requirements, section 87.173 (the frequencies table for part 87 services overall) to allow part 87 aeronautical radionavigation service in the 92-95.5 GHz band, and section 87.187 (governing the frequencies and uses for aircraft stations specifically) to allow EFVS aircraft stations to operate in that band.¹⁸

6. The frequencies in the 92-95.5 GHz range are allocated for Federal and non-Federal use on a shared basis,¹⁹ and they mainly consist of shared co-primary allocations.²⁰ The 92-95.5 GHz band has in-band and adjacent operations that are addressed in this Waiver Order, including Radio Astronomy Service (RAS);²¹ non-federal point-to-point services;²² federal use for Earth exploration-satellite service (EESS) and Space Research Service;²³ and federal allocations for Fixed, Mobile, Radiolocation, Radionavigation and Radionavigation-satellite Service.²⁴

III. DISCUSSION

7. Section 1.925 of the Commission's rules provides that we may grant a waiver if it is shown that (a) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and grant of the requested waiver would be in the public interest; or (b) in

¹⁵ See Moog Inc. (Moog) Comments, WT Docket No. 19-140, 1 (filed Sept. 3, 2019) (Moog Comments). Specifically, Moog's FOD detection system, called the Tarsier Automatic Runway Foreign Object Debris Detection System, operates over 93.60-95.04 GHz. See Letter from Edward A. Yorkgitis, Jr., Counsel for Moog, to Marlene H. Dortch, FCC, WT Docket No. 19-140, 2 (filed July 30, 2025) (Moog July 30, 2025 *Ex Parte*).

¹⁶ See SNC Waiver Request.

¹⁷ See SNC Waiver Request at 1.

¹⁸ See SNC Waiver Request at 2-3.

¹⁹ See 47 CFR §§ 2.105(b), 2.106.

²⁰ The 92-94 GHz and 94.1-95 GHz bands are allocated for the Fixed, Mobile, Radio Astronomy, and Radiolocation services on a co-primary basis. The 94-94.1 GHz band contains Federal co-primary allocations for the Earth Exploration Satellite (Active) and Space Research (Active) Services, and shared allocations for Radiolocation (primary) and Radio Astronomy (secondary). The 95-100 GHz band has shared co-primary allocations for the Fixed, Mobile, Radio Astronomy, Radiolocation, Radionavigation, and Radionavigation-Satellite Services. 47 CFR § 2.106.

²¹ See 47 CFR § 2.106(a).

²² See generally 47 CFR part 101, subpart Q; see also 47 CFR §§ 101.1505(b), 101.1507.

²³ See 47 CFR §§ 2.106(a), 2.106(b)(562) (5.562). There is also a non-federal allocation for Radiolocation, but no active radiolocation licensees are in the band, and no non-federal radiolocation service is authorized there under the Commission's current rules. See, e.g., 47 CFR § 90.103(b) (providing no frequencies for assignment to stations in the Radiolocation Service higher than 36 GHz); Universal Licensing System, License Search, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>.

²⁴ See 47 CFR § 2.106(a).

light of unique or unusual circumstances, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.²⁵

8. We conclude that SNC has met the first prong of the waiver standard and that grant of the request is warranted, subject to certain conditions. The purpose of the part 87 rules generally is to promote efficient and effective aviation radio communication,²⁶ and denial of the waiver would frustrate these purposes. The filings of SNC and other parties support the conclusion that permitting the use of SNC's millimeter-wave radar-based EFVS will significantly promote the safety of landings in low visibility as well as other aviation procedures.²⁷ Further, the record supports the conclusion that SNC's EFVS will be effective in providing a number of other benefits for aviation and airport operations, such as reducing flight delays, diversions, and cancellations during poor weather, decreasing the amount of time an aircraft spends in a holding pattern waiting for visibility conditions to improve, and enhancing the ability to maintain flight schedules.²⁸

9. The specific rules at issue, including the Table of Allocations, also serve to prevent harmful interference between services and thus ensure co-existence among authorized services.²⁹ SNC asserts that permitting radar for EFVS in the 92-95.5 GHz band will present "an exceedingly limited possibility of harm to other users."³⁰ As discussed in detail below, we find that, with appropriate conditions, SNC's system will present no significant risk of harmful interference.

10. *Radio Astronomy Service (RAS)*. The 92-95.5 GHz band is allocated to RAS on a primary basis, except in the 94-94.1 GHz band, which is allocated to RAS on a secondary basis.³¹ In its comments, CORF expressed concerns about the impact that 92-95.5 GHz band airborne EFVS stations may have on radio astronomy observations.³² In its recent waiver request, SNC states that, at the request of the National Science Foundation (NSF), it met with representatives of the MIT Haystack Observatory, which it describes as the observatory "most likely to be affected by EFVS operations," to determine whether a technical solution could be developed to adequately protect radio astronomy.³³ SNC states that, as a result of these discussions, the parties determined that SNC's EFVS radar would not cause harmful interference to radio astronomy observations when operating consistent with three specified parameters:

²⁵ 47 CFR § 1.925(b)(3); *see also* *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

²⁶ *See Request for Waiver to Allow Aeronautical Utility Mobile Stations to Use 1090 MHz for Runway Vehicle Identification & Collision Avoidance*, WT Docket No. 09-128, Order, 25 FCC Rcd 1407, 1408, para. 3 (MD WTB 2010).

²⁷ *See* SNC Waiver Request at 3-6; *see also* ALPA Comments at 2 (system "greatly enhances the safety of approach, landing, takeoff, and similar procedures."); Boeing Comments at 3 (EFVS will "foster measurable benefits for aviation safety and efficiency").

²⁸ *See* SNC Waiver Request at 6-7; *see also, e.g.*, Airbus Comments at 4 (92-95.5 GHz EFVS radar "would definitely improve pilot awareness of terrain and help during adverse conditions to improve airport capacity").

²⁹ *See ReconRobotics, Inc.*, WP Docket No. 08-63, 25 FCC Rcd 1782, 1784, para. 7 (WTB & PSHSB 2001) (*ReconRobotics*); *Recco AB*, WT Docket No. 14-176, 30 FCC Rcd 14399, 14401, para. 10 (MD WTB 2015) (finding that "one purpose of allocating different spectrum bands to different services is to prevent harmful interference"); *Aviation Spectrum Resources, Inc.*, WT Docket No. 19-180, Order, 35 FCC Rcd 2001 (MD WTB 2020) (holding that the purpose of rules designing two services for different frequencies in the 136-137 MHz band was "to ensure that there is adequate interference-free spectrum for both services.").

³⁰ SNC Waiver Request at 2.

³¹ *See* 47 CFR §§ 2.106(a), 2.106(c)(342) (US342).

³² *See* CORF Comments at 14; *see also* Letter from Colin J. Lonsdale, Director, Haystack Observatory, MIT, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 19-140, 1 (filed June 4, 2020) (asserting that the proposed use of EFVS at 92-95.5 GHz was "likely to cause harmful interference to radio astronomy at our facility").

³³ *See* SNC Waiver Request at 7.

(1) radar scanning operations to begin at no more than 1000 feet above ground level; (2) radar elevation scanning only below the horizon, and azimuth scan angle nominally centered on the landing runway; and (3) radar exclusion zones of 25 km around each radio astronomy observatory.³⁴ SNC's Updated Technical Analysis also states that operation of SNC's EFVS radar should only be under Instrument Meteorological Conditions (*i.e.* visibility less than 3 miles), and, in support of coexistence with RAS and other allocated services, we condition operations accordingly.³⁵ We find that SNC has taken the appropriate steps to demonstrate that its radar, when operated within these specified parameters, will not create a significant risk of harmful interference to the RAS. Consistent with its prior coordination pursuant to footnote US161, we also encourage SNC to continue coordinating and engaging with the National Radio Astronomy Observatory ([nmrdz@nrao.edu](mailto:nmrdez@nrao.edu)) and NSF (esm@nsf.gov) including the sharing of system-use data, as practicable, to help promote compatibility of its EFVS radar and radio astronomy.

11. *Non-federal point-to-point services.* The Commission has authorized use of the 92-94 GHz and 94.1-95 GHz bands for non-federal point-to-point services under part 101 of the Commission's rules.³⁶ We find that few links have been deployed in the band since the rules were adopted in 2003. Consequently, it is unlikely that systems using this band are, or will be, located near runways where they might interfere with EFVS radar during low-visibility landings.³⁷ SNC also points to several characteristics of its system that generally reduce the risk of harmful interference to other services even further. These include that its EFVS radar uses low power, operates at low altitude (no more than 1000 feet) with a short duration and a low duty cycle, and will generally operate under adverse conditions that will increase propagation losses.³⁸ Further, SNC's Updated Technical Analysis indicates highly limited potential for harmful interference to fixed service digital communication links in the band that are near airports, where EFVS would be deployed.³⁹ We note that no party raised concerns in the rulemaking record that EFVS presents a risk of harmful interference to point-to-point link services. Accordingly, we find SNC's system will not create a significant risk of harmful interference to non-federal point-to-point links in the 92-94 and 94.1-95 GHz bands.

12. *Earth exploration-satellite service (EESS) and Space Research Service.* The 94-94.1 GHz band is allocated on a primary basis for federal use for the EESS and Space Research Service for active sensor operations, limited to the use of spaceborne cloud radars, as well as for federal radiolocation services.⁴⁰ SNC states that its EFVS radar will not operate in the 94-94.1 GHz band and we adopt a condition confirming this limitation.⁴¹ However, SNC's EVFS radar will operate both above and below this band. SNC's Updated Technical Analysis finds that spaceborne cloud-proliferating radar has an

³⁴ See *id.*

³⁵ See Updated Technical Analysis at 18 (providing that "[t]he EFVS radar is only operated in Instrument Meteorological Conditions (IMC), defined as visibility of less than 3 miles."). See also SNC Waiver Request at 2

³⁶ See generally 47 CFR part 101, subpart Q; see also 47 CFR §§ 101.1505(b), 101.1507.

³⁷ Links in the band must be registered with a third-party database. See 47 CFR § 101.1523. Based on a search of registered links, we find only 15 links have been constructed in the 92-95.5 GHz band. See Micronet Online Services, <https://www.micronetcom.com/MOS/MillimeterWave/Query>.

³⁸ See Sierra Nevada Corp. Comments, WT Docket No. 19-140, 5-6 (filed Sept. 3, 2019) (SNC Comments).

³⁹ See Updated Technical Analysis at 23.

⁴⁰ See 47 CFR §§ 2.106(a), 2.106(b)(562) (5.562). There is also a non-federal allocation for Radiolocation, but no active radiolocation licensees are in the band, and no non-federal radiolocation service is authorized there under the Commission's current rules. See, e.g., 47 CFR § 90.103(b) (providing no frequencies for assignment to stations in the Radiolocation Service higher than 36 GHz); Universal Licensing System, License Search, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>.

⁴¹ See Updated Technical Analysis at 24.

instantaneous ground footprint of a few square kilometers. Given the relatively small footprint, and its conclusion that the percentage of time interference is generated at worse-case airports is less than 2%, SNC concludes that the probability of beam intersection is small and interference from out of band emissions, if any, would be minimal.⁴² For these reasons, we find that SNC's radar present no significant risk to federal services in the 94-94.1 GHz band.

13. CORF also alleges that harmonics from 92-95.5 GHz radars are potential sources of interference to EESS (passive) in the 183-191 GHz band where the service is co-primary.⁴³ CORF argues that, as a consequence, implementation of airborne radars at 92-95.5 GHz must include attention to reduction of out-of-band emissions.⁴⁴ We include a waiver condition requiring SNC's radars to comply with part 87 requirements applicable to aircraft radionavigation stations, including the power limits applicable to radionavigation stations under section 87.131 of the Commission's rules and the emission limitations under section 87.139, which we find is sufficient to address the concern.⁴⁵

14. *Other Federal Allocations.* The 92-94 GHz and 94.1-95 GHz bands are allocated for federal use for Fixed, Mobile, and Radiolocation services on a primary basis, and 95-100 GHz has primary allocations for federal use for these services plus the Radionavigation and Radionavigation-satellite Service.⁴⁶ According to a 2003 National Telecommunications and Information Administration (NTIA) assessment, federal agencies had several radar applications in the 92-95 GHz band. It stated that such radar were "primarily for use by the military services, and include weapon guidance, obstacle avoidance, and friendly force interrogation applications" as well as "military airborne applications for radar in this band."⁴⁷ Given the characteristics of SNC's EFVS radar systems as described above, and that use of these systems will be limited to airport locations and, specifically, to final approach to the runway, landing, or other runway operations, we generally do not anticipate any significant risk of harmful interference to federal radar stations other than those federal stations in and around military facilities. In order to protect federal stations in and around military facilities, we prohibit usage of SNC's radar system for landings at military facilities absent an agreement with appropriate federal authorities permitting such usage. We note that this prohibition applies to federal sites with deployment of Moog's FOD detection system.⁴⁸

15. *Commercial Deployments of FOD Detection Systems.* Moog also raised concerns about the possible interference impact SNC's EFVS radar may have on Moog's FOD detection system if the latter is deployed at United States commercial airports and airfields.⁴⁹ While there are no such

⁴² See *id.*

⁴³ See CORF Comments at 11-12.

⁴⁴ See *id.* at 12.

⁴⁵ See 47 CFR § 87.139.

⁴⁶ See 47 CFR § 2.106(a).

⁴⁷ See NTIA Reply Comments, WT Docket No. 02-146, 9-10 (filed Feb. 3, 2003) (NTIA 70/80/90 GHz Reply Comments) (also noting that the band is "currently characterized by current usage as a radar band").

⁴⁸ See Letter from Edward A. Yorkgitis, Jr., Counsel for Moog, Inc., to Marlene H. Dortch, Secretary, FCC, WT Docket No. 19-140, et al., 3 (filed Dec. 22, 2023) (Moog Dec. 22, 2023 *Ex Parte*) (stating that "[t]he U.S. Navy and Marine Corps, using NTIA-issued radio frequency assignments, now have almost four years of experience using the Moog-installed Tarsier system in the 90 GHz band installed at the Marine Corps Air Station (MCAS) in Yuma, Arizona[.]"). Moog notes that the Yuma, Arizona facility operates runways and airfields as part of joint-use commercial and military facility. See Moog July 30, 2025 *Ex Parte* at 2. According to Moog, as of December 2025, two additional military sites, MCAS Miramar in San Diego, California and Naval Air Station Lemoore, in Kings and Fresno Counties, California have also deployed the system. See *id.*

⁴⁹ See Moog Comments; Letter from Edward A. Yorkgitis, Jr., Counsel for Moog, to Marlene H. Dortch, FCC, WT Docket No. 19-140 (filed July 30, 2025) (Moog July 30, 2025 *Ex Parte*).

deployments at this time, Moog states that, as of 2025, it was “in discussions with several commercial airports in the U.S. about the possible deployment” of its FOD detection system.⁵⁰ It does not oppose the introduction of EFVS radar in the 92-95.5 GHz band, but requests that the Commission take measures to accommodate and ensure protection of future FOD detection systems at commercial airports and airfields in the band.⁵¹ Moog asserts that coexistence between FOD detection systems and EFVS operating in the vicinity of each other should be possible in most cases with planning and appropriate mitigation measures, particularly band segmentation (that is, restricting the respective systems to different portions of the 92-95.5 GHz band).⁵²

16. To the extent Moog seeks measures to protect possible future deployments at commercial airports, we find that such measures are unwarranted at this time.⁵³ First, it appears that no commercial site has yet deployed Moog’s system and there is no evidence in the rulemaking record that there are any plans or agreements for such a deployment. In addition, the Commission’s rules do not currently authorize the operation of such a FOD detection system in any part of the 92-95.5 GHz band, and no request for such authorization is currently pending.⁵⁴ SNC argues that “[u]ntil Moog gains authority for commercialization of its FOD system in the United States, SNC should not be hamstrung in the operation of its EFVS radar.”⁵⁵ We agree. Because Moog has no agreement for any commercial deployment and no Commission authorization that would permit it to deploy a system is either established or being considered, the possibility that Moog’s system might be deployed at commercial airports or airfields in the future is too speculative at this time to warrant proactive protective measures, such as band segmentation, that restrict SNC’s EFVS radar.⁵⁶

17. *Waiver Relief.* We find that the requested waiver will serve the public interest. As discussed above, permitting use of SNC’s EFVS will have a number of benefits for aviation and airport operations.⁵⁷ Further, because SNC’s system is entirely installed on the aircraft, these benefits will not require any deployment of additional ground infrastructure by an airport.⁵⁸ SNC also asserts that their vision technology can enable aircraft landings in moderate to severe Instrument Meteorological

⁵⁰ Moog July 30, 2025 *Ex Parte* at 2.

⁵¹ *Id.* at 1.

⁵² *See id.* at 2; *see also id.* (asserting that band segmentation “will facilitate coexistence without undue constraints on either company’s spectrum solution in the 90 GHz Band.”).

⁵³ While this band has been studied internationally for use by FOD detection systems, *see, e.g.*, ITU Publications, Report ITU-R M.2562-0, Sharing and compatibility studies between foreign object debris detection system and other services in the frequency ranges 92-100 GHz (Dec. 2025), https://www.itu.int/dms_pub/itu-r/opb/rep/R-REP-M.2562-2025-PDF-E.pdf, the Commission has not adopted any rules to authorize non-federal FOD detection radar in that band.

⁵⁴ *See* 47 CFR §§ 87.173, 90.103(b), 95.3331.

⁵⁵ *See* SNC Waiver Request at 8.

⁵⁶ We reserve the right to adjust this approach if the Commission, at a later date, permits operation of a FOD detection system in the 92-95.5 GHz band. *See* Letter from Laura Stefani, Counsel to Sierra Nevada Company, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 19-140, 1 (filed Aug. 13, 2024) (agreeing that, “when necessary,” SNC would enter into “a band sharing arrangement” to protect Moog’s operations).

⁵⁷ *See supra* para. 8.

⁵⁸ *See* SNC Waiver Request at 6 (“EFVS radar can fit onto the nose of most aircraft and requires no ground systems, enabling airports to eliminate much of the costly ground infrastructure used for landings and approaches. This will open airports that are presently limited from certain operations because they do not have appropriate ground systems in place.”). SNC states that only approximately 1% of airports have the necessary precision approach systems for landing in low visibility conditions, and that the cost of ground infrastructure to allow these landings is approximately \$10 million per runway end. *See id.* at n.16.

Conditions.⁵⁹ We further find that the conditions adopted herein appropriately protect against the risk of harmful interference and that the underlying purpose of the rules would not be served through their continued application. We therefore grant a waiver of the Table of Allocations and frequency rules, subject to the conditions specified below.

18. We find that a waiver of the station identification requirement under section 87.107(a) is also warranted.⁶⁰ Section 87.107(d) currently exempts from the station identification requirement “[a]irborne weather radar, radio altimeter, air traffic control transponder, distance measuring equipment, collision avoidance equipment, racon, radio relay, radio navigation land test station (MTF), and automatically controlled aeronautical enroute stations.”⁶¹ This list of exemptions reflects a determination that the requirement should not apply where station identification is impractical.⁶² We find that SNC’s airborne EFVS radar is comparable for this purpose to categories already on the list, such as airborne weather radar and collision avoidance equipment, and that exemption will serve the public interest by facilitating EFVS deployment.⁶³ We therefore waive the station identification requirement, section 87.107(a), to the extent that it applies to SNC’s EFVS radar.

19. Accordingly, we waive the section 2.106 Table of Allocations and sections 87.107(a), 87.173, and 87.187 of the Commission’s rules to permit the marketing, licensing by rule, and use of SNC’s EFVS radar system, subject to the following conditions:

- This waiver is granted for a term of five years or until the resolution of the associated rulemaking issues in WT Docket No. 19-140, whichever occurs sooner. Absent a resolution of the rulemaking issues, SNC may request that the waiver term be extended, based on a showing that the waiver should remain in effect for a longer period.
- SNC and licensees must comply with all part 87 technical and service rules applicable to aircraft radionavigation stations, other than those rules specifically waived in this *Order*.
- SNC must obtain equipment authorization for EFVS equipment following applicable certification requirements of parts 2 and 87 prior to marketing or operation, including the notification requirements of section 87.147(d).⁶⁴ A copy of this *Order* shall be submitted with the equipment authorization application.

⁵⁹ See SNC Waiver Request at 3.

⁶⁰ See 47 CFR § 87.107(a).

⁶¹ See 47 CFR § 87.107(d).

⁶² See *Amendment of Part 9 of the Commission’s Rules Relative to Implementation of Certain Requirements of the Geneva Radio Regulations (1959) Regarding Frequencies, Frequency Stability and Definitions*, Docket No. 14452, Report and Order, 42 FCC 2d 1147, 1154 (1962) (adopting earlier version of the “Station identification” rule, specifying in subsection (f) that “[r]adio systems, where the transmission of specific identification is considered to be impracticable, are exempted from the provisions of this subpart; e.g., airborne weather radar, radio altimeter, air traffic control transponder, distance measuring equipment, collision avoidance equipment, racon, radiosonde, and radio relay.”).

⁶³ We note that the policy of not requiring station identification from radar systems due to impracticability is also reflected in the Maritime rules, which provide that, generally, “[r]adar transmitters must not transmit station identification.” See 47 CFR § 80.104.

⁶⁴ See 47 CFR § 87.147. Thus, although notification to the Federal Aviation Administration under section 87.147(d) is limited to equipment for transmissions in specified bands that do not currently include the 92-95.5 GHz band, SNC must nevertheless provide the specified notification.

- Radar scanning operations by SNC's EFVS equipment are permitted in the 92-95.5 GHz band, except for the 94.0-94.1 GHz band.⁶⁵
- Operation will be on a secondary basis to other authorized operations.
- Radar scanning operations may occur no more than 1000 feet above ground level.
- The permissible radar scanning angle is limited to: radar elevation scanning below the horizon, and the azimuth scan angle nominally centered on the landing runway.⁶⁶
- EFVS radar may not operate within 25 km of any United States radio astronomy observatory listed in Table 3 of the Updated Technical Analysis.
- EFVS radar may only be operated in Instrument Meteorological Conditions, *i.e.* conditions where visibility is less than 3 miles.
- EFVS radar may not operate in or during a landing at any federal military facility, except where such operation has been authorized under agreement with facility authorities.
- SNC must provide purchasers of the EFVS radar with a copy of the *Order* at the time of sale.⁶⁷

IV. CONCLUSION

20. Accordingly, IT IS ORDERED, pursuant to sections 4(i) and 303(i) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(i), and section 1.925 of the Commission's rules, 47 CFR § 1.925, that the Request for Waiver filed by Sierra Nevada Company on February 25, 2026, IS GRANTED ON THE CONDITIONS SET FORTH ABOVE.

⁶⁵ We clarify that, notwithstanding the restriction in 94-94.1 GHz, we require compliance with the emission limitations under section 87.139, 47 CFR § 87.139, only at the edges of the 92-95.1 GHz band.

⁶⁶ Accordingly, this waiver only authorizes aircraft, whether fixed-wing or rotary, to use EFVS stations for operations related to aircraft runways (including takeoff, landing, or taxiing), and not for other areas such as helipads.

⁶⁷ We recognize that SNC will not itself be the licensee/operator. Accordingly, we require SNC to provide a copy of this *Order* to all purchasers of the EFVS radar to help ensure that parties operating the EFVS radar understand their obligations under this Order, including applicable conditions of operation discussed above. We emphasize that, to the extent licensee/operators use this system in a manner that is inconsistent with the operating parameters established here or otherwise unauthorized, that unauthorized operation of the EFVS radar may subject such licensee/operators to Commission enforcement action.

21. This action is taken under delegated authority pursuant to sections 0.131 and 0.331 of the Commission's rules, 47 CFR §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Joel Taubenblatt
Chief, Wireless Telecommunications Bureau

Andrew C. Hendrickson
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