

[TO BE PUBLISHED IN THE GAZETTE OF INDIA, EXTRAORDINARY,  
PART II, SECTION 3, SUB-SECTION (i)]

Ministry of Civil Aviation

Notification

New Delhi, the January, 2018

**G.S.R..... (E).**— In exercise of the powers conferred under rule 2 of G.S.R.751(E) dated 30<sup>th</sup> September, 2015, the Central government hereby proposes to make the following amendments in the Ministry of Civil Aviation (Height Restrictions for Safeguarding of Aircraft Operations) Rules, 2015 [G.S.R.751(E) dated 30.09.2015]. The objections or suggestions of the stakeholders/general public are hereby invited on the proposed amendments to the said rules within a period of 30 days from the date of publishing the proposed notification in the public domain.

1. Rule 8(1) and 8(2) may be merged into one as under: -

**“Clearances for siting towers of fixed wireless stations.**— The siting clearance in respect of towers of tower/mast of fixed wireless stations shall be issued by the Standing Advisory Committee on Radio Frequency Allocation (SACFA) WPC Wing of the Ministry of Communication, Government of India. Prior to issuance of the siting clearance, WPC wing will seek NOC from AAI and Defence authority besides others, as the case may be. Applicants shall apply online to SACFA Secretariat only. The SACFA will thereafter forward the application to AAI, Defence Authorities, and others as necessary. The SACFA and NOCAS (No Objection Certificate Application System) are integrated. AAI shall issue NOC online to SACFA Secretariat. The individual SACFA application at the SACFA server is automatically updated with NOC height data, as cleared by AAI.”

2. Rule 9 may be amended as under: -

**“Processing of No Objection Certificate cases.** – Processing of NOC cases in respect of civil aerodromes shall be carried out at nine Airports Authority offices one each at Delhi, Kolkata, Mumbai, Chennai, Guwahati Hyderabad, Bengaluru, Ahmedabad, and Nagpur airports and at any other office that may be notified by Airports Authority from time to time.”

3. Existing Rule 16 may be re-numbered as Rule 17 and a new Rule 16 may be inserted as under:

**“Rule 16. Validity and Renewal.-**

The validity of NOC shall be **8 years** from the date of issue. One-time **renewal** without assessment may be allowed upto **4 years**, provided construction work has commenced, subject to the condition that such request is made within six months after expiry of validity of the NOC and the delay is due to circumstances which are beyond the control of the developer. In case NOC is revised after review or appeal, the validity of NOC shall be 8 years from the date of issue of revised NOC.

Provided that in cases where the construction work has not started during the initial validity period of NOC, **renewal** shall not be considered and the height of such buildings or structures shall be reassessed in accordance with the provisions of these rules.”

4. The existing rule 16 which may be re-numbered as Rule 17 and may be amended as under:

**“Rule 17. Savings. –**

Nothing in these rules shall affect the height clearances assessed and duly issued under the notifications issued by Ministry of Civil Aviation, Government of India from time to time during the validity period of NOC, including renewal period, within which the applicants have to complete the structures and obtain the completion certificate from the concerned authorities.”

5. A new Rule 18 may be inserted as under:

**“Rule 18. Accuracy requirement.-**

The accuracy requirement for site elevation is 05m AMSL. The accuracy requirement for WGS-84 Coordinates is 1/10<sup>th</sup> of a second in the format of DD MM SS.s and position accuracy should be within 3 meters. The accuracy requirement for site elevation and top elevation of structures/ buildings shall be 0.5 meters AMSL.”

6. Following paras of Schedule I may be amended as under:

“Para 1.2 : Installation of Extra High Tension, High Tension lines as defined in the Indian Electricity Rules 1956, shall not be permitted within 1500 metre of the Inner edge of the approach and take-off climb surface.”

“Para 3.1 : A land area within 300 m radius from the centre of DVOR counter poise for DVOR/DME and Antenna for VHF DF.”

“Para 3.2.4: The area spreads behind the LLZ antenna by 20 meter and bounded by trapezium made by one line along the LLZ antenna array and 60 meters’ on either side from the center of the array and another parallel line behind the antenna by 20 meters and 45 meters on either side from the extended runway centerline as depicted in Appendix K, Schedule VIII.”

“Para 3.8: **Microwave Link/ Ultra High Frequency (UHF) Link:** Within the corridor between the two link sites having dimensions of 30 meters on either side of the direct line of sight in horizontal plane and 10 meters below from the direct line of sight in the vertical plane.”

“Para 3.10: **NDB/Locator/En-route Beacons:** A land area within a radius of 60 meters from centre of antenna.”

“Para 3.11: **High Frequency (HF) Remote Receiver:** Land area upto a distance of minimum 1525 meters of all the HF Receiver Antenna installed in Remote Receiver station.”

“Para 3.12: **Stand-alone Distance Measuring Equipment:** No structure shall be permitted on the land above the level of 3 meters below the antenna base upto a distance of 150 meters from the antenna. (To be deleted and inserted at 3.21)

“Para 3.14: **Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Reference Transmitter:** No structure shall be permitted on the land above the level of 5 meters below the antenna base up to the distance of 200 meters from reference transmitter antenna.”

"Para 3.15: **A-SMGCS Multi-Lateration (MLAT)**: No structure shall be permitted on the land above the level of 2 meters below the antenna base up to the distance of 200 meters from MLAT sensor antenna."

"Para 3.16: **Ground Based Augmentation System Reference Receiver/GBAS VDB Monitoring Station/ Indian Land Uplink Station (INLUS)**: A land area within the radius of 400 meters of the antenna."

"Para 3.17: **Ground Based Augmentation System VHF Data Broadcast (GBAS VDB) station**: A land area within the radius of 300 meters of the site."

"Para 3.21: **RCAG/Automatic Dependent Surveillance-Broadcast (ADS-B)**:- No structure shall be permitted on land above the level of 3 meters below the antenna base up to distance of 300 meters from the antenna."

"Para 4. ix): **Precision approach runway, category II**. An instrument runway served by Instrument Landing System and/or MLAS and visual aids intended for operations with a decision height not higher than 60 m but not lower than 30 m and a runway visual range not less than 300 m."

"Para 4. x) (a) : **ILS CAT IIIA**- intended for operations with a decision height lower than 30 meters, or no decision height and a runway visual range not less than 175 meters.

"Para 4. x) (b): **ILS CAT IIIB**- intended for operations with a decision height lower than 15 meters, or no decision height and a runway visual range less than 175 meters but not less than 50 meters."

"Para 4. Sub Para xiii) (c): **Outer Marker facility operating on 75 MHz** in the Very High Frequency band is normally installed along the extended centerline of the runway at a distance between 3.5 and 6 nautical miles (1 nautical mile = 1852 meter) and produces radiation pattern to indicate the landing aircraft, the pre-determined distance from the threshold along the instrument Landing System glide path."

7. Para 3.9 of the Schedule I may be deleted.

8. Existing Para 3.18 of the Schedule I may be deleted and a new para 3.18 may be inserted as under:

"**Para 3.18: Indian National Reference Station (INRES)**: A land area within the radius 100 meters of the antenna."

9. The word 'Aerodrome', wherever it appears, may be replaced with the word 'Aeroplane' in the 'Table 1.1: Dimension of Runway Strip' of Schedule I.

10. The 'Purpose' and the following Paras of the Schedule II may be amended as under:

**"Purpose.-**

The height or permissible elevation for the structure, requiring grant of NOC, shall be calculated based upon the International Civil Aviation Organization (ICAO) Annex 14 Chapter 4 Obstacle Restriction and Removal, Annex 10 volume I Radio Navigation Aids and ICAO PANS-OPS Doc 8168, Vol.II (Construction of Visual and Instrument Flight Procedures), ICAO Doc 9905 Required Navigation Performance Authorization Required (RNP AR) Manual, DGCA Guidelines on Design, Validation, Approval and Promulgation of Instrument Flight Procedures and any other related ICAO document

defining the operational requirements for minimum altitudes of various segments of published or proposed instrument approach procedures.”

“Para 1.4.1.2: For Runway code 3 and 4, the Inner Horizontal Surface shall be a composite pattern, which consists of two circular areas centered at the two ends of the runway with a radius of 4000 meters. These areas shall be joined tangentially to form an elliptical shape as shown in Appendix-A of Schedule VIII.”

“Para 1.5.1: The conical surface shall be projected upwards and outwards from the periphery of the Inner Horizontal Surface. The slope 5% (1:20) of the conical surface shall be measured in a vertical plane perpendicular to the Inner Horizontal Surface and shall continue upto a height of 300 meters. The reference datum for Conical Surface shall be the aerodrome elevations (Refer to Appendix -B of Schedule VIII for illustration of the various surfaces including the conical surface).”

“Existing Para 1.6.6 may be deleted and existing para 1.6.7 may be re-numbered as Para 1.6.6.”

A new para, Para 1.7 may be inserted in Schedule II, as under:

**“1.7 Outer Transitional Surface**

1.7.1 In order to avoid abrupt vertical changes in surfaces, the surfaces beyond the conical surfaces will slope laterally at 1:7 from edges of the approach and take off surfaces between the permissible heights of 150m to 300m.  
(For illustration refer to Appendix -B of Schedule VIII).”

Existing Para 1.7 may be renumbered as Para 1.8 and be amended as under:

“Para 1.8: **Obstacles Free Zone** shall be established for a runway equipped with precision approach (ILS) category II and III operations. The zone shall be kept free from fixed objects other air navigation aids, which must be near the runway, to perform their function, mounted on light weight frangible fixtures.

**“Para 2: Protection of Service volume of various Communication, Navigation and Surveillance Facilities** (based on ICAO Annex 10 Navigational Aids) The limit of service volume of CNS equipment extend up to a maximum distance of 20 km from the CNS facility, except in case of ILS Localizer, wherein it extends upto 35 Km.”

**“Sub-para 2.5.1.1:** Beyond 500 meters from particular Radar site, the height of the permissible structures shall be increased at the rate of 0.05 meter per meter from 3 meter below the centre of antenna pedestal upto a point wherein the line drawn from a point 10% below the minimum sector altitude at the farthest point (from Radar site) or any other designated MSA at different distance in same sector whichever is closer to horizon, to the center of antenna pedestal intersects. Beyond the above stated point no object shall be permitted to protrude above the line drawn from a point 10% below the minimum sector altitude at the farthest point (from Radar site) or any other designated MSA at different distance in same sector whichever is closer to horizon to the center of antenna pedestal. (For illustration refer to Appendix -C of Schedule VIII).

The existing note appended to the Para 2.5.1.1 may be deleted and following three notes may be inserted:

**“Note 1:** In case of Airport served with different MSA in different sectors, buffer of 5 NM shall be applicable around sector of lower MSA.

**Note 2:** Wireless/Mobile communication antenna masts, flag/light poles which are beyond 2 KM from the Radar Antenna shall be considered clear from the ASR.

**Note 3:** TV towers and other high towers/chimneys etc. shall be continued to be examined as per para 2.5.1 above.”

"Para 2.5.2.2: After multi radar system is operationalized and integrated, the maximum height permissible in the integrated system shall be considered for grant of height to the applicant. However, from the Radar performance requirement point of view, the structures are to be examined, as follows, to ensure that there is no degradation of Radar performance.

- I. Within one kilometer from any of the Radar (ASR/MSSR), structures shall be examined from the respective radar (ASR/MSSR) as per para 2.5.1.
- II. The metallic structures beyond one kilometer from all the Radars (ASR/MSSR), but between one to two Kilometer from any of the Radars (ASR/MSSR), shall be examined from respective Radar (ASR/MSSR) as per Para 2.5.1.
- III. The non-metallic structures beyond one kilometer from all the Radars (ASR/MSSR), but between one to two Kilometer from any of the Radars (ASR/MSSR), shall be permitted highest permissible height, as per IV below.
- IV. Objects beyond two kilometer from all the Radars (ASR/MSSR), highest permissible height among integrated & operational ASR sites shall be permitted as per para 2.5.1.

Note-I: Reinforced Cement Concrete (RCC) structures shall also be treated as Metallic structures.

Note-II: Above criterion will not be applicable for wind farms and EHT/HT lines."

"**Para 2.6:** Beyond 200 meters from particular Radar site, the height of the permissible structures shall be increased at the rate of 0.05 meter per meter from 5 meter below the center of Antenna Pedestal up to a point wherein the line drawn from Antenna pedestal at an elevation angle of 0.5 degree or the Antenna tilt angle whichever is higher, intersects. Beyond the above stated point no object shall be permitted to protrude above the line drawn at an angle of 0.5 degree from antenna pedestal or an angle equal to antenna tilt angle whichever is higher.  
(For illustration refer to Appendix -D of Schedule VIII)."

**Para 2.6.1** may be re-numbered as para 2.7 and existing paras 2.7 to para 2.12 may be re-numbered accordingly.

Existing para 2.6.1 (re-numbered as para 2.7) may be amended as under:

**"Para 2.7: Monopulse Secondary Surveillance Radar/ Secondary Surveillance Radar (MSSR/SSR)**

- a) For collocated MSSR/SSR: Same as Air Surveillance Radar/Air Route Surveillance Radar with which it is collocated.
- b) For stand-alone MSSR/SSR: As per operational use (Approach/ Enroute)."

**Existing Para 2.7 (renumbered as para 2.8): "Para2.8.-Remote Control Air to Ground Communication (RCAG)/Automatic Dependence Surveillance – Broadcast (ADS-B)**

No structure (located beyond the area of 300 Meter radius as specified in Annexure-I) shall subtend a vertical angle greater than 1.0 degree up to a radius of 2 Kilometer from RCAG/ADS-B antenna."

Para 2.8.2 (re-numbered as para 2.9.2) may be amended as under:-

"Beyond the distance of 200 M from A-SMGCS Ref TX, no structure shall be permitted in the corridors between the Reference Transmitter and associated MLATS, the dimension of each corridor being 5 meters on either side of the direct line of sight in Horizontal plane and 5 meters below from the direct line of sight in vertical plane."

Para 2.9 (re-numbered as Para 2.10):- **“Ground Based Augmentation System (GBAS) Reference receiver/ GBAS VDB Monitoring Station/ Indian Land Uplink Station (INLUS)/ Indian National Reference Station (INRES):**

No structure located beyond the area as specified in Annexure-I, shall subtend a vertical angle greater than 3.0 degree up to a radius of 3 Kilometer from GBAS Reference receiver/GBAS VDB Monitoring Station/ Indian Land Uplink Station (INLUS)/ Indian National reference Station (INRES) Antenna System.”

Para 2.12 (re-numbered as **Para 2.13**):-**“Electricity Power Transmission Lines:**

**2.13.1** No Extra High Tension (EHT), High Tension (HT), Low Tension (LT) line shall be permitted to pass through the sensitive area of Localizer and glide path.

**2.13.2** All EHT/HT lines shall not be permitted to the following area until and unless these are shielded by natural terrain not likely to be removed: -

- a. Localizer: within  $\pm 18$  degree, all EHT/HT lines shall be permitted only up to an angle of elevation of 0.5 degree from the localizer. If these EHT/HT line are on the radial, these may be permitted to 0.75 degree elevation. In the sector between  $\pm 18$  degree to  $\pm 35$  degree line may be permitted up to the elevation angle of 0.75 degree.
- b. Glide Path: all EHT/HT lines shall be permitted only up to an angle of elevation of 0.5 degree from the Glide Path. If the EHT/HT lines are on the radial, these lines shall be permitted to 0.75 degree elevation.
- c. VOR: EHT/HT lines shall be permitted only upto an angle of elevation of 0.5 degrees from the centre of counterpoise and if these lines are on the radial, they shall be permitted upto an angle of elevation of 1 degree from the centre of counterpoise.
- d. ASR/ MSSR, ARSR and MSSR: no HT lines shall be permitted upto 1 km no EHT lines shall be permitted upto 2 km.

**Note:** The Power Transmission line masts, shall be treated in a radial if they fall within  $\pm 01$  degree when seen from the CNS facility/facilities.”

Two new paras viz., Para 2.14 and 2.15 may be inserted as under:

**“Para 2.14:** NDB/ Locators: No structure located beyond the area of 30 Meter radius as specified in Annexure-I) shall subtend a vertical angle greater than 5.0 degree up to a radius of 1 km from NDB/ Locators Antenna.”

**“Para 2.15:** Ground Based Augmentation System VHF Data Broadcast (GBAS VDB): No structure (located beyond the area of 300 Meter radius as specified in Annexure-I) shall subtend a vertical angle greater than 0.9 degree up to a radius of 3 Kilometers from GBAS VDB Antenna.”

**“Para 3.3- Note 1:** Instrument flight procedures (IFP) of all the civil aerodromes in India have been published in the AIP India/AIP Supplement/G series NOTAM etc. under the section “Aerodrome”. In the published procedures, the minimum altitudes of the various segments of instrument flight procedures have been specified.

**“Para 4.3:** For CNS facilities, shielding benefit shall be provided to the structures in cases wherein such structures are in the shadow of any natural terrain. Shadow for this purpose is defined as an area behind the natural terrain when seen from the facilities and falling below the extrapolated line drawn from the respective facilities to the highest point of terrain and in line with extremities of the proposed structure.”

**“Para 7 (k): Frangible Object –** An object of low mass designed to break, distort or yield on impact so as to present the minimum hazard to aircraft.”

**“Para 7 (m): Obstacle Free Zone (OFZ) –**The airspace above the inner approach surface, inner transitional surfaces and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than low mass and frangible mounted one, required for air navigation purposes.”

11. The Table 2.2 of Schedule II may be amended as under:

Table 2.2 – Approach Surface Slope of Instrument Runway

Runway Code No.	Aeroplane Reference Field Length (meters)	Precision Approach Runway			Non-Precision Approach Runway		
		First Section Length (Meter) & Slope	Second Section Length (Meter) & Slope	Horizontal Section (Meter)	First Section Length (Meter) & Slope	Second Section Length (Meter) & Slope	Horizontal Section (Meter)
1.	<800	3000 2.5%	12000 3%	-	2500 3.33%	-	-
2.	800<1200	3000 2.5%	12000 3%	-	2500 3.33%	-	-
3.	1200<1800	3000 2%	3600 2.5%	8400	3000 2%	3600 2.5%	8400
4.	1800 and above	3000 2%	3600 2.5%	8400	3000 2%	3600 2.5%	8400

12. The word ‘Aerodrome’ may be replaced by the word, ‘Aeroplane’ in Table 2.3 and Table 2.4 of Schedule II.

13. In Table 2.4 of Schedule II, for code 2 Non-Instrument Runway radius of HIS shall be 2500m instead of 2000m.

14. Appendix C and D of Schedule VIII may be replaced as under:

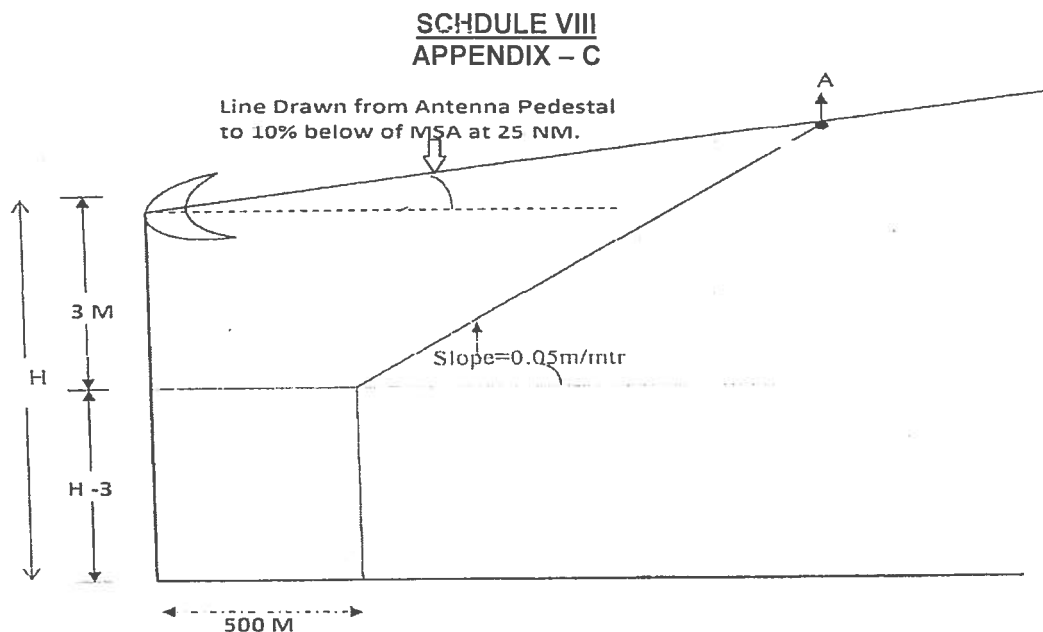
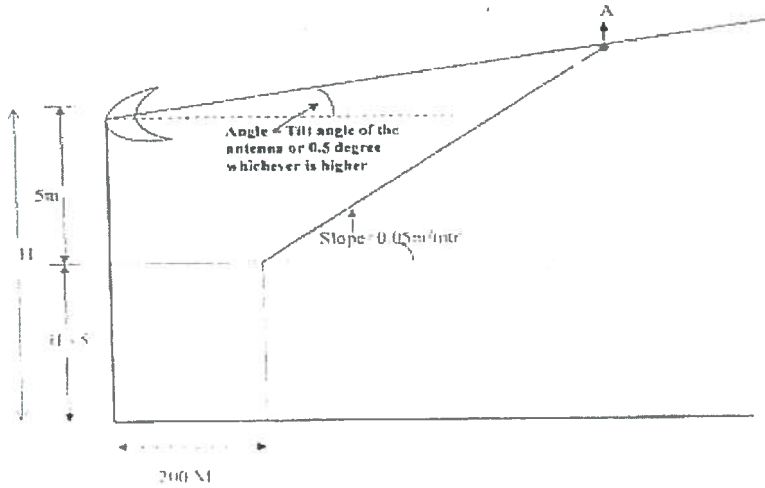


Fig 1 Criteria for height restriction with respect to ASR

**SCHEDULE VIII  
APPENDIX - D**



**Fig 2 Criteria for height restriction with respect to ARSR**

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