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CREDAI - MCHI

Ref. No. : MCHI/PRES/17-18/216 9th May, 2018

To,
Shri Deepak Sajwan
Under Secretary
Ministry of Civil Aviation
Government of India
'B' Block, Rajiv Gandhi Bhawan,
Safdarjung Airport Area, Satya Sadan,
New Delhi - 110003

Subject:- Suggestion / Objections and Request for Hearing in respect to Draft Notification published on 12th April 2018 to amend the existing GSR 751 E, Ministry of Civil Aviation (Height Restrictions for Safeguarding of Aircraft Operations) Rules, 2015

Respected Sir,

We have reviewed the proposed Draft GSR 751 E, Ministry of Civil Aviation (Height Restrictions for Safeguarding of Aircraft Operations) Amendment Rules, 2018 and we wish to list our Suggestions / Objections as stated below. We have also attached the required Documents/Images/Photographs to complement our observations/comments/objections.

1. Validity Period of Existing/Expired NOCs and Renewal

Part No. / Regulation No	Provision in Draft Rules	Suggestion Proposed	Justification
9(A)(1) & 9(A)(2)	9(A)(1) Validity and Renewal.- The validity of the No Objection Certificate shall be eight years from the date of issue. One-time renewal without assessment may be allowed upto four years. Provided that the construction work has commenced and such request is made within six months of expiry of validity of the No Objection Certificate and the delay is due to circumstances which are beyond the control of the developer. (2) In case the No Objection Certificate is	9 Validity and Renewal.- The validity of the No Objection Certificate shall be eight years from the date of issue. In case the No Objection Certificate is revised after review or appeal, the validity of the No Objection Certificate shall be eight years from the date of issue of revised No Objection Certificate. One-time renewal without assessment shall be allowed upto four years. Provided that commencement certificate has been issued by the local planning authority, construction work has commenced and the delay	Change in language is suggested to avoid ambiguity and capture the discussions held in the meetings of the NOC Review Working Group 2017.

	revised after review or appeal, the validity of the No Objection Certificate shall be eight years from the date of issue of revised No Objection Certificate. Provided that in cases where the construction work has not started during the initial validity period of No Objection Certificate, renewal shall not be considered and the height of such buildings or structures shall be reassessed in accordance with the provisions of these rules.	is due to circumstances which are beyond the control of the developer. In cases where commencement certificate has not been issued by the local planning authority and the construction work has not started during the initial validity period of No Objection Certificate, renewal shall not be considered and the height of such buildings or structures shall be reassessed in accordance with the provisions of these rules. In cases where construction of buildings, structures, etc are completed, based upon the approval from the concerned Local, Municipal or Town Planning and Development Authorities not exceeding the Permissible Top Elevation as mentioned in the No Objection Certificate issued by the designated officer of AAI, within overall period of 12 years from the date of No Objection Certificate shall be allowed to obtain Occupation Certificate from the concerned authorities.”;	

2. Savings

Part No. / Regulation No	Provision in Draft Rules	Suggestion Proposed	Justification
16	16. Savings.-- Nothing in these rules shall affect the height clearances assessed and duly issued under the notifications issued by the Government of India in the Ministry of	16. Savings.-- Nothing in these rules shall affect the height clearances assessed and duly issued under these rules and the notifications issued by the Government of India in the Ministry of	Heights granted under NOCs from 30th September 2015 till date are required to be protected against the amendments proposed under this notification.

	Civil Aviation vide notification numbers S.O. 84(E) dated the 14th January, 2010, and S.O 1589(E) dated the 30th June, 2008, during the validity period of the No Objection Certificate, including renewal period, within which the applicants have to complete the structures and obtain the completion certificate from the concerned authorities:	Civil Aviation vide notification numbers S.O. 84(E) dated the 14th January, 2010, and S.O 1589(E) dated the 30th June, 2008, during the validity period of the No Objection Certificate, including renewal period, within which the applicants have to complete the structures and obtain the completion certificate from the concerned authorities:	

3. Vertical height tolerance

Part No. / Regulation No	Provision in Draft Rules	Suggestion Proposed	Justification
17	17. Accuracy requirement.-The accuracy requirement for site elevation shall be 05m AMSL. The accuracy requirement for World Geodetic System-84 Coordinates is 1/10th 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.	17. Accuracy/Vertical tolerance requirement.- The accuracy/ vertical tolerance limit requirement for site elevation and top elevation of structures/ buildings shall be 50 cm (0.5 meters) AMSL while verifying / certifying the height in accordance with these provisions.	Change in language is suggested to avoid ambiguity and capture the discussions held in the meetings of the NOC Review Working Group 2017 along with adherence to the requirements of Aerodrome Operators. Reason: During issue of Occupation Certificate, aerodrome operator verifies and certifies the vertical height without considering accuracy (+ /- 0.5m of the equipment/Objectively tolerance of vertical height. The aerodrome operator in Mumbai is insisting for tolerance in addition to accuracy to implement this provision. Approved Survey Engineers are using different type of survey equipment, which are different from aerodrome operators

			(MIAL\DIAL) and AAI. As there is no compulsion on standardization in the existing equipment used by different agencies, the disparity in vertical height due to accuracy of equipment exists. It's an inbuilt systemic error and objectively affects the vertical tolerance of +/- 0.5 and only the developers are affected in large scale after completion of the project. Hence, the word Accuracy/Tolerance is to be mentioned to avoid confusion and effective use for building vertical height variation. Interim Request: As an interim measure, Aerodrome Operator should be advised to consider this vertical tolerance while verifying the height prior to granting Occupation Certificate.

4. No Construction Zone around High Frequency (HF) Remote Receiver

Part No. / Regulation No	Provision in Draft Rules	Suggestion Proposed	Justification
SCHEDULE – I 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.”;	High Frequency (HF) Remote Receiver: Land area upto a distance of minimum1525 meters of all the HF Receiver Antenna installed in Remote Receiver station.”;	Change in language to avoid ambiguity

5. Radar Criteria: Other than Large Object/Structure (0.4°) benefit

Part No. / Regulation No	Provision in Draft Rules	Suggestion Proposed	Justification

SCHEDULE – II 2.5.1.1	"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 centre of antenna pedestal."	Existing provision of other than large object benefit to be retained and continued. "Beyond the above stated point, other than large 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 centre of antenna pedestal." Note: Large object means the structure/s in isolation or collectively subtending azimuth angle of 0.43 degree or above at Radar antenna. In case of cluster of buildings wherein the gap between the two adjacent buildings sub tends an azimuth angle of less than 0.43 degree on the antenna pedestal, the entire cluster should be considered as one object. Appendix-C of Schedule VIII to be modified suitably.	Earlier provision to be retained as the proposal of granting additional height benefit to "other than large" objects is an existing benefit given to Developers in line with similar provisions adopted by Transport Canada under "Land Use In The Vicinity of Aerodromes" (TP1247E 2013/14) in which large structures/objects have been defined as having an azimuth angle of more than 0.43°. Building/s comply with "other than large" structure definition totally based on direction and Dimension (width) orientation with respect to Radar. Further, very small percentage of buildings can fit in to this definition and many clusters can be avoided by verifying building data. As long as the Radar operation and performance is not affected or within the acceptable tolerance levels and safe aircraft operation is not affected, the benefit of additional height benefit due to "Other than large" object/structure definition is required to be continued in accordance with the existing regulations, as the height benefit is not only necessary to restore the heights granted to existing buildings/structures

			but also essential to ensure consumption of full FSI potential to meet with specific state Urban development vision projects. Further, this is required in compliance to ICAO DOC 9167 PART 6, 2.2.3: wherein the intent is to ensure that measures taken provide maximum economic benefits to neighboring communities and least possible interference with the rights of property owners in addition to greatest possible degree of safety and efficiency for aircraft operations.

6. Stakeholders Involvement

Part No. / Regulation No	Provision in Draft Rules	Suggestion Proposed	Justification
14(3)	14. Development and up gradation of aerodromes.– (3) Necessary consultation with the concerned stakeholders shall be carried out by the airport developer, airport operator or by the Air Navigation Service provider, as the case may be, at the time of development of master plan of a Greenfield airport or planning of major airport expansion or the installation of new communication, navigation and surveillance facilities at the existing airports.	14. Development and up gradation of aerodromes.– (3) Necessary consultation with the concerned stakeholders including aerodrome local community bodies/ Local Planning Authority / Construction group professional association shall be carried out by the airport developer, airport operator or by the Air Navigation Service provider, as the case may be, at the time of development of master plan of a Greenfield airport or planning of major airport expansion or the installation of new communication,	Association of local community bodies, construction group members and Local Planning Authority should be included for discussions as STAKEHOLDERS for development and or upgradation of airport for systemic / synergistic development of airport and town/city. During meetings of NOC Review Working Group 2017, it was agreed to link these consultation meetings with other meeting of stakeholders at airports. Further, this is required in compliance to ICAO

		navigation and surveillance facilities at the existing airports.	DOC 9167 PART 6, 2.2.3: wherein the intent is to ensure that measures taken provide maximum economic benefits to neighboring communities and least possible interference with the rights of property owners in addition to greatest possible degree of safety and efficiency for aircraft operations.

7. One Time Consideration / Renewal of Expired NOCs

Proposal for enhancing validity/renewal period for NOCs is in process since October 2016

Several structures which have been granted incremental height benefit under "other than large object" criteria and are nearing completion, have validity period of 5 years and are renewed for further period 3 years. At end of eight years, many of these buildings are in the last stage of completing the requirements for grant of Occupation Certificate

Inspite of NOCs nearing expiry, they have not sought revalidation as the permissible heights under provisions of existing rules would reduce drastically upon re-assessment due to ADS - B restriction

Due to unavoidable situations as expressed above, there is no guarantee for grant of height based on the earlier obtained NOC, if applied afresh.(Fear of losing height in completion stage)

This uncertainty of lesser height to the building at a project completion stage leads to chaos and not an acceptable situation and unjustified. Sometimes, it may also lead to demolition of constructed building with a genuine NOC. Such delay and resultant damages are beyond the scope of developer.

Vide Point No. 1 above, it is suggested to include provision to allow cases where construction of buildings, structures, etc are completed, based upon the approval from the concerned Local, Municipal or Town Planning and Development Authorities not exceeding the Permissible Top Elevation as mentioned in the No Objection Certificate issued by the designated officer of AAI, within overall period of 12 years from the date of No Objection Certificate to obtain Occupation Certificate from the concerned authorities.

In a scenario where the above provision suggested in Point No. 1 is not acceptable, it is essential that one time consideration is granted for those existing NOC's whose validity period has expired; more than 6 months have also passed and are in substantial completion stage. Such structures/buildings are required to be protected for their issued NOC heights for overall 12 years, in line with increased overall validity period of 12 years so that the projects can be taken to its logical conclusion without any further loss or stress to the various stake holders; otherwise it may lead to demolition, if reassessed in accordance with the existing rules.

8. Shielding benefit criteria for Building/Structures:

Part No. / Regulation No	Provision in Draft Rules	Suggestion Proposed	Justification
SCHEDULE - II 4	4. Shielding criteria The principle of shielding is applicable w.r.t. Natural Terrain, already penetrating one of the obstacle limitation surfaces of an airport and it is not likely to be removed. The shielding criteria as explained below are applicable w.r.t. AGA and CNS surfaces.	4. Shielding criteria The principle of shielding is applicable w.r.t. Natural Terrain / Existing Immovable Object; already penetrating one of the obstacle limitation surfaces of an airport and it is not likely to be removed. The shielding criteria as explained below are applicable w.r.t. AGA and CNS surfaces.	Shielding criteria with respect to Existing Buildings / structures should be considered in accordance with earlier provision S.O.84(E), Annex 14, Volume 1, CAR SECTION 4 SERIES 'B' PART I, ICAO Doc 9137 Airport Services Manual, Part 6, and also taking into account worldwide practices followed in Spain, Australia, France, USA, etc.

9. Permanent Nature Displaced Threshold

Part No. / Regulation No	Provision in Draft Rules	Suggestion Proposed	Justification
SCHEDULE - II 1.3.1.4	For determining the approach, the physical extremities of the runway shall only be considered. In case of displaced threshold the permissible height shall be calculated based on approach surface and transitional surface with respect to the runway extremity or displaced threshold whichever is more restrictive.	For determining the approach Surface, the threshold (Physical Extremity/Displaced) shall only be considered as reference point. "In case the Threshold has been displaced due to Obstacles of Permanent Nature, which are in existence for considerable time, not likely to be removed or no scope for runway extension and Instrument Approach Landing Procedure are permanently established at the aerodrome with the threshold(Displaced), the threshold (displaced) shall be considered as reference point" for NOC calculation	Reason: Annex 14 – Aerodromes, Volume I: Approach Surface: 4.1.8 Approach surface is an inclined plane or combination of planes preceding the threshold. (GSR 751E , 1.3 also mentioned the same as Annex 14 provision) In the initial NOC calculations, only runway extremity approach and transition surface is considered and permissible height is calculated. Displaced threshold approach surface is not part of the analysis. During appeal / aeronautical study calculations, approach surface of

			both (Runway Extremity and displaced threshold) are considered for calculation. Hence, it is requested to consider either to grant permissible heights based on displaced threshold approach surface to applicable building /structure (Or) not to consider displaced threshold approach surface analysis during appeal / aeronautical study request for additional height. If, declared distances, Take off Run Available (TORA) & Take off Distance Available (TODA) are considered till runway extremity, then, the building /structure fall outside take - off Climb surface is/are to be considered for permissible height benefit based on displaced threshold approach consideration. (Kindly see the attached detail on the displaced threshold)

10. Ground Based Augmentation System VHF Data Broadcast (GBAS VDB)

Part No. / Regulation No	Provision in Draft Rules	Suggestion Proposed	Justification
SCHEDULE - II 2.14	2.14: Ground Based Augmentation System VHF Data Broadcast (GBAS VDB): No structure	2.14: Ground Based Augmentation System VHF Data Broadcast (GBAS VDB): No structure (located beyond the area of 300	While carrying out siting analysis for installation of GBAS system, the Pedestal height to be cleared for VDB Antenna

	(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.	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. While carrying out siting analysis for installation of GBAS system, the Pedestal height to be cleared for VDB Antenna should be considered at higher level in order to ensure that the heights of structures after commissioning of the system are not adversely affected vis-à-vis the allowable heights in reference to the other CNS facilities / equipments.	should be considered at higher level in order to ensure that the heights of structures after commissioning of the system are not adversely affected vis-à-vis the allowable heights in reference to the other CNS facilities / equipments.

We request you to consider our Suggestions/Objections and grant us a hearing at the earliest.

Yours faithfully,
For CREDAI-MCHI

Mayur Shah
President

Domnic Romell
Hon. Secretary

S. S. Hussain, I.A.S. (Retd.)
Chief Executive Officer

Enclosed: As above.

Copy to:

1. **Hon'ble Shri Suresh Prabhu**
   Ministry of Civil Aviation
   Rajiv Gandhi Bhawan,
   Safdarjung Airport, Block-A,
   New Delhi-110 003

2. **Hon'ble Shri Jayant Sinha**
   Minister of State for Civil Aviation
   Ministry of Civil Aviation
   Rajiv Gandhi Bhawan,
   Safdarjung Airport, Block-A,
   New Delhi-110 003

3. **Shri Rajiv Nayan Choubey (I.A.S.)**
   Secretary, Ministry of Civil Aviation
   Rajiv Gandhi Bhawan
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4. **Shri Arun Kumar, (I.A.S.)**
   Joint Secretary, Ministry of Civil Aviation
   Chairman – Appellate Committee, Airports Authority of India
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5. **Shri Guruprasad Mohapatra, (I.A.S.)**
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6. **Shri A. K. Dutta**
   Member (ANS)
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   Corporate Headquarters, Rajiv Gandhi Bhawan,
   Safdarjung Airport, Block-B,
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7. **Shri S. V. Satish**
   Executive Director -ATM (NOC) & Member of NOC Review Working Group 2017
   Airports Authority of India
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8. **Shri R. K. Singla**
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   Airports Authority of India
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   Safdarjung Airport, Block-B,
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NOTE ON DISPALCED THRESHOLD ANALYSIS

1. **Displaced Threshold Issue is to be resolved to be in line with the ICAO Annex 14 & Civil Aviation Requirement(CAR) and GSR 751E.**

   a) In accordance with S.O.84E as per para 1.3.1.4, it is clearly mentioned that for determining the approach, the physical extremities of the runway shall be considered and if the displacement of the threshold is permanent, benefit of higher height was considered, **Whereas the declaration of permanent displacement was left to the aerodrome operators decision and the benefit of additional height due displacement was not granted in the NOC.**

   As per S.O.84E, displaced threshold approach was not considered for obtaining higher height through aeronautical study and only extremities of the threshold were considered for initial NOC as well as aeronautical study.

   b) **In GSR 751 as per para 1.3.1.4, the words temporary threshold and permanent threshold were removed and permissible height is being calculated after consideration of displaced threshold or runway extremity whichever is most restrictive.**

   In the initial NOC, only runway extremity approach and transition surface is considered (displaced threshold approach is not a part of the analysis). Hence accordingly, the GSR 751 para 1.3.1.4 needs to be amended accordingly.

   The buildings /structure, which fall just outside runway extremity approach surface and within I H S / CS / OHS surface and applied for additional height based on aeronautical study, has been rejected due falling within approach surface, as **approach surface of both (Runway Extremity and displaced threshold) are considered for calculation**.

   c) The plots which are falling in the IHS as per the initial NOC are now falling in the approach segment of displaced threshold and hence these cases are being rejected by AAI, HQ for additional height based on aeronautical study. **Example:**

Party Name	Case Number	Rejection Date
MICL Realty LLP	AAI/20012/133/2017 NOCAS ID: SNCR/WEST/011817/192566	04.08.2017
Arihant Realtors	AAI/20012/120/2017 NOCAS ID: SNCR/WEST/062715/140016	24.07.2017

   d) **Though the displacement of threshold is being considered for cases filed for aeronautical study, the benefit of displacement with respect to the building heights is not given to plots from the beginning of the approach.**

   e) **Extract of Annex 14 – Aerodromes, Volume I - Relevant Para's, which supports the permanent displaced threshold:**

APPROACH SURFACE – DEFINITION:

Approach Surface: 4.1.8 Approach surface is an inclined plane or combination of planes **preceding the threshold.**

11.2: Displaced Threshold: 11.1.1 The threshold is normally located at the extremity of a runway, if there are no obstacles penetrating above the approach surface.

11.2.1 **If an object extends above the approach surface and the object cannot be removed**, consideration should be given to **displacing the threshold permanently.**

11.2.2 To meet the obstacle limitation objectives of Chapter 4, **the threshold should ideally be displaced down the runway for the distance necessary to provide that the approach surface is cleared of obstacles.**

Note : GSR 751 E also mentioned the same Annex 14 Definition:

1.3 Approach Surface

1.3.1 The approach surface shall be established for each runway strip in the direction of intended landing of the aeroplanes and the limits and slopes are given table below:

1.3.1.1 Instrument Runway

Inner Edge of Approach Surface:

Length of Inner edge	- 150 meters for Code No. 1 and 2
	- 300 meters for Code No. 3 and 4
Distance from runway threshold	- 60 meters

Hence, by definition, Approach surface starting point shall be at 60m distance from runway threshold (Whether threshold is Permanent or Temporary). Considering from runway extremity is a non-compliance to the Annex 14, CAR and GSR 751 E provisions.

f) **EFFECT ON PAN OPS PROCEDURE: VISUAL SEGMENT SURFACE:**
(ICAO, Document - 8168, Volume 1)

- New straight-in instrument approach procedures published on or after 15 March 2007 shall be protected for obstacles in the visual segment. For this purpose, no obstacles, except subject to 5.4.6.4, shall penetrate a Visual Segment Surface (VSS) laterally.
- *(5.4.6.4: If the VSS is penetrated, the approach procedure should not be promulgated without an aeronautical study. Mitigation action as a result of such a study may result in an increase of the descent gradient/angle and/ or runway threshold displacement)*
- ILS Glide Path angle for runway 14 is 3 degree (AIP- AD2.22 VABB) and the required for VSS is 1.88 degree (3° – 1.12° = 1.88°).
- The Percentage of required slope is 3.3% (1:33.33)

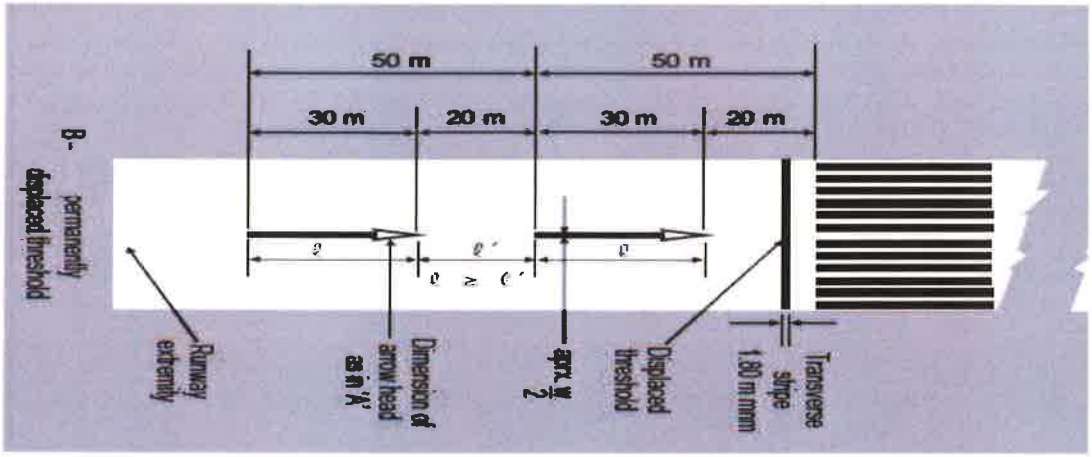
- **ILS Glide Path location, reference datum and determined obstacle clearance limits for Mumbai Runway 09/27/14 are based on threshold location (Displaced).**
- **Portion of objects which are covered under VISUAL SEGMENT SURFACE in accordance with the provision i.e., starting 60m from displaced threshold (shifted approach area) are being analysed for transitional surface requirement of slope 14.3%(1:7).**

Hence, the required obstacle protection slope of 3.3%(1:33.33) for VSS area is not protected which is a safety hazard as the obstacle are not protected or limited in respect to threshold (Displaced).

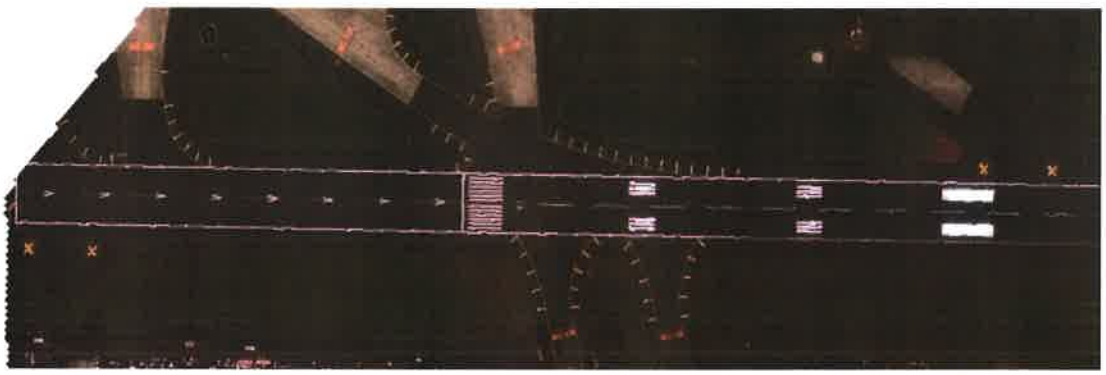
g) **Example : Mumbai Aerodrome:**

- **The threshold is normally located at the extremity of a runway, if there are no obstacles penetrating above the approach surface.**
- The major ends (Extremities) of all the runways at Mumbai International Airport and Juhu airport are **having obstacles penetrating the approach surface and cannot be removed.**
- **09 / 27 – Railway Track Lines, Buildings constructed prior to the inception of the airport. 14 / 32 – National Highway, Buildings constructed prior to the inception of the airport.** Juhu **08 / 26 - Buildings constructed prior to the inception of the airport.**

- As per Annexure 14 of ICAO, when the runway threshold is permanently displaced, the longitudinal strips are placed after the transverse stripe as shown below.



- In the below satellite image (IKONOS - II) for the CSI Airport, Mumbai, it is observed that the marking on the Runway 14 is same as given in Annexure 14 "Aerodromes" for permanent displacement, hence it is clear that the thresholds is permanently displaced from respective extremity of the runway.



h) **The Technical Committee in their joint meeting held on 1/11/2010 and also on 29/4/2011 confirmed and acknowledged the displacement as permanent and accordingly granted more height for development to some buildings. (Information obtained through RTI)**

- Representatives of MIAL, AAI CHQ, AAI RHQ and External Experts were part of this committee.
- The relevant part of the minutes of the meetings is as below:
- **"Representative of MIAL stated that as far as existing obstructions are concerned the issue of take off climb surface and TORA, TODA with respect to permanent obstructions like mobile rail traffic could be mitigated by prescribing a particular climb gradient for departing aircraft from Runway 27 and notifying the same. AAI representatives also concurred with the above views of MIAL"**
- **Based on the above minutes of meetings, several NOC were issued for more height.**
- As per the available and gathered information, there is no future runway extension of Mumbai Airports has been planned, which means that the displaced threshold will be permanent in nature forever.

- Authorities like MMRDA, MHADA, MCGM, PWD, WESTERN RAILWAY, etc have not been notified or informed of any future expansion of runway till date. **Unless they have been informed, extension of runway cannot take place due requirement of shifting / removal of national infrastructure like railways, highways, etc.**

i) If, declared distances, **Take off Run Available (TORA) & Take off Distance Available (TODA) are considered till runway extremity**, then, the building /structure **fall outside take – off Climb surface is/are to be considered for permissible height benefit based on displaced threshold approach consideration.**

j) Hence, it is requested to either give the benefit of additional height based on displaced threshold to all or displaced threshold analysis for additional height in aeronautical study not to be considered from the plots falling within the displaced threshold approach.

k) We therefore request following amendment for consideration in the GSR 751 (E), Para 1.3.1.4: "**In case the threshold has been displaced due to Obstacles of Permanent Nature, which are in existence for considerable time, not likely to be removed or no scope for runway extension and Instrument Approach Landing Procedure are permanently established at the aerodrome with the threshold reference, the Threshold (Displaced) shall be considered as reference point" for NOC calculation**

Prepared by
Shri T. Mohan Chandran, Aviation Consultant & Adviser.
For CREDAI-MCHI
Mumbai