



Airports Authority of India

DIRECTORATE OF AIR TRAFFIC MANAGEMENT
DEPARTMENT OF AERODROME SAFEGUARDING
RAJIV GANDHI BHAWAN, NEW DELHI-110003

[File No. AAI/ATM/DoAS/72/2019]

AERODROME SAFEGUARDING CIRCULAR (ADSAC) 4 OF 2020

Subject: Preparation & Implementation of Colour Coded Zoning Map (CCZM).

1. Introduction

1.1. Rules 6 of Govt. of India notification GSR 751E issued on 30th September 2015 mandates that *"The Colour Coded Zoning Maps (CCZM) shall be issued by the Airports Authority of India based on the latitude & longitude of the area in respect of civil aerodromes which shall indicate through different colour coded grids, the permissible heights in the areas around the airport, falling within the radius not exceeding twenty kilometers from the Aerodrome Reference Point. The CCZM shall be available at AAI website www.aai.aero" for public use.*

1.2. Rule 7, sub-rule (2) of GSR 751(E) reads *"In cases of aerodromes where the Colour Coded Zoning Maps has been issued, the Local, Municipal or Town Planning and Development authorities shall, in accordance with the height specifications provided in such Colour Coded Zoning Maps, approve the construction of the structures, as per the existing building regulations or bye laws or any other law for the time being in force:*

Provided that no such approval shall be given by the Local, Municipal or Town Planning and Development authorities for sites which lies in approach, take off and transitional areas of an airport or in any other area, marked in the Colour Coded Zoning Map for the compulsory obtaining of No Objection Certificate from the designated officer or authorised officer".

The CCZM depicts the Permissible Top Elevation (PTE) for a grid in a particular coloured zone.

1.3. In compliance of the Govt. of India's directive, AAI has issued CCZM of 78 airports and published them on its website <https://nocas2.aai.aero/nocas/index.html> and



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provided the same to the Local Bodies for their implementation as envisaged by GSR-751(E).

2. Purpose

- 2.1. The purpose of this Aerodrome Safeguarding Circular (ADSAC) is to standardize the methodology of preparation of CCZM, procedure of its publication and its usage by the Urban Local Bodies (ULBs) for approving the building plans below CCZM top elevation.
- 2.2. This ADSAC explains the following regarding CCZM:
- 2.2.1. Preparation methodology and Publication of CCZM,
 - 2.2.2. Roles and responsibilities of Urban Local Bodies for effective implementation of CCZM; and
 - 2.2.3. Benefits of CCZM.
- 2.3. Airport Director/ CEO of an airport will pursue the ULBs in adopting the CCZM permissible top elevations (PTEs) for structures under CCZM Top Elevation for approving the building heights. Collaborating with the Urban Local Bodies (ULBs) for implementation of Color Coded Zoning Map (CCZM) will result in Ease of Doing Business and control and monitoring of obstacles for safe aircraft operations.

3. Scope / Applicability

This ADSAC applies to all airports for which CCZM has been published by AAI, under operational and management control of AAI and the other public and private use licenced civil airports for which AAI is responsible for issuance of NOC for height clearance under GSR751(E) or any other notification issued by GOI for the purpose under the Aircraft Act 1934 Section 9A. This ADSAC will also be useful to the concerned Local Bodies, Development Authorities and Town Planning Authorities.

4. Cancellation

- 4.1. Nil

5. Effective date

- 5.1. This ADSAC will be effective from the date of its issue.



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6. Preparation and publication of Colour Coded Zoning Map (CCZM)

6.1. Rules 6 of Govt. of India notification GSR 751E issued on 30th September 2015 mandates that the Colour Coded Zoning Maps (CCZM) shall be issued by the Airports Authority based on the latitude & longitude of the area in respect of civil aerodromes which shall indicate through different colour coded grids, the permissible heights in the areas around the airport, falling within the radius not exceeding twenty kilometers from the Aerodrome Reference Point. The CCZM shall be available at AAI website www.aai.aero.

6.2. The Colour Coded Zoning Maps (CCZMs) are prepared by Dept. of Aerodrome Safeguarding at AAI CHQ by extensive use of NOCAS application including CCZM automation tool developed in 2019.

6.2.1. Nodal Officer prepare a list of Airports for which CCZMs are to be created and is responsible to ensure that the data of the airport in respect of AGA, CNS & PANS-OPS procedures in NOCAS is current to the extent feasible.

6.2.2. The Designated Nodal Officer (CCZM) shall create the CCZM preferably by extensive usage of CCZM automation tool in "No Objection Certificate Application System (NOCAS)" version 2.0.

6.2.3. Generally, the grid size selected for CCZM creation is (1' x 1') Grid which may be altered to (30" x 30") Grids in areas closure to the airport max. up to 4 kms to reduce the RED Zone in the CCZM or to accommodate special requirements from Urban Local Bodies (ULBs)/Development Authorities.

6.2.4. The CCZM thus created is to be verified by AGA, CNS and PANS-OPS point of view and therefore distributed to the respective AGA/CNS/PANS-Ops users for verification of the permitted top elevation through online NOCAS or on file in hard copy form.

6.2.5. After obtaining all the comments, the Nodal Officer-CCZM shall compile all the comments and update the CCZM to incorporate the feedbacks to maximum extent possible and present the CCZM along with feedbacks to the GM (ATM-DoAS) for approval.

6.2.6. GM (ATM-DoAS) shall review all the comments and approve the CCZM for issuance and publication.



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6.2.7. The Nodal Officer-CCZM (DO-CCZM) shall ensure publication of CCZM in grid format as well as CCZM with geographical features at <https://nocas2.aai.aero/nocas>. Nodal Officer-CCZM shall also ensure that the CCZM is incorporated into NOCAS and a copy of the approved CCZM is provided to the respective airport for further distribution to the ULBs.

6.2.8. Shape file (GIS format) may also be provided to the Local Bodies so that the CCZM grids are superimposed by the Local Bodies on the city maps for better appreciation and utilization.

7. Procedure for application of CCZM

7.1. The availability of CCZM of an aerodrome empowers the concerned Local Body to clear the building proposals up to top elevation below CCZM elevation, without referring to AAI.

7.2. The grid-wise permitted top elevations Above Mean Sea Level (AMSL) are indicated in various colours, increasing with the distance from Airport. Red Colour grid indicates that no predetermine top elevation is given. For sites in Red area, compulsory NOC applications are to be filed. The maximum height that can be approved through CCZM is up to 140m above the Aerodrome Elevation.

7.3. CCZM of 78 airports have been issued to the public and the Local Bodies / Municipal Corporations etc. All the CCZMs in pdf format as well as interactive CCZMs are available at <https://nocas2.aai.aero/nocas>. CCZM of other airports will be issued in due course.

7.4. NOC applications submitted through NOCAS for height clearances with PTE less than CCZM approved elevation shall be auto-settled.

7.5. For IFR aerodrome CCZM, the Permissible Top Elevation (PTE) of the buildings/ structures beyond 20Km and up to 56Km of ARP shall be the PTE of the outer most grids of the CCZM. The large grid between 20km to 56km is indicated as "XX56" and harmonized in NOCAS for auto-settle purpose.

8. Interpretation and implementation of the CCZM

8.1 The applicant shall locate the plot/site in CCZM based on WGS coordinates and identify the home grid, where the plot/site lies. Co-relate the colour of the home grid



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with the colour legend, available in CCZM and check the Permissible Top Elevation (PTE). A draft CCZM is attached as **Annexure-I**.

8.2 The applicant may also use Interactive CCZM available in NOCAS for identification of home grid and permissible top elevation.

8.3 In case, the colour of the home grid is RED, the applicant shall apply online for NOC for height clearance to AAI through NOCAS at <https://nocas2.aai.aero/nocas/index.html> for issuance of NOC or through the Common Allocation Form (CAF) with the Urban Local Bodies (ULB) where the web service of ULBs have been integrated with NOCAS website for single window clearance in accordance with Ministry of Urban development initiative for 'Ease of Doing Business'.

8.4 The applicant shall approach the concerned Local Body for building plan approval if the requested height is below the CCZM permitted top elevation.

8.5 In case the desired height is more than the CCZM permitted top elevation, then the applicant shall apply online for NOC for height clearance to AAI through NOCAS at <https://nocas2.aai.aero/nocas/index.html> for issuance of NOC or through the Common Application Form (CAF) with the Urban Local Bodies (ULB).

9. Benefits of Colour Coded Zoning Map (CCZM)

9.1 Some benefits that can be drawn by creation and publication of CCZM for an aerodrome are enumerated as:

- a) Except in the areas marked in Red Colour in a CCZM, NOC application for height clearance below the CCZM height are not required to be made to AAI.
- b) The Urban Local Bodies are authorized to approve construction of buildings as per their own building regulations/bye-laws up to the heights indicated in CCZM. NOC for height clearance from AAI for buildings/ structures below the height specified in the CCZM is not required.
- c) Developers/ULBs can plan their own projects expeditiously without seeking NOC from AAI up to the heights indicated in the CCZM.
- d) Reduced workload of various offices of Department of Aerodrome Safeguarding (DoAS), AAI will result faster resolution of the NOC applications filed through NOCAS.
- e) Auto settle criteria: The NOC application filed through online NOCAS is auto-settled if the Requested Top Elevation (RTE) is below the CCZM permitted to elevation. A system generated assessment letter is issued to the applicant.



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10. Role of Urban Local Bodies in CCZM implementation

- 10.1 Local, Municipal or Town Planning and Development authorities shall, in accordance with the height specifications provided in Colour Coded Zoning Maps, approve the construction of the structures, as per the existing building regulations or bye laws or any other law for the time being in force.

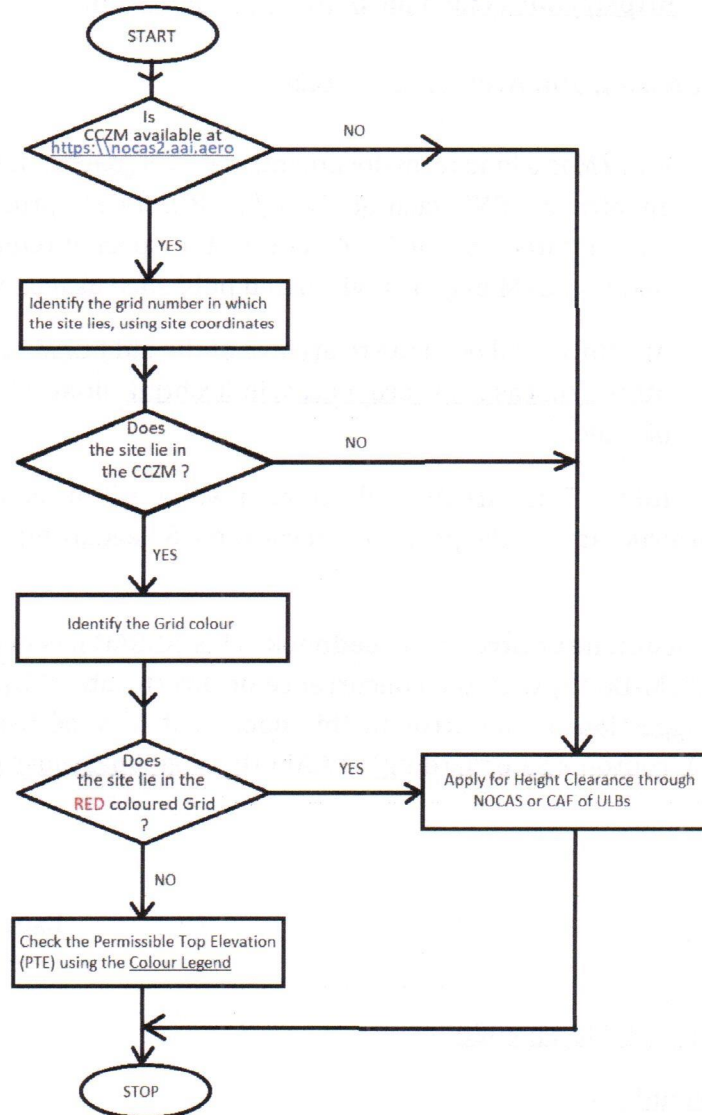
Provided that no such approval shall be given by the Local, Municipal or Town Planning and Development authorities for sites which lies in grid marked in Red colour in the Colour Coded Zoning Map for the compulsory obtaining of No Objection Certificate from the concerned Designated Officer.

- 10.2 For Civil Airports, being safeguarded by AAI for which CCZM have not been issued, need to apply at <https://nocas2.aai.aero/nocas/index.html> for issuance of NOC for height clearance as per the procedure.
- 10.3 The Local, Municipal or Town Planning and Development authorities shall approve/sanction Building Plan only if height of the building or structure is within the permissible elevation as indicated in the Colour Coded Zoning Map for the given site. In case the site overlaps multiple grids, lowest grid top elevation will be applicable.
- 10.4 The Local, Municipal or Town Planning and Development Authorities shall submit the details of structures approved using CCZM to the concerned designated officer within a period of thirty days from the date of such approval.
- 10.5 The CCZM grids may be superimposed on the city planning maps by the Urban Local Bodies for its effective implementation. Shape file of the CCZM may be obtained from AAI CHQ by writing to nocashelp@aai.aero or gmdoaschq@aai.aero.
- 10.6 Local Bodies may interact with the concerned Airport Director/CEO of the airport for seeking clarification, if any, and also convey their feedback/suggestions on CCZM.



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11. CCZM Flow Diagram:



CCZM Flow Chart

12. Limitation of CCZM:

12.1. The CCZM indicates the grid-wise Permitted Top Elevations above AMSL or in reference to EGM08 datum. The Local Bodies/Developer shall ensure that site elevations are surveyed correctly to ensure that building/structure top elevation does not exceed the CCZM permitted top elevation. CCZM permitted top elevation \geq site elevation + building height above ground.



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12.2. If a Developer plans to construct above CCZM elevation, NOC from AAI shall be required. An application shall be filed through NOCAS at <https://nocas2.aai.aero/nocas/index.html>.

13. Revision and Archiving of CCZM:

13.1 A CCZM is a long term document, however, based on the revision of Master Plan of an airport, CNS facilities and/or PANS-OPS procedures duly approved and incorporated in NOCAS, or due to the specific requirement of concerned Local Body, a CCZM may be revised and published as next version.

13.2 All efforts will be made to archive of the old CCZM of an airport in pdf form at <https://nocas2.aai.aero/nocas/index.html>, along with version No. and their date of issue.

14. **Validity:** This ADSAC will remain valid till it is amended or withdrawn or incorporated in the proposed Aerodrome Safeguarding Manual (to be developed).

15. **Document Control and feedback:** This ADSAC has been issued by the office of ED (ATM-DoAS) with the concurrence of Directorate of Operations, AAI. Any feedback, suggestion or the error in this document may be brought into the notice of GM (Aerodrome Safeguarding) at AAI CHQ at gmdoaschq@aai.aero.

(J.P. Alex)

Executive Director (ATM-DoAS)

Dated: 16th March 2020

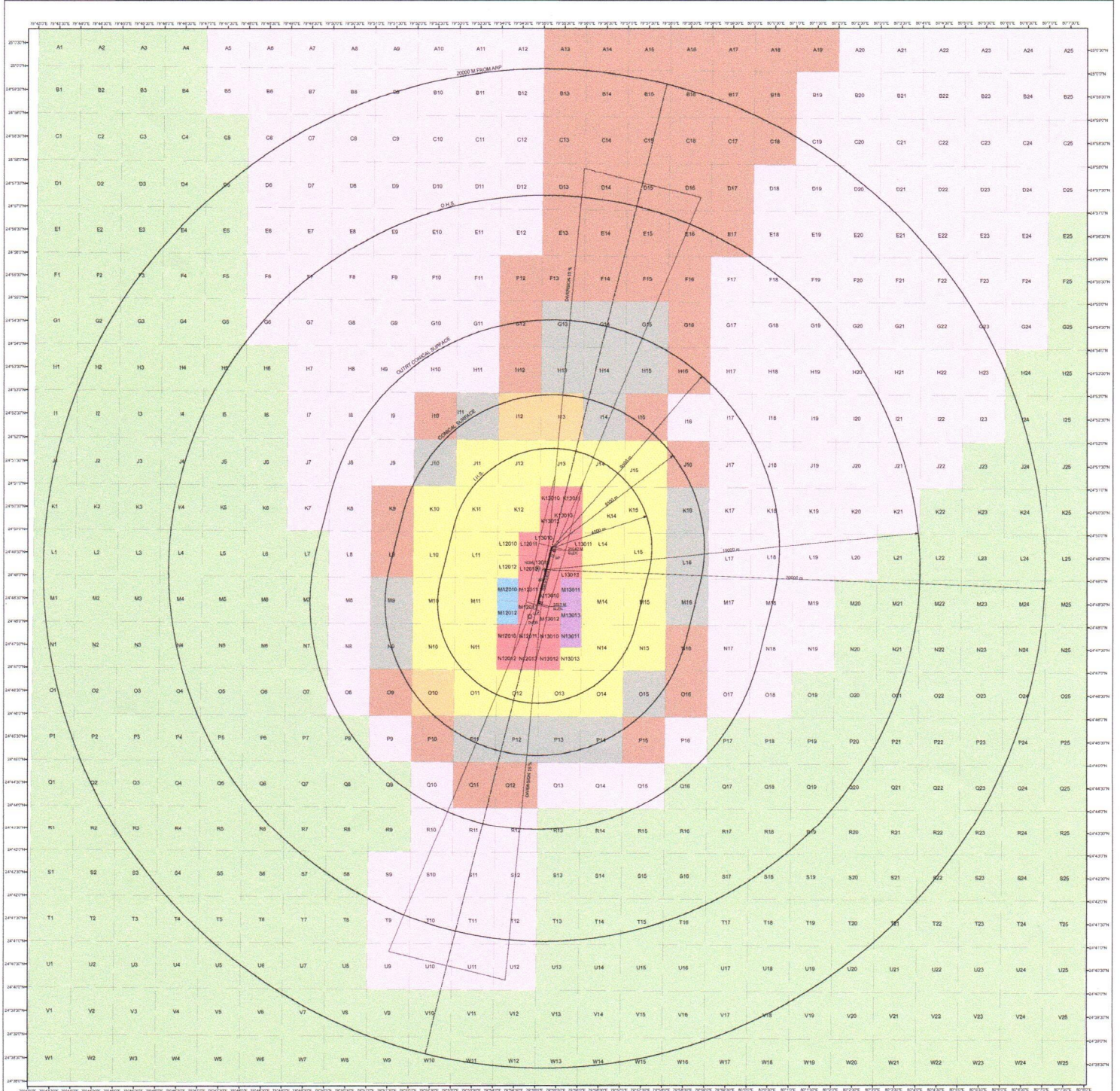
Distribution:

1. All REDs/All APDs of AAI.
2. Chief Executive Officers of all Joint Venture Airports.
3. In-Charge of all licensed Private and State Govt. Airports including RCS Airports.

[illegible]

DATUM WGS-1984

KHAJURAHO AIRPORT		RWY END CO ORDINATES		LIST OF NAV AIDS AT KHAJURAHO AIRPORT		<div>SCALE: 1:40000</div> <div><div>01000200030004000500060007000</div><div>Meters</div></div> <div><div>1. ALL GEOGRAPHICAL COORDINATES ARE IN WGS-1984.</div><div>2. ALL ELEVATIONS, CONTOURS AND DIMENSIONS ARE IN METERS.</div></div> <div><div>N</div><div>KHJ</div><div>11° E</div><div>ANNUAL WIND DIRECTION 11° E</div></div> <div>COLOR CODED ZONING MAP (GRID FORMAT) OF KHAJURAHO AIRPORT</div>	
LATITUDE	24°48' 11.386"N			S.NO.	NAV AIDS	COORDINATES	ELEVATIONS
LONGITUDE	82°59' 48.80"E	RWY 01	24°48' 27.45"N	1.	NDB	24°48' 13.00"N 078°54' 58.04"E	217.1 M
AMP ELEVATION	217.14 M		078°54' 58.18"E	2.	ALS	24°48' 13.00"N 078°54' 58.07"E	222.1 M
MEO ELEVATION	222.81 M	RWY 19	24°48' 36.70"N	3.	GP	24°48' 28.64"N 079°00' 18.81"E	212.8 M
RWY DIVER	2228M/42M		079°02' 17.10"E	4.	DVOR	24°48' 10.78"N 078°54' 48.80"E	223.3M



COLOUR LEGEND		NOTES:-		APPLICABLE FROM DATE: 13-03-2019 (SUBJECT TO REVIEW AND WHEN REQUIRED)		VERSION: 1.1	DATE: 13-03-2019
NOZ TO BE OBTAINED FROM AA	272M	PERMISSIBLE TOP ELEV 272M ANSL OR BELOW	1. THIS CCZM HAS BEEN ISSUED IN ACCORDANCE WITH MCAI NOTIFICATION NO GSR 71(1)E/11 IN RESPECT OF KHAJURAHO AIRPORT AND DOES NOT INCLUDE SUBSECTION OF EXISTENCE AIRPORT.	COMPILED BY: (DR SUBJECT)	(DR SUBJECT)	RECOMMENDED BY: ACM (ACC)	(ACM ACC)
231M	262M	PERMISSIBLE TOP ELEV 262M ANSL OR BELOW	2. NOZ IS NOT REQUIRED FROM AA FOR BUILDINGS / STRUCTURES PROPOSED TO BE CONSTRUCTED UP TO THE HEIGHT PERMITTED VICE THIS CCZM REFER TO 11 (E) RULE 7.1 (3) & 4.3	APPROVED BY: (DR SUBJECT)	(DR SUBJECT)	APPROVED BY: (DR SUBJECT)	(DR SUBJECT)
242M	252M	PERMISSIBLE TOP ELEV 252M ANSL OR BELOW	3. THE ELEVATION PERMITTED BY CCZM ARE INDICATED ABOVE MEAN SEA LEVEL. (A) ANSL BUILDING HEIGHT PERMITTED (A) ABOVE GROUND LEVEL (ANSL) WILL BE CALCULATED AS BUILDING HEIGHT (ANSL) = CCZM ELEVATION FOR THE RESPECTIVE GRID - SITE ELEVATION OF THE BUILDING.				
252M	242M	PERMISSIBLE TOP ELEV 242M ANSL OR BELOW	4. AS PER GSR 71(1) (E) RULE 8.4 (A) THE LEVEL ROAD AND LEVEL RAILWAY LINES WITHIN ONE KILOMETER OF THE AIRPORT BOUNDARY WALL SHALL ALSO BE SUBJECT TO ISSUANCE OF THE NO OBJECTION CERTIFICATE.				
262M	232M	PERMISSIBLE TOP ELEV 232M ANSL OR BELOW	5. AS PER GSR 71(1) (E) SCHEDULE 1 (1.2) INSTALLATION OF EXTRA HIGH TENSION/ULTRA HIGH TENSION LINES SHALL NOT BE PERMITTED WITHIN 100 METERS OF THE INNER EDGE OF THE APPROACH AND TAKE OFF/CLIMB SURFACE.				
272M	222M	PERMISSIBLE TOP ELEV 222M ANSL OR BELOW	(ISSUED BY AIRPORT'S AUTHORITY OF INDIA)				