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No. 5/1989
24th March 1989

(No. NAA/30-47/86-ARI)
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The Government of India, Ministry of Civil Aviation Notification No. S. O. 988 dated 5th January 1988 is reproduced below for information and guidance.
A. I. C. No. 8 of 1980 is cancelled herewith.

AIR MARSHAL C.K.S. RAJE, PVSM, AVSM
CHAIRMAN
NATIONAL AIRPORTS AUTHORITY

MINISTRY OF CIVIL AVIATION
New Delhi, the 5th January, 1988

S.O. 988.—In exercise of the powers conferred by section 9-A of the Aircraft Act, 1934 (22 of 1934) and in supersession of the notification of the Government of India in the erstwhile Ministry of Tourism and Civil Aviation No. GSR 516, dated the 15th March, 1979, the Central Government, being of opinion that it is necessary and expedient so to do for the safety of aircraft operations hereby direct that:—

- (i) No building or structure shall be constructed or erected, or no tree shall be planted, on any land within the limits specified in Annexure I to this notification in respect of Civil and Military Aerodromes existing as listed in Annexure III to this notification, aerodromes to be constructed or developed and notified by the Competent authority in future where there is any building, structure or tree on such land, the owner or the person having control of such building, structure or tree shall demolish such building or structure or, as the case may be, cut such tree forthwith but not later than a period of one month from the date of publication of this notification in the Official Gazette;

- (ii) No building or structure higher than the height specified in Annexure II to this notification shall be constructed or created, or no tree which is likely to grow or ordinarily grows higher than the height specified in the said Annexure II, shall be planted, on any land within a radius of twenty kilometres from the aerodrome reference point (ARP) of the aerodromes listed in Annexure III to this notification excluding the land covered by Annexure I to this notification or aerodromes which would be constructed or developed and notified by the competent authority from time to time, where the height of any building or structure or tree on such land is higher than the height specified in the said Annexure II, the owner or the person having control of such building, structure, or tree shall forthwith but not later than a period of one month from the date of publication of this notification in the Official Gazette, reduce the height thereof so as not to exceed the specified height.

ANNEXURE I

1. The land enclosed in approach funnels of the runway with a maximum distance of 360 metres, measured from each runway end along extended centre line of the runway.

1.1 The land comprising within the runway strip of uniform width of 150 metres on either side of the centre line which extend to 60 metres beyond each extremity of the runway end along extended centre line of the runway.

1.2 The land comprising within the runway strip of uniform width of 75 metres on either side of the centre line which extend to 60 metres beyond each extremity of the runway or associated stopway in case of non-instrument runway.

Note—In this Annexure:—

(a) "approach funnel"—

(i) in relation to an instrument runway, means the area in the shape of an isosceles trapezium having the longer parallel side 4800 metres long (2400 metres on either side of the extended centre line of the runway) and smaller parallel side 300 metres long (150 metres on either side of the extended centre line of the runway) where the smaller and longer parallel sides are placed at a distance of 60 metres and 15060 metres, respectively, from the end of the runway and at right angles to the extended centre line;

(ii) in relation to a non-instrument runway, means the area in the shape of an isosceles trapezium having the longer parallel side 1800 metres long (900 metres on either side of the extended centre line of the runway), and smaller parallel side 180 metres long (90 metres on either side of the extended centre line of the runway), where the smaller and longer parallel sides are placed at a distance of 60 metres and 6540 metres, respectively from the end of the runway and at right angles to the extended centre line. Thereafter, the trapezium is followed by a contiguous rectangular area of that width for the remainder of the length upto a distance of 15060 metres from the end of runway.

(b) "instrument runway" means a runway served by visual aid or aids providing directional guidance adequate for a straight in approach and intended for the operation of aircraft using instrument approach procedures.

2. In an aerodrome where:—

(a) VOR/TVOR/DVOR/DME/VHF DF facilities are available, the land within 305 metres radius of the VOR/TVOR/DVOR/DME/VHF DF.

(b) Localiser facilities are available, the area upto 305 metres on $\pm 35^\circ$ of the localiser beam and upto 60 metres on area beyond $\pm 35^\circ$ of the localiser antenna.

(c) Glide Path facilities are available, the area bounded by the following:—

(i) A line 460 metres in the direction of the approach from the glide path facility and perpendicular to the runway.

(ii) A line 120 metres in the opposite direction and perpendicular to the runway.

(iii) Far edge of the runway from the glide path.

(iv) A line 120 metres in the directions away from the runway and parallel to it.

(d) Locators/Marker Beacons facilities are available, the land within a radius of 30 metres of the site of the marker and locator beacons.

(e) ASR facilities are available, the area within a radius of 305 metres of the A.S.R.

(f) ARSR/SSR facilities are available, the area within a radius of 610 metres of the ARSR/SSR site.

(g) Microwave Link facilities are available, the area 45 metres width on either side of the direct line of sight in azimuth and 9 metres from the line of sight in elevation in the vertical plane.

- (h) Extended Range VHF facilities are available, upto a distance of 305 metres in front of the antenna.
- (i) UHF Link facilities are available, on a corridor of 50 metres on either side of the direct line of azimuth and 30 metres in vertical from the line of sight in the elevation plane;
- (j) Beacon facilities are available, within a radius of 180 metres around the antenna.
- (k) Remote Receiver facilities are available, within a radius of 1525 metres of the site.

ANNEXURE—II

The permissible elevations are to be worked out based upon the aerodrome and ground aids, the radio navigational aids and operational requirements of minimum obstacle clearance for safety of aircraft operations. The lowest elevations thus worked out will be applicable for any structure/building.

1. Based on Aerodrome and Ground Aids.

- 1.1 Take-off climb/approach areas and surfaces :—Maximum permissible elevation is below 2 per cent slope from end of the basic strip upto a distance of 2285 metres on the extended centreline of the runway.
- 1.2 Transition Surface :—The maximum permissible height will be 14.3 per cent in the area which shall be measured in a vertical plane at right angle to the centreline of the runway upto a distance of 474 metres for instrument runway and 400 metres for non-instrument runway.
- 1.3 Inner Horizontal Surface :—The maximum permissible height of a structure below the Inner Horizontal Surface will be 45 metres above the aerodrome reference point, if the runway length is less than 1525 metres and will be 45 metres above the nearest runway end elevation, if the runway length is 1525 metres or more.
- 1.4 Conical Surface :—The slope in the conical surface will be measured above the Inner Horizontal Surface in the vertical plane beyond a distance of 4000 metres extending upto 6100 metres from the aerodrome reference point, if the runway length is less than 1525 metres and from the nearest runway end, if the runway is 1525 metres or more. The height applicable will be 45 metres plus 5 per cent of the slope of the distance more than 4000 metres above the aerodrome reference point.
- 1.5 Outer Horizontal Surface :—Outer Horizontal Surface shall extend from 6100 metres from the aerodrome reference point upto 15240 metres and the applicable height will be 150 metres above the aerodrome reference point.
(Please see Annexure IV for Description of Surfaces).

2. Based on Navigational Aids :—(Heights are applicable beyond the distance given in Annexure-I).

- 2.1 VOR/TVOR/DVOR/DME/VHF DF :—Beyond 305 metres radius of the facility, an object should not protrude an angle of elevation of one degree from the facility site.
- 2.2 ILS
 - 2.2.1 Localiser :—Beyond the area specified in sub para (b) of para 2 in Annexure-I, an object should not protrude an angle of elevation of 0.75 degrees.
 - 2.2.2 Glide Path :—Beyond the area specified in sub-para (c) of para 2 in Annexure-I, a building/structure should not subtend an angle of elevation more than 1 degree.
- 2.3 Markers/Locators :—Beyond the area specified in subpara (d) of para 2 in Annexure-I, structure is allowed upto a height of 9 metres to a distance of 110 metres from the facility and an angle of elevation of 0.5 degree beyond 110 metres.
- 2.4 A.S.R. :—Beyond 305 metres of the facility, the structure should not subtend an angle of elevation more than 0.5 degree.
- 2.5 ARSR/SSR :—Beyond 610 metres of the facility upto 1 NM, structure is allowed upto radar antenna height. More than 1 NM, structure should not form an angle of elevation more than 0.5 degree.
- 2.6 Extended Range VHF :—Beyond 305 metres from the antenna front, the elevation angle permitted is 0.5 degree in the line of shoot (10 degrees on either side of the desired direction).

3. Based on Operational Criteria :—The heights of structures shall be restricted with reference to the Obstacle Clearance Altitudes as published in Notices to Airmen and amended from time to time. The vertical clearance between the structure and the aircraft making an instrument approach to land shall be upto 150 metres.

NOTE (Definitions)

1. **Basic Strip:**—A uniform strip of 150 metres on either side of the centreline of the runway which extend 60 metres beyond each extremity of the runway and or associated stop way of instrument runway and 75 metres in case of non-instrument runway.
2. **Take-off climb & Approach Surface:**—The land enclosed in the approach funnel of all runways where distances are measured from each end of the runway along its extended centre line (see Annexure-I).
3. **Transition Area:**—Transition area is an area which is below a specified surface sloping upwards and outwards from the edge of the approach funnel and from the line originating at the end of the inner edge of each approach area drawn parallel to the runway centreline in the direction of landing and along the line at right angle to the centre line of the runway.
4. **Inner Horizontal Surface:**—A horizontal surface of radius 4000 metres located from the aerodrome reference point, if the runway length is less than 1525 metres and from the runway end, if the runway length is 1525 metres or more. The I.H.S. may be of composite pattern which may consist of two or more circular patterns centred at different runway ends and then joined tangentially.
5. **Conical Surface:**—Conical Surface shall be projected upwards and outwards from the periphery of I.H.S. upto a distance of 6100 metres from the A.R.P./nearest runway end.
6. **Outer Horizontal Surface:**—The Outer horizontal surface shall extend from the periphery of conical surface upto a distance of 15240 metres from the ARP.
7. **Aerodrome Reference Point:**—It is a designated point which is established in the horizontal plane at or near the geometric centre of the landing area.
8. **Elevation or Reduced Level:**—It is a vertical distance of a point or a level on or affixed to the surface of the earth measured from mean sea level.
9. For description of 'approach funnel', 'runway strip', 'transitional areas', 'Horizontal' and 'Conical' surfaces, see diagram Annexure IV to this Notification.

Description of Communication/Navigational Facilities :

1. **VOR/TVOR/DVOR:**—V.H.F. Omni Radio Range (VOR), Terminal V.H.F. Omni Radio Range (TVOR) and Doppler V.H.F. Omni Radio Range operating in the VHF band of frequencies 112 to 118.0 Mhz, radiate signals whereby an aircraft with the help of an instrument in its cockpit when tuned to the ground equipment frequency automatically gets his direction with respect to the facility. This helps an aircraft to navigate on a predetermined course or to home to an airport served by the facility.
2. **ILS.**—It is an abbreviation for "Instrument Landing System". It serves to help an aircraft to make a safe landing on the runway served by the ILS in condition of poor visibility. It comprises of the following component facilities :—
 - (i) **Localiser.**—This facility radiates VHF signals which when picked up by an aircraft, guide it onto the centre line of the runway in the horizontal plane. Normally situated about 305 metres from the runway end.
 - (ii) **Glide Path.**—This facility radiates UHF (Ultra High Frequency) signals. It is normally situated about 275 metres to 305 metres from the runway threshold and offset about 122 metres to 137 metres from the centreline of the runway. This provides the glide angle information to a landing aircraft with the help of an instrument in the cockpit which when tuned to the glide path frequency indicates whether the aircraft is flying up/down/along the correct glide angle.
 - (iii) **Outer Marker/Outer Locator:**—Outer Marker facility operating on 75 MHz in the VHF band is normally installed along the extended centreline of the runway at a distance between 3.5 and 6 nautical miles (1 nautical mile—1853 metres).
It produces radiation pattern to indicate to the landing aircraft the predetermined distance from the threshold along the I.L.S. glide path.
3. **RADAR**
 - (i) **ASR.**—It is a radar facility serving an aerodrome to scan the air traffic within 50 to 60 nautical miles of the aerodrome
 - (ii) **ARSR/SSR.**—Air Routes Surveillance Radar is a high power long range radar covering a distance of 200 nautical miles approx. It scans air traffic to a larger distance than ASR.
4. **Communication/Navigational Facilities :—**
 - (i) **Microwave Link.**—It is a radio facility whereby mostly radar intelligence is carried to the Air Traffic Control Display site.
 - (ii) **Extended Range VHF.**—It is a VHF two way air-ground communication facility employing high power VHF transmitter. The normal VHF range of 150 to 200 nautical miles is extended to about 300 nautical miles.
 - (iii) **UHF Link.**—A radio relay facility operating in Ultra High Frequency Band.
 - (iv) **Beacons.**—These are radio transmitters operating in the MF band from 200 to 400 KHz radiating omni directionally in the horizontal plane. An aircraft equipped with a suitable cockpit instrument can get its direction automatically with respect to it.
 - (v) **Remote Receivers.**—These are radio receiving stations (HF Band) installed at remote sites away from factory/industrial areas to avoid interference like man-made static etc.

RESTRICTED

ANNEXURE—III

PART-I
List of Defence Aerodromes indicating elevation of Airfield reference point (ARP) and Runway direction

Sl. No.	Name of Aerodrome	ARP Elevation (Metres/Feet)	R/W Direction (Magnetic)
1.	Adampur	247/611	13/31
2.	Adilabad	257/643	05/23
3.	Agra	167/549	05/23 12/30
4.	Allahabad	97/319	12/30 07/25
5.	Ambala	274,899	30R/12L 12R/30L
6.	Awantipur	1649/5410	12/30
	Bagdogra	126/414	18/36
8.	Bahadurgarh	212/697	09/27 13/31
9.	Bakshi Ka-Talab	123,404	09/27
10.	Banar	211/692	05/23
11.	Bareilly	173/568	11/29
12.	Barrackpore	6/18	02/20
13.	Bhatinda	205 666	13/31
14.	Bidar	664/2178	08/26 02/20
15.	Bihta	54/177	10/28
16.	Bikaner (Nal)	215/706	05/23
17.	Car-Nicobar	13/42	02/20
18.	Chabua	110,361	05/23
19.	Chandigarh	314/1029	11/29
20.	Chushul	4337/14229	15/33
21.	Daman	11 36	03/21 10/28
22.	Deolali (Nasik Road)	599 1968	09/27
23.	Dinjan	118,397	03/21 12/30
24.	Diu	7/23	05/23
25.	Ferozpur	196/642	14/32 04/22
26.	Fukcha	4178 13707	14/32
27.	Gorakhpur	78 255	11/29
28.	Gwalior (Maharajpur)	158 617	06/24 11/29
29.	Hakimpet	613/2011	09/27 14/32
30.	Halwara	239/784	13/31
31.	Hashimara	109/858	11R/29L 11L/29R
32.	Hathwa	67/220	13/31
33.	Hindon	214/702	09/27

Sl. No.	Name of Aerodrome	ARP Elevation Mtrs./Feet.	R, W Direction (Magnetic)
34.	Hyderabad (AFA)	613/2013	10L/28R 10R/28L
35.	Jaisalmer	236/774	04/22
36.	Jalahalli	927/3042	10/28
37.	Jammu	291/956	18/36
38.	Jamnagar	15/49	06/24
39.	Jodhpur	216/710	12/30
40.	Jorhat	91/300	05/23
41.	Kalaikunda	61/200	04/22
42.	Kachrapara	8/26	17/35
43.	Kanpur (Chakeri)	123/405	16/34
44.	Kargil	2920/9579	09/27
45.	Khambelia	44/145	01/19
46.	Leh	3256/10682	02/20
47.	Manipur Road (Dimapur)	148/485	09/27
48.	Misamari	95/312	01/19
49.	Naliya	43/142	02/20
50.	Neemuch	493/1617	09/27
51.	Panagarh	73/240	07/25
52.	Pathankot	311/1020	12/30
53.	Phaphameu	94/307	05/23
54.	Punch	1003/3292	17/35
55.	Pune	592/1942	10/28
56.	Purnea	36/119	14/32
57.	Salawes	201/660	09/27
58.	Sarsawa (Saharanpur)	271/890	05/23
59.	Shillong	1767/5795	09/27
60.	Sirsa	199/653	04/22
61.	Srinagar	1657/5436	05/23
62.	Sulur	380/1248	13/31
63.	Suratgarh	180/600	05/23
64.	Tambaram	28/89	10/28
65.	Tezpur	70/230	05/23
66.	Turiat (Aljal)	305/1000	01/19
67.	Udhampur	634/2079	18/36
68.	Utterlāl	154/505	02/20
69.	Yelahanka	928/3045	09/27

LIST OF AERODROMES CONTROLLED BY NATIONAL AIRPORTS AUTHORITY AND INTERNATIONAL AIRPORTS AUTHORITY, OF INDIA

Sl. No.	Name	State/Union Territory	Location		Elevation Metres (Feet)	R/W Direction	R/W Dimensions Metres (Feet)
			Latitude (North)	Longitude (East)			
1	2	3	4	5	6	7	8
1.	Agartala	Tripura	235224	911432	14m (47')	05/23 18/36	1631mX46m (5350'X150') 1829mX46m (6000'X150')
2.	Ahmedabad	Gujarat	230414	723737	55m (180.4')	05/23 14/32	2286mX46m (7500'X150') 1477mX46m (4860'X150')
3.	Akola	Maharashtra	204152	770332	305m (1000')	10/28	1219mX46m (4000'X150')
4.	Amritsar	Punjab	314217	744811	229m (752')	16/34 07/25	2789mX46m (9150'X150') 1402mX30m (4600'X98')
5.	Aurangabad	Maharashtra	195149	752354	581m (1907')	09/27	1829mX46m (6000'X150')
6.	Balurghat	West Bengal	251547	884754	24m (78')	09/27	1097mX30.5m (3600'X100')
7.	Barapani (Shillong)	Meghalaya	2538	9154	899m (2950')	04/22	1829mX46m (6000'X150')
8.	Behala	West Bengal	223022	881748	3m (10')	18/36	861mX30.5m (2825'X100')
9.	Belgaum	Karnataka	155127	743707	758.42m (2488')	08/26 18/36	1766mX46m (5795'X150') 1478mX46m (4849'X150')
10.	Bhavnagar	Gujarat	214513	721128	5.4m (18')	07/25 03/21 16/34	1920mX46m (6300'X150') 550mX46m (1804'X150') 556mX46m (1824'X150')
11.	Bhopal	Madhya Pradesh	231711	772071	523m (1716')	06/24 12/30	1835mX46m (6020'X150') 1646mX46m (5400'X150')
12.	Bhubaneshwar	Orissa	201445	854915	44.5m (146')	14/32 05/23	1783mX46m (5850'X150') 1379mX46m (4525'X150')
13.	Bhuj	Gujarat	231713	694014	78m (257')	05/23 11/29	2515mX46m (8250'X150') 915mX46m (3000'X150')

AGARTI LACRSADIV = 104940 721030 13' 3936'X100'

74
900

14.	Bilaspur	Madhya Pradesh	(20°60')	82°04'	274m (900')	06/24 17/35	1811mX46m (5943'X150') 1462mX46m (4796'X150')
15.	Bombay [Santa-cruz]	Maharashtra	190527	725205	8m [27']	09/27 14/32	3492mX61m [11456'X200'] 2730mX46m [8956'X150']
16.	Bombay [Juhu]	Maharashtra	190550	725005	3m [9']	04/22 08/26 16/34	732mX46m [2400'X150'] 1143mX46m [3750'X150'] 732mX46m [2400'X150']
17.	Calcutta [Dum Dum]	West Bengal	223911	882657	5m[17.5']	19r/01L 19L/01R 07/25	2399mX46m [7870'X150'] 3627mX46m [11900'X150'] 1524mX46m [5000'X150']
18.	Chakulia	Bihar	222736	864237	129m [424']	17/35	2220mX46m [7284'X150']
19.	Coimbatore	Tamil Nadu	110144	770235	395.5m [1298']	05/23	1341mX46m [4400'X150']
20.	Cooch Behar	West Bengal	261949	892815	41.5m [136']	04/22	1068mX30.5m [3505'X100']
21.	Cuddapah	Andhra Pradesh	14°31'	78°47'	131m (430')	11/29	1097mX30.5m (3600'X100')
22.	Deesa (Palampur)	Gujarat	241603	721219	145m (467')	06/24	856mX46m (2808'X150')
23.	Delhi/Palam IGI Airport	Delhi	283407	770648	227m (744')	10/28 09/27 15/33	3810mX46m (12500'X150') 2293mX46m (7522'X150') 2058mX46m (6750'X150')
24.	Delhi/ Safdarjung	Delhi	283504	771229	212m (696')	12/30 05/23	1356mX46m (4450'X150') 781mX46m (2400'X150')
25.	Dehradun (Jolly Grant)	U.P.	30°12'	78°12'	518m (1700')	08/26	1163mX30.5m (3815'X100')
26.	Donakonda	Andhra Pradesh	15°50'	79°30'	142.5m (467')	NE/SW	914mX30.5m (3000'X100')
27.	Gauhati (Guwahati)	Assam	260616	913519	48m (158')	02/20	2743mX46m (9000'X150')
28.	Gaya	Bihar	244451	845641	110m (362')	01/19 10/28	1470mX46m (4824'X150') 2284mX46m (7500'X150')
29.	Hassan	Karnataka	13°05'	76°07'	957m (3139')	E/W	(1200mX50m) (3900'X160')

Ex: of Ray 32 by 650 ft.

*Proposed 10/28
218m/232.5
283232.29
771250
1155*

* *Dimgaht* *2553* *4346* *47L ft.* *12/30* *7500 ft. X 150'*
Prof. sed.

1	2	3	4	5	6	7	8
30.	Hadapsar (Pune)	Maharashtra	18°29'	73°56'	579.268M 590m (1935')	E/W	1052mX122m (3450'X400')
31.	Hyderabad (Begumpet)	Andhra Pradesh	172700	782750	531m (1741')	09/27 14/32	2768mX46m (9080'X150') 1082mX46m (3550'X150')
32.	Indore	Madhya Pradesh	224322	754823	561m (1840')	07/25	1707mX46m (5600'X150')
33.	Jabalpur	Madhya Pradesh	231058	800343	494m (1622')	06/24 18/36	1372.5mX46m (4500'X150') 1128mX46m (3560'X150')
34.	Jaipur	Rajasthan	264926	754812	385m (1263')	09/27 15/33	1815mX46m (5955'X150') 1592mX46m (5225'X150')
35.	Jhansi	U.P.	25°29'	78°34'	244m (800')	15/33	1296mX46m (4252'X150')
36.	Jharsuguda	Orissa	215451	840303	228m (748')	06/24	1882mX46m (6174'X150')
37.	Jogbani (Forbesganj)	Bihar	26°18'	87°18'	59m (193')	09/27	1525mX153m (5000'X500')
38.	Junagadh (Keshod)	Gujarat	211852	701610	49.5m (163')	05/23	1372mX46m (4500'X150')
39.	Kailashahar	Tripura	241828	920034	27m (90')	03/21	1006mX30.5m (3300'X100')
40.	Kamalpur	Tripura	240754	914851	39m (128')	01/19	1372mX30m (4500'X100')
41.	Kandla	Gujarat	230642	70°06'05"	29m (95')	05/23	1524mX30m 5000'X100')
42.	Kanpur	U.P.	262625	802153	125m (410')	10/28	1082mX46m (3550'X150')
							Actual length 3700ft.
43.	Karipur (Calicut)	Kerala	110800	755710	100m (328')	10/28	1829mX46m (6000'X150')
44.	Khandwa	M.P.	215125	761959	329m (1080')	10/28	890mX30m (2920'X100')
45.	Khajuraho	M.P.	244910	795512	217m (713')	01/19	1829mX46m (6000'X150')
46.	Khowai	Tripura	240342	913627	29m (95')	18/36	915mX30m (3000'X100')
47.	Kolhapur	Maharashtra	163955	741729	607m (1990')	07/25	914mX92m (3000'X300')
48.	Kota	Rajasthan	250935	755056	273m (896')	08/26	1219mX46.5m (4000'X150')
49.	Kulu (Bhunta)	Himachal Pradesh	315228	770924	1084m (3557')	16/34	1128mX30m (3700'X100')
50.	Lalitpur	U.P.	244258	782503	367m (1203')	10/28	1972mX46m (6469'X150')

			5	6	7	
51. Lucknow	U.P.	264542	805307	122m (400')	09/27	2358 (7735' Actual (7835'X150'
		3052			01/19	1097mX46m (3600'X150'
52. Ludhiana	Punjab	305110	755728	254m (833')	12/30	1463mX46m (4800'X150'
53. Madras	Tamil Nadu	125937	801037	10.5m (34')	07/25	3063mX46m (10500'X150'
					12/30	1897mX46m (6224'X150'
54. Madurai	Tamil Nadu	095001	780522	136m (447')	09/27	1826mX46m (5990'X150'
					13/31	1403mX46m (4604'X150'
55. Malda	West-Bengal	250°4'40"	880750	24m (79')	11/29	1099mX30m (3605'X100'
56. Mangalore (Bajpe)	Karnataka	125938	745327	102m (334')	09/27	1625mX46m (5330'X150'
57. Dibrugarh (Mohanbari)	Assam	272850	850118	110m (350')	05/23	1829mX45m (6000'X150'
58. Muzaffarpur	Bihar	260701	851854	52m (172')	10/28	1219mX30m (4000'X100'
59. Mysore	Karnataka	121345	763930	716m (2349')	05/23	1347mX46m (4421'X150'
					09/27	663mX46m (2176'X150'
60. Nadiargul	Andhra Pradesh	171614	783241	552m (1810')	10/28	914mX152m (3000'X500'
					14/32	914mX152m (3000'X500'
61. Nagpur	Maharashtra	210528	790259	308m (1012')	14/32	3200mX46m (105001'X150'
					09/27	1957mX46m (6420'X150'
<i>Sevrel</i> 62. North Lakhimpur (Lilabari)	Pondichery	113623	793143	180'	05/23	1646mX46m (5400'X150'
	Assam	271726	940549	100m (324')	04/22	1646mX46m (5400'X150'
63. Panagarh	West Bengal	232824	872547	73m (240')	15/33	2192mX46m (7190'X150'
64. Panna	Madhya Pradesh	243915	801546	424m (1391')	17/35	1539mX18m (5050'X60'
65. Pantnagar	Uttar Pradesh	290156	792827	233m (764')	10/28	1097mX30m (3600'X100'
66. Pasighat	Arunachal Pradesh	2806	9523	157m (514')	17/35	10005mX24m (3300'X75')
67. Patna	Bihar	253534	850533	51m (167')	07/25	2038mX46m (6860'X150'
68. Porbandar	Gujarat	213859	693932	5m (17')	09/27	1372mX46m (4500'X150'
					05/23	1003mX37m (3290'X120'
	<i>Ramagundam</i> Andhra Pradesh	1846'	79°24'	670'	07/25	5016'X150'
	<i>Pondichery</i> U.T.	1158	7949	131'	07/25	4000'X150'

1	2	3	4	5	6	7	8
69.	Raipur	Madhya Pradesh	211050	814425	313.5m (1029')	06/24 14/32	1861mX46m (6107'X1508') 1792mX46m
70.	Rajamundry	Andhra Pradesh	170630	814916	44.5m (146')	05/23	1829mX46m (6000'X150')
71.	Rajkot	Gujarat	221832	704647	134m (440')	05/23	1646mX46m (5400'X150')
72.	Ranchi	Bihar	231849	851924	646m (2120')	13/31	2713mX46m (8900'X150')
73.	Raxual	Bihar	26°58'	84°50'	79m (260')	10/28	1097mX30.5m (3600'X100')
74.	Rupsi	Assam	260824	895436	40m (132')	05/23	1829mX46m (6000'X150')
75.	Satna	Madhya Pradesh	243345	805116	319m (1047')	11/29	1752mX46m (5750'X150')
76.	Shella	Assam	251030	913830	24m (80')	18/36	914mX18m (3000'X60')
77.	Shimla (Jabbarhatti)	H.P.	310440	770422	1524m (5000')	14/32	1036mX46.5m (3400'X75')
78.	Sholapur	Maharashtra	173735	755606	481m (1578')	15/33	1310mX46m (4298'X150')
79.	Silchar (Kumbhigram)	Assam	245443	925845	102m (333')	06/24	1785mX46m (5857'X150')
80.	Tanjore (Thanjavur)	Tamil Nadu	104312	790610	76m (249&)	07/25 14/32	1781mX46m (5843'X150') 1402mX46m (4600'X150')
81.	Tirupati	Tamil Nadu	133754	793236	103m (339')	08/26	1372mX46m (4500'X150')
82.	Tiruchirapalli	Tamil Nadu	104551	784258	85m (279')	09/27 15/33	1864mX46m (6115'X150') 1411mX46m (4630'X150')
83.	Trivandrum	Kerala	082840	765515	4m (13')	14/32 10/28 05/23	2953mX46m (9690'X150') 1224mX46m (4015'X150') 1094mX37m (3589'X120')
84.	Imphal (Tulihal)	Manipur	244549	935411	773m (2536')	04/22	2746mX46m (9010'X150')
85.	(Tural) Aizawl	Mizoram	23°44'	92°48'	305m (1000')	01/19	1274mX27m (4180'X90')
86.	Udaipur	Rajasthan	243702	735343	509m (1670')	08/26	1828mX46m (6000'X150')
87.	Vadodara	Gujarat	221946	731310	37m (121')	04/22 09/27	2469mX46m (8100'X150') 1372mX46m (4500'X150')
88.	Varanasi	Uttar Pradesh	252703	825138	80m (262')	09/27	1792mX46m (5879'X150')

TUTICORIN Tamil Nadu. 0843 7802 9066 10/28.

1	2	3	4	5	6	7	8
89.	Vellore	Tamil Nadu	125424	790406	233m (764')	07/25	792mX146 (2600'X480)
90.	Vijayawada	Andhra Pradesh	163135	804754	21m (69')	08/26	1744mX46m (5723'X150')
91.	Visakhapatnam	Andhra Pradesh	174316	831329	3m (10')	05/23	1828mX46m (6000'X150')
						09/27	1462mX46m (4800'X150')
						18/36	342mX46m (2761'X15')
92.	Warrangal	Andhra Pradesh	175452	793608	285m (935')	09/27	1862mX46m (6107'X150')
						15/33	1774mX46m (5818'X150')

Part II of Annexure-III ends—

Part III of Annexure III

STATE OWNED LICENSED AERODROMES

1	2	3	4	5	6	7	8
			103°24'	76°45'E	833m (2733')	09/27	1143mX30m (3750'X100')
			2624	7551	308m (1010')	09/27	1097mx61m (3600'x200)
			30°20'	76°27'	267m (875')	NE/SW	(1500'x150)
			12°57'	773956	888m (2914')	09R/27L	3307mx61m (10850'x20)
						09L/27R	2126mx46m (6975'x150)
			2118 (2218)	8123	297m (975')	05/23	1524mx30m (5000'x100)
			23°27'	75°25'	470m (1541')	NW/SE 13/31/	1463mx45 (4880'x15)
			2633	9338	67m (220')	E/W	1280mx91 (4200'x30)
			26°43'	91°51'	91.5m	02/20	1097mx92 (3600'x30)
			2314	8131	457m (1500')	13/31	428mx23m 93mX30m (3200'x10)
			2339	8658	94m (310')	E/W	1097mx4 (3600'x1)
			3015	7625	830m (253')	NE/SE	1200mx5
			2707	9454	67m (220')	NE/SW	1097mx9 (3600'x3)
			22°49'	86°10'	142m (465')	08/26	1040mx2 (3415'x)
			1916	8325	239m (785')	12/30	914mx6 (3000'x)
			18°52'	82°33'	594m (1950')	16/34	914mx3 (3000'x)
			3111	7535 (8535)	234m (765')	14/32	1000mx (3281'x)
			2633	80°14'	131m (330')	E/W	884mx2 (2900'x)
			2336	8713	270'	14/32 04/22	6000'x1 4800'x

1376m x 757m
 East-west
 275°-0'-0"

1	2	3	4	5	6	7	8
12.	Birpur	Bihar	2632	8701	75m (246)	E/W	650mx130 (2100'x450)
13.	Bundi	Rajasthan	2524	7538	311m (1020')	N/W	732mx37m (2400'x120')
						E/W	1189mx55m (3900'x180')
14.	Chaibasa	Bihar	2231	8551	244m (800')	E/W	732mx.83m (2400'x600')
						N/S	546mx137m (1800'x450')
15.	Chandrapur	Maharashtra	19°58'	7912	244m (800')	08/26	1000mx30m (3281'x1000')
16.	Dapo Rijo	Arunachal Pradesh	2800	94011	244m (800')	07/25	1000mx30m (3000'x100')
17.	Dhanbad	Bihar	2350	8626	233m (765')	E/W	1128mx23m (3700'x75')
					(as per FLIP) 2600m	N/S	457mx91m (1500'x390')
18.	Daltaganj	Bihar	24°00'	84°05'	243m (300')	E/W	3000'x100'
19.	Dholapur	Rajasthan	2643	7756	177m (580')	E/W	732mx46m (200'x150')
						N/S	914mx46m (3000'x150')
							1829mx46m (6000'x150')
20.	Faizabad	U. P.	2645	8245	100m (330')	NE/EW	1463mx46m (4800'x150')
						NW/SE	1005mx46m (3300'x150')
21.	Faridkot	Punjab	3011	7444	203m (664')	E/W	504mx55m (1980'x180')
						N/W	1829mx47m (6000'x150')
22.	Fursatganj (Rai Bareilly)	U. P.	2615	8122	107m (350')	09/27	1829mx46m (6000'x150')
23.	Giridih	Bihar	2413	8618	305m (1000')	09/27	1829mx46m (6000'x150')
24.	Gadra Road	Rajasthan	2542	7053	142.5m (500')	L/A	457mx457m (1500'x1500')
25.	Ghazipur	U. P.	2527	8334	46m (219')	07/25	1808mx46m (5931'x150')
26.	Gondia	Maharashtra	2131	48°20'	315m (1035')	05/23	1966mx46m (6208'x150')
27.	Gopalpur	Orissa	19°15'	84°52'	30m (100')	05/23	3042'x500'
28.	Guna	M. P.	2439	7721	495m (1621')	14/32	3000'x10
29.	Hirakud	Orissa	2135	8400	202m (658')	15/33	1097mx46 (3600'x150)

DHULIA

Maharashtra

205530 744430

900 to
950'

09/27

1380m x 457
1380m x 45

File 13/225/91

Gurjara Haryana 2830 7700 750ft 13/31 2850x110
 Gurjara Haryana 2827¹³ 770A 755ft 09/27 2200x52
 RIT, Vid. Sec. Um. Eien Aparna

	2	3	4	5	6	7	8
8. Kolapani	Assam	2649	9308	91m	04/32	914mX91m (3000'x300')	
9. Bokaro (Marahari)	Bihar	233826	860949	225m (737')	13/31	1463mx39m (4800'x100')	
10. Mithapur (Dwarala)	Gujarat	2225 22-26-110	6902 68-50-34	4m (12')	N/S	914mx137m (3000'x45'm)	
					07/25	1372mx46m (4500'x150')	
21. Nanaksar (Saman Bhari)	Punjab	3036	7511	232m (760'M)	N/S	427mx18m (1600'x166')	
22. Panga (Jalpaiguri)	W. Bengal	2628	8838	84m (275')	ENE/WSW	1122mx91m (3678'x300')	
23. Pannery	Assam	2645	9155	46m (300')	N/S	1000mx91m (3280'x300')	
24. Rajhara	M.P.	2032	8105	361m (1185')	NE/SW	914mx30.5m (3000'x100')	
25. Rourkela	Orissa	221540	844835	201m (655')	09/27	1219mx30m (4000'x100')	
26. Sardar Nagar (Gorakhpur)	U.P.	2642	8325	79m (260)	11/29	823mx36.5m (2700'x120')	
27. Shahbad	Karnataka	1706	7700	396m (130')	10/28	1097mx27.5m (3600'x90')	
28. Sindri	Bihar	233930	862945	180m (590')	12/30	903mx30m (2962'x100')	

State Govt. Acrodromes Normally Maintained in Serviceable Condition

1. Akbarpur	U.P.	2627	8234	101m (330)	11/29	1829mx40m (6000'x150')
2. Along	Arunachal Pradesh	28°10'	94°49'	214m (702')	05/23	973mx28m (3192'x92')
3. Alwar	Rajasthan	2730	7630	266m (871')	L/A	640mx46m' (2100'x150)
4. Ambikapur	M.P.	2259	8312	588m (1922')	16/34	1371mx91m (4500'x300')
5. Behrampur	W. Bengal	2405	8815	15m (50')	02/20	510mx137m (1650'x450')
6. Bhagalpur	Bihar	2515	8701	46m (1508')	06/27	1006mx137m (3300'x150')
7. Bharatpur	Rajasthan	2712	7733	177m (580')	09/27	823mx137m (2700'x450'm)
8. Bhawli	Rajasthan	2613	7340	270m (890')	06/24	2012mx183m (6600'x600')
9. Bhiwani	Haryana	2851	7611	213m (695')	12/30	914mx30.5m (3000'x100')
10. Bhowrah	Bihar	2340	8623	140m (450')	L/A	914mx155m (300'x180')
11. Bider	Karnataka	1754	7730	634m (2080')	08/26	1868mx46m (6129'x150')
					02/20	1871mx46m (6142'x150')

Amrawati Maharashtra 2043 7749 342/345 08/26 1371m X 30m
 Sri Sathya Sai Div. Anantpur A.P. 14 09 7748 475m 09/27 1525m X 100m

1	2	3	4	5	6	7	8
30.	Hissar	Haryana	29°10'48"	75°45'30"	214m (700')	12/30	1219mx46m 4100'x150')
31.	Isarda	Rajasthan	2609	7603	253m (830')	E/W	640mx46m (2100'x150')
32.	Jagdapur	M.P.	1904	8202	555m (1822')	06/24	Do 1029mx46m (3375'x150')
33.	Jakkur	Karnataka	1305	7736	922m (3024')	08/26	914mx46m (3000'x150')
34.	Jaith	Maharashtra	1704	7512	673m (2240')	N/S E/W SE/NW	343m(1224') 663m(2715') 549m (1800')
35.	Jalgaon	Maharashtra	2058	5740 7540	259m (850')	09/27 NE/SW	777m (2550') 1372mx46m (4500'x150')
36.	Jhalawar	Rajasthan	2436	7610	251m (824)	N/W E/W	792mx47m (2600'x150') -do-
37.	Jhabua (Ranpat)	M. P.	224730	743232	335m (1100')	E/W	914mx30.5m (3000'x100')
38.	Jhunjhunu	Rajasthan	2807	7523	338m (1110')	10/28	1006mx46m (3300'x150')
39.	Karad	Maharashtra	1717	7409	576m (1890)	E/W	1280mx30.5m (4200'x100')
40.	Karnal	Haryana	2943	7702	246m (829')	13/31	914mx46m (3000'x150')
41.	Kawalpur	Maharashtra	1655	7437	580m (1850')	N/S SE/NW	732mx183m (2400'x600') 914mx91m (3000x300')
42.	Khavada	Gujarat	2351	6946	—	E/W	376mx24m (1200'x80')
43.	Laligarh	Rajasthan	2952	7359	182m (1600')	L/A	1036mx46m (2600'x150')
44.	Malpura	Rajasthan	2618	7523	125m (400')	L/A	594mx457m (1950'x1500')
45.	Mathania	Rajasthan	2626	7300	251m (825)	05/23 14/32	2012mx138 (6600'x607') 1565m46m (5136'x150')
46.	Merta Road	Rajasthan	2633	7355	323m (1059')	L/A	1097mx46m (3600'x150')
47.	Muirpur	U. P.	2408	8305	406m (1332)	E/W	823mx61m (2700'x200')
48.	Nabha	Punjab	3026	7613	252m (828')	NNW SSE NNW	457mx457m (1500'x1500') 610m x 2000m

1	2	3	4	5	6	7	8
49.	Nagarjuna Sagar	Andhra Pradesh	1632	7919	201m (658')	E/W	1646mX30m (5400'X100')
50.	Nagpur	Rajasthan Maharashtra	2711	7343	252m (828')	ESE/ WNW	1097mX46m (3600'X150')
51.	Nanded	Maharashtra	1911	7719	381m (1250')	E/W	1250mX31m (4100'X10')
52.	Nowgong	M.P.	2503	7925	228.5m (750')	04/22	1055mX15m (4100'X100')
53.	Narnaul	Haryana	2805	76°10'	272m	09/27	914mX30m (3000'X100')
54.	Osmanabad	Maharashtra	18°15'	76°05'		N/S	4000'X150'
55.	Patiala	Punjab	3019	76°27'	250m (820')	15/33	1097mX46m (3600'X150')
						03/21	1372mX46m (4500'X150')
				7425	567.5m (1862')	L/A	843mX30m (2800'X100')
	Pinjore			7652	500m (1640')	16/34	914mX30m (3000'X75')
				8201	94m (310')	12/30	1829mX46m (6000'X150')
				7712	375m (1231')	05/23	1950mX46m (6400'X150')
				73°19'44"	92m (306')	05/23	1097mX30m (3600'X100')
				75°00'	493m (1607')		(4000'X150')
				8130	47m (153')	L/A	732X183m (2400'X600')
				8606	229m (750')	13/31	484mX183m (4870'X600')
				7153	374m (1228')	04/22	1097mX46m (3600'X150')
				8153	333m (1093')	E/W	1097mX30.5m (3600'X100')
				7253	305m (1000')	L/A	1402mX91m (4600'X300')
				8622	266m (872')	N/S	1159mX46m (3200'X150')
				2401	480.5m (1570')	L/A	823mX46m (2700'X150')
				2615	91m (300')	11/29	1829mX46m (6000'X150')
				2105	5m (18')	04/22	1006mX30m (3300'X100')
				2123	274m (900')	06/24	1957mX46m (6420'X150')
				2034	229m (750')	L/A	914mX46m (3000'X150')
				27°53'3"	5145' (1524m)	18/36	(1219X30m) 4000'X100'

4300

State Govt. : Aerodromes not necessarily maintained in a serviceable condition.

1	2	3	4	5	6	7	8
1.	Abu Road	Rajasthan	2447	7249	266.5m (875')	L/A	1960'X1500'
2.	Amroli	Gujarat	2137	7113	129.5m (450')	NW/SE	914mX46m (3000'X150')
3.	Arrah	Bihar	2434	8439	53.5m (173')	L/A	594mX137m (1950'X450')
4.	Babai	Rajasthan	2753	7544	374m (1228')	E/W	640mX640m (2100'X2100')
5.	Banswara	Rajasthan	2335'30"	74°20'	2134m (200') 700'	10/28	1140mX40m (3740'X150')
6.	Baripada	Orissa	2157	8649	76m (250')	L/A	805mX732m (2640'X2400')
7.	Bettiah	Bihar	2647	8432	72.5m (238')	E/W	457mX91m (1500'X300')
8.	Begusarai	Bihar	2525	8605	41m (134')	09/27	447mX91m (1500'X300')
9.	Betul (Amla)	Madhya Pradesh	2156	7808	594m (1800')	08/26	1067mX46m (3500'X150')
10.	Bhabu	Bihar	2503	8337	81m (266')	E/W	457mX91m (1500'X300')
11.	Bihar Sharif	Bihar	2515	7530	58m (191')	W/E	457mX91m (1500'X300')
12.	Buxar	Bihar	2533	8358	63m (206')	L/A	457mX91m (1500'X300')
13.	Chapra	Bihar	2547	8446	53.5m (175')	L/A	494mX137m (1950'X450')
14.	Dehri (Suere)	Bihar	2455	8408	107m (350')	L/A	1067mX137m (3500'X450')
15.	Deoghar	Bihar	2427	8647	228.5m (750')	L/A	457mX91m (1500'X300')
16.	Dhana (Sagar)	Madhya Pradesh	2345	7853	192m (630')	18/36	914mX91m (3000'X300')
17.	Dumka	Bihar	2424	8705	157m (450')	E/W	777mX137m (2250'X450')
18.	Dwara	Assam	2510	9130	15m (50')	L/A	850mX55m (2790'X180')
19.	Falna	Rajasthan	2514	7314	320m (1050')	L/A	457mX457m (1500'X1500')
20.	Ginigera	Karnataka	1522	7617	457m (1500')	E/W	914mX37m (3000'X125')
21.	Hazaribagh	Bihar	2402	8523	570m (1900')	L/A	594mX137m (1950'X125') 457mX91m (1500'X300')
22.	Jawai (Sumerpur)	Rajasthan	2506	7309	290.5m (593')	NE/EW	632mX121mm (2400'X396')
23.	Jahanabad	Bihar	2513	8500	69.5m (225')	E/W	457mX91m (1500'X300')

~~GUARDASPUR PUNJAB 3203 7523 1621' 14/32 1090'X80'~~
 4" 43P As per Adviser Civil Aviation Punjab no airstrip exists at Guardaspur. Letter in F.No. 20013/438/90-AR

1	2	3	4	5	6	7	
24.	Jhingura	U.P.	2508	8239	91m (300')	09/27	4000'X
25.	Karad	Maharashtra	1717	7409	576m (1890')	E/W	1280mX30. (4200'X100'
26.	Kanaha	Madhya Pradesh	2213	8044	861m (2825')	N/S	1609mX91m (5280'X300')
27.	Katihar	Bihar	2531	8734	30.5m (100')	L/A	457mX91m (1500'X300
28.	Khargone	Madhya Pradesh	2149	7534	267.5m (907.25')	EW/NS	914mX30.5 (3000'X100'
29.	Kishanganj	Bihar	2605	8756	46m (150')	L/A	1005mX91m (3000'X300
30.	Madhubani	Bihar	2620	8604	53.5m (176')	L/A	457mX91m (1500'X300'
31.	Mehsana	Gujarat	2336	7226	85m (280')	NE/SW	914mX46m (3000'X150
32.	Monghyr	Bihar	2521	8629	86.5m (153')	L/A	732mX183m (2000'X600. 549mX137m (1800'X450
33.	Morvi	Gujarat	2245	7050	53m (175')	NNE/SSN	671mX46m (2200'X150
34.	Motihari	Bihar	2637	8434	66m (217')	E/W	594mX137m (1950'X450
35.	Muzaffarpur (Race Course)	Bihar	2607	8524	51.5m (169')	L/A	745mX137m (2475'X450
36.	Muzaffarpur (Sikandarpur)	Bihar	2607	8524	54m (177')	L/A	557mX341m (1766'X1120
37.	Nawapara	Orissa	2052	8232	323m (1058')	NE/SW	1001.5mX2 (32861'X90
38.	Pachmert	Madhya Pradesh	2230	7825	1085m (3360')	SW/NE	914mX46m
39.	Purnea	Bihar	2549	8723	39.6m (129')	10/28	871mX91m (2858'X300'
40.	Quilon	Kerala	0854	7636	9.1m (30')	N/S E/W	338mX(1110 273mX(900
41.	Radhanpur	Gujarat	2354	7136	39m (129')	L/A	610mX610m (2000'X2000
42.	Rakhikot	Madhya Pradesh	2209	7829	762m (2500')	L/A	1006mX46m (3400'X150
43.	Saharsa	Bihar	2553	8635	40m (132')	E/W	2400'X30'

NOTE :-

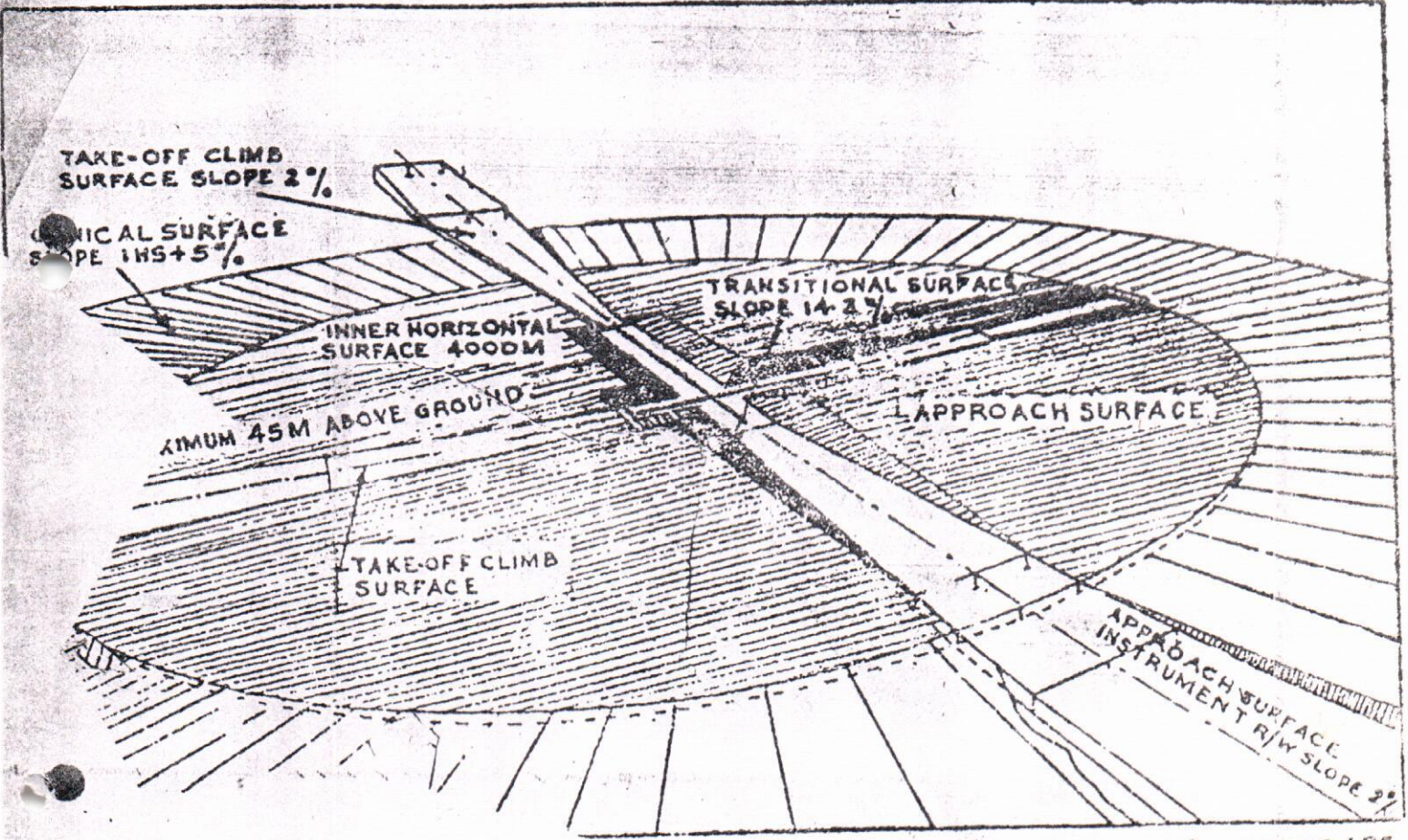
- (1) L/A means Landing Area.
- (2) N means North.
- (3) S means South.
- (4) E means East.
- (5) W means West.

Tamil Nadu.

0843

7802

90'
(84')10/28
85-28' 81.64'



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50.99 @ hcc. 12