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Provision of remote AFIS at OEAO from a Remote Tower Center (RTC)

1. Purpose

1.1 The purpose of this AIP Supplement is to provide information on the provision of remote AFIS at OEAO (Alula International Airport) from a Remote Tower Center (RTC) using Digital-Tower Systems. This center is located at King Abdulaziz International Airport (OEJN).

1.2 The Digital video cameras are mounted on tower frames, as indicated in the aerodrome chart, and sited to allow full coverage of the aerodrome's maneuvering area. They are used as the primary source for the visual presentation displays used for the provision of AFIS at OEAO.

2. Remote AFIS service at OEAO

2.1 The remote digital tower systems are composed of the following:

- **A visual surveillance system composed of eight fixed cameras and two movables with Pan-Tilt Zoom (PTZ) capability, which can be directed as required to zoom on fix and mobile objects within AoR. The visual surveillance is mounted on a Tower mast at a height of twenty meters is replacing** the 'Out of The Window (OTW)' view of the aerodrome and its vicinity from a conventional tower. The attached AD chart shows the location of the tower mast.

- **ATS Communication facilities,** to provide air-ground, and ground-ground communications (main and backup/emergency) in the area of responsibility through dedicated ground connections between the local radio equipment at the aerodrome and Remote Tower Center (RTC). The provision of AFIS will use the following ATS communication facilities:

Service designation	Call sign	Frequency	Hour of OPS	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
AFIS ALULA TWR		118.000 MHZ (Main) **5 NM/8500 FT**	H24	NIL	NIL	1- Call Alula tower 15 MIN before ARR time. 2- In Case of COM failure with AFIS, Contact RFFS on 133.5 MHZ at least 15 minutes before ARR time.
		121.650 MHZ (Standby) **5 NM/8500 FT**	H24	NIL	NIL	
		121.500 MHZ	H24	NIL	NIL	
		243.000 MHZ	H24	NIL	NIL	
		350.000 MHz **5 NM/8500 FT**	H24	NIL	NIL	
ATIS	Alula ATIS	126.275 MHZ **5 NM/8500 FT**	H24	NIL	NIL	
TIBA	TIBA	122.800 MHZ	H24	NIL	NIL	TIBA procedure to be applied outside Alula ATZ.

- **Monitoring and management of navigation aids, and aeronautical ground lights features,** allowing Aerodrome Flight Information Service Officers (AFISOs) to operate and monitor NAVAIDS and AGL, which are necessary for the provision of AFIS.

- **Meteorological information interfacing,** allowing the presentation of meteorological information and conditions at RTC using appropriate data transmission links.

- **Binocular functionality** emulates the function of a binocular in a conventional tower, by allowing the AFISOs to have a close-up view of a specific location or object within AoR.

- **A Light Gun or Signaling Lamp** is remotely controlled allowing the AFISOs to communicate via a signaling lamp in the case of radiotelephony communication failure.

- **Aerodrome ambient airfield/airside audio sensors,** allowing an increased situational awareness of aircraft and vehicles' ground movements.

- **ADS-B Ground stations,** provide surveillance data broadcasted by equipped aircraft and vehicles to allow AFISOs to monitor air and ground movements at OEAO.

- **Tower Mast: the height of the tower mast is 20 meters** AGL.

- **Local and remote Monitoring functions that continuously monitor the technical status of equipment and systems used, generate alarms and warnings when failures have been detected.**

2.2 The remote aerodrome AFIS is provided using two AFIS working positions located at the RTC. Each position is equipped with the required systems to provide Aerodrome Flight Information Service through a visual presentation showing 360 degree real time videos images and labels covering the movement area and the aerodrome vicinity.

3. Overview of the transition plan

The purpose of transition plan is to ensure the smooth and efficient transfer of the provision of AFIS from the physical/conventional Tower[1] located at OEAO to the Remote tower center located at King Abdulaziz international Airport (OEJN). This transition aims to minimize disruption, maintain continuity, and ensure that all considerations and aspects related to the provision of remote aerodrome AFIS are carefully managed and executed.

During the transition, extensive operational trials will be organized from 15 December 2024 to 19 March 2025 to assess the performance, accuracy, integrity, availability, continuity, and reliability of the remote digital tower systems and the visual presentation displays replicating the 'Out of The Window (OTW)' view of the aerodrome and its vicinity.

3.1 During the operational trials the provision of AFIS at OEAO will be alternatively provided from the physical/conventional tower and the RTC to validate all features and functions of the visual presentation

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[1] *The physical Tower is used by Rescue & Fire-Fighting Services (RFFS) as Control room and currently the tower shared between RFFS operators and AFISOs.*

and all technical enablers. The shadowing activities will be organized in accordance with the following schedule :

Date	Time (UTC)	Remote Aerodrome AFIS from RTC	AFIS Provided from the physical Tower
15/12/2024	07:00 – 11:00	Control	Monitor (Shadow)
	11:00 – 12:30*(Next Day)	Not Available	Control
16/12/2024	12:30 – 16:30	Control	Monitor (Shadow)
	16:30 – 08:00	Not Available	Control
17/12/2024	08:00 – 12:00	Control	Monitor (Shadow)
	12:00 – 12:30*(Next Day)	Not Available	Control
18/12/2024	12:30 – 16:30	Control	Monitor (Shadow)
	16:30 – 08:00	Not Available	Control
19/12/2024	08:00 – 12:00	Control	Monitor (Shadow)
	12:00 – 08:00	Not Available	Control
20/12/2024	08:00 – 16:00	Control	Monitor (Shadow)
	16:00 – 14:00	Not Available	Control
21/12/2024	14:00 – 22:00	Control	Monitor (Shadow)
	22:00 -04:00	Not Available	Control
22/12/2024	04:00 – 12:00	Control	Monitor (Shadow)
	12:00 – 09:00	Not Available	Control
23/12/2024	09:00 – 17:00	Control	Monitor (Shadow)
	17:00 – 08:00	Not Available	Control
24/12/2024	08:00 – 16:00	Control	Monitor (Shadow)
	16:00 – 03:00	Not Available	Control
25/12/2024	03:00 – 19:00	Control	Monitor (Shadow)
	19:00 – 03:00	Not Available	Control
26/12/2024	03:00 – 19:00	Control	Monitor (Shadow)
	19:00 – 03:00	Not Available	Control
27/12/2024	03:00 – 19:00	Control	Monitor (Shadow)
	19:00 – 03:00	Not Available	Control
28/12/2024	03:00 – 19:00	Control	Monitor (Shadow)
	19:00 – 03:00	Not Available	Control
29/12/2024	03:00 – 19:00	Control	Monitor (Shadow)
	19:00 – 03:00	Not Available	Control
30/12/2024 –19 /03/2025	24 hrs.	Control	Monitor (Shadow)

3.2 During the operational trials, AFIS Officers will coordinate with pilots and drivers through R/T to check the accuracy of the visual presentation displays, automatic object tracking, and all functions and

features of the remote digital tower systems. These checks will cover confirmation of aircraft/vehicle position, its characteristics, ambient conditions, accuracy of weather information and AGL status, readability of all A/G Communications, the procedures to operate the Light Gun, and the overall efficiency of the AFIS.

3.3 Subject to satisfactory operational trials and the issuance of regulatory approvals by GACA, the provision of remote aerodrome flight information service at Alula (OEAO) will be operational by **20 March 2025.**

4. Contact

4.1 For further information regarding the provision of remote AFIS at OEAO, please contact Jeddah Tower Operations by:
E-mail: Jedtwr@sans.com.sa
Tele: +966580088998.

- END -

Alula AD Chart showing the location of Remote Digital Tower Mast
Located at Alula airport

AERODROME CHART - ICAO 26°28'59"N 038°07'07"E **ELEV 2045**

AFIS	118.000
ATIS	126.275
FRS	133.500
TIBA	122.800
FIRE & RESCUE	121.900

ALULA / Alula International

UNCONTROLLED AD

RWY	DIRECTION	THR	THR GUND	BEARING STRENGTH
12	116°	26°29'23"N 038°06'19"E	43	PCN 60 F/B/X/T ASPHALT
30	296°	26°28'34"N 038°07'55"E	43	

VAR 4° E 2020

ELEV, ALT IN FEET
DIMENSIONS IN METERS
BRG ARE MAG
ANNUAL RATE OF CHANGE 3' E

NOTE:

1- Call Alula tower 15 MIN before ARR time.
2- In Case of COM failure with AFIS, Contact RFFS on 133.5 MHZ at least 15 minutes before ARR time.

- NOTE:

Alula ATS [AFIS] is provided remotely from a Remote Tower Centre located at King Abdulaziz International Airport (OEJN)

TAXIWAY DESIGNATOR	Width	BEARING STRENGTH (PCN)	Surface
TWY A	23	80 F/B/X/T	ASPHALT
TWY A2	23	79 F/B/X/T	ASPHALT
TWY A3	23	79 F/B/X/T	ASPHALT
TWY A4	23	79 F/B/X/T	ASPHALT
TWY B	23	79 F/B/X/T	ASPHALT
TWY B2	23	79 F/B/X/T	ASPHALT
TWY B3	23	79 F/B/X/T	ASPHALT
TWY B4	23	79 F/B/X/T	ASPHALT
TWY W5	15	59 F/A/X/U	ASPHALT

APRON	BEARING STRENGTH (PCN)	Surface
APRON	86/R/B/W/T	CONCRETE

PRECISION APPROACH CAT I LIGHTING SYSTEM

CWY 240 x 150

ILS LOC
IAUA 111.1

THR ELEV 1994

SWY 120 x 45

VAULT STATION (WEST)

TDZ ELEV 2015

PAPI 3°

STRIP 3410 x 280

3050 x 45 ASPHALT

PERIMETER ROAD

ARP

GENERATOR BUILDING

TWY A

REMOTE TOWER MAST   R-TWR

FIRE & RESCUE BUILDING

TWY B

PAPI 3°

GP/DME
IAUA 331.7- 48X

UTILITIES BUILDING

SEWAGE TREATMENT PLANT

APRON

TWY A

SWY 120 x 45

TDZ ELEV 2045

CARS PARK

Private Aviation Hangar

CWY 240 x 150

THR ELEV 2045

PRECISION APPROACH CAT I LIGHTING SYSTEM

WATER FIRE & WATER TANK BLDG

GUARD REST BUILDING

TERMINAL BUILDING

PERIMETER FENCE

VAULT STATION (EAST)

GATEHOUSE BUILDING

ALULA INTL DVOR/DME
AUA 114.9- 96X

300 0 500 1000 METERS
1000 0 1000 2000 3000 FEET

TAKE-OFF MINIMUMS:

RWY 12: 500FT CEILING AND 3200 METERS VISIBILITY REQUIRED;OR STD WITH MINIMUM CLIMB RATE OF 286FT/NM TO 4000FT
RWY 30: 700FT CEILING AND 3200 METERS VISIBILITY REQUIRED;OR STD WITH MINIMUM CLIMB RATE OF 383FT/NM TO 4000FT

LEGEND	
WIN D IRECTION INDICATOR	
SERVICE ROAD	
FENCE	—x—x—x—
TOWER USED FOR PROVISON OF REMOTE ATS (R-TWR)	

CHANGES: New Edition